

# DRAFT EIA & EMP FOR PROPOSED ROUGH STONE QUARRY CATEGORY – B1

(Submitted for Public Hearing as per the provisions of EIA Notification 2006 & its amendments thereof)

**ToR Identification No. TO25B0108TN5803895N (F.No. 12350), dated 30.07.2025**

| PROPOSED QUARRY LEASE DETAILS                |                                                                                                                                                                   |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SURVEY NOS</b>                            | <b>208 (Part-8)</b>                                                                                                                                               |
| <b>VILLAGE</b>                               | <b>PARAVAKKAL</b>                                                                                                                                                 |
| <b>TALUK</b>                                 | <b>PERNAMPATTU</b>                                                                                                                                                |
| <b>DISTRICT</b>                              | <b>VELLORE</b>                                                                                                                                                    |
| <b>EXTENT</b>                                | <b>2.02.40 ha</b>                                                                                                                                                 |
| <b>CLUSTER EXTENT</b>                        | <b>8.29.90 ha</b>                                                                                                                                                 |
| <b>PROPOSED PRODUCTION<br/>(ROUGH STONE)</b> | <b>TEN YEARS: 2,42,660 m<sup>3</sup> - 45m AGL<br/>FIRST FIVE YEARS: 1,20,660 m<sup>3</sup> - 45m AGL<br/>SECOND FIVE YEARS: 1,22,000 m<sup>3</sup> - 45m AGL</b> |
| <b>LAND</b>                                  | <b>GOVERNMENT PORAMBOKE LAND</b>                                                                                                                                  |

(Sector No. 1(a) Sector No.1 as per NABET)

Category of the Project: B1 Cluster Mining, Total Cluster Area – 8.29.90 Ha  
Baseline Monitoring Period – March 2025 to May 2025

## APPLICANT

**THIRU.R.SATHISH,  
S/O. RAMOORTHY,  
NO.236, KIDANGU RAMAPURAM VILLAGE,  
POGALUR POST, PERANAMPATTU TALUK,  
VELLORE DISTRICT.**

| ENVIRONMENTAL CONSULTANT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | LABORATORY                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>M/s. GLOBAL MINING SOLUTIONS</b><br><i>(NABET Accredited &amp; ISO 9001 Certified Consultant)</i><br>Plot No. 6, S.F.No. 13/2, A2, VS City,<br>RC Chettypatty, Kottamettupatty, Omalur,<br>Salem, Tamil Nadu – 636 455.<br>NABET Accreditation No: NABET/EIA/23-26/SA<br>0241, Valid Until - January 4, 2026<br>Contact: 97502 23535 & 94446 54520<br>Email: <a href="mailto:infoglobalmining@gmail.com">infoglobalmining@gmail.com</a> ,<br><a href="mailto:globalminingsolutionssalem@gmail.com">globalminingsolutionssalem@gmail.com</a> | <b>M/s. SHRIENT ANALYTICAL &amp; RESEARCH<br/>LABS PRIVATE LIMITED</b><br>(NABL Accredited Testing Laboratory)<br>Valid Until -29.09.2025<br>#416/15, Dhargas Road, Perungalathur,<br>West Tambaram, Chennai,<br>Tamil Nadu, India. |

## **AMENDMENT PAGE**

| <b>SL</b> | <b>Page No.</b> | <b>Section / Clause / Para / Line (as Applicable)</b> | <b>Date of Amendment</b> | <b>Amendment Made</b> | <b>Reasons of amendment</b> | <b>Signature of Person Authorizing Amendment</b> |
|-----------|-----------------|-------------------------------------------------------|--------------------------|-----------------------|-----------------------------|--------------------------------------------------|
| 1         |                 |                                                       |                          |                       |                             |                                                  |
| 2         |                 |                                                       |                          |                       |                             |                                                  |
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| 7         |                 |                                                       |                          |                       |                             |                                                  |
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| 9         |                 |                                                       |                          |                       |                             |                                                  |
| 10        |                 |                                                       |                          |                       |                             |                                                  |

## **ACKNOWLEDGEMENT**

*M/s. Global Mining Solutions, Salem is very much thankful Thiru.R.Sathish S/o. Ramoorthy, Lessee for the confidence and trust placed on the organization for carrying out Environmental Impact Assessment (EIA) study for the proposed Rough Stone quarry over a lease extent of 2.02.40 Ha., & Cluster extent of 8.29.90 Ha., located at Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State and formulating the Environmental Management Plan (EMP). We also gratefully acknowledge the cooperation and assistance provided by concerned government authorities for collection of secondary information for the preparation of Draft EIA/EMP report. Our sincere thanks to the local people of Paravakkal Village and the nearby villages for their whole hearted cooperation and constant involvement during the entire field study without which the study would not have been possible.*

*For: M/s. Global Mining Solutions*



(M. Prabu)

Managing Director

### **UNDERTAKING**

*In line with MoEF OM No. J – 11013/41/2006-IA.II (I) dated 5<sup>th</sup> October 2011, we hereby give our undertaking for owning the content and information in the EIA/EMP report submitted for EC of the proposed Rough Stone quarry over a lease extent of 2.02.40 Ha., & Cluster extent of 8.29.90 Ha located at Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State.*

*For: M/s. Global Mining Solutions*



*Name: M.Manikandan*

*EIA Coordinator – Mining*



## **UNDERTAKING**

*In Line with OM no. J-11013/41/2006-IA.II (1) dated 4<sup>th</sup> Aug 2009 and its Amendments, we hereby confirm that all Terms of Reference issued by Ministry of Environment, Forest and Climate Change vide ToR Identification No. TO25B0108TN5803895N (F.No. 12350), dated 30.07.2025 of Draft EIA/EMP report for the proposed Stone Quarry over a lease extent of 2.02.40 Ha., & Cluster extent of 8.29.90 Ha., located at Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State for the production of 2,42,660m<sup>3</sup> (10 years) of Rough Stone formation from the proposed lease area and the details has been complied in the Draft EIA/EMP report is factually correct.*

*The EIA/EMP report has been prepared by M/s. Global Mining Solutions (GMS), Salem. GMS is a NABET accredited consultant for preparation of EIA/EMP report of Mining of Minerals (Opencast & Under Ground Mining) vide certificate No. NABET/EIA/23-26/SA 0241, valid till 04.01.2026.*

*For: M/s. Global Mining Solutions*



*Name: M.Manikandan*

*EIA Coordinator – Mining*

PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.



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**National Accreditation Board for Education and Training**

**Certificate of Accreditation**

**Global Mining Solutions**  
Plot No - 6 SF No 13/2 A2, VS City, RC Chettypatty, Kottamettupatty, Omalur,  
Salem, Tamil Nadu-636455

The organization is accredited as **Category-A** under the QCI-NABET Scheme for Accreditation of EIA Consultant Organization, Version 3: for preparing EIA/EMP reports in the following Sectors-

| S. No | Sector Description                                        | Sector (as per) |           | Cat. |
|-------|-----------------------------------------------------------|-----------------|-----------|------|
|       |                                                           | NABET           | MoEFCC    |      |
| 1     | Mining of minerals including opencast/ underground mining | 1               | 1 (a) (i) | A    |
| 3     | Thermal power plants                                      | 4               | 1 (d)     | B    |
| 5     | Metallurgical industries (ferrous)                        | 8               | 3 (a)     | A    |
| 6     | Cement Plants                                             | 9               | 3 (b)     | A    |
| 26    | Building and construction projects                        | 38              | 8 (a)     | B    |
| 27    | Townships and Area development projects                   | 39              | 8 (b)     | B    |

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in SAAC minutes dated May 20, 2025, posted on QCI-NABET website.

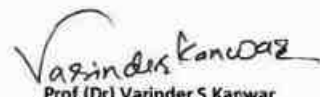
The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACO/25/3638 dated May 30, 2025. The accreditation needs to be renewed before the expiry date Eco Chem Sales and Services, Surat following due process of assessment.

Valid up to  
January 4, 2026



Certificate No.  
NABET/EIA/23-26/SA 0241

Issue Date  
May 30, 2025

  
Prof (Dr) Varinder S Kanwar  
CEO - NABET

For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to QCI-NABET website.

## **DECLARATION BY EXPERTS**

*Declaration by Experts contributing to the proposed Stone Quarry over a lease extent of 2.02.40 Ha., & Cluster extent of 8.29.90 Ha., located at Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State.*

*I, hereby, certify that I was a part of the EIA team that developed the above EIA.*

EIA Coordinator Name: M. Manikandan

M. MANIKANDAN  
  
EIA CO-ORDINATOR  
GLOBAL MINING SOLUTIONS  
SALEM

*Period of involvement: March 2025 to May 2025.*

### **Contact information:**

**M/s Global Mining Solutions**

**Plot No.6, SF No. 13/2, A2, VS City, RC Chettypatty,**

**Kottamettupatty, Omalur,**

**Salem, Tamil Nadu – 636 455**

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

| <b>S. No.</b> | <b>Functional areas</b> | <b>Name of the expert/s</b> | <b>Involvement (period and task**)</b>                                                                                                                                                                  | <b>Signature and Date</b> |
|---------------|-------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 1             | AP                      | Dhanalakshmi Ramanathan     | Assessment of existing air quality, Impact of the project on ambient air and suggested mitigation measures for air pollution.<br><br><u>Period: March 2025 to May 2025.</u>                             | R. Dhanu                  |
| 2             | WP                      | Abirami Kaliaperumal        | Assessment of existing water quality, impact of the project on surface and ground water quality, suggested mitigation measures for minimizing the impact.<br><br><u>Period: March 2025 to May 2025.</u> | K. Abirami                |
| 3             | SHW                     | Ramadoss N                  | Assessment of waste generated from the project, suggested waste management practices.<br><br><u>Period: March 2025 to May 2025.</u>                                                                     | C. Ramadoss               |
| 4             | SE                      | Sarasvathy K                | Baseline SE studies. Data compilation and assessment. Impact of the project on SE status of the area. Formulation of CER plan.<br><br><u>Period: March 2025 to May 2025.</u>                            | K. Sarasvathy             |
| 5             | EB                      | Saravanan S                 | Baseline data collection of related to ecology of the area.<br><br><u>Period: March 2025 to May 2025.</u>                                                                                               | S. Saravanan              |
| 6             | HG                      | Ravinthiran N               | Hydrogeological feature of the area. Ground water depth and impact of project on ground water of the area.<br><br><u>Period: March 2025 to May 2025.</u>                                                | N. Ravinthiran            |
| 7             | AQ                      | Srilatha                    | Air quality modeling utilizing                                                                                                                                                                          | T. Srilatha               |

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|    |     |                         |                                                                                                                                                                                                               |               |
|----|-----|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
|    |     | Thiruveedhula           | the area source model. Predication of the ground level concentration of the dust. Suggesting suitable mitigation measures.<br><u>Period: March 2025 to May 2025.</u>                                          |               |
| 8  | NV  | Dhanalakshmi Ramanathan | Ambient noise study of the area. Incremental noise generation due to quarry operation and impact of the noise due to the project.<br><u>Period: March 2025 to May 2025.</u>                                   | R. Dhanu      |
| 9  | LU  | Srilatha Thiruveedhula  | Preparation of land use map based on satellite imagery. Land use classification and analysis. Impact prediction of the project on the surrounding land environment.<br><u>Period: March 2025 to May 2025.</u> | T. Srilatha   |
| 10 | RH  | S.V. Prashant           | Identification of the Risk related to the mining activities. Preparation of emergency disaster management plan. Plan for supply of safety equipment for the worker.<br><u>Period: March 2025 to May 2025.</u> | S. Prashant   |
| 11 | SC  | Shisupal Sing           | Soil monitoring, secondary data collection on soil type, soil management practices, utilization of topsoil.<br><u>Period: March 2025 to May 2025.</u>                                                         | Shisupal Sing |
| 12 | GEO | Valliappan Meyyappan    | Geological map, stability of quarry and dump, management plan for mine stability, after use of mining quarry and geological feature of the area.<br><u>Period: March 2025 to May 2025.</u>                    | V. Meyyappan  |

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# **COMPLIANCE TO** **TERMS OF REFERENCE**

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

| S.No                                 | ToR Points                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Reply  | Pg. No |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|
| <b>1. Seiaa Specific Conditions:</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |        |        |
| 1.1                                  | The Authority noted that the subject was placed in the 587th meeting of SEAC-I held on 07.07.2025. After detailed discussions, the Authority accepts the recommendation of SEAC-I and decided to grant Terms of Reference (ToR) along with Public Hearing for the quantity of 2,42,660 cu.m of Rough stone upto the depth of 45 m AGL as per the approved mining plan, under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC-I & normal conditions & the conditions mentioned below.                                                                                                                                                 | Agreed | -      |
| 2                                    | <b>SEAC Conditions - Site Specific</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |        |
| 2.1                                  | 1. A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of statutory personnel, appropriate environmental monitoring, good maintenance of haul roads and village/panchayat roads, authorized blasting operation etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal:<br>(i) Copy of the agreement forming CMC.<br>(ii) The Organisation chart of the Committee with defining the role of the members<br>(iii) The 'Standard Operating Procedures' (SoP) executing the planned activities.<br>2. The PP shall ensure the | Agreed | -      |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                     |                        |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------|
|          | installation of CCTV at the proposed quarry site and ensure its inclusion during the EIA presentation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                     |                        |
| <b>3</b> | <b>SEAC Standard Condition</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                     |                        |
| 1        | <p>In the case of existing/operation mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following:</p> <ul style="list-style-type: none"> <li>(i) Original pit dimension</li> <li>(ii) Quantity achieved Vs EC Approved Quantity</li> <li>(iii) Balance Quantity as per Mineable Reserve calculated</li> <li>(iv) Mined out Depth as on date Vs EC Permitted depth</li> <li>(v) Details of illegal/illicit mining</li> <li>(vi) Violation in the quarry during the past working</li> <li>(vii) Quantity of material mined out outside the lining lease area</li> <li>(viii) Condition of Safety zone/benches</li> <li>(ix) Revised/Modified Mining Plan showing the benches of not exceeding 6m height and ultimate depth of not exceeding 50m.</li> </ul> | The applied lease is fresh project. | -                      |
| 2        | Details of habitations around the proposed mining area and latest VAO Certificate regarding the location of habitations within 300m radius from the periphery of the site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Complied.                           | Enclosed as Annexure 5 |
| 3        | The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories,                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Complied.                           |                        |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                       |     |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----|
|   | sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                       |     |
| 4 | The PP shall submit a detailed hydrogeological report indicating the impact of proposed quarrying operations on the water bodies like lake, water tanks, etc are located within 1 km of the proposed quarry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | The study is under progress. It will be incorporated in the final EIA & EMP.                                          | -   |
| 5 | The Project Proponent shall carry out Bio-diversity study through reputed institution and the same shall be included in the EIA report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Complied. The biodiversity report of the study area to be incorporated at the time of final EIA submission.           | 117 |
| 6 | The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries. Tiger reserve etc. upto a radius of 25 km from the proposed site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | The DFO letter stating that the proximity distance of RF & PF to be incorporated at the time of final EIA submission. | -   |
| 7 | In case of proposed lease in an existing (or old) quarry where the benches are not formed(or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic institutions-CSIR Central Institute of Mining & Fuel Research/Dhanbad, NIRM/ Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Suratkal and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining | -                                                                                                                     | -   |



**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|    |                                                                                                                                                                                                                                                                                            |                                                                     |   |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---|
|    | the EC.                                                                                                                                                                                                                                                                                    |                                                                     |   |
| 8  | However, in case of the fresh/virgin quarries, the project shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30m below ground level.                                  | It will be complied at the timing of EC appraisal.                  | - |
| 9  | The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent                         | Affidavit will be incorporated in the Final EIA Report              | - |
| 10 | The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site | Agreed. Will be complied.                                           | - |
| 11 | The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.                                                                           | The details to be incorporated at the time of final EIA Submission. | - |
| 12 | If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines                                                                                                  | The applied lease is fresh project.                                 | - |
| 13 | What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?                                                                                                                                                                    | The applied lease is fresh project.                                 | - |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                        |                                                               |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| 14 | <p>Quantity of minerals mined out.</p> <ul style="list-style-type: none"> <li>• Highest production achieved in any one year.</li> <li>• Detail of approved depth of mining.</li> <li>• Actual depth of the mining achieved earlier.</li> <li>• Name of the person already mined in that leases area.</li> <li>• If EC and CTO already obtained, the copy of the same shall be submitted.</li> <li>• Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches</li> </ul> | The applied lease is fresh project.                                                                                                                                                                                                                                                                                                                                                    | -                                                             |
| 15 | All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).                                                                                                                                                                   | <p>Project coordinates superimposed in satellite imagery and given as Figure No – 2.2 in Chapter – 3.</p> <p>The geology and geomorphology map are provided in Figure No.3.24, 3.25 Chapter 3.</p> <p>The Soil map is provided under Figure No. 3.26, Chapter-3.</p> <p>The 10km Radius Index plan showing buffer zone is given in Figure No.3.1 &amp; Figure 3.2a in Chapter – 3.</p> | <p>64</p> <p>135 &amp; 136</p> <p>137</p> <p>93</p> <p>97</p> |
| 16 | The PP shall carry out Drone video survey covering the cluster, green belt, fencing etc.,                                                                                                                                                                                                                                                                                                                                                                                                                                 | The applied lease is fresh project.                                                                                                                                                                                                                                                                                                                                                    | -                                                             |
| 17 | The proponent shall furnish photographs of adequate fencing, greenbelt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan                                                                                                                                                                                                                                                                        | <p>There are no trees within ML area. Fencing and plantations are under process.</p> <p>Greenbelt / Plantation will be carried out in the safety zone to enhance the vegetative growth and aesthetic in the safety zone area. In the post mining stage, an area of 0.52.80 Ha will be under greenbelt and plantation.</p>                                                              | -                                                             |
| 18 | The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity,                                                                                                                                                                                                                                                                                                                                                                                                   | The geological reserves are estimated to be rough stone 6,83,760m <sup>3</sup>                                                                                                                                                                                                                                                                                                         | 76                                                            |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                        |     |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----|
|    | proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding, environment and the remedial measures for the same.                                                                                                                                                                                                                                                                                                                                                                                                                                   | The mineable reserves of rough stone 2,42,660m <sup>3</sup>                                                            |     |
| 19 | The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act'1952 and the MMR" 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.                                                                                                                                                                                                                                             | Complied. Please refer Fig. 10.1                                                                                       | 188 |
| 20 | The Project Proponent shall conduct the Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD/TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitoring data, it may clearly be shown whether working all intersect ground water. Necessary data and documentation in this regard may be provided. | The hydrogeological study from a reputed institute is in progress and it will be incorporated in the final EIA report. | -   |
| 21 | The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality& flora/fauna including traffic/vehicular movement study.                                                                                                                                                                                                                                                                                                                                                                          | The baseline data for all environments is collected for the Summer season (March to May 2025).                         | 95  |

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|    |                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                     |     |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 22 | The Proponent shall carry out the cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of air pollution, water pollution, & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.                                                             | Detailed cumulative impact study has been carried and the same is incorporated in the Chapter 4.<br><br>Accordingly, a detailed Environment Management Plan is prepared considering air, water, noise and soil environment and the details are given in Chapter 10. | 184 |
| 23 | Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.                                                                                                                                                                                                                                                                                                             | Rain water harvesting Plan is given in chapter 4.                                                                                                                                                                                                                   | -   |
| 24 | Land use of the study area delineating forest area, agricultural land, grazing land. Wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given. | Satellite imagery has been used to study the lease area and the details of land use is given in Chapter 3.                                                                                                                                                          | 119 |
| 25 | Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area distance from mine lease, its land use, R&R issues, if any, should be provided.                                                                                                                                                                                                                               | Not applicable.<br>There is no generation of the OB & waste.                                                                                                                                                                                                        | -   |
| 26 | Proximity to Areas declared as 'Critically Polluted'(or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured                                                                                                                   | No proximity to Critically polluted areas.                                                                                                                                                                                                                          | -   |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|    |                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                             |     |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|    | and furnished to the effect that the proposed mining activities could be considered.                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                             |     |
| 27 | Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.                                                                                                                                                                                                                 | The impact of the mining operations due to this quarry on water environment is studied and mitigation measures are proposed. Rain water harvesting plan is given Chapter 4. | -   |
| 28 | Impact on local transport infrastructure due to the Project should be indicated                                                                                                                                                                                                                                                                                                                        | Since the production is very less, only few trucks of 5/10T will be used for transport. The effect of transport on local transport will be negligible.                      | -   |
| 29 | A tree survey shall be carried out (Nos. name of species, age, diameter, etc) both within the mining lease applied area & 300m buffer zone and its management during mining activity                                                                                                                                                                                                                   | There are no trees within 300m buffer zone of the project area.                                                                                                             | -   |
| 30 | A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific                                                                                                                                                                                                                                                                                | Detailed mine closure plan is given in Chapter 7.                                                                                                                           | 179 |
| 31 | As part of the study of flora and fauna around the vicinity of the proposed site, the EIA Coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, where ever possible                                                                                                                                             | Accepted. It will be done.                                                                                                                                                  | -   |
| 32 | The purpose of green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix - I in consultation with the DFO, State Agriculture University and local school/college authorities. The plant species with | Green belt is proposed in an area of 0.52.80 ha. Green belt development plan provided.                                                                                      | 143 |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|    |                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                             |     |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----|
|    | dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.                                                                                                                                                                                                                                                        |                                                                                                                                             |     |
| 33 | Taller/one year old saplings raised in appropriate size of bags; preferably eco-friendly bags should be planted as per the advice of local forest authorities/botanist/horticulturist with regard to site-specific choices. The proponent shall earmark the green belt area with GPS coordinates all along the boundary of the project site with at least 3 m wide and in between blocks in an organized manner | Accepted. The photographs showing green belt will be provided once it is completed.                                                         | -   |
| 34 | A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.                                                                                                                                                                                                                                             | A disaster management plan is prepared and the details are given in Chapter 7.                                                              | 177 |
| 35 | A risk assessment and Management plan shall be prepared and included in the EIA/EMP report for the complete life of the proposed quarry or till the end of the lease period                                                                                                                                                                                                                                     | Risk assessment and its management is given in Chapter 7.                                                                                   | 173 |
| 36 | Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.                      | Occupational Health Impacts of the project and preventive measures are detailed under Chapter 4.                                            | 164 |
| 37 | Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed                                                                                                                                                                                                                                                      | No major impact on public health will be there since the villages are located more than 1km from the lease area. Details of CER and CSR are | -   |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|    |                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                       |     |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-----|
|    | remedial measures should be detailed along with budgetary allocations.                                                                                                                                                                                                                                                                               | discussed under Chapter No. 8                                                                                         |     |
| 38 | The Socio-economic studies should be carried out within a 5km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation. | Socio economic study is conducted both by visits and secondary data collection.<br><br>Details are given in Chapter 3 | 128 |
| 39 | Details of litigation pending against the project, if any, with direction /order passed by any Court of law against the Project should be given.                                                                                                                                                                                                     | No litigation is pending                                                                                              | -   |
| 40 | Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.                                                                                                                                                            | Benefits of the project is given in Chapter 8                                                                         | 181 |
| 41 | If any quarrying operations were carried out in the proposed quarrying site for which now EC is sought, the project proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF & CC, Regional Office, Chennai or the concerned DEE/TNPCCB.            | Not applicable. The applied lease area is fresh quarry.                                                               | -   |
| 42 | The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.                                                                                                                                                                                                  | -                                                                                                                     | -   |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|                                         |                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                              |   |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 43                                      | Concealing any factual information or submission of false/fabricated data and failure to comply with any of the condition mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986 | Agreed                                                                                                                                                                                                                                                       | - |
| <b>4.0 Cluster Management Committee</b> |                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                              |   |
| 1                                       | Cluster management committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.                                                                                                              | There are three quarries (1 - Existing + 3 Proposed) within a 500-metre radius. The proponent will take the initiative to form a cluster management committee once environmental clearance is obtained for this quarry as well as the other proposed quarry. | - |
| 2                                       | The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,                                                                                        | Agreed. Will be complied.                                                                                                                                                                                                                                    | - |
| 3                                       | The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.                                                                                                    | Agreed. The list of members of the committee formed will be submitted to AD/mines after obtaining Environmental Clearance.                                                                                                                                   | - |
| 4                                       | Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.                                      | Agreed. Details of the Operation plan for cluster mining operations will be submitted once we get environmental clearance for all quarries proposed in the cluster area.                                                                                     | - |
| 5                                       | The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the                                                   | Risk management plan for the individual quarry is given in this report. As far as cluster working condition is concerned, once the committee is formed, risk management as a cluster including inundation of clusters                                        | - |



**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|                                            |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                           |     |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                                            | cluster and evacuation plan.                                                                                                                                                                                                                                                                    | and the evacuation plan will be elaborated and the same will be submitted to the EIA.                                                                                                                                                                                     |     |
| 6                                          | The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the Environmental policy devised shall be given in detail in the EIA Report. | Environmental policy for the cluster will be framed by the cluster management committee and the policy will be in accordance with EPA Act, 1986 and its amendments, guidelines by MoEF&CC/SEIAA and other regulatory bodies. This policy will be displayed in the quarry. | -   |
| 7                                          | The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.                                                                                                                                | Agreed. It will be complied as mentioned in the Point No.4                                                                                                                                                                                                                | -   |
| 8                                          | The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public in the vicinity.                                                                                                                                                   | Agreed. It will be complied as mentioned in the Point No.4.                                                                                                                                                                                                               | -   |
| <b>Agriculture &amp; Agro-Biodiversity</b> |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                           |     |
| 9                                          | Impact on surrounding agricultural fields around the proposed mining Area.                                                                                                                                                                                                                      | Agreed. It is described in the point no. 12 (e) of this ToR Compliance Annexure-B                                                                                                                                                                                         | -   |
| 10                                         | Impact on soil flora & vegetation around the project site.                                                                                                                                                                                                                                      | Complied. The details are given in Chapter 3.                                                                                                                                                                                                                             | 116 |
| 11                                         | Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.                                                             | Complied. The details are given in Chapter 3.                                                                                                                                                                                                                             | 117 |
| 12                                         | The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.                                                                                               | Complied. The details are given in Chapter 3.                                                                                                                                                                                                                             | 117 |
| 13                                         | Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and                                                                                                                                                                    | The detailed action plan has been described in the EMP (Chapter 10) for the sustainable management for the project area                                                                                                                                                   | 117 |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|                |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                           |     |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                | services.                                                                                                                                                        | and its surroundings.                                                                                                                                                                                                                                                                                                                                                                                                     |     |
| 14             | The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.            | Complied. The details are given in Chapter 4.                                                                                                                                                                                                                                                                                                                                                                             | 117 |
| <b>Forests</b> |                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                           |     |
| 15             | The project proponent shall detailed study on impact of mining on Reserve Forests free ranging wildlife.                                                         | There is Pallalakuppam Extn R.F1- 1.26 km(NW), Pallalakuppam R.F. – 5.53 km (SW),Pallalakuppam Extn R.F2- 1.89 km(S), Gundlapalli R.F – 4.28 km (NW), Sanankuppam R.F – 7.56 km (SE) Pallalakuppam Extn R.F – 1.3km(NW), Gundlapalli R.F – 4.2 km (NW), Sanankuppam R.F – 7.5km (SE) and no other reserved forest located in the buffer zone. The fauna commonly found in the core and buffer zone is given in Chapter 3. | 91  |
| 16             | The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.                    | Complied. The details are given in Chapter 3.                                                                                                                                                                                                                                                                                                                                                                             | 117 |
| 17             | The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.         | Not Applicable. This is a dry barren land.                                                                                                                                                                                                                                                                                                                                                                                | -   |
| 18             | The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site. | There is Pallalakuppam Extn R.F1- 1.26 km(NW), Pallalakuppam R.F. – 5.53 km (SW),Pallalakuppam Extn R.F2- 1.89 km(S), Gundlapalli R.F – 4.28 km (NW), Sanankuppam R.F – 7.56 km (SE) Pallalakuppam Extn R.F – 1.3km(NW), Gundlapalli R.F – 4.2 km (NW), Sanankuppam R.F – 7.5km (SE) and no other reserved forest located in the buffer zone. There is no, National Parks, Corridors and Wildlife pathways.               | -   |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

**Water Environment**

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                        |     |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 19 | Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period. | The hydrogeological study from a reputed institute is in progress and it will be incorporated in the Final EIA report.                                                                                                 |     |
| 20 | Erosion Control measures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | There is no waste generation (OB) in this quarry has been envisaged. However, there may be erosion due to rainy season and that is limited within quarry area. The control measures are explained in Chapter 4.        |     |
| 21 | Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas.                                                                                                                                                                                                                                                                                                                                | Complied. The details are incorporated in Chapter 4.                                                                                                                                                                   |     |
| 22 | The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.                                                                                                                                                                                                                                                                                                                                                                                            | Not applicable.                                                                                                                                                                                                        | -   |
| 23 | The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities.                                                                                                                                                                                                                                                                                                                                                                             | Fragmentation impact on environment may be due to drilling and blasting. The anticipated impacts and mitigation measures are discussed in Chapter 4.                                                                   |     |
| 24 | The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land                                                                                                                                                                                                                                                                                         | An ecological and biodiversity study has been conducted and the same is incorporated in the Chapter 3 of the Draft EIA/EMP report. However, there are no any features mentioned in this condition within the M.L area. | 117 |

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|                       |                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                    |     |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                       | form changes visual and aesthetic impacts.                                                                                                                                                                                                                                                | However, the impacts anticipated with respect to the environment of the project area are very negligible and it will be minimized within the project area. The details are described in Chapter 3. |     |
| 25                    | The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.                                                                                                                                    | Agreed.                                                                                                                                                                                            | -   |
| 26                    | The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.                                                                                                                                                                       | Complied. The details are described in Chapter 3.                                                                                                                                                  | 92  |
| 27                    | The EIA shall include the impact of mining activity on the following:<br>a) Hydrothermal/Geothermal effect due to destruction in the Environment.<br>b) Bio-geochemical processes and its foot prints including Environmental stress.<br>c) Sediment geochemistry in the surface streams. | Complied. The details are described in Chapter 3.                                                                                                                                                  | 92  |
| <b>Energy</b>         |                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                    |     |
| 28                    | The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilize the Energy shall be furnished.                                                                                                                                                     | Complied. The details are described in Chapter 4.                                                                                                                                                  | 141 |
| <b>Climate Change</b> |                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                    |     |
| 29                    | The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.            | Complied. The details are described in Chapter 4.                                                                                                                                                  | 141 |
| 30                    | The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and                                                                                                                          | Complied. The details are described in Chapter 4.                                                                                                                                                  | 141 |

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|                                 |                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                              |     |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----|
|                                 | physical, chemical & Biological soil features.                                                                                                                                                                                                                                                                                                                                          |                                                                                                                              |     |
| 31                              | Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood.                                                                                                                                                                                                                                                                             | Complied. The details are described in Chapter 4.                                                                            | 141 |
| <b>Mine Closure Plan</b>        |                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                              |     |
| 32                              | Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.                                                                                                                                                                                                                                                                        | Complied. Mine Closure Plan has been incorporated in the approved Mining Plan and the same is incorporated in the Chapter 7. | 179 |
| <b>EMP</b>                      |                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                              |     |
| 33                              | Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.                                                                                                                                                                                                      | Complied. The details are described in Chapter 10.                                                                           | 184 |
| 34                              | The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.                                                                                                                                                                                                                  | Complied. The details are described in Chapter 10.                                                                           | 190 |
| <b>Risk Assessment</b>          |                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                              |     |
| 35                              | To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.                                                                                                                                                                                                                                          | Complied. The details are described in Chapter 7.                                                                            | 174 |
| <b>Disaster Management Plan</b> |                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                              |     |
| 36                              | To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued. | Complied. The details are described in Chapter 7.                                                                            | 177 |
| <b>Others</b>                   |                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                              |     |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|                                                             |                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                 |   |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---|
| 37                                                          | The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.                                                             | -                                                                                                                               | - |
| 38                                                          | As per the MoEF& CC office memorandum F.NO.22-65/2017-1A.11I dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.                                                                        | Noted. It will be complied in the Final EIA/EMP report.                                                                         | - |
| 39                                                          | The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.                   | Nil                                                                                                                             | - |
| <b>Standard Terms of Reference for (Mining of minerals)</b> |                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                 |   |
| 1.1                                                         | Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994 | This is a new project. No mining has been carried out in this lease area so far by the proponent.                               | - |
| 1.2                                                         | A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given                                                                                                                                                                                                                   | Precise Area Communication letter received from the Assistant Director, Department of Geology and Mining, Vellore. (Annexure-2) | - |
| 1.3                                                         | All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine                                                                                                                                                                                                         | Complied. All the documents in the name of the lessee.                                                                          | - |

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|     |                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                    |                                                    |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
|     | lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                    |                                                    |
| 1.4 | All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the areashould be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone)                                       | Project coordinates superimposed in satellite imagery and given as Figure No – 2.1 in Chapter – 2.<br>The geology and geomorphology map are provided in Figure No.3.24, 3.25 Chapter 3.<br><br>The Soil map is provided under Figure No. 3.26, Chapter-3.<br>The 10km Radius Index plan showing buffer zone is given in Figure No.3.1 & Figure 3.2 in Chapter – 3. | 64<br><br>135 & 136<br><br>137<br><br>93<br><br>97 |
| 1.5 | Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics                                                                                | Land Use Pattern of 10 km Radial Buffer Area of Project Site is given page chapter-3.                                                                                                                                                                                                                                                                              | 119                                                |
| 1.6 | Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority                                                                                                      | Not Applicable.<br>The proposed land is Government Poramboke Land.                                                                                                                                                                                                                                                                                                 | -                                                  |
| 1.7 | It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The | Environmental policy for the cluster will be framed by the cluster management committee and the policy will be in accordance with EPA Act, 1986 and its amendments, guidelines by MoEF&CC/SEIAA and other regulatory bodies. This policy will be displayed in the quarry.                                                                                          | -                                                  |

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|      | hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of noncompliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.                                                     |                                                                                                                                  |     |
| 1.8  | Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided                                                                                                                                                                                      | Risks are identified and the management is given in Chapter 7.                                                                   | 173 |
| 1.9  | The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.                                                                                                                                                                                                                                | The study area of 10km comprising core zone and buffer zone is used for the study. All details given in Chapter – 3.             | 90  |
| 1.10 | Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given | Satellite imagery has been used to study land use and the details of land use in the core and buffer zone is given in Chapter 3. | 97  |
| 1.11 | Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given                                                                                                                                                                                                                                                          | The entire material quarried out will be sold. No waste generation from this quarrying operation.                                | -   |



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|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1.12 | A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the State Expert Appraisal Committees | There is Pallalakuppam Extn R.F1- 1.26 km(NW), Pallalakuppam R.F. - 5.53 km (SW),Pallalakuppam Extn R.F2- 1.89 km(S), Gundlapalli R.F - 4.28 km (NW), Sanankuppam R.F - 7.56 km (SE) Pallalakuppam Extn R.F - 1.3km(NW), Gundlapalli R.F - 4.2 km (NW), Sanankuppam R.F - 7.5km (SE) and no other reserved forest located in the buffer zone. The fauna commonly found in the core and buffer zone is given in Chapter 3.                                                                        | 92 |
| 1.13 | Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished                                                                                                                                                                                                                                                                                                                                                                   | There is Pallalakuppam Extn R.F1- 1.26 km(NW), Pallalakuppam R.F. - 5.53 km (SW),Pallalakuppam Extn R.F2- 1.89 km(S), Gundlapalli R.F - 4.28 km (NW), Sanankuppam R.F - 7.56 km (SE) Pallalakuppam Extn R.F - 1.3km(NW), Gundlapalli R.F - 4.2 km (NW), Sanankuppam R.F - 7.5km (SE) and no other reserved forest located in the buffer zone. The fauna commonly found in the core and buffer zone is given in Chapter 3.<br><br>Forest clearance submitted at the time of final EIA submission. | 92 |
| 1.14 | Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Not Applicable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -  |

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|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 1.15 | The vegetation in the RF / PF areas in the study area, with necessary details, should be given                                                                                                                                                                                                                                                                                                                                                                                                                                         | There is Pallalakuppam Extn R.F1- 1.26 km(NW), Pallalakuppam R.F. - 5.53 km (SW),Pallalakuppam Extn R.F2- 1.89 km(S), Gundlapalli R.F - 4.28 km (NW), Sanankuppam R.F - 7.56 km (SE) Pallalakuppam Extn R.F - 1.3km(NW), Gundlapalli R.F - 4.2 km (NW), Sanankuppam R.F - 7.5km (SE)  | 92  |
| 1.16 | A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted                                                                                                                                                                                                   | Not Applicable.                                                                                                                                                                                                                                                                       | -   |
| 1.17 | Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlifeand copy furnished. | There is Pallalakuppam Extn R.F1- 1.26 km(NW), Pallalakuppam R.F. - 5.53 km (SW),Pallalakuppam Extn R.F2- 1.89 km(S), Gundlapalli R.F - 4.28 km (NW), Sanankuppam R.F - 7.56 km (SE) Pallalakuppam Extn R.F - 1.3km(NW), Gundlapalli R.F - 4.2 km (NW), Sanankuppam R.F - 7.5km (SE). | 92  |
| 1.18 | A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly                                                                                                                                                                                                                                                                                                                 | Flora and fauna composition in the core and buffer zone of the project has been studied through primary field surveys. The details are furnished in Chapter 3.                                                                                                                        | 117 |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

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|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|---|
|      | authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled- I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost |                                                               |   |
| 1.19 | Proximity to Areas declared as Critically Polluted or the Project areas likely to come under the Aravali Range, (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered                                                                                | Not Applicable                                                | - |
| 1.20 | Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL. HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority)                                                                                                                                   | Not Applicable                                                | - |
| 1.21 | R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other                                                                                                                                                                                                                                                             | Not applicable. No habitation within 300 meter of the radius. |   |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                    |     |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|      | weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                    |     |
| 1.22 | One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Sitespecific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given. | Baseline data for meteorology, ambient air quality, Water quality, noise level, soil and flora & fauna are collected during Pre-Monsoon season (March 2025 to May 2025) and detailed in Chapter-3. | 95  |
| 1.23 | Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Modeling is done using AERMOD and the projected values are found to be within the norms. Hence, there is no major impact due to this                                                               | 160 |

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|      |                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                             |     |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|      | movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map. | mining project. Cumulative impact of mining is also studied and the same is found to be within norms. The details are given in Chapter 3.                                                                                                                   |     |
| 1.24 | The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated                                                                                                                                                                                               | The entire water requirement for the project is 6.0 KLD which will be sourced from outside agencies. Negligible sewage of 1.0 KLD will be generated, for which a septic tank with soak pit will be set up. The water balance diagram is shown in Chapter 2. | 146 |
| 1.25 | Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided                                                                                                                                                                                                                                                                        | Not Applicable.<br><br>The required water will be outsourced from the nearby village.                                                                                                                                                                       | -   |
| 1.26 | Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided                                                                                                                                                                                                               | Details of water conservation plan are given chapter 10.                                                                                                                                                                                                    | 146 |
| 1.27 | Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided                                                                                                                                                                                                                                  | The surface water condition and ground water condition in the study area is given in Chapter 3.                                                                                                                                                             | 140 |

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|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                               |   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1.28 | Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from State Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished       | Ground water table of the project surrounding area is 67 m AGL. So, the proposed mine working will not intersect the ground water table.                                                      | - |
| 1.29 | Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out                                                                                                                                                                                                                                                                                                                                                                                                          | Not applicable.<br><br>There is no stream, seasonal or otherwise, passing through the lease area.                                                                                             | - |
| 1.30 | Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same                                                                                                                                                                                                                                                                                                                                                                                                                                    | Details of site elevation and depth are given in Chapter 2.                                                                                                                                   | - |
| 1.31 | A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and | In the lease area, safety barrier 10 m left as safety zone. Greenbelt/Plantation will be carried out in and around the lease area to enhance the vegetative growth and aesthetic in the area. | - |

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|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                         |     |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|      | should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                         |     |
| 1.32 | Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines | This is a small quarry and the production is very less. 3 Nos. of 5T/10T tippers will be used for transport. The trips will be minimum. Hence no major impact on transport is expected. | -   |
| 1.33 | Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Onsite shelter and facilities will be provided to mine workers                                                                                                                          | -   |
| 1.34 | Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report                                                                                                                                                                                                                                                                                                                                                                                                           | The post mining land use/conceptual land use of the study area is given in Chapter 2.                                                                                                   | 82  |
| 1.35 | Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed                                                                                                                                                                                        | Occupational health and safety study is given in Para 10.1.5 of Chapter-3.                                                                                                              | 164 |

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|      |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                           |     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 1.36 | Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations                                                         | No major impact on public health will be there since the villages are located more than 1km from the lease area.                                                                                                                                                                                                          | -   |
| 1.37 | Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation                                          | This project provides employment to 25 people directly & indirectly. Local people will be hired for unskilled labour. Through CSR, nearby schools, villages will be benefitted. For CER, INR 500000 is allocated. Based on the demand of the people during public hearing, further funds will be allocated, if necessary. | -   |
| 1.38 | Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project | Environmental Management plan details are given in Chapter 10.                                                                                                                                                                                                                                                            | 184 |
| 1.39 | Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project                                   | During public hearing process, the opinions and demands of the people will be noted. The replies and commitment made by the proponent along with time bound action plan wherever applicable will be provided in Final EIA/EMP report.                                                                                     | -   |
| 1.40 | Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given                                                                                                                                          | There is no litigation pending against the project.                                                                                                                                                                                                                                                                       | -   |
| 1.41 | The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out                                                                                                                                                  | The cost details including break-up of various costs are given in Chapter 10.                                                                                                                                                                                                                                             | 190 |



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|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 1.42 | A Disaster management Plan shall be prepared and included in the EIA/EMP Report                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | The disaster and its management plan is given in Chapter-7.                                                                                                                                                                                                                                                                                                                                                                                      | 177 |
| 1.43 | Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | This project will contribute financially through payment of taxes like royalty, GST, etc. The project will also contribute via CSR. The demands of people during public hearing will also be considered by the project proponent. This project provides employment to 25 people directly. Local people will be hired for unskilled labour. Through CSR, nearby schools, hospitals will be benefitted. For CSR, INR 5.0 Lakhs has been allocated. | -   |
| 1.44 | <p>Besides the above, the below mentioned general points are also to be followed:-</p> <p>a) All documents to be properly referenced with index and continuous page numbering.</p> <p>b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.</p> <p>c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&amp;CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.</p> <p>d) Where the documents provided are in a language other than English, an English translation should be</p> | Yes, Complied.                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |

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|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|  | provided.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |
|  | <p>e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.</p> <p>f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.</p> <p>g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&amp;CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation. h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.</p> |  |  |

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VELLORE DISTRICT, TAMIL NADU STATE.**

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|  |                                                                                                                                                                                                                                                                                                                                                               |  |  |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|  | <ul style="list-style-type: none"><li>a. The EIA report should also include surface plan of the area indicating contours of main topographic features, drainage and mining area,</li><li>b. eological maps and sections and</li><li>c. sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area</li></ul> |  |  |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 PURPOSE OF THE REPORT**

Environmental Impact Assessment (EIA) is the management tool to ensure the sustainable development and it is a process, used to identify the environmental, social and economic impacts of a project prior to decision making. It is a decision-making tool, which guides the decision makers in taking appropriate decisions for any project.

EIA systematically examines both beneficial and adverse consequences of the project and ensures that these impacts are taken into account during the project designing. It also reduces conflicts by promoting community participation, information, decision makers, and helps in developing the base for environmentally sound project.

Rough Stone are the major requirements for construction industry. This EIA report is prepared by considering Cumulative load of all proposed & existing quarries located within 500 m radius of the project area.

Thiru.R.Sathish proposes to operate Rough Stone Quarry over an extent of 2.02.40 Ha Government Poramboke Land in S.F. No. 208 (Part-8) of Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State and ToR obtained vide ToR Identification No. TO25B0108TN5803895N, Dated: 30.07.2025.

This proposed project is categorized under category "B1" Activity 1(a) (mining lease area in cluster situation). This cluster includes the one existing quarry and two proposed Quarries including this proposed Quarry. The existing and proposed quarries located within 500m radius are detailed in below Table.

**Table 1.1 – Details of Quarries within 500m Radius**

| <b>S.No</b>                  | <b>Name of the Quarry Owner</b>                  | <b>S.F. Nos &amp; Village</b>     | <b>Lease Period</b>      | <b>Area in Ha</b> |
|------------------------------|--------------------------------------------------|-----------------------------------|--------------------------|-------------------|
| <b>a. Existing Quarry</b>    |                                                  |                                   |                          |                   |
| 1.                           | JPJ Stone Crusher Partner of Thiru. Janarthanan. | Paravakkal Village 208(P-4)       | 24.02.2021 to 23.02.2031 | 1.21.50           |
| 2.                           | Thiru.D. Baskaran                                | Pogalur 208 (P.3)                 | 27.06.2023 to 26.11.2033 | 1.00.00           |
| <b>b. Abandoned Quarry</b>   |                                                  |                                   |                          |                   |
| <b>NIL</b>                   |                                                  |                                   |                          |                   |
| <b>c. Expired Quarry</b>     |                                                  |                                   |                          |                   |
| 1.                           | Tmt. G. Amutha                                   | Paravakkal Gudiyatham 197/10 A    | 03.12.2013 to 02.12.2018 | 0.82.00           |
| 2.                           | Thiru.N. Govindarajan                            | Paravakkal Gudiyatham 197/8c      | 18.01.2019 to 17.01.2024 | 0.48.50           |
| <b>d. Proposed Quarry</b>    |                                                  |                                   |                          |                   |
| 1.                           | Tvl. Sri Sai Constructions                       | Paravakkal Village 208 (part – 5) | Proposed Quarry          | 2.03.00           |
| 2.                           | Thiru. J.Nareshkrishna                           | Paravakkal Village 208 (Part 6)   | Proposed Quarry          | 2.03.00           |
| 3.                           | Thiru.R.Sathish                                  | Paravakkal Village 208(P-8)       | This Proposal            | 2.02.40           |
| <b>Total Area of Cluster</b> |                                                  | <b>8.29.90 Ha</b>                 |                          |                   |

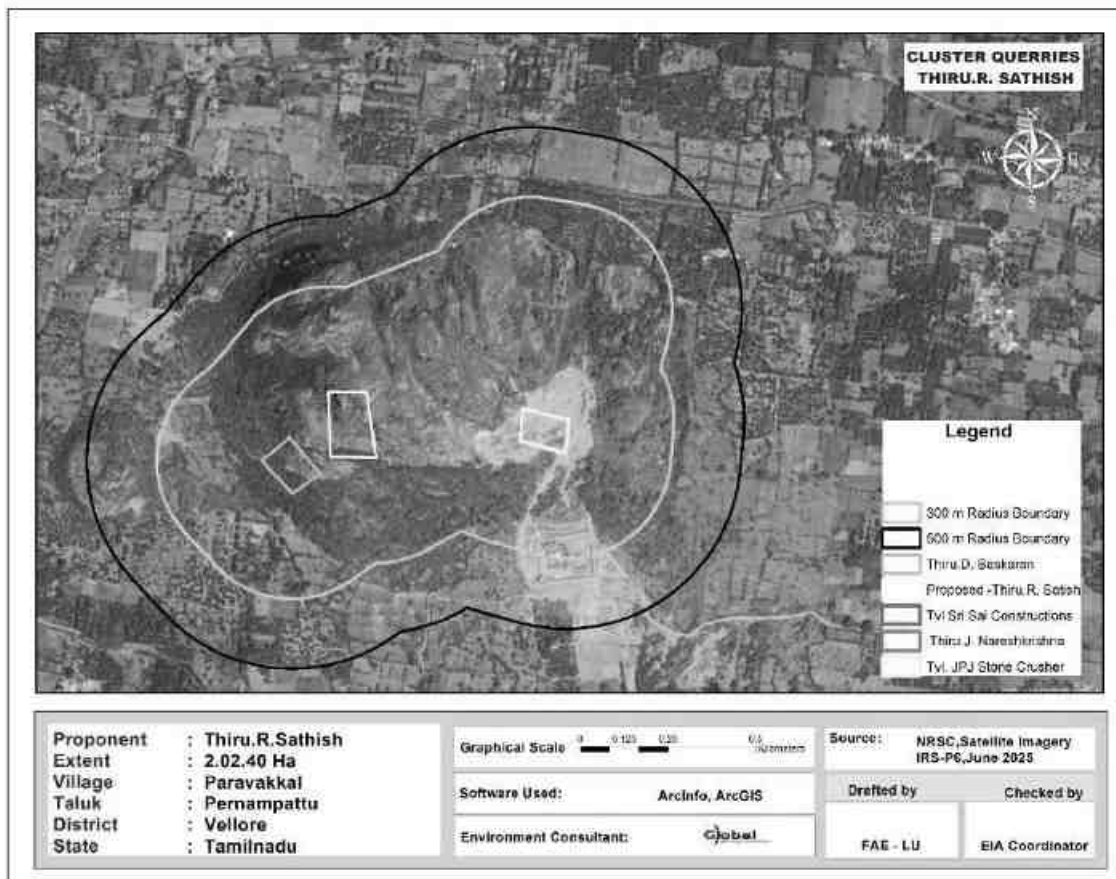
Cluster area calculated as per MoEF & CC Notification S.O. 2269(E) Dated 1<sup>st</sup> July 2016. Satellite image of Quarries in Cluster is shown in Fig 1.1.

As per MoEF&CC OM: F.No.L-11011/175/2018-IA-II(M), dated 12.12.2018, the EIA/EMP report has to be prepared for the cluster area based on ToR recommended by SEIAA. Therefore, the applicant applied for ToR through Parivesh website vide online proposal no. SIA/TN/MIN/539674/2025, Dated 31.05.2025. The ToR proposal was placed in 587th SEAC meeting, dt 07.07.2025 and 859th SEIAA meeting, dated 24.07.2025. Then ToR has been issued by the SEIAA vide ToR Identification No. TO25B0108TN5803895N, Dated: 30.07.2025 to prepare the draft EIA report as per the recommended ToR for

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

conducting Public hearing and obtaining Environmental Clearance from the SEIAA.

**Figure.1.1 Satellite Image showing cluster quarries**



## 1.2 IDENTIFICATION OF PROJECT AND PROJECT PROPONENT

### 1.2.1 IDENTIFICATION OF PROJECT

**Table -1.2 Project Identification**

|                         |                                                                            |
|-------------------------|----------------------------------------------------------------------------|
| Name of the Project     | Rough Stone Quarry of Thiru. R.Sathish                                     |
| S.F No.                 | 208 (Part-8)                                                               |
| Location of the Project | Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State. |
| Extent                  | 2.02.40 Ha                                                                 |
| Type of Land            | Government Poramboke Land                                                  |

## **1.2.2 IDENTIFICATION OF PROJECT PROPONENT**

**Table -1.3- Details of Project Proponent**

|                               |                                                                                                                 |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Name of the Project Proponent | Thiru. R.Sathish                                                                                                |
| Communication address         | S/o. Ramoorthy,<br>No.236, Kidangu Ramapuram Village,<br>Pogalur Post, Peranampattu Taluk,<br>Vellore District. |
| e-mail Address                | -                                                                                                               |
| Mobile No.                    | -                                                                                                               |

## **1.3 BRIEF DESCRIPTION OF THE PROJECT**

### **1.3.1 NATURE AND SIZE OF THE PROJECT**

The quarrying operation is proposed to be carried out by Opencast Mechanized Mining Method by jack hammer drilling, slurry blasting by forming 5.0 m bench height and 5.0 m bench width. Excavator and tippers are proposed for Loading and transportation.

**Table – 1.4 Brief Descriptions of the Project**

|                                |                                                      |
|--------------------------------|------------------------------------------------------|
| Name of the Quarry             | Rough Stone Quarry of Thiru. R.Sathish               |
| Toposheet No                   | 57 L/13                                              |
| Latitude                       | 12°54'55.26"N to 12°55'01.28"N                       |
| Longitude                      | 78°47'45.04"E to 78°47'48.74"E                       |
| The altitude of the area       | 510 m (AMSL)                                         |
| Proposed Depth of Mining       | 45 m AGL (5 Years)<br>45 m n (10 Years)              |
| Geological Resources           | 6,83,760 m <sup>3</sup>                              |
| Mineable Reserves              | 2,42,660m <sup>3</sup>                               |
| Proposed Production (10 Years) | 2,42,660m <sup>3</sup>                               |
| Ultimate pit Dimension         | 164 m (L) X 90 m (W) X 45 m (D),<br>Depth - 45 m AGL |
| Water Level in the area        | 67 m BGL                                             |
| Method of Mining               | Opencast Mechanized Mining Method involving          |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|                                          |                                                                                                                                                                                                                                                                                     |       |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|                                          | drilling and blasting                                                                                                                                                                                                                                                               |       |
| Topography                               | The area applied for quarry lease is exhibits hilly terrain covered by covered by Topsoil formation. The massive Charnockite formation is noticed below 1m (Avg) Topsoil and sloping towards Northeast side of the area, the altitude of the area is above 430m (maximum) from MSL. |       |
| Machinery Proposed                       | Jack Hammer                                                                                                                                                                                                                                                                         | 2 Nos |
|                                          | Compressor                                                                                                                                                                                                                                                                          | 1 Nos |
|                                          | Excavator with bucket and rock breaker                                                                                                                                                                                                                                              | 1 Nos |
|                                          | Tipper (5/10 T)                                                                                                                                                                                                                                                                     | 3 Nos |
| Environmental Setting within 500m Radius | Water Bodies –Nil with in 500m radius<br>Nearest Habitation - Nil within 500m Radius<br>Nearest RF -Nil within 500m Radius                                                                                                                                                          |       |
| Details of Habitation                    | Nil within 300m radius                                                                                                                                                                                                                                                              |       |
| Proposed Manpower Development            | 25 Nos                                                                                                                                                                                                                                                                              |       |
| Water Requirement                        | 6.0 KLD                                                                                                                                                                                                                                                                             |       |
| Greenbelt Development                    | The safety zone of 0.52.80 Ha will be developed with about 528 Nos. of plantation.                                                                                                                                                                                                  |       |
| Fuel Requirement                         | 1,94,128 KL of HSD (Entire ProjectLife)                                                                                                                                                                                                                                             |       |
| Project Cost                             | Rs. 281.13 Lakhs (Including operational + Fixed Asset + EMP cost).                                                                                                                                                                                                                  |       |
| EMP Cost                                 | Total EMP Cost for 10 years is 35.43 lakhs i.e., Rs. 9.14 Lakhs of Capital + Recurring cost Rs. 2.09 lakhs for ten years                                                                                                                                                            |       |
| CER Cost                                 | Rs. 5 Lakhs                                                                                                                                                                                                                                                                         |       |
| Applicability of CRZ Clearance           | Not Applicable                                                                                                                                                                                                                                                                      |       |



### 1.3.2 NATURE OF THE PROJECT

|          |                              |
|----------|------------------------------|
| Sector   | 1(a) Non-Coal Mining         |
| Type     | Fresh Project                |
| Category | B1 (Cluster Situation)       |
| Mineral  | Minor mineral of Rough Stone |

### 1.3.3 LOCATION OF PROJECT

The proposed Quarry lease area is situated at S. F. Nos. 208 (PART-8) of Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State. The area lies in the north latitude of 12°54'55.26"N to 12°55'01.28"N and Longitude: 78°47'45.04"E to 78°47'48.74"E. Location of the proposed project is shown in Figure 2.1 and the satellite imagery of the project site is shown in Fig 2.2. The details of Environmental Sensitivity within 1km radius are shown below:

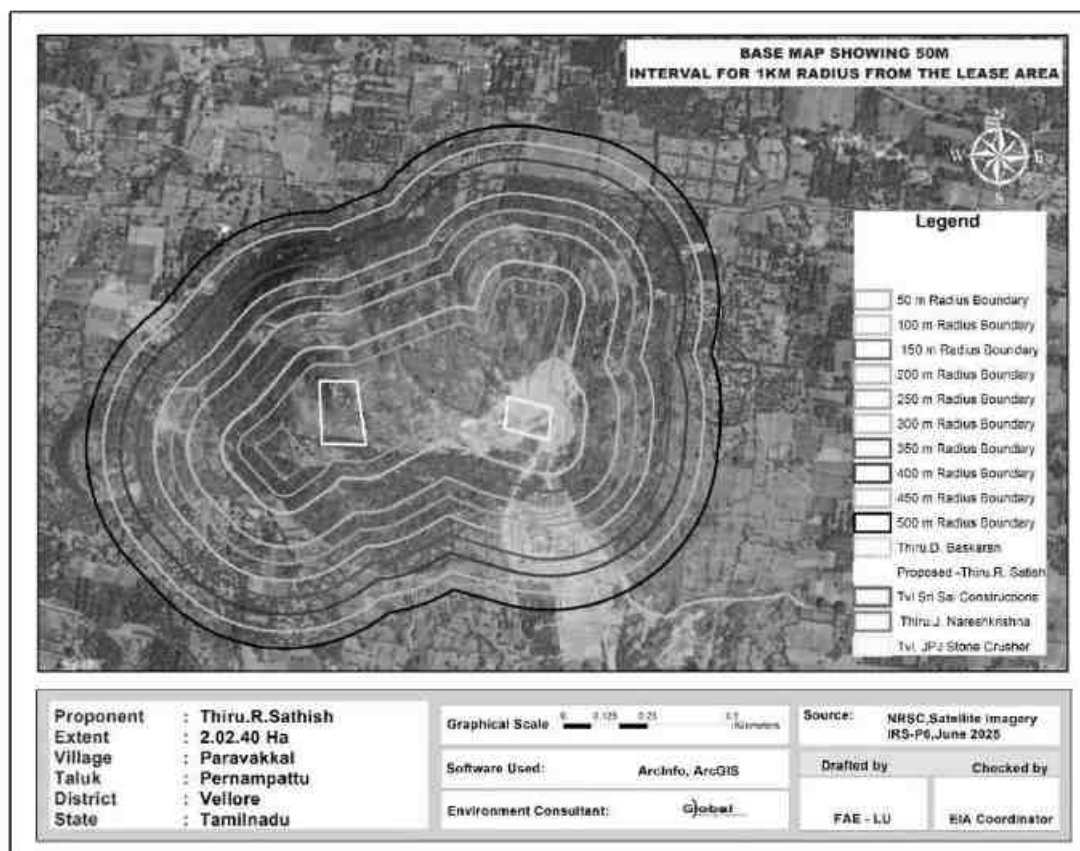


**Figure 1.2 – Environmental Settings Map**

## **1.4 IMPORTANCE OF THE PROJECT TO THE REGION**

Rough stone will continue to be a staple in construction, decoration and industry for years to come. As recycling picks up, mining and quarries may slow down, but we will always need rough stone in general construction and industry.

## **1.5 REGULATORY COMPLIANCES**

Understanding of the applicable environmental legislative framework is crucial for understanding the scope of the EIA study. With respect to prevention and control of environmental pollution, the following Acts and Rules of MoEF&CC (Ministry of Environment Forests and Climate Change), GoI (Government of India) govern the proposed project. The applicable environmental legislation for the proposed mining project is detailed below,

- Environment protection Act, 1986
- EIA Notification, 2006 & Subsequent amendments
- Water Pollution (Prevention & Control) Act, 1974
- Air Pollution (Prevention & Control) Act, 1981
- Noise Pollution (Regulation & Control) Rules, 2000
- Mines Act, 1952
- Tamil Nadu Minor Mineral Concession Rules, 1959
- Mines and Minerals (development and regulation) Act, 1957
- Minor Minerals Conservation and Development Amendment Rules 2018
- State Minor Mineral Concession Rules (GMMCR), 2017
- Explosive Act, 1884
- Explosive Rules, 2008
- Hazardous and other Wastes (management and Transboundary Movement) Rules, 2016
- Batteries (Management and Handling) Rules 2010
- Solid Waste Management Rule 2016

### 1.5.1PRESENT LEGAL STATUS

**Table 1.5 – Present Legal Status**

| Description                             | Issuing Authority                                             | Status   | Letter number                                   | Date       | Reference    |
|-----------------------------------------|---------------------------------------------------------------|----------|-------------------------------------------------|------------|--------------|
| Precise Area Communication              | Assistant Director, Department of Geology and Mining, Vellore | Received | Rc.No.<br><b>441/2024(Kanimam)</b><br>(Kanimam) | 24.04.2025 | Annexure – 2 |
| Mine Plan Approval Letter               | Assistant Director, Department of Geology and Mining, Vellore | Approved | Rc.No. 441/2024<br>(Mines)                      | 30.04.2025 | Annexure-3   |
| 500m radius Cluster Letter              | Assistant Director, Department of Geology and Mining, Vellore | Obtained | Rc.No.<br>441/2024(Mines)                       | 30.04.2025 | Annexure-4   |
| VAO NOC for features within 300m radius | VAO, Pogalur                                                  | obtained | -                                               | 26.04.2025 | Annexure-5   |

### **1.5.2 SCREENING**

As per the Environmental Impact Assessment (EIA) Notification dated 14th September 2006 and its subsequent amendments the proposed quarry mining project falls under 'Category B1(Cluster Situation)', which requires Environmental Clearance from the State Environmental Impact Assessment Authority (SEIAA). The project proponent has appointed M/s. Global Mining Solutions, Salem, who are accredited by the National Accreditation Board for Education and Training (NABET), Quality Council of India (QCI), New Delhi, under the registration number NABET/EIA/23-26/SA 0241. Their role is to carry out an Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) study in compliance with the Ministry of Environment, Forest and Climate Change (MoEF & CC) requirements.

### **1.5.3 SCOPING**

The proposal was placed in the 587<sup>th</sup> meeting of SEAC on 07.07.2025. Based on the presentation and documents furnished by the project proponent, SEAC decided to recommend the proposal for the grant of Terms of Reference (ToR) to SEIAA and SEIAA recommended ToR in its 859<sup>th</sup> meeting dated 24.07.2025.

### **1.5.4 SCOPE OF THE STUDY**

In line with the prescribed Terms of Reference (TOR), the area comprising 10 km radius around the proposed mine lease boundary is considered as the study area. The EIA/EMP report has been prepared following the generic structure specified in the EIA Notification 2006. The detailed studies have been conducted as per prescribed Standard TOR issued by SEIAA, TamilNadu vide ToR Identification No. TO25B0108TN5803895N, dated: 30.07.2025. The point wise compliance for the ToR has been incorporated in this EIA/EMP report.

The main scope of the EIA study is to quantify the cumulative impact in the study area due to cluster quarries and formulate the effective mitigation measures for this applied project area. A detailed account of the emission sources, emissions control equipment, background Air quality levels, Meteorological measurements, Dispersion

model and all other aspects of pollution like effluent discharge, Dust generation etc., have been discussed in this report. The baseline monitoring study has been carried out during the Period of March 2025 – May 2025 for various environmental components so as to assess the anticipated impacts due the cluster quarry projects on the environment and suggest suitable mitigation measures for likely adverse impacts due to this proposed project.

The scope of study broadly covered as below,

- ♦ Literature review and collection of secondary data relevant to the study area.
- ♦ Establish the baseline environmental aspects in and around the proposed project covering 10 km radius.
- ♦ Identify various existing pollution loads due to various mining activities.
- ♦ Predict incremental levels of pollutants in the study area due to the proposed operations.
- ♦ Establishing and analyzing demographic profile including sex ratio, literacy rate, SC/ST, workers classification, land use categorization, etc in the project influenced area
- ♦ Evaluate the predicted impacts on various environmental attributes in the study area by using scientifically developed and widely accepted environmental impact assessment methodologies.
- ♦ Prepare an Environment Management Plan (EMP) outlining the measures for improving the environmental quality and identify critical environmental attributes that are required to be monitored in the post-project scenario.
- ♦ To assess the impacts on human settlement in the project influence area Socio-Economic Assessment
- ♦ Cumulative impact assessment for the quarries in cluster.

## **1.6 NEED AND JUSTIFICATION OF THE PROJECT**

- Proposed mining project will fulfill the local market requirement for real estate and infrastructure industry. This project will also provide employment to local people helping them earn livelihood.
- Employment generated consequent to the mining activity in the project will be benefit local and rural population and will have multiplier effects on local economy.
- The Project will give tremendous boosts to the local and regional economy benefiting the population.
- The social benefits arising out of this proposal can be expressed in terms of increase in the standards of living of local population, educational opportunities, training and development of skills etc.

## **1.7 STRUCTURE OF THE REPORT**

As per the new guidelines of the MoEF & CC the report has been divided into the following chapters and presented as follows:

### **1. Introduction**

This chapter describes the profile of the project proponent, name and contact address with email, project consultants, the purpose of the project, brief description of the project, applicable environmental regulations, objectives and methodology for EIA studies etc.

### **2. Project Description**

This chapter gives a brief description of the project such as the type of project, need for the project, its location, approachability, layout, etc of the proposed project, the project implementation schedule, estimated cost of development etc.

### **3. Description of the Environment**

This chapter presents details of the baseline environmental status for microclimate, air quality, noise, water quality (surface and ground), soil quality, flora, fauna and socioeconomic status etc.

### **4. Anticipated Environmental Impacts & Mitigation Measures**

This chapter discusses the possible sources of pollution and environmental impacts due to the project during operation phases and suggests the mitigation measures.

### **5. Analysis of Alternatives (Site And Technology)**

This chapter discusses the analysis of the various alternatives for the technology as well as the site and gives the selection of the most feasible alternative.

### **6. Environmental Monitoring Program**

This chapter discusses the details about the environmental monitoring program during operation phases. The technical aspects of monitoring the effectiveness of mitigation measures are covered in this chapter.

### **7. Additional Studies**

This chapter covers information about the additional studies conducted for this project such as the Risk Analysis, Emergency Response and Disaster Management Plan.

### **8. Project Benefits**

This chapter presents the benefits from this project

### **9. Environmental Management Plan**

This chapter deals with the EM for the proposed sand mining projects and indicates the measures proposed to minimize the likely impacts on the environment during and operation phases and budgetary allocation for the same.

## **10. Summary and Conclusion**

This chapter deals with the overall justification for implementation of the project and explanation of how, adverse effects have been mitigated.

## **11. Disclosure of Consultant**

This chapter deals with the details of consultants engaged and the NABET accreditation details of environmental consultants.

\*\*\*\*



## **CHAPTER 2**

### **PROJECT DESCRIPTION**

#### **2.1 TYPE OF THE PROJECT**

The proposed activity is the extraction of Rough Stone quarry by open cast mechanized mining method.

This project proposed to produce 2,42,660 m<sup>3</sup> of Rough Stone for the period of 10 years with ultimate depth up to 45 m AGL.

#### **2.2 NEED FOR THE PROJECT**

Rough stone is one of the important materials for the building construction. The rough stone is used as both as coarse aggregate and fine aggregate after the proper sizing of stone. The coarse and fine aggregate are essential for preparing concrete which is used in foundation, beam, column, roof slab work of the buildings. The infrastructure is the sign of development of nation. So, it is very need to excavate the rough stone for economic and infrastructure development of our Nation.

#### **2.3 LOCATION OF THE PROJECT**

This is a Rough Stone Quarry located in Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State. The area lies in the north latitude of 12°54'55.26"N to 12°55'01.28"N and Longitude: 78°47'45.04"E to 78°47'48.74"E and toposheet number 57 L/13. Location of the proposed project is shown in Figure 2.1 the satellite imagery of the project site is shown in Figure 2.2.

This proposed project area is classified as Government Poramboke Land & does not fall within 10 km radius of any Eco – sensitive zone, Wild life Sanctuary, National Park, Tiger Reserve, Elephant Corridor and Biosphere Reserves. The M.L area details are presented in below Table.

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

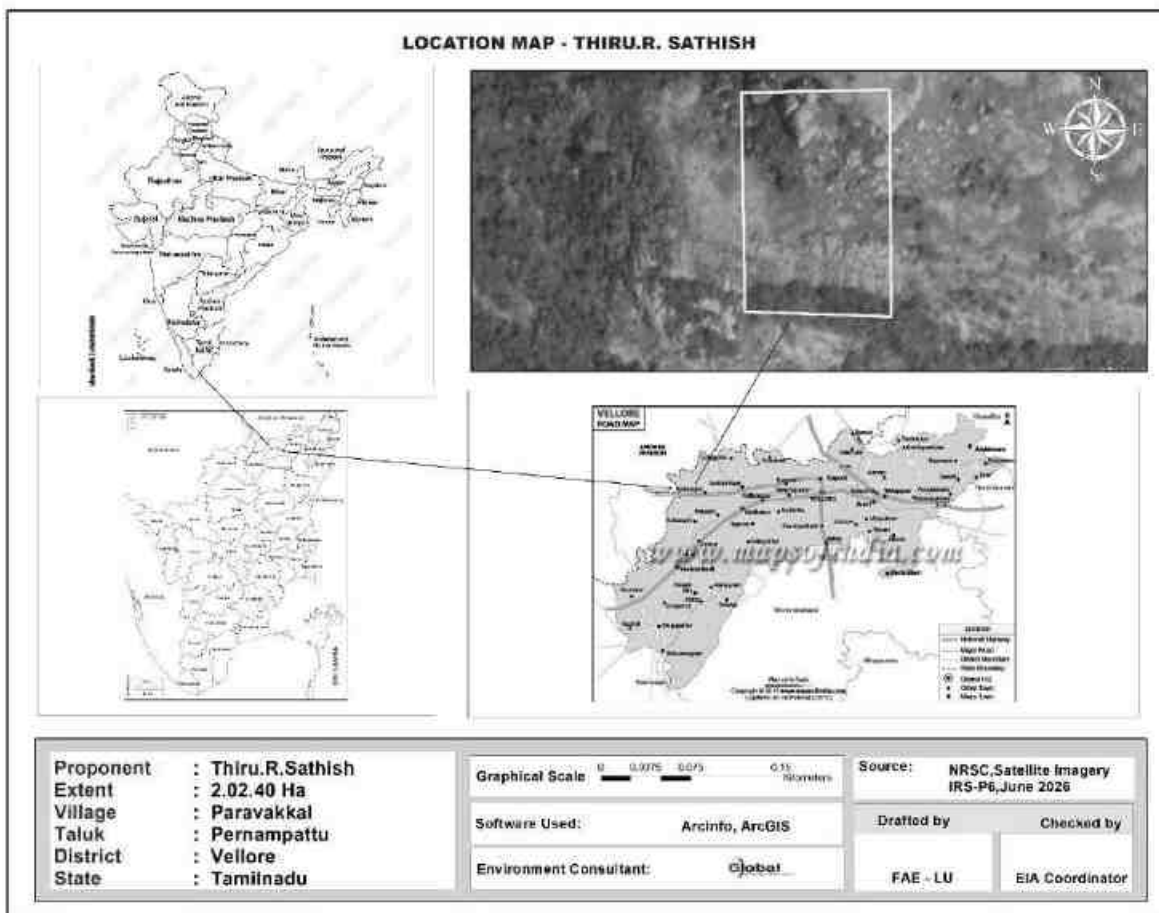


**Figure 2.1 Location Map**

**Table 2.1 Boundary Coordinates of the Project Site**

| Corners | Co- ordinates |               |
|---------|---------------|---------------|
|         | Latitude      | Longitude     |
| 1       | 12°54'55.26"N | 78°47'45.09"E |
| 2       | 12°55'01.25"N | 78°47'45.04"E |
| 3       | 12°55'01.28"N | 78°47'48.69"E |
| 4       | 12°54'55.29"N | 78°47'48.74"E |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

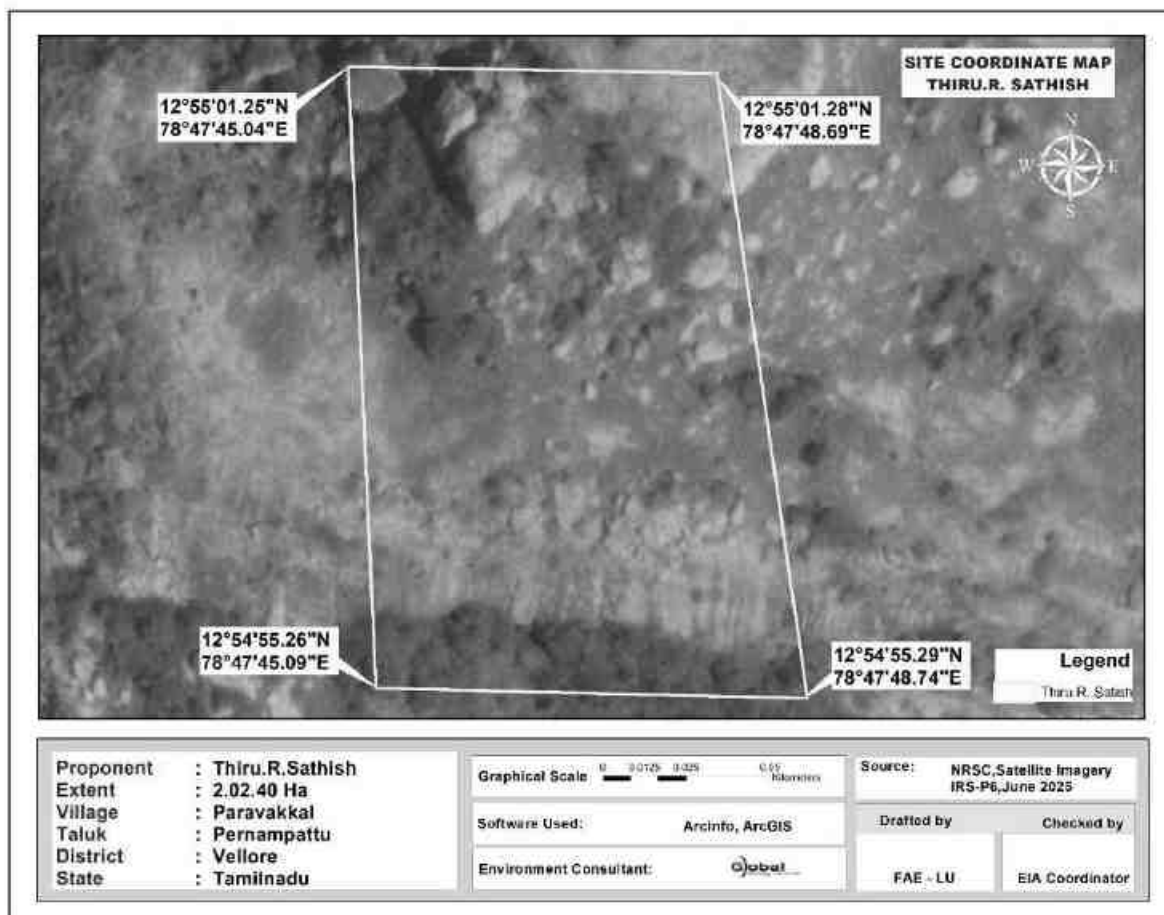


**Figure 2.2 Google Image of the project site with Boundary Coordinates**

**Table 2.2 Mine Lease Area and its Ownership**

| Location                                                         | S.F. No      | Area in Ha     | Patta No. | Patta Name                                                                                                  |
|------------------------------------------------------------------|--------------|----------------|-----------|-------------------------------------------------------------------------------------------------------------|
| Paravakkal village,Pernampattu taluk,Vellore District, Tamilnadu | 208 (PART-8) | 2.02.40        | -         | It is a Government Poramboke Land. PP has obtained the tender from the government Attached as Annexure No.6 |
| <b>Total</b>                                                     |              | <b>2.02.40</b> |           |                                                                                                             |

**Table 2.3 Site Connectivity**

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nearest Roadway | <ul style="list-style-type: none"> <li>❖ This ML area is accessible from Pangarishikuppam – Gidangu village road on south side of the area.</li> <li>❖ Nearest Railway line is Vellore – Vaniyambadi line which is about 4.8Km on southeastern side of the area.</li> <li>❖ The National Highway (NH-75) Vellore – Kolar is about 3.2km on northern side of the area.</li> <li>❖ The State Highway (SH-130) Vaniyambadi – Gudiyatham is about 4.1Km on southeastern side of the area.</li> </ul> |
| Nearest Village | Rajakuppam – 2.2km - N                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Nearest Railway | Valathoor -5.45 km – SE                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Nearest Airport | Chennai - 160 km - E                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

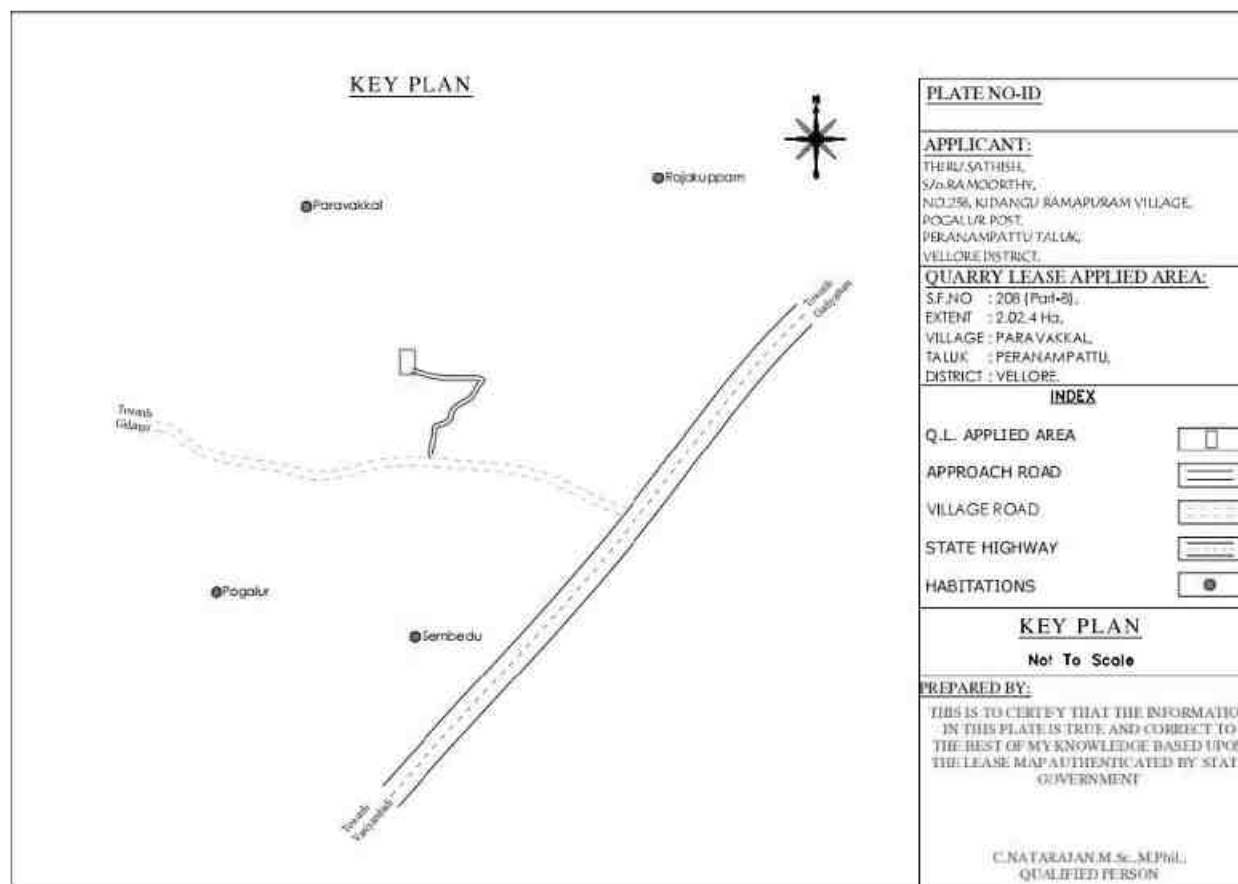


**Figure 2.3 Site Connectivity Map**

**Table 2.4 Salient features of the Project**

| <b>S. No.</b> | <b>Particulars</b>                    | <b>Details</b>                                                                                              |
|---------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 1.            | Proponent Name                        | Thiru. R.Sathish                                                                                            |
| 2.            | Proposed project                      | Rough Stone Quarry of Thiru. R.Sathish                                                                      |
| 3.            | Extent                                | 2.02.40 Ha and the cluster area within 500 m radius including the proposed mine is 8.29.90 Ha > 5 Ha        |
| 4.            | Location                              | S. No. 208 (Part-8), Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State.             |
| 5.            | Co-ordinates of the project site      | Latitude: 12°54'55.26"N to 12°55'01.28"N<br>Longitude: 78°47'45.04"E to 78°47'48.74"E                       |
| 6.            | Topography                            | Hilly Terrain                                                                                               |
| 7.            | Site Elevation above MSL              | 510 m from MSL                                                                                              |
| 8.            | Topo Sheet No.                        | 57 L/13                                                                                                     |
| 9.            | Minerals of Mine                      | Rough Stone                                                                                                 |
| 10.           | Proposed production in m <sup>3</sup> | 2,42,660m <sup>3</sup> of Rough up to the depth of 45m for the period of 10 years                           |
| 11.           | Ultimate Depth of mining              | 45m (AGL)                                                                                                   |
| 12.           | Method of Mining                      | Opencast Mining with a bench height of 10m and bench width of 10m is proposed                               |
| 13.           | Drilling/Blasting                     | Drilling and controlled Blasting is proposed                                                                |
| 14.           | No. of Working days                   | 300 Days                                                                                                    |
| 15.           | Water requirement & Source            | 6.0 kLD and will be sourced from local vendors                                                              |
| 16.           | Manpower                              | 25 Nos.                                                                                                     |
| 17.           | Project Cost                          | Rs. 278.33 lakhs                                                                                            |
| 18.           | Mining Plan Approval                  | Assistant Director, Department of Geology and Mining, Vellorer vide Rc.No. 441/2024(Mines) dated 30.04.2025 |
| 19.           | Safety Zone                           | 0.52.80 Ha will be maintained as safety zone and                                                            |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|     |                           |                                                    |
|-----|---------------------------|----------------------------------------------------|
|     |                           | tree saplings will be planted in this area         |
| 20. | Ground water level        | 67m in summer and 64m in rainy seasons             |
| 21. | Distance of Stone Crusher | 1.5km, SW                                          |
| 22. | Previous History & CCR    | This is a Fresh Lease. Hence CCR is not applicable |

**Table 2.5 Environmental Settings of the project site**

| <b>S. No.</b> | <b>Particulars</b>              | <b>Details</b>                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.            | Nearest Highway                 | National Highway (NH-75) Vellore – Kolar is about 3.2km on northern side of the area.<br>State Highway (SH-130) Vaniyambadi – Gudiyatham is about 4.1Km on southeastern side of the area.                                                                                                                                                                                                               |
| 2.            | Interstate Boundary             | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                          |
| 3.            | Nearest Railway Station         | Valathoor line located at 5.45 Km on (SE)                                                                                                                                                                                                                                                                                                                                                               |
| 4.            | Nearest Airport                 | Chennai – 148 km - E                                                                                                                                                                                                                                                                                                                                                                                    |
| 5.            | Nearest Village                 | Paravakkal – 1.0 km - N                                                                                                                                                                                                                                                                                                                                                                                 |
| 6.            | Water bodies                    | <ul style="list-style-type: none"> <li>• Odai - 599 m (NE).</li> <li>• Cheruvanki Eri -5.65 km (NE).</li> <li>• Palar River - 6.8 km (S).</li> <li>• Stream - 9.89 km (W).</li> <li>• Kavundinya Nadi - 6.37 km (NE).</li> <li>• Godd Ar - 7.3 km (NE).</li> <li>• Kottaramadugu Small Dam - 9.8 km (N)</li> </ul>                                                                                      |
| 7.            | Reserved Forest                 | <ul style="list-style-type: none"> <li>• Pallalakuppam Extn R.F1- 1.26 km(NW)</li> <li>• Pallalakuppam R.F. – 5.53 km (SW)</li> <li>• Pallalakuppam Extn R.F2- 1.89 km(S)</li> <li>• Gundlapalli R.F – 4.28 km (NW)</li> <li>• Sanankuppam R.F – 7.56 km (SE)</li> <li>• Pallalakuppam Extn R.F – 1.3km(NW)</li> <li>• Gundlapalli R.F – 4.2 km (NW)</li> <li>• Sanankuppam R.F – 7.5km (SE)</li> </ul> |
| 8.            | Eco Sensitive Zone and Wildlife | Nil within 10km Radius                                                                                                                                                                                                                                                                                                                                                                                  |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|     |                                    |                         |
|-----|------------------------------------|-------------------------|
|     | Sanctuary<br>(Notified)            |                         |
| 9.  | Archaeological<br>important places | Nil within 10 km radius |
| 10. | Defense<br>Installations           | Nil within 10 km radius |
| 11. | Nearest Port                       | Nil within 10 km radius |
| 12. | Seismic Zone                       | Nil within 10 km radius |

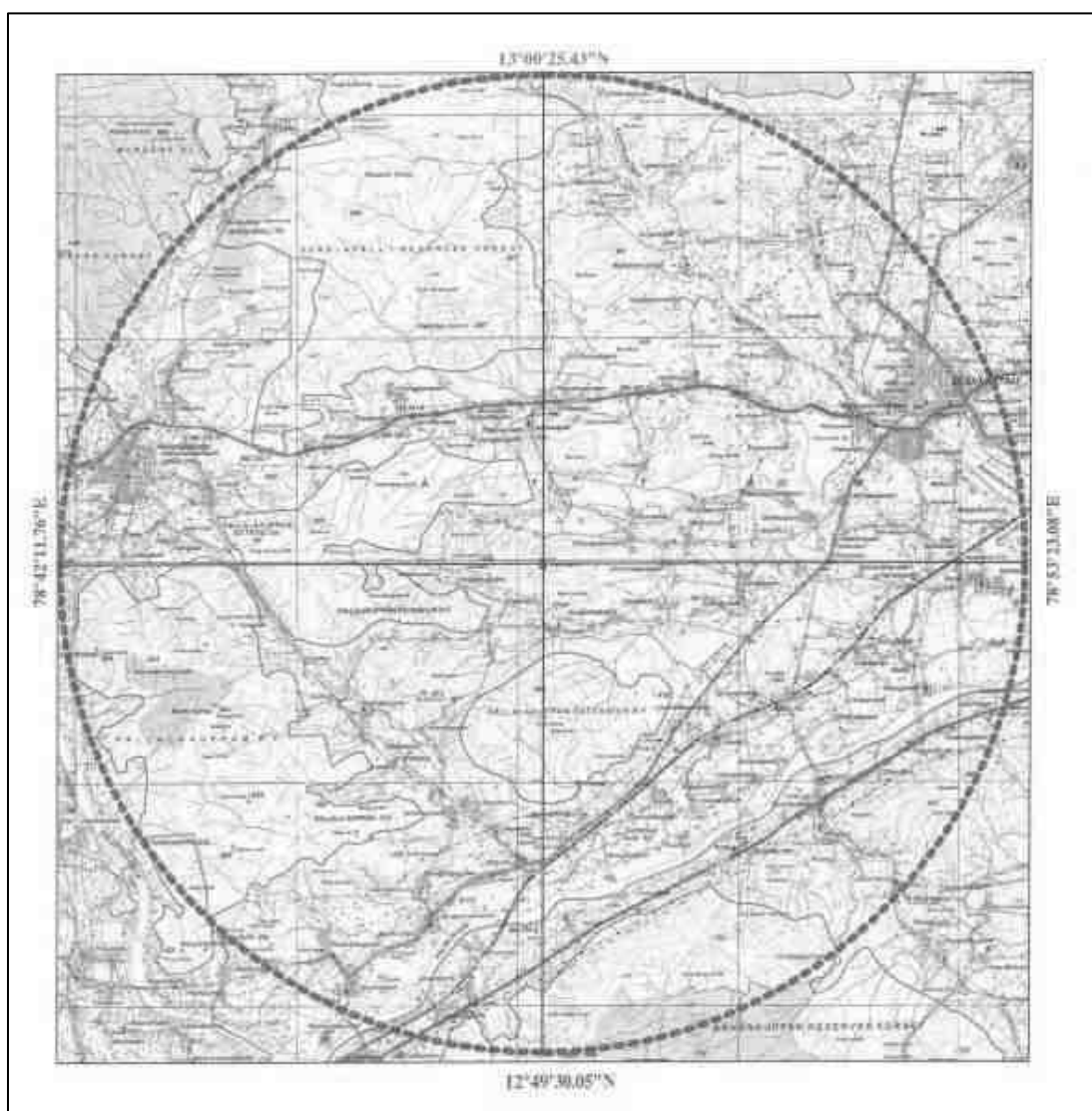


**Figure 2.4 10km Radius TOPO Map**

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

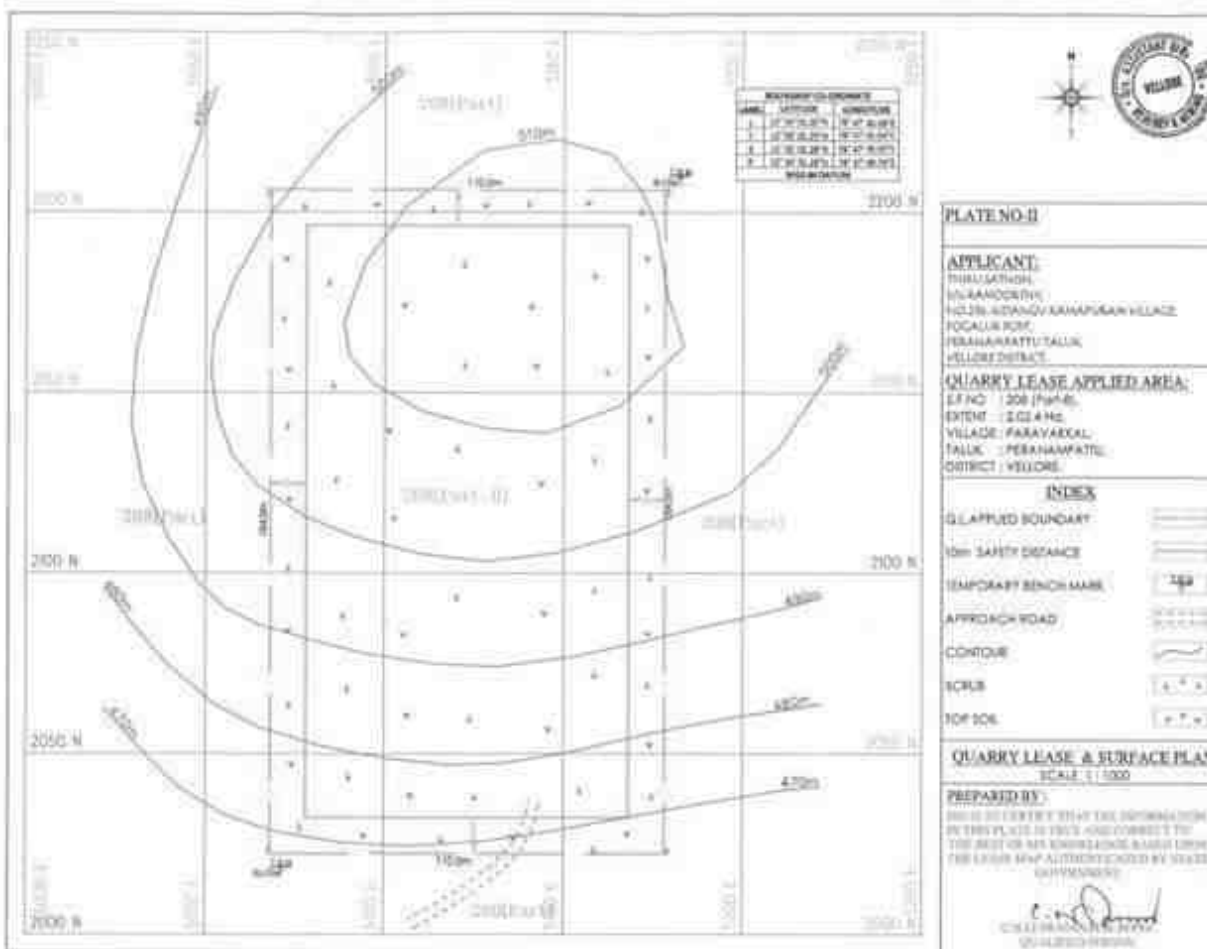


**Figure 2.5 Lease Plan**



**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

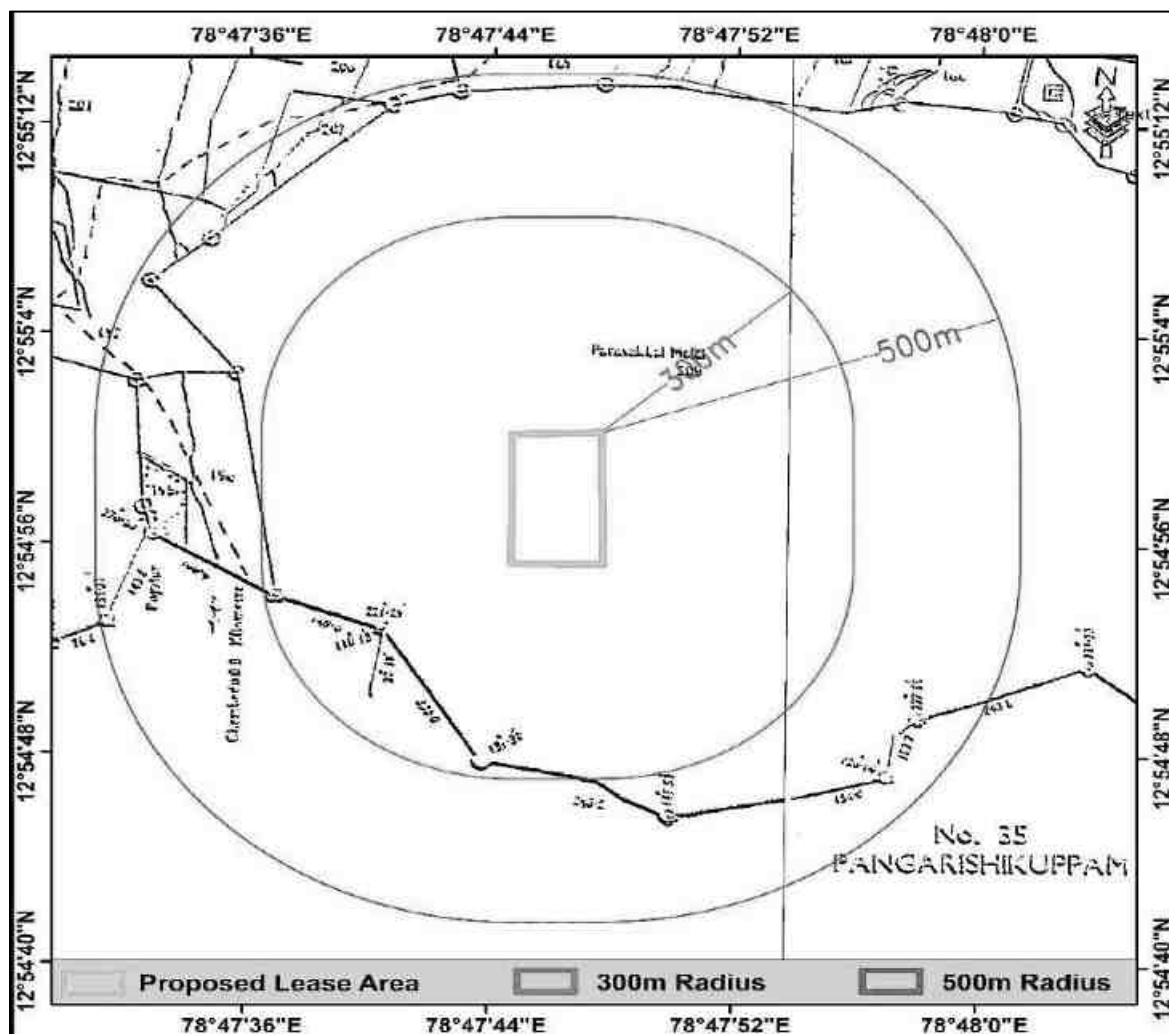


**Figure 2.6 Village Map**



**Figure 2.7 Site Photographs**

## **LAND USE PATTERN OF THE PROJECT AREA**

The entire project site Government Poramboke Land and the proponent has obtained tender from the Government. The land use pattern of the mine lease area as of today and conceptual stage given in Table No. 2.6.

**Table 2.6 Land use pattern of the Project area**

| <b>Description</b>       | <b>Present Area in Ha.</b> | <b>Area at the end of life of Quarry in Ha.</b> |
|--------------------------|----------------------------|-------------------------------------------------|
| Quarrying Pit            | Nil                        | 1.47.60                                         |
| Infrastructure           | Nil                        | 0.01.00                                         |
| Roads                    | Nil                        | 0.01.00                                         |
| Safety Zone / Green Belt | Nil                        | 0.52.80                                         |
| Unutilized               | 2.02.40                    | Nil                                             |
| <b>Total</b>             | <b>2.02.40</b>             | <b>2.02.40</b>                                  |

## **2.4 SIZE AND MAGNITUDE OF THE OPERATION**

The proposed activity is the extraction of Rough Stone by open cast mechanized mining method over an extent of 2.02.40 Ha and to produce 2,42,660m<sup>3</sup> of Rough Stone for the period of 10 years with ultimate depth up to 45 m AGL. The details of geological and mineable reserves in the lease area have been provided below in the subsequent sub section.

## **2.5 TOPOGRAPHY AND DRAINAGE**

The area applied for quarry lease is almost plain topography covered by topsoil formation. The massive Charnockite formation is noticed below and sloping towards northeastern side of the area, the altitude of the area is above 510m (maximum) from MSL. No major river is found nearby the lease applied area.

## **2.6 GEOLOGY**

### **2.6.1 REGIONAL GEOLOGY**

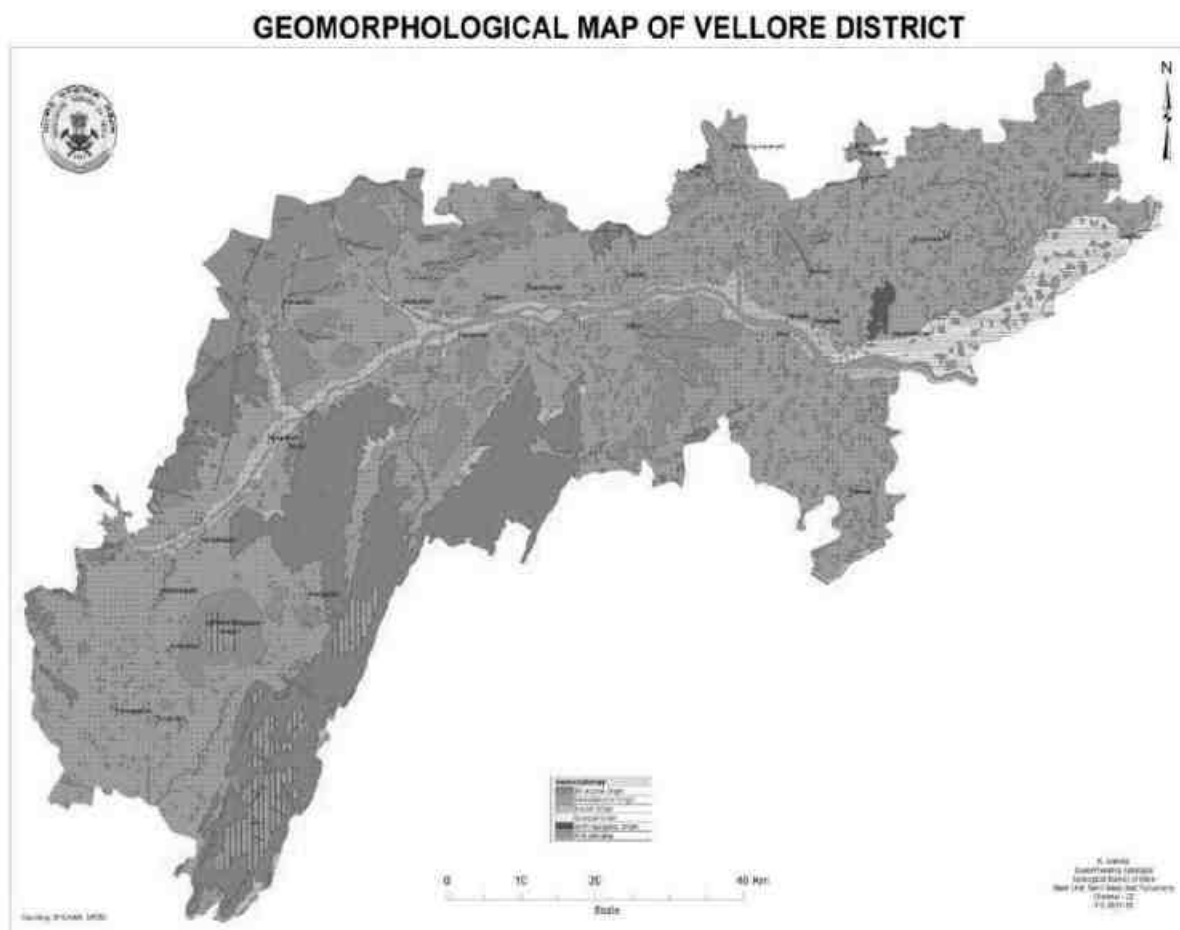
The area is underlain by the wide range of metamorphic rocks of peninsular gneissic complex. These rocks are extensively weathered and overlain by the recent valley fills and alluvium at places. The geological formations found in the district are Archaean rocks like Gneisses, Granites, Charnockites basic granulites and calc-gneisses. The younger formations are Quartz veins and pegmatite.

The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Charnockite is part of peninsular Gneisses, a high-grade metamorphic rock. The strike of the Charnockite formation is N45°E – S45°W with dipping towards SE80°.

The general geological succession of the area is given as under.

| <b>AGE</b> |   | <b>ROCK TYPE</b> |
|------------|---|------------------|
| Recent     | - | Gravelly soil    |
|            |   | Unconformity     |
| Archaean   | - | Dolerite dyke    |
|            |   | Charnockite.     |
|            |   | Peninsular       |
|            |   | Gneissic complex |
|            |   | And Calc Gneiss  |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**



**Source: District Survey Report, Vellore**

## 2.6.2 LOCAL GEOLOGY

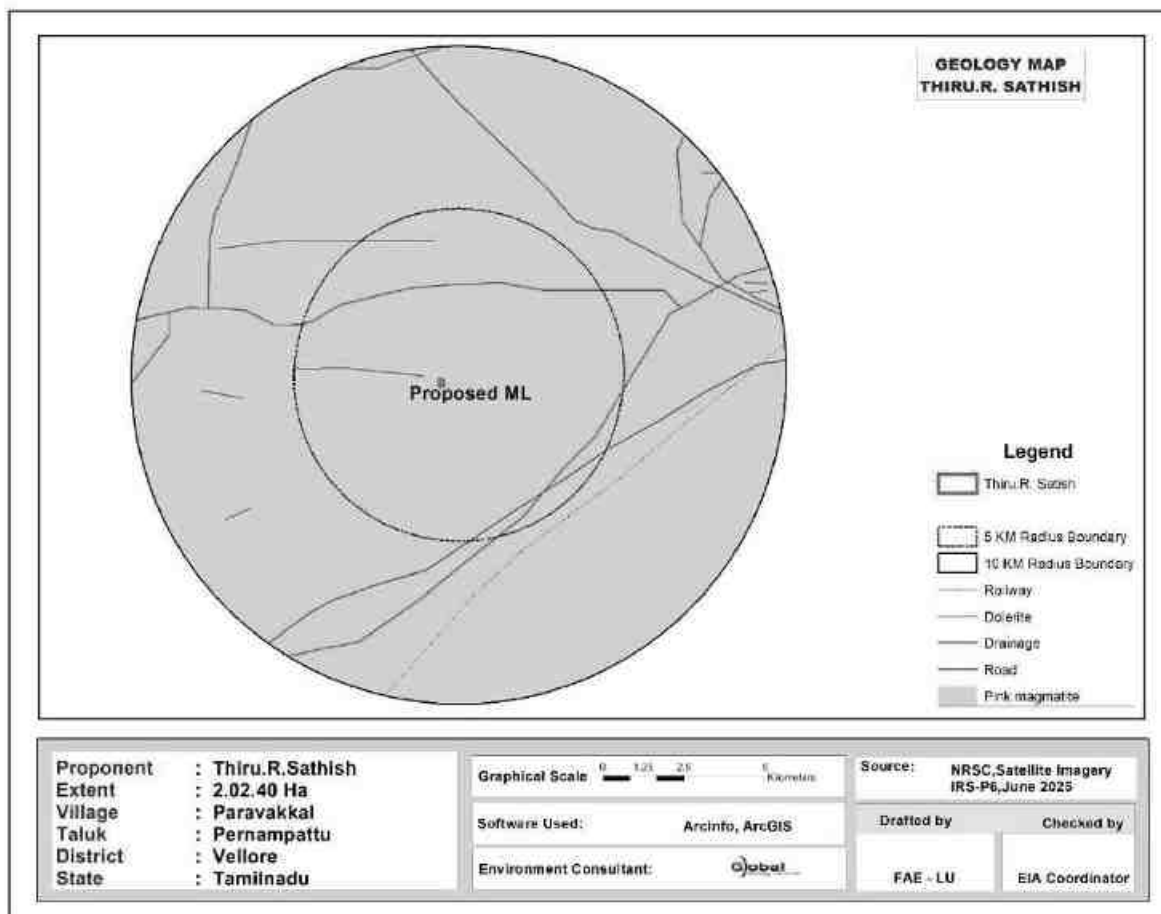


**Figure 2.8 Geology Map – 10km Radius from the Project Site**

Vellore District comprises rocks of Satyamangalam Group and Older Supracrustal Group of Archaean Age, Charnockite and Migmatite Groups of Southern Granulite Terrain of Archaean to Proterozoic age, Peninsular Gneissic Complex-II(PGC-II) of Archean to Palaeoproterozoic, basic intrusives of Mesoproterozoic age, epidote hornblende gneiss of Proterozoic, Alkali Complex and acid intrusives of Neoproterozoic age and Quaternary viz., black silty clay of Palar-Swarnamukhi Formation of Late Holocene in age. The grey hornblende-biotite gneiss of PGC-II is occurring in the north-western parts of the district. Epidote hornblende gneiss occurs as north-south trending body near Odugattur and Agaram with Charnockite Group. Charnockite is most predominant rock type at south Palar river and forms the mail hill masses and plains. Apart from Charnockite, pyroxene granulite, pink

migmatite, hornblende biotite gneiss and biotite gneiss are the main lithologies observed at south of Vellore and in an around kaniyambadi. The major lithologies at north palar river near Katpadi are migmatite gneiss, pink migmatite and pink hornblende biotite granite.

Charnockite Group of rocks with interbanded sequence of pyroxene granulite and banded magnetite quartzite have undergone wide spread migmatization giving rise to epidote-hornblende gneiss that show extensive shearing at the east of odugathur. Dolerite dykes occur profusely throughout the area of the district and trending NS,NE-SW and E-W with minor variations and extent over a few meters to 70m width. The granites, pegmatite,quartz and aplite veins occurs as a last phase of magmatism and mainly intruded rocks of peninsular Gneissic Complex(PCG-II). The late Holocene active fluvial deposits is marked by black silty clay and part of Palar Swarnamukhi formation. Regional Geology map for the 10 Km radius from the proposed project site is given as Figure 2.6.

## 2.7 RESOURCES AND RESERVES

The Resources and Reserves of Rough Stone were calculated based on Cross-Section Method to cover the maximum lease area.

**Table 2.7 Available Geological Resources**

| Section | Topography               | Bench | Length<br>in (m) | Width<br>in (m) | Depth<br>in (m) | Geological<br>Resources<br>of Rough<br>stone in<br>m3 | Bulk<br>Density | Geological<br>Resources of<br>Rough stone<br>in Ts |
|---------|--------------------------|-------|------------------|-----------------|-----------------|-------------------------------------------------------|-----------------|----------------------------------------------------|
| XY-AB   | Above<br>Ground<br>Level | I     | 88               | 84              | 5               | 36960                                                 | 2.75            | 101640.00                                          |
|         |                          | II    | 105              | 110             | 5               | 57750                                                 | 2.75            | 158812.50                                          |
|         |                          | III   | 117              | 110             | 5               | 64350                                                 | 2.75            | 176962.50                                          |
|         |                          | IV    | 130              | 110             | 5               | 71500                                                 | 2.75            | 196625.00                                          |
|         |                          | V     | 142              | 110             | 5               | 78100                                                 | 2.75            | 214775.00                                          |
|         |                          | VI    | 154              | 110             | 5               | 84700                                                 | 2.75            | 232925.00                                          |
|         |                          | VII   | 166              | 110             | 5               | 91300                                                 | 2.75            | 251075.00                                          |
|         |                          | VIII  | 178              | 110             | 5               | 97900                                                 | 2.75            | 269225.00                                          |
|         |                          | IX    | 184              | 110             | 5               | 101200                                                | 2.75            | 278300.00                                          |
| Total   |                          |       |                  |                 |                 | 683760                                                | –               | 1880340.00                                         |

The Geological Resource of Rough Stone : 683760m<sup>3</sup>

### **2.7.1 MINEABLE RESERVES**

The mineable reserves are calculated by deducting 7.5 m and 10 m safety distance and bench loss.

**Table 2.8 – Available Mineable Reserves**

| Section | Topography            | Bench | Length<br>in (m) | Width<br>in (m) | Depth<br>in (m) | Mineable<br>Reserves<br>of Rough<br>stone in<br>m3 | Bulk<br>Density | Mineable<br>Reserves of<br>Rough stone<br>in Ts |
|---------|-----------------------|-------|------------------|-----------------|-----------------|----------------------------------------------------|-----------------|-------------------------------------------------|
| XY-AB   | Above<br>Ground Level | I     | 78               | 74              | 5               | 28860                                              | 2.75            | 79365.00                                        |
|         |                       | II    | 90               | 85              | 5               | 38250                                              | 2.75            | 105187.50                                       |
|         |                       | III   | 97               | 75              | 5               | 36375                                              | 2.75            | 100031.25                                       |
|         |                       | IV    | 105              | 65              | 5               | 34125                                              | 2.75            | 93843.75                                        |
|         |                       | V     | 112              | 55              | 5               | 30800                                              | 2.75            | 84700.00                                        |
|         |                       | VI    | 119              | 45              | 5               | 26775                                              | 2.75            | 73631.25                                        |
|         |                       | VII   | 126              | 35              | 5               | 22050                                              | 2.75            | 60637.50                                        |
|         |                       | VIII  | 129              | 25              | 5               | 16125                                              | 2.75            | 44343.75                                        |
|         |                       | IX    | 124              | 15              | 5               | 9300                                               | 2.75            | 25575.00                                        |
| Total   |                       |       |                  |                 |                 | 242660                                             | –               | 667315.00                                       |

The mineable reserve is computed as 2,42,660m<sup>3</sup> of Rough stone upto a depth of 45m (above ground level) only.

## **2.8 PROCESS DESCRIPTION AND TECHNOLOGY**

### **2.8.1 PROCESS DESCRIPTON**

The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, Loading and transportation of Rough stone to the needy buyers. The production of Rough stone in this quarry involves the following method which is typical for Rough Stone quarrying in contrast to other major mineral mining.

- Splitting of rock mass of considerable volume from the parent rock mass by jackhammer drilling and blasting, hydraulic excavators are used for loading the Rough Stone from pithead to the needy buyers.
- Occasionally hydraulic excavators are attached with rock breakers for fragmentation to avoid secondary blasting.



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- The primary boulders thus splitted are removed from the pits by excavators and further made to smaller sizes by rock breakers attached in excavators.

The process diagram is provided in Figure 2.9. The production plan and cross section and conceptual plan and conceptual cross section is given in Figure No. 2.10 and Figure No. 2.11 respectively.

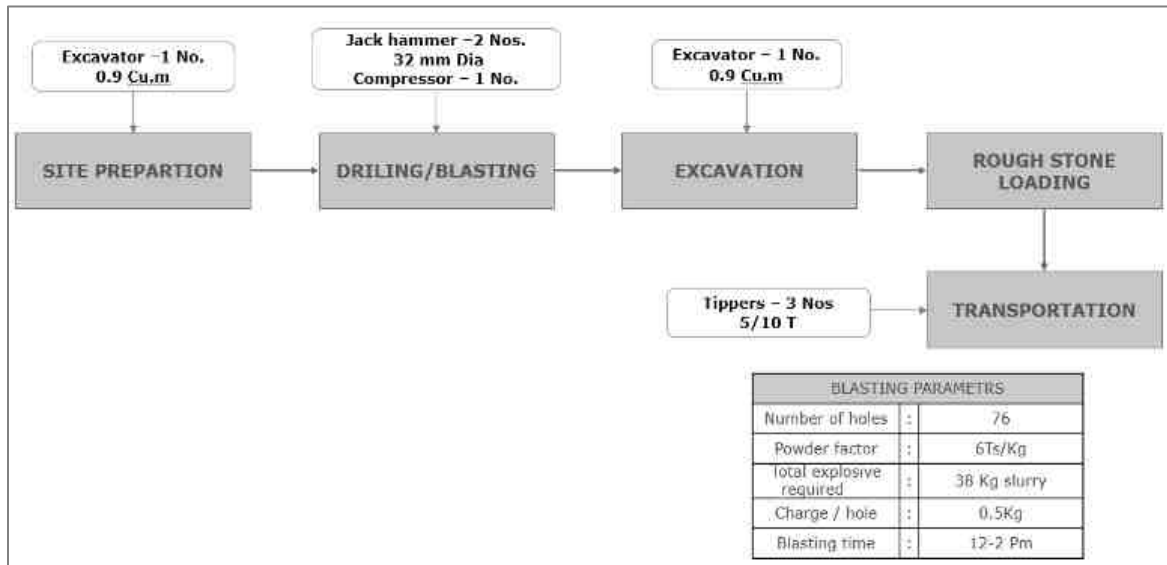
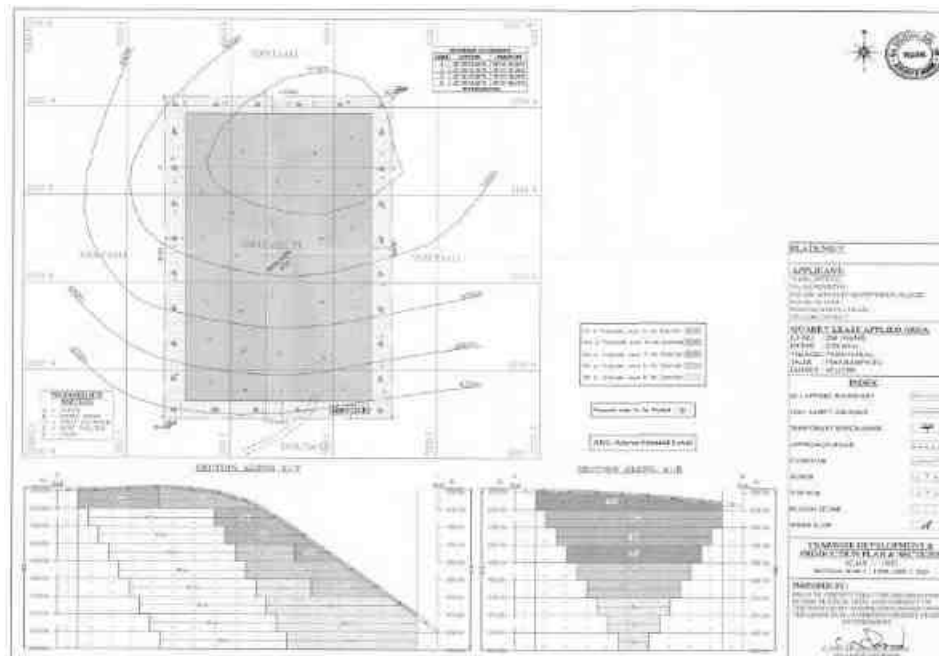


**Figure 2.9 Process Flow Diagram**



[illegible]

### Table 2.9 – Machinery Details

| S.No. | Name of the Equipment                  | Capacity            | Requirement |
|-------|----------------------------------------|---------------------|-------------|
| 1     | Excavator with Rock breaker attachment | 0.90 m <sup>3</sup> | 1           |
| 2     | Compressor                             | 400 psi             | 1           |
| 3     | Jack hammer                            | 32 mm<br>Dia        | 2           |
| 4     | Tipper                                 | 5/10 T              | 3           |

## **2.8.2 DRILLING AND BLASTING PARAMETERS**

Drilling and Blasting will be carried out as per parameters given below,

**Table 2.10 – Details of Blasting**

|                          |                                 |
|--------------------------|---------------------------------|
| Diameter of the hole     | 32-36 mm                        |
| Spacing                  | 0.6m                            |
| Depth                    | 1 to 1.5 m                      |
| Burden of hole           | 0.6m                            |
| Pattern of hole          | Zig zag                         |
| Inclination of hole      | 70 <sup>0</sup> from horizontal |
| Number of holes          | 76                              |
| Powder factor            | 6Ts/Kg of Explosives            |
| Total explosive required | 38 Kg slurry Explosives         |
| Charge / hole            | 0.5Kg                           |
| Blasting time            | 12-2 Pm                         |

## **2.8.3 TYPE OF EXPLOSIVE**

Slurry explosive is proposed for shattering and heaving effect for removal of rough stone. No deep hole drilling or primary blasting is proposed. The Project Proponent have agreement with M/s. Guru Explosives to carry out the blasting operation for the proposed quarry.

## **2.8.4 STORAGE OF EXPLOSIVES**

No proposal for storage of explosives within the project area, the applicant will engage authorized explosive agency to carry out the blasting and it will be supervised by competent and statutory foreman / mines manager as per DGMS guidelines.

## **2.8.5 PRODUCTION SCHEDULE**

The year wise production schedule upto lease period of first 5 years is given below, the year wise production plan is given in Figure 2.10.

**Table 2.11 Year wise Production Plan**

| Year        | Section | Topography         | Bench | Length in (m) | Width in (m) | Depth in (m) | Mineable Reserves of Rough stone in m³ | Bulk Density | Mineable Reserves of Rough stone in Ts |
|-------------|---------|--------------------|-------|---------------|--------------|--------------|----------------------------------------|--------------|----------------------------------------|
| I           | XY-AB   | Above Ground Level | I     | 39            | 74           | 5            | 14430                                  | 2.75         | 39682.50                               |
| Total       |         |                    |       |               |              |              | 14430                                  | –            | 39682.50                               |
| II          | XY-AB   | Above Ground Level | I     | 39            | 74           | 5            | 14430                                  | 2.75         | 39682.50                               |
| Total       |         |                    |       |               |              |              | 14430                                  | –            | 39682.50                               |
| III         | XY-AB   | Above Ground Level | II    | 29            | 85           | 5            | 12325                                  | 2.75         | 33893.75                               |
|             |         |                    | III   | 36            | 75           | 5            | 13500                                  | 2.75         | 37125.00                               |
|             |         |                    | IV    | 15            | 65           | 5            | 4875                                   | 2.75         | 13406.25                               |
| Total       |         |                    |       |               |              |              | 30700                                  | –            | 84425.00                               |
| IV          | XY-AB   | Above Ground Level | IV    | 29            | 65           | 5            | 9425                                   | 2.75         | 25918.75                               |
|             |         |                    | V     | 51            | 55           | 5            | 14025                                  | 2.75         | 38568.75                               |
|             |         |                    | VI    | 31            | 45           | 5            | 6975                                   | 2.75         | 19181.25                               |
| Total       |         |                    |       |               |              |              | 30425                                  | –            | 83668.75                               |
| V           | XY-AB   | Above Ground Level | VI    | 27            | 45           | 5            | 6075                                   | 2.75         | 16706.25                               |
|             |         |                    | VII   | 65            | 35           | 5            | 11375                                  | 2.75         | 31281.25                               |
|             |         |                    | VIII  | 68            | 25           | 5            | 8500                                   | 2.75         | 23375.00                               |
|             |         |                    | IX    | 63            | 15           | 5            | 4725                                   | 2.75         | 12993.75                               |
| Total       |         |                    |       |               |              |              | 30675                                  | –            | 84356.25                               |
| Grand Total |         |                    |       |               |              |              | 120660                                 | –            | 331815.00                              |

**Production Details:**

First Five Years: 1,20,660 m<sup>3</sup> of Rough Stone

Second Five Years: 1,22,000 m<sup>3</sup> of Rough Stone

Total Production for Ten Years: 2,42,660m<sup>3</sup> of Rough Stone

**2.8.6 DISPOSAL OF WASTE**

There is no waste anticipated in this rough stone Quarry. The entire quarried minerals will be utilized. The overburden in the form of Top Soil, will be preserved in the safety zone and utilized for plantation purpose. Rough Stone , after the excavation Rough Stone will be directly loaded into tipper to the needy buyers for road project and construction works for filling and leveling of low lying areas.

**2.9 CONCEPTUAL MINING PLAN / FINAL MINE CLOSURE PLAN**

Conceptual mining plan is prepared with an object of ten years of systematic development of bench layouts, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructure etc.

The ultimate pit size is designed based on certain practical parameters such as economical depth of mining, safety zones, permissible area, etc. Conceptual cross section and mine closure plan is given in Figure 2.11.

**Table 2.12 - Ultimate Pit Dimension at the end of Lease period**

| <b>Pit</b> | <b>Length in m<br/>(Max)</b> | <b>Width in m<br/>(Max.)</b> | <b>Depth in m<br/>(Max.), agl</b> |
|------------|------------------------------|------------------------------|-----------------------------------|
| I          | 164                          | 90                           | 45m (above<br>ground level)       |

**Table 2.13 - Land use pattern of the Project site**

| <b>Description</b> | <b>Present Area in Ha.</b> | <b>Area at the end of life of<br/>Quarry in Ha.</b> |
|--------------------|----------------------------|-----------------------------------------------------|
|--------------------|----------------------------|-----------------------------------------------------|

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|                |                |                |
|----------------|----------------|----------------|
| Quarrying pit  | Nil            | 1.47.60        |
| Infrastructure | Nil            | 0.01.00        |
| Roads          | Nil            | 0.01.00        |
| Greenbelt      | Nil            | 0.52.80        |
| Unutilized     | 2.02.40        | Nil            |
| <b>Total</b>   | <b>2.02.40</b> | <b>2.02.40</b> |

- At the end of life of mine, the excavated mine pit / void of 1.47.60 Ha will act as artificial reservoir for collecting rain water and helps to meet out the demand or crises during drought season.
- After mine closure the greenbelt (0.52.80 Ha.) will be developed along the safety barrier and top benches and 0.02 Ha are approach road and Infrastructure.

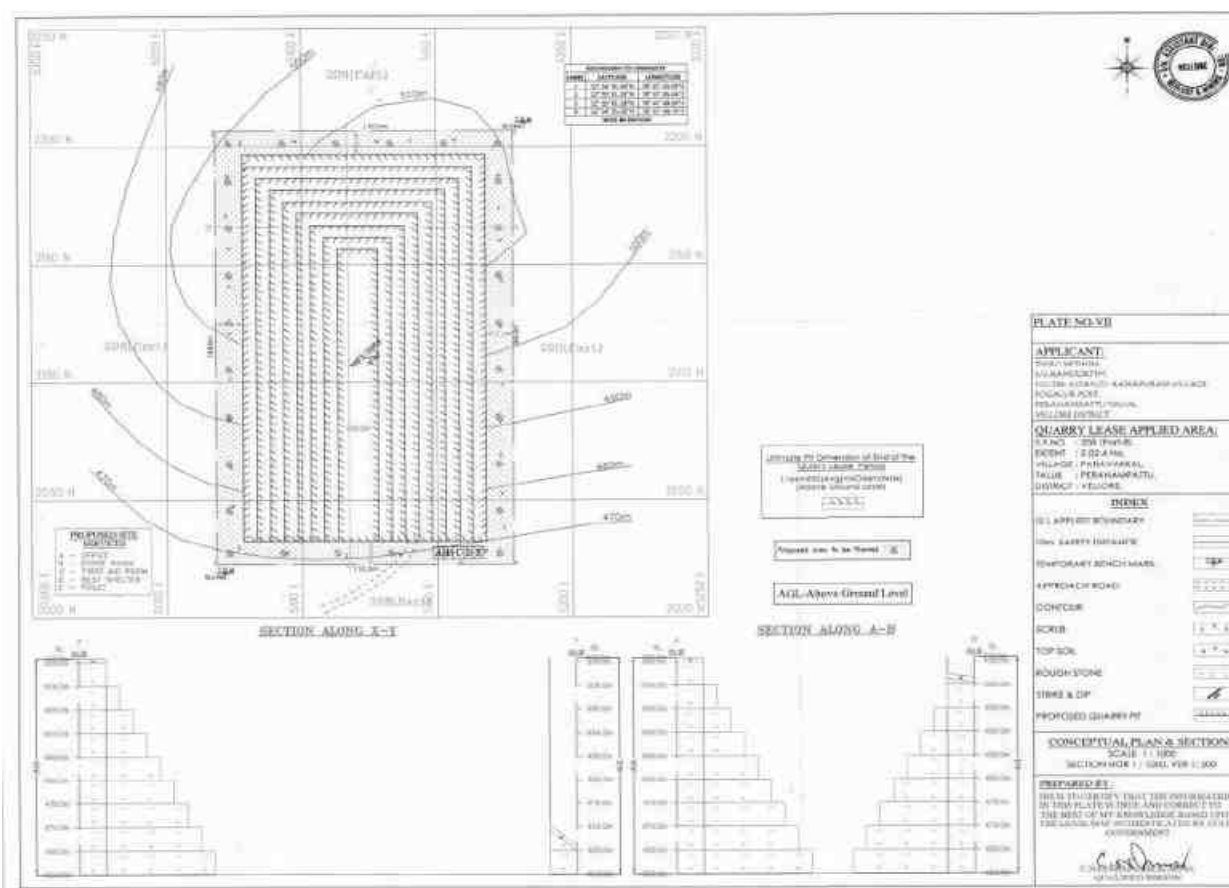


**Figure 2.11 Conceptual Plan and Cross Section**

## **2.10 PROJECT REQUIREMENT**

### **2.10.1 WATER REQUIREMENT AND SOURCE**

The total water requirement estimated for the quarry is 6.0 KLD. The required water will be procured from outside agencies initially and later rainwater harvested in the mine pit shall be used other than drinking purpose.

**Table 2.14 Details of Water requirement**

| <b>Activity</b>       | <b>Water Requirement in KLD</b> |
|-----------------------|---------------------------------|
| Drinking & Domestic   | 1.5                             |
| Dust Suppression      | 1.5                             |
| Greenbelt Development | 3.0                             |
| <b>Total</b>          | <b>6.0</b>                      |

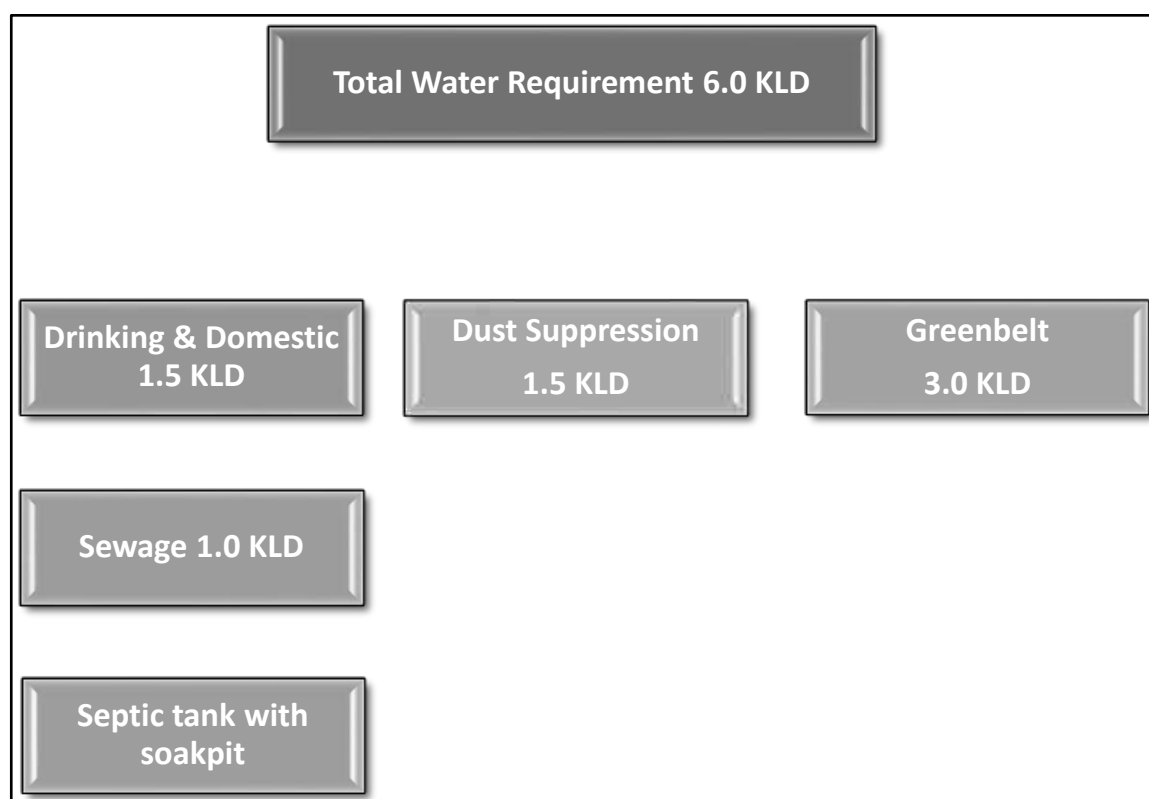


**Figure 2.12 Water Balance Chart**

### **2.10.2 POWER REQUIREMENT**

All the equipment will be diesel operated. No electricity is needed for mining operation. The minimum power requirement for office, etc will be met from state grid.

### **2.10.3 FUEL REQUIREMENT**

High speed Diesel (HSD) will be used for mining machineries.

**Table 2.15 Details of Fuel (HSD) Requirement**

i) For Rough Stone

|                                  |                                 |
|----------------------------------|---------------------------------|
| Per hour excavator will consume  | 16 liters /hr                   |
| Per hour excavator will excavate | 20m <sup>3</sup> of Rough Stone |
| For 2,42,660 m <sup>3</sup>      | 2,42,660 /20<br>= 12,133        |
| So, Diesel consumption           | = 12,133 x 16 litres            |
|                                  | =1,94,128 litres of HSD         |

The Total fuel consumption is around **194.128** KL of HSD for the entire period of life (10 years).

### **2.10.4 EMPLOYMENT GENERATION**

The project will provide employment opportunities totally to 15 persons directly and 10 indirectly.

**Table 2.16 Details of Manpower requirement**

|         |              |                |        |
|---------|--------------|----------------|--------|
| 1.      | Skilled      | Mines Manager  | 1 No.  |
|         |              | Foreman / Mate | 2 No.  |
|         |              | Operator       | 6 No.  |
|         |              | Mechanic       | 1 No.  |
| 2.      | Semi-skilled | Driver         | 3 No.  |
| 3.      | Unskilled    | Labours        | 12 Nos |
| Total = |              |                | 25 Nos |



### **2.10.5 GREEN BELT REQUIREMENT**

The safety zone, covering an area of 0.52.80 Hectares, will be maintained as a green belt and planted with 528 Nos. of local species.



**Figure 2.13 Fencing and Plantation Photos**

### **2.10.6 VEHICULAR TRAFFIC DENSITY**

The proposed quarry is located in Paravakkal village. The details of transport route from the crusher plant is shown below:



**Figure 2.14 Traffic Map with Distance of nearest Crusher**

The vehicular traffic survey will be carried out in the route through which mined out minerals are transported. Within 500 m radius, there are one existing quarry and two proposed quarries including this proposal. The final product from this quarry will be transported through Gidangu – Pangarishikuppam village road which is located 1.27 km in southern side of the project area.

## **Methodology**

### **Vehicle Count**

The vehicles passing through the road (in both ways) were counted separately for 24 hours at the one elected location from 0600 hrs to 0600 hrs next day continuously. Category wise vehicle counting has been done continuously and recorded in the traffic volume count on hourly basis under respective categories.

### **Categorization of Traffic**

The engine driven vehicles were categorized into various heads viz. two wheelers, three wheelers, four wheelers and trucks/bus. The level of service is given below.

**(Source: Recommended Design Service Volumes (PCUs per hour), IRC)**

| Level of Service | General Operating conditions                                                                                                                               | Range of V/C |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| A                | Free flow (traffic flows at or above speed limit and motorists have complete mobility between lanes)                                                       | <0.30        |
| B                | Reasonable flow (slightly more congested, with some maneuverability)                                                                                       | 0.3 – 0.47   |
| C                | Stable flow (more congested than B, loads close to capacity)                                                                                               | 0.48 – 0.68  |
| D                | Approaching unstable flow (speeds are somewhat reduced, example: busy corridor during middle of a weekday, or a functional urban highway during rush hour) | 0.69 – 0.88  |
| E                | Unstable flow (flow becomes irregular, speed varies widely and rarely reaches speed limit)                                                                 | 0.88 - 1.00  |
| F                | Forced or breakdown flow (a constant traffic jam)                                                                                                          | >1.00        |

**Table 2.17 Summary on Traffic Volume**

| Route                                   | Existing Traffic Survey in PCU | Incremental Traffic Survey due to project (cluster) | Total traffic survey volume | Hourly capacity in PCU as per IRC -1960 guidelines |
|-----------------------------------------|--------------------------------|-----------------------------------------------------|-----------------------------|----------------------------------------------------|
| Gidangu – Pangarishikuppam village road | 275                            | 18                                                  | 595                         | 1500                                               |

**Table 2.18 Modified Level of Service**

| Route                                   | Existing Volume<br>PCU/hr | Existing V/C<br>Ratio | Additional Volume<br>PCU/hr | Modified Volume<br>PCU/hr | Modified V/C ratio | Modified LOS |
|-----------------------------------------|---------------------------|-----------------------|-----------------------------|---------------------------|--------------------|--------------|
| Gidangu – Pangarishikuppam village road | 275                       | 0.18                  | 18                          | 0.012                     | 0.19               | A*           |

### **2.10.7 INFRASTRUCTURE REQUIREMENT**

This is a proposed project. Site services like mine office, first aid room, toilets etc. will be provided as semi-permanent structures.

### **2.10.8 PROJECT COST**

The total project cost of this Rough stone Quarry is Rs. 278.33 lakhs

### **2.10.9 PROJECT IMPLEMENTATION SCHEDULE**

The proponent proposes to implement the production immediately after obtaining all the statutory approvals. The commercial operation will commence after the grant of Environmental Clearance. CTO and CTE will be obtained from the Tamil Nadu State Pollution Control Board. The conditions imposed during the Environmental Clearance will be compiled before the start of mining operation.

\*\*\*

## **CHAPTER 3**

### **DESCRIPTION OF THE ENVIRONMENT**

#### **3.1. STUDY AREA, PERIOD COMPONENTS AND METHODOLOGY**

The project area is located in Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State over an extent of 2.02.40 Ha., The project area is considered as Core zone and the area in the surrounding 10km radius is considered as Buffer Zone. The baseline environmental monitoring was conducted by Shrient Analytical & Research Labs Private Limited, Chennai it is an NABL and MOEF recognized laboratory for various components of environment, viz. Air, Noise, Water, Land was carried out during Summer Season i.e. March 2025 to May 2025 in the study area covering 10 km radial distance from the rough stone mine. Other environmental data on flora and fauna, land-use pattern, forest etc. were also generated through field surveys and secondary information collected from different State Govt. departments. Sampling methods and analysis. Socio-economic survey was conducted, through interaction with the people, sarpanch and medical officers by floating questionnaires and collection of information are supported by census data for demographic structures, amenities, and infrastructure availability within the study area. Baseline values for various environmental components are discussed in this Chapter.

#### **ENVIRONMENTAL SETTING OF THE STUDY AREA**

| <b>Table 3.1 Description of the lease area</b> |                                                                                                                                                 |                                   |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| <b>S.No.</b>                                   | <b>Areas</b>                                                                                                                                    | <b>Distance from project site</b> |
| 1                                              | Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value | Nil within 15km radius            |
| 2                                              | Areas which are important or sensitive for ecological reasons                                                                                   |                                   |

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|    |                                                                                                                                                               |                                                                                                                                                                                           |          |           |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|
| A  | Wetlands, water courses or other water bodies,                                                                                                                | Water bodies                                                                                                                                                                              | Distance | Direction |
|    |                                                                                                                                                               | Odai                                                                                                                                                                                      | 599 m    | NE        |
|    |                                                                                                                                                               | Cheruvanki Eri                                                                                                                                                                            | 5.65 km  | NE        |
|    |                                                                                                                                                               | Palar River                                                                                                                                                                               | 6.8 km   | S         |
|    |                                                                                                                                                               | Kavundinya Nadi                                                                                                                                                                           | 6.37 km  | NE        |
|    |                                                                                                                                                               | Godd Ar                                                                                                                                                                                   | 7.3 km   | NE        |
|    |                                                                                                                                                               | Stream                                                                                                                                                                                    | 9.89 km  | W         |
|    |                                                                                                                                                               | Kottaramadugu Small Dam                                                                                                                                                                   | 9.8 km   | N         |
| B  | Coastal zone, biospheres,                                                                                                                                     | Nil within 10km radius                                                                                                                                                                    |          |           |
| C  | Mountains, forests                                                                                                                                            | Pallalakuppam Extn R.F1- 1.26 km(NW),<br>Pallalakuppam Extn R.F2- 1.89 km(S),<br>Gundlapalli R.F – 4.28 km (NW),<br>Pallalakuppam R.F. – 5.53 km (SW) &<br>Sanankuppam R.F – 7.56 km (SE) |          |           |
| 3  | Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, overwintering, migration                  | Nil within 15km radius                                                                                                                                                                    |          |           |
| 4  | Inland, coastal, marine or underground waters                                                                                                                 | Nil within 15km radius                                                                                                                                                                    |          |           |
| 5  | State, National boundaries                                                                                                                                    | Nil within 15km radius                                                                                                                                                                    |          |           |
| 6  | Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas                                                              | Nil within 15km radius                                                                                                                                                                    |          |           |
| 7  | Defense installations                                                                                                                                         | Nil within 15km radius                                                                                                                                                                    |          |           |
| 8  | Densely populated or built-up area                                                                                                                            | Pangarishikuppam – 1.8 km - SE                                                                                                                                                            |          |           |
| 9  | Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)                                                  | Pangarishikuppam – 1.8 km - SE                                                                                                                                                            |          |           |
| 10 | Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals) | Nil                                                                                                                                                                                       |          |           |

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|    |                                                                                                                                                                                                                         |                                                        |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| 11 | Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)                                                                                         | Nil                                                    |
| 12 | Areas susceptible to natural hazard which could cause the project to present environmental problems (earth quakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions) similar effects | No. The area is not prone to earthquakes, floods, etc. |

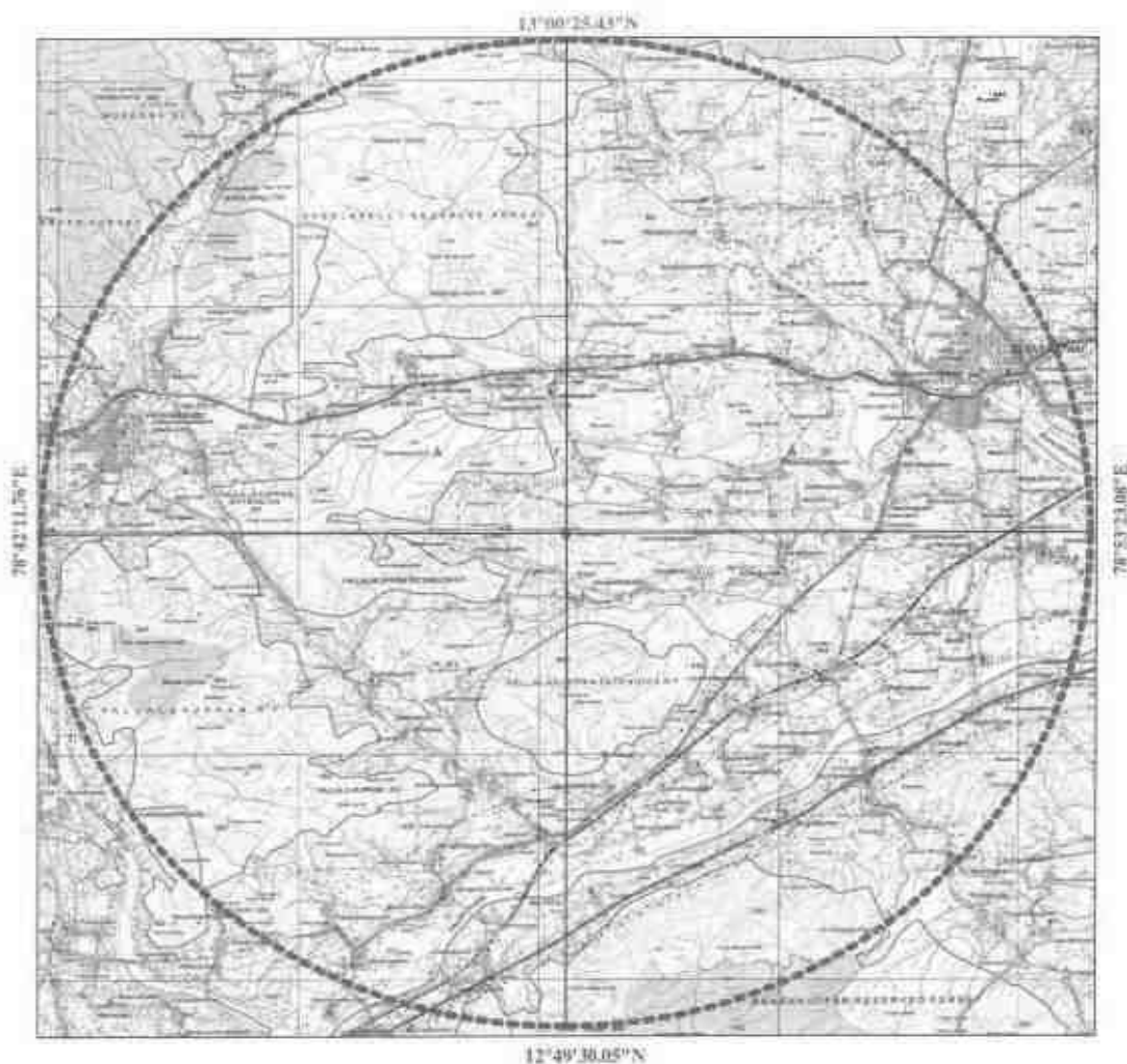


**FIG 3.1 ENVIRONMENTAL SETTING OF THE STUDY AREA**

## **STUDY PERIOD**

The relevant information and data (both primary and secondary) were collected in core as well as buffer zone (10 km distance from the mine boundary) during Summer Season (March., to May., 2025) in accordance with the guidelines for preparation of EIA studies in order to assess the impact of the mine site within the 10 Km study area on existing physical, biological and social environment.

### **3.2 ESTABLISHMENT OF BASELINE FOR VALUED ENVIRONMENTAL COMPONENTS:**

Information on the following components/parameters were collected to understand the existing scenario of the core and buffer area:

- ✚ Meteorological environment
- ✚ Air environment
- ✚ Water environment
- ✚ Noise environment
- ✚ Soil environment
- ✚ Biological environment
- ✚ Land use & Land cover
- ✚ Socio economic environment
- ✚ Hydrogeology

### **BASELINE DATA COLLECTION**

Baseline environment data on various components of the environment in the study area were collected during Summer Season (March., to May., 2025) to assess the present scenario of the area. Details are given in the table given below.

Baseline data collection During Post Monsoon Season (March., to May., 2025)

| Sr.No | Environmental Component | Primary data                                                                                                                 |                          |                                |
|-------|-------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------|
|       |                         | Parameters                                                                                                                   | Frequency                | Monitoring/Sa mpling locations |
| 1     | Land                    | Agriculture, Habitation, Industry, Stony waste/ Quarries, Forest area, Plantation/ Vegetation, Open scrub, Water bodies etc. | Once in a Season         | 10 km radius study area        |
| 2     | Meteorology             | Temperature, Relative Humidity, Wind Speed, Wind Direction.                                                                  | Hourly                   | 1                              |
| 3     | Air                     | PM10, PM2.5, SO2, NO2, CO & PAH                                                                                              | twice a week (24 hourly) | 7                              |
| 4     | Noise                   | Equivalent noise levels in Leq in dB (A)                                                                                     | Once in a season (day &  | 7                              |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|   |                             |                                   |                  |            |
|---|-----------------------------|-----------------------------------|------------------|------------|
|   |                             |                                   | night time)      |            |
| 5 | Water                       | Parameters as per IS 10500 - 2012 | Once in a season |            |
| A | Surface Water               | Parameters as per IS 10500 - 2012 | Once in a season | 2          |
| B | Ground Water                | Parameters As per IS 2720/USDA    | Once in a season | 7          |
| 6 | Soil                        | Parameters As per IS 2720/USDA    | Once in a season | 7          |
| 7 | Biological Environment      | Flora and Fauna                   | Once in a season | Study Area |
| 8 | Socio- Economic Environment | Socio-Economic Environment        | Once in a season | Study Area |

**INSTRUMENTS USED FOR ENVIRONMENTAL BASELINE DATA COLLECTION**

The following instruments were used at the site for environmental baseline data collection work.

- Respirable Dust Sampler with attachment for gaseous Pollutants, Envirotech APM 460.
- Fine Particulate Matter (FPS) Sampler APM 550
- Sound Level Meter Model Envirotech SLM - 100
- Digital D.O. Meter Model - 831 E (CPCB Kit)
- Weather Monitoring Station Model Enviro WM 271
- Water Level Indicator and
- Global Positioning System (GPS) Apart from collecting samples of air, water, noise and soil from representative sampling points given in proceeding sections, the data on land use, vegetation and agricultural crops were also collected by the field team through interaction with a large number of local inhabitants of the study area and different Government departments/agencies. This provided an excellent opportunity to the members of the field team for obtaining clear scenario of the existing environment of the study area.



**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

### **3.3. BASE MAP OF ALL ENVIRONMENTAL COMPONENTS**

#### **(ENUMERATION OF THE STRUCTURES LOCATED WITHIN 1.0 KM RADIUS FROM THE PROPOSED QUARRY SITE)**

A site survey has been conducted to identify and list structures located within a 1 Km radius from the proposed Quarry and are detailed below. There are permanent structures within a 1 km radius from the project site. The PP has obtained a letter from Village Administrative Office (VAO), Pogalur stating that there are no structures situated within 300 Km radius.

**FIG 3.2 GOOGLE MAP SHOWING 50M INTERVAL FOR 500 M RADIUS FROM THE LEASE AREA**

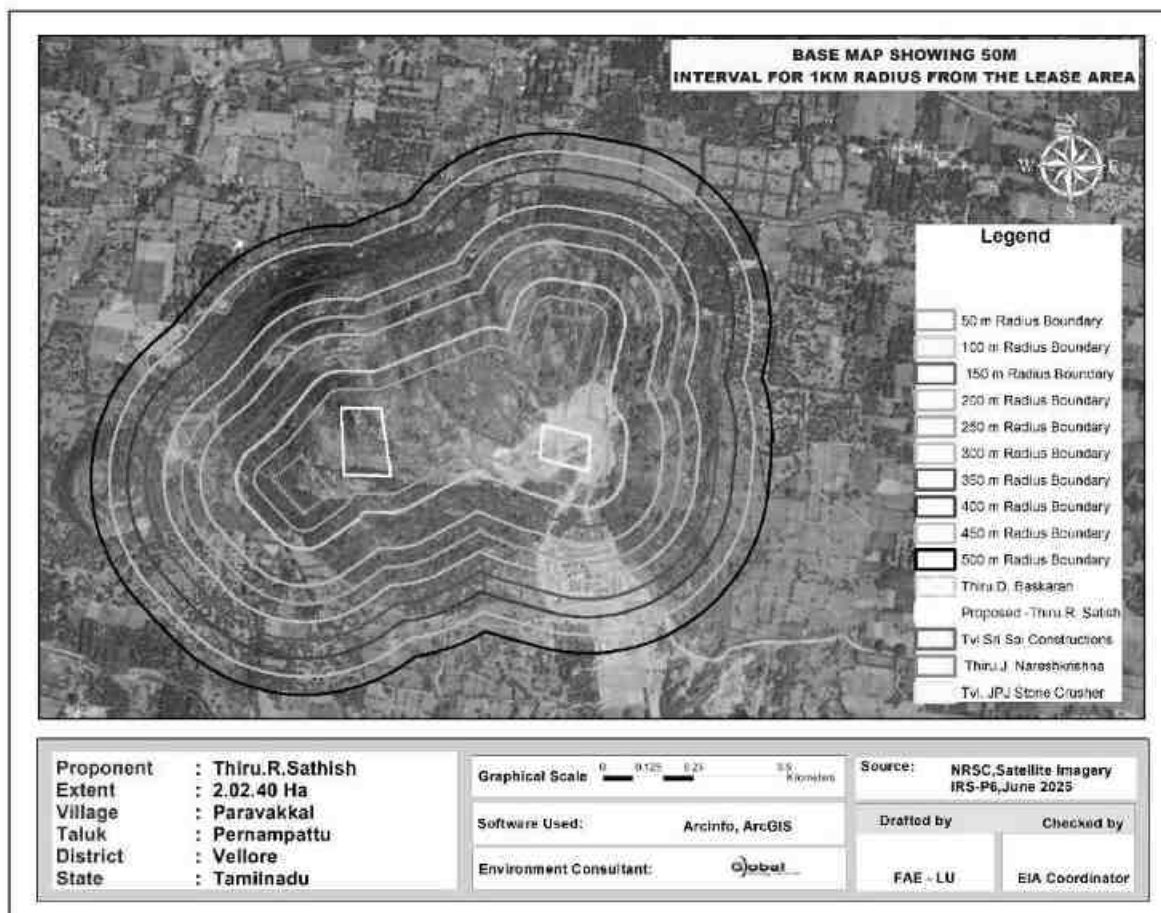
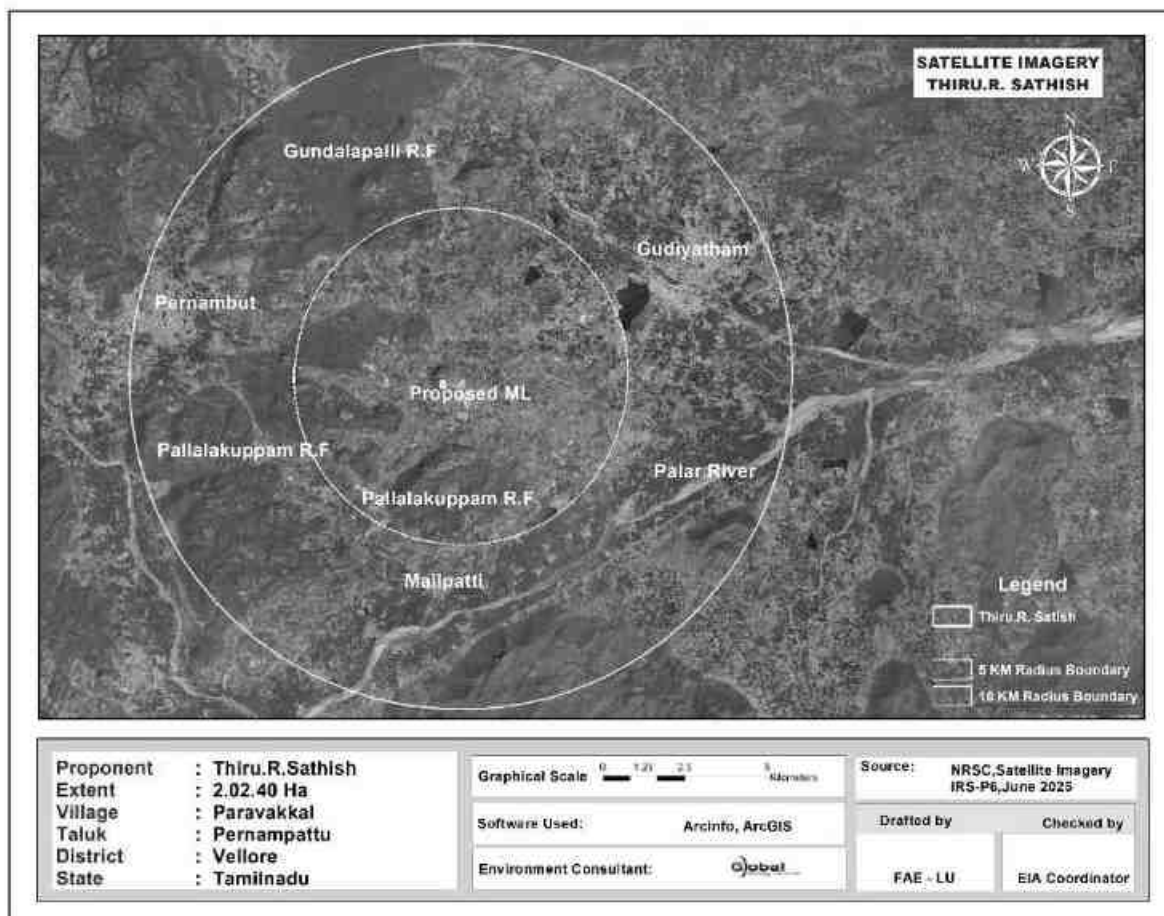


**FIGURE - 3.2a SATELLITE MAP OF THE PROJECT AREA (10 KM RADIUS)**



### **3.3.1 METEOROLOGICAL ENVIRONMENT**

**Meteorological conditions prevailing in the buffer zone is given below**

#### **Climate**

The climate of vellore District is tropical. The period from the weather is pleasant during the period from November to January. The normal temperature varies between 18°C to a maximum of 42°C during summer. Rainfall of this area is about 800mm to 900 mm during the both NE & SW monsoons. .

## **Rainfall**

Vellore district generally experiences hot and humid climate conditions. The district receives rain under the influence of both southwest and northeast monsoons. Most of the precipitation occurs in the form of cyclonic storm caused due to depressions in Bay of Bengal chiefly during NE monsoon period. The SW monsoon is highly erratic and summer rains are negligible. Rainfall of this area is about 800mm to 900 mm during the both NE & SW monsoons. The excess rainfall is 192% (Source: Mausam.imd.gov.in)

Rainfall received from 2017 to 2021 is given below.

| <b>Table 3.2 Rainfall data</b> |             |             |             |             |                              |
|--------------------------------|-------------|-------------|-------------|-------------|------------------------------|
| <b>Actual Rainfall in mm</b>   |             |             |             |             | <b>Normal rainfall in mm</b> |
| <b>2017</b>                    | <b>2018</b> | <b>2019</b> | <b>2020</b> | <b>2021</b> |                              |
| 1231.8                         | 750.3       | 1022.6      | 1077        | 1521.2      | 980                          |

## **Relative Humidity**

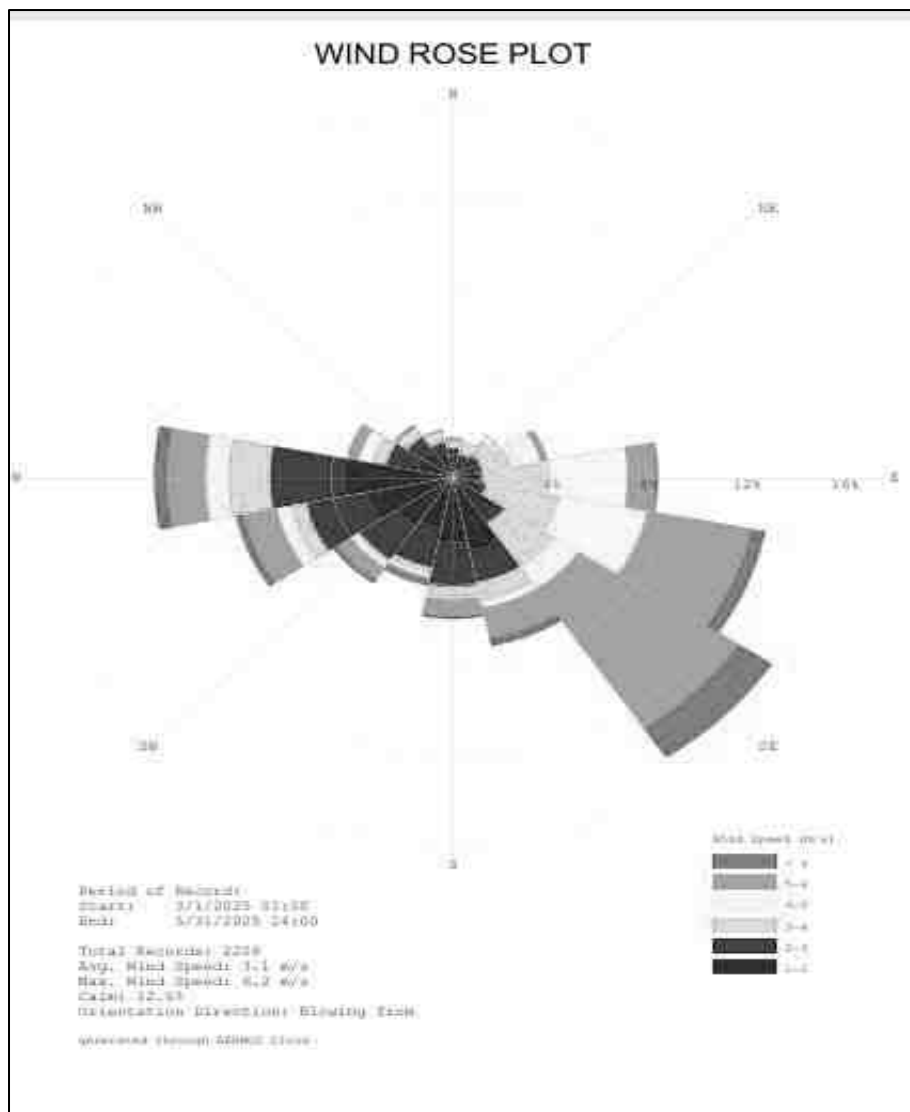
The relative humidity, in general around the year is between 55 and 65% in most parts of the district, except during the north-east monsoon season when it is over 65%.

## **Seismic information**

The study area falls in Zone II, which comes under the least active zone. The seismic map of India is given as Fig 3.3.



**FIG 3.4 WIND ROSE PLOT DURING MARCH TO MAY 2025**



### **Meteorological data of the project area**

The meteorological data collected in the study area from March 2025 to May 2025 which includes Temperature, Wind speed, Wind direction and Relative humidity. The predominant wind blows from West. The temperature of the area is reported to be 24.4°C and 27.1°C during summer.

### **3.3.2 AMBIENT AIR MONITORING DATA**

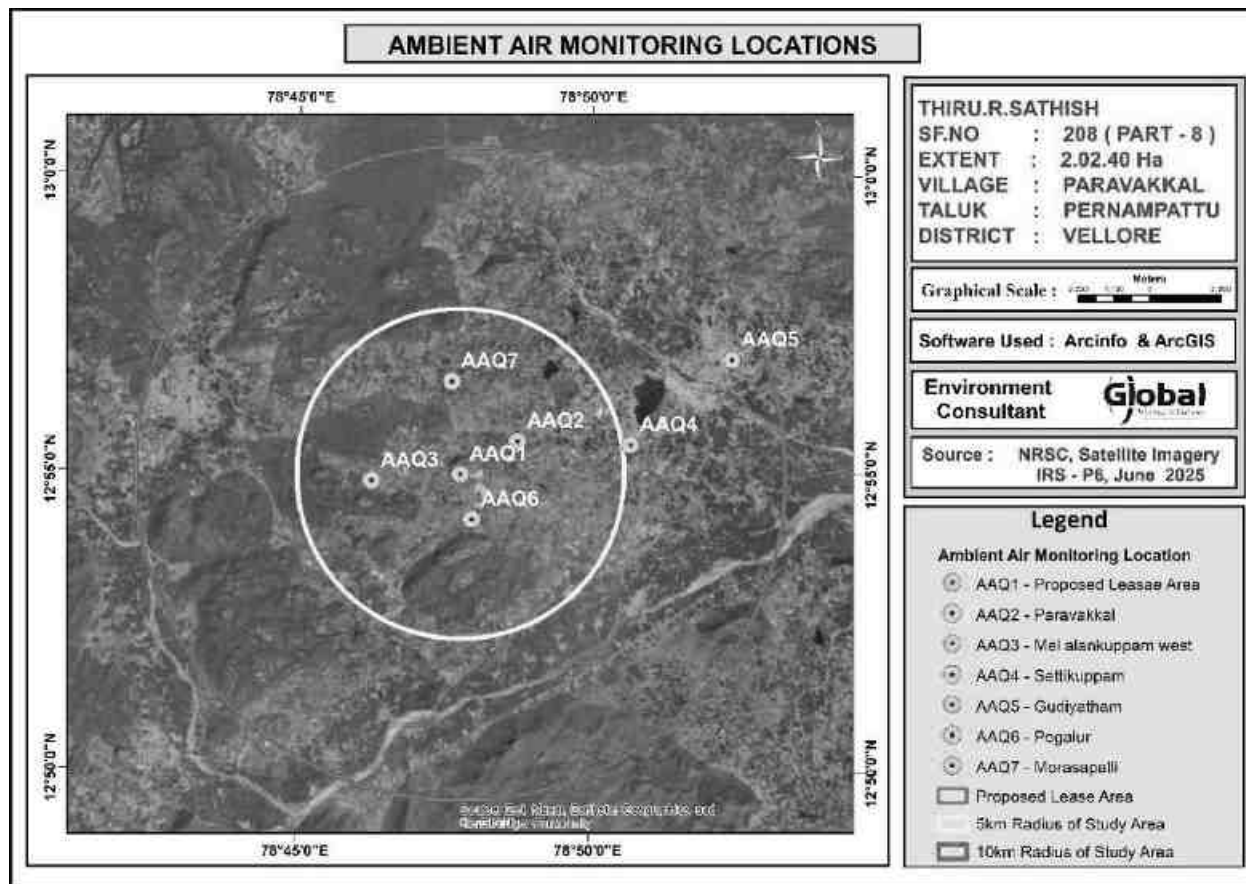
Ambient air quality monitoring has been carried out in 7 locations. One in the core zone and remaining six locations in the buffer zone areas. Monitoring locations have been chosen such that the measurement represents the overall air condition prevailing in the area. The study area represents mostly rural environment with stone mining quarries & crushers.

The regional climatologically data, was used as a guideline to know the predominant wind direction during study period. The locations were identified keeping in view predominant wind directions prevailing during study period, sensitive receptors, human settlements, and mining activities around.

The levels of Respirable Particulate Matter (PM10), Fine Particulates (PM2.5), Sulphur Dioxide (SO<sub>2</sub>) and Oxides of Nitrogen (NO<sub>x</sub>) were monitored for establishing the baseline status. PM10 were sampled with the help of Respirable Dust Samplers on filter papers and SO<sub>2</sub> & NO<sub>x</sub> were absorbed in the respective absorption media in the impingers attached to RD samplers and analyzed Spectrophotometrically. PM2.5 was monitored with the help of Fine Particulate Samplers. The monitoring locations for ambient air study are given in Table – 3.3 and Figure 3.5 below.

| <b>Table 3.3: Ambient Air Quality Monitoring Locations</b> |                     |                       |                                 |                                |
|------------------------------------------------------------|---------------------|-----------------------|---------------------------------|--------------------------------|
| <b>S. No.</b>                                              | <b>Station Code</b> | <b>Locations</b>      | <b>Distance &amp; Direction</b> | <b>Coordinates</b>             |
| 1                                                          | AAQ 1               | Project site          | Core Zone                       | 12°54'58.27"N<br>78°47'46.90"E |
| 2                                                          | AAQ 2               | Paravakkal            | 1.13 km, NW                     | 12°55'24.57"N<br>78°47'22.62"E |
| 3                                                          | AAQ 3               | Mel Alangkuppam -West | 2.64 km, SW                     | 12°54'44.62"N<br>78°46'35.64"E |
| 4                                                          | AAQ 4               | Chettikuppam          | 3.75 km, E                      | 12°55'12.99"N<br>78°50'11.28"E |
| 5                                                          | AAQ 5               | Gudiyatham            | 7.0 Km, NE                      | 12°56'17.75"N<br>78°51'41.28"E |
| 6                                                          | AAQ6                | Pogalur               | 1.65 Km, NE                     | 12°54'6.90"N<br>78°47'32.93"E  |
| 7                                                          | AAQ7                | Morsapalli            | 2.97 Km, E                      | 12°56'45.52"N<br>78°47'40.19"E |

**FIG 3.5 BASE MAP OF AMBIENT AIR MONITORING LOCATIONS**



The concentrations of various air pollutants at the 7 locations are given below. For all the components in the table, the unit are in  $\mu\text{g}/\text{m}^3$ .

**Table.3.4 Results of Air sampling Analysis**

| Station ID                                                                           | Min  | Max  | Avg.  |
|--------------------------------------------------------------------------------------|------|------|-------|
| <b>Particulate matter PM-2.5 (<math>\mu\text{g}/\text{m}^3</math>)</b>               |      |      |       |
| AAQ-1                                                                                | 21.6 | 31.5 | 26.55 |
| AAQ-2                                                                                | 22.9 | 27   | 24.95 |
| AAQ-3                                                                                | 21.1 | 31   | 26.05 |
| AAQ-4                                                                                | 22.8 | 28.6 | 25.7  |
| AAQ-5                                                                                | 21.5 | 27.5 | 24.5  |
| AAQ-6                                                                                | 21.4 | 26.1 | 23.75 |
| AAQ-7                                                                                | 21.1 | 25.2 | 23.15 |
| <b>CPCB NAAQS 2009 for PM<sub>2.5</sub> - 60 <math>\mu\text{g}/\text{m}^3</math></b> |      |      |       |
| <b>Particulate matter PM-10 (<math>\mu\text{g}/\text{m}^3</math>)</b>                |      |      |       |
| AAQ-1                                                                                | 48.4 | 67.9 | 58.15 |
| AAQ-2                                                                                | 48.6 | 62.3 | 55.45 |
| AAQ-3                                                                                | 42.7 | 56.5 | 49.6  |
| AAQ-4                                                                                | 47.3 | 61.4 | 54.35 |
| AAQ-5                                                                                | 45.1 | 55.9 | 50.5  |
| AAQ-6                                                                                | 47.2 | 58.2 | 52.7  |
| AAQ-7                                                                                | 44.7 | 57.1 | 50.9  |
| <b>CPCB NAAQS 2009 for PM<sub>10</sub> - 100 <math>\mu\text{g}/\text{m}^3</math></b> |      |      |       |
| <b>Sulphur Di-oxide as SO<sub>2</sub> (<math>\mu\text{g}/\text{m}^3</math>)</b>      |      |      |       |
| AAQ-1                                                                                | 3.9  | 6.2  | 5.05  |
| AAQ-2                                                                                | 3.6  | 5.8  | 4.7   |
| AAQ-3                                                                                | 4.6  | 6    | 5.3   |
| AAQ-4                                                                                | 4.1  | 5.8  | 4.95  |
| AAQ-5                                                                                | 4.1  | 5.9  | 5     |
| AAQ-6                                                                                | 3.8  | 6    | 4.9   |
| AAQ-7                                                                                | 4.6  | 6.2  | 5.4   |
| <b>CPCB NAAQS 2009 for SO<sub>2</sub> - 80 <math>\mu\text{g}/\text{m}^3</math></b>   |      |      |       |
| <b>Oxide of Nitrogen as NO<sub>2</sub> (<math>\mu\text{g}/\text{m}^3</math>)</b>     |      |      |       |
| AAQ-1                                                                                | 7.4  | 12.3 | 9.85  |
| AAQ-2                                                                                | 7.1  | 10.2 | 8.65  |
| AAQ-3                                                                                | 8.5  | 10.9 | 9.7   |
| AAQ-4                                                                                | 7.5  | 13.3 | 10.4  |
| AAQ-5                                                                                | 8.2  | 12.1 | 10.15 |
| AAQ-6                                                                                | 7.7  | 13.6 | 10.65 |
| AAQ-7                                                                                | 7.6  | 10.9 | 9.25  |
| <b>CPCB NAAQS 2009 for NO<sub>2</sub> - 80 <math>\mu\text{g}/\text{m}^3</math></b>   |      |      |       |

The results are summarized in graph and given as below Fig. 3.6



**FIG 3.6 AMBIENT AIR QUALITY DATA A1 - MINE LEASE AREA**

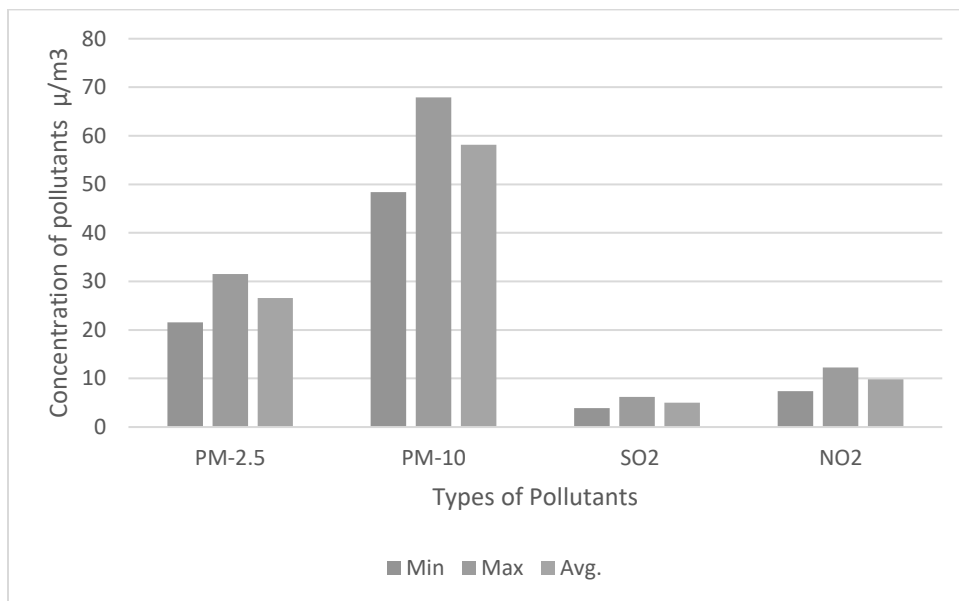


**FIG 3.7 AMBIENT AIR QUALITY DATA A2 - PARAVAKKAL VILLAGE**

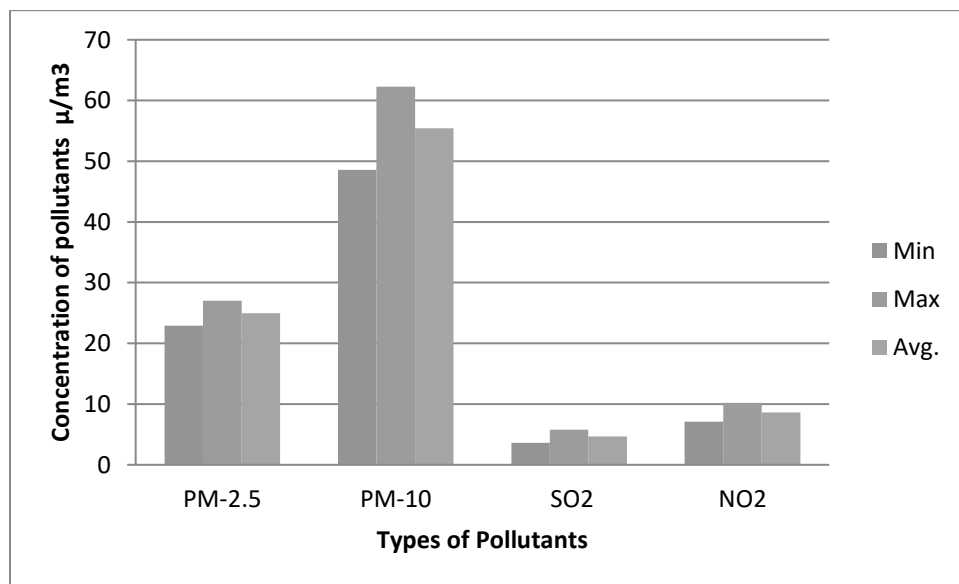


**FIG 3.8 AMBIENT AIR QUALITY DATA A3 – MEL ALANKUPPAM -WEST VILLAGE**

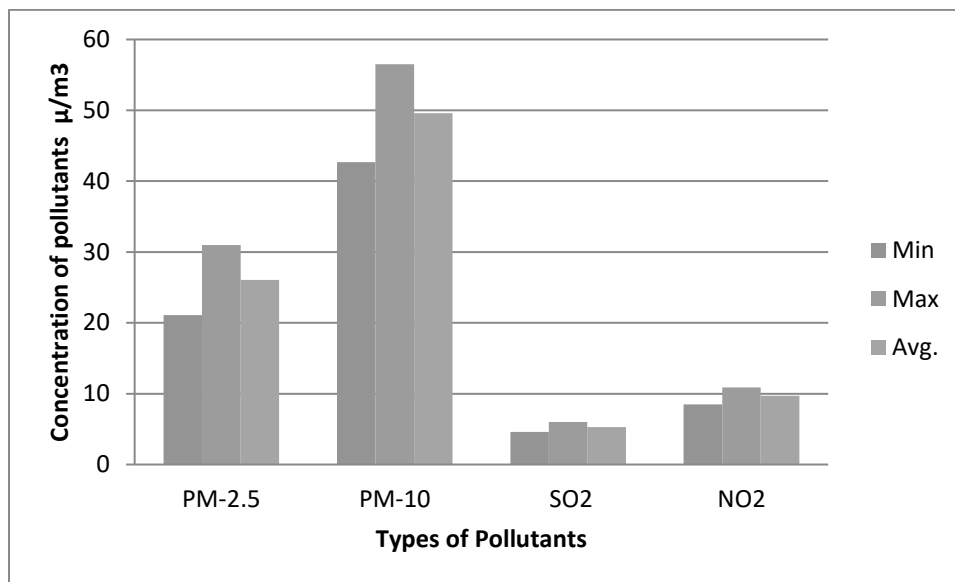


**FIG 3.9 AAQ DATA A4 - CHETTIKUPPAM VILLAGE**

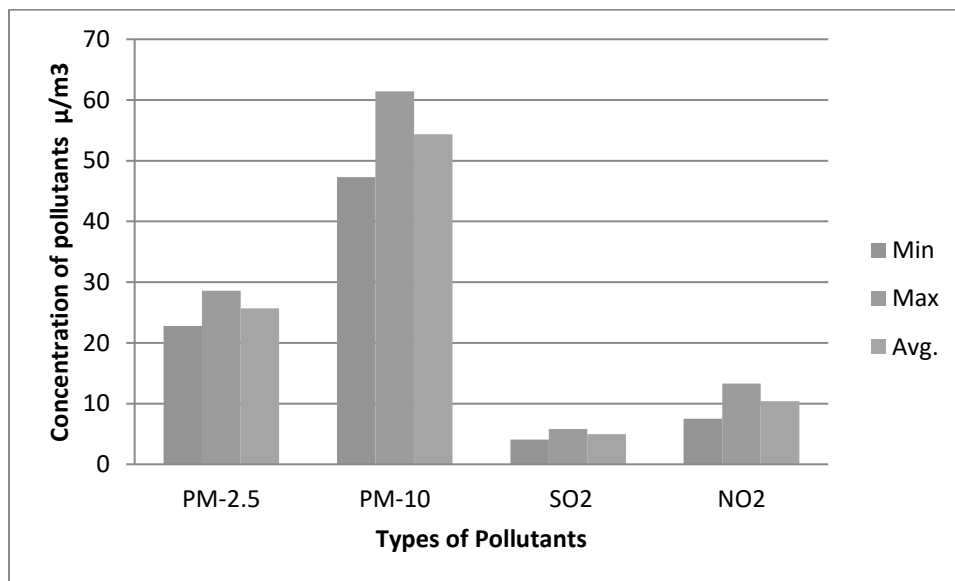


**FIG 3.10 AMBIENT AIR QUALITY DATA A5 - GUDIYATHAM VILLAGE**

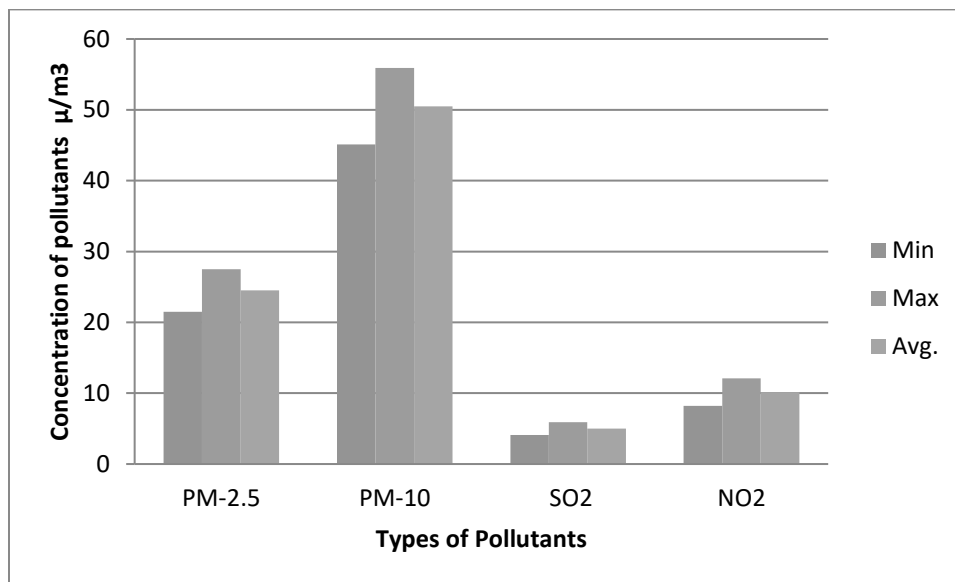


**FIG 3.11 AMBIENT AIR QUALITY DATA A6 – POGALUR VILLAGE**

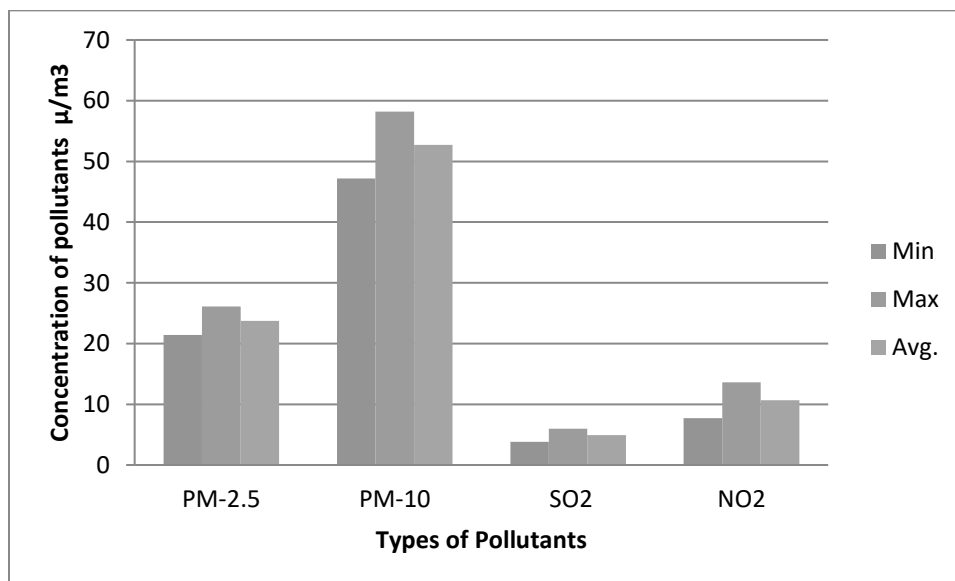
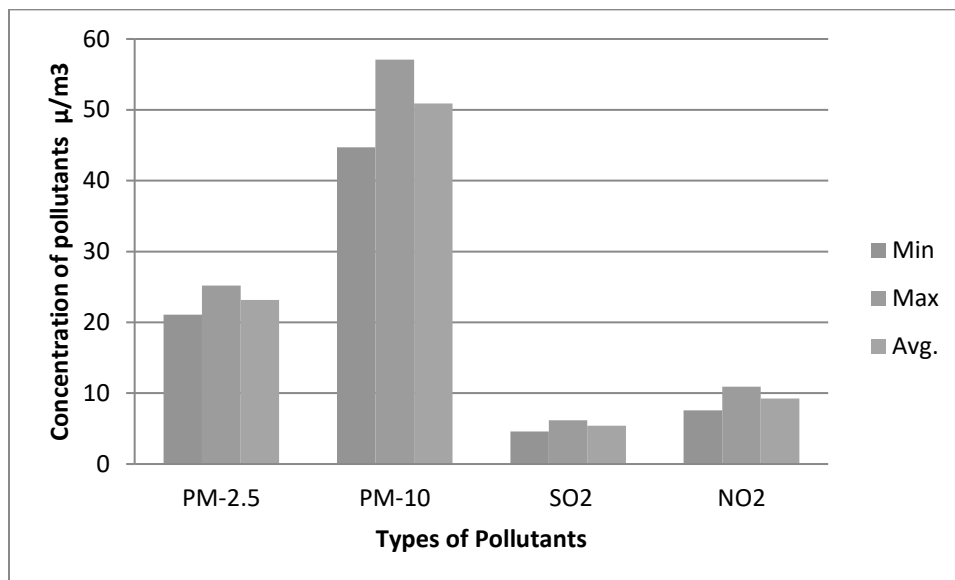


**FIG 3.11.a AMBIENT AIR QUALITY DATA A7 – MORSAPALLI VILLAGE**



From the above results, it is observed that the ambient air quality with respect to PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>2</sub> at all the monitoring locations was within the permissible limits specified by CPCB.

### 3.3.3 WATER ENVIRONMENT

Assessment of baseline data on water environment includes:

- Identification of water resources
- Collection of water samples
- Analyzing water samples collected for physico-chemical parameters as per standards.

#### Surface Water

There is Palar River is located at a distance of 6.8 km in South direction of lease area & Kaundinya Nadi is located at a distance of 6.37 km in Northeast direction of lease area. The rainfall over the area is moderate, the rainwater storage in open wells, trenches is in practice over the area and the stored water acts as source of freshwater. The prevailing status of surface water quality has been assessed during the study period. Surface water quality locations and results are provided in Table 3-14 and Figure 3.11.

## **Ground Water**

The rainfall is the main source for the availability of water both in surface and sub-surface. The quantum of rainfall varies every year depending upon the monsoon. However, the extraction of surface and sub-surface water is increasing year by year. It leads to environmental impact on the water sources like depletion of water level, deterioration of water quality. It makes the demand for the quantification of available water and also its quality for various purposes like agriculture, industries, drinking and domestic purposes. Total five (05) ground water monitoring locations were identified for assessment in different villages around the project site based on the usage of sub surface water by the settlements/ villages in the study area. The groundwater results are compared with the acceptable and permissible water quality standards as per IS: 10500 (2012) for drinking water. Groundwater quality monitoring locations and results are given in Table 3.5 and Figure 3.11.

## **Sampling Locations**

Two (2) surface water samples and five (5) ground water samples were collected from the study area and were analysed for physio-chemical, heavy metals and bacteriological parameters in order to assess the effect of mining and other activities on water bodies. The samples were analysed as per the procedures specified by CPCB, IS-10500:2012. The water sampling locations are given in Table 3.5 and shown as Figure 3.12.

The monitoring locations were selected based on:

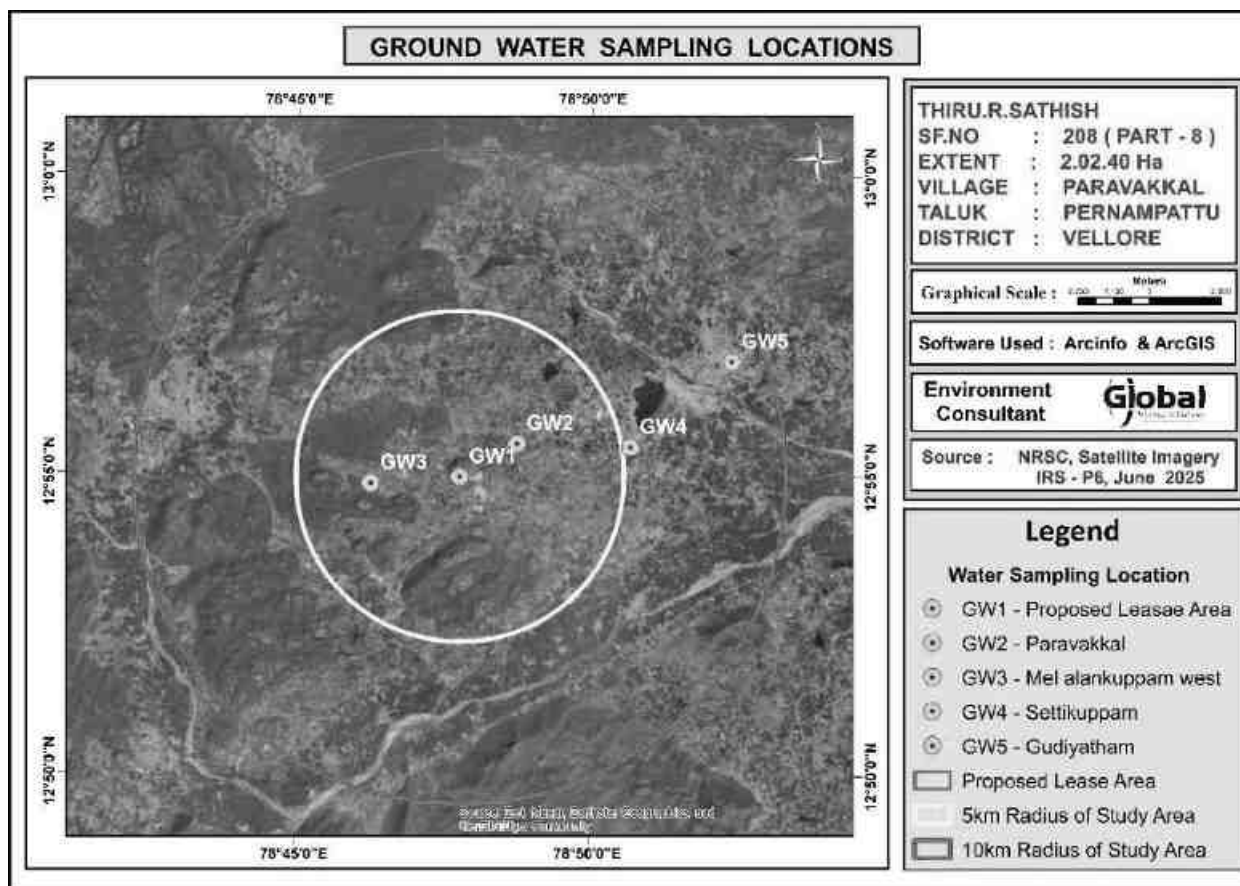
- Location of the major water bodies
  - Location of project site,
  - Likely areas that can represent baseline conditions
- Water bodies nearby

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

**Table 3.5 Water Sampling Locations**

| S.NO                 | Location Code | Monitoring Locations    | Latitude and longitude      |
|----------------------|---------------|-------------------------|-----------------------------|
| <b>Surface Water</b> |               |                         |                             |
| 1                    | SW1           | Palar River-Up stream   | 12°50'44.98"N 78°46'56.36"E |
| 2                    | SW2           | Palar River-Down stream | 12°52'55.46"N 78°51'2.06"E  |
| <b>Ground Water</b>  |               |                         |                             |
| 1                    | GW1           | Project site            | 12°54'58.27"N 78°47'46.90"E |
| 2                    | GW2           | Paravakkal              | 12°55'24.57"N 78°47'22.62"E |
| 3                    | GW3           | Mel Alangkuppam -West   | 12°54'44.62"N 78°46'35.64"E |
| 4                    | GW4           | Chettikuppam            | 12°55'12.99"N 78°50'11.28"E |
| 5                    | GW5           | Gudiyatham              | 12°56'17.75"N 78°51'41.28"E |

**FIG 3.12 BASE MAP OF GROUND WATER SAMPLING LOCATIONS**



**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

**FIG 3.12a BASE MAP OF SURFACE WATER SAMPLING LOCATIONS**

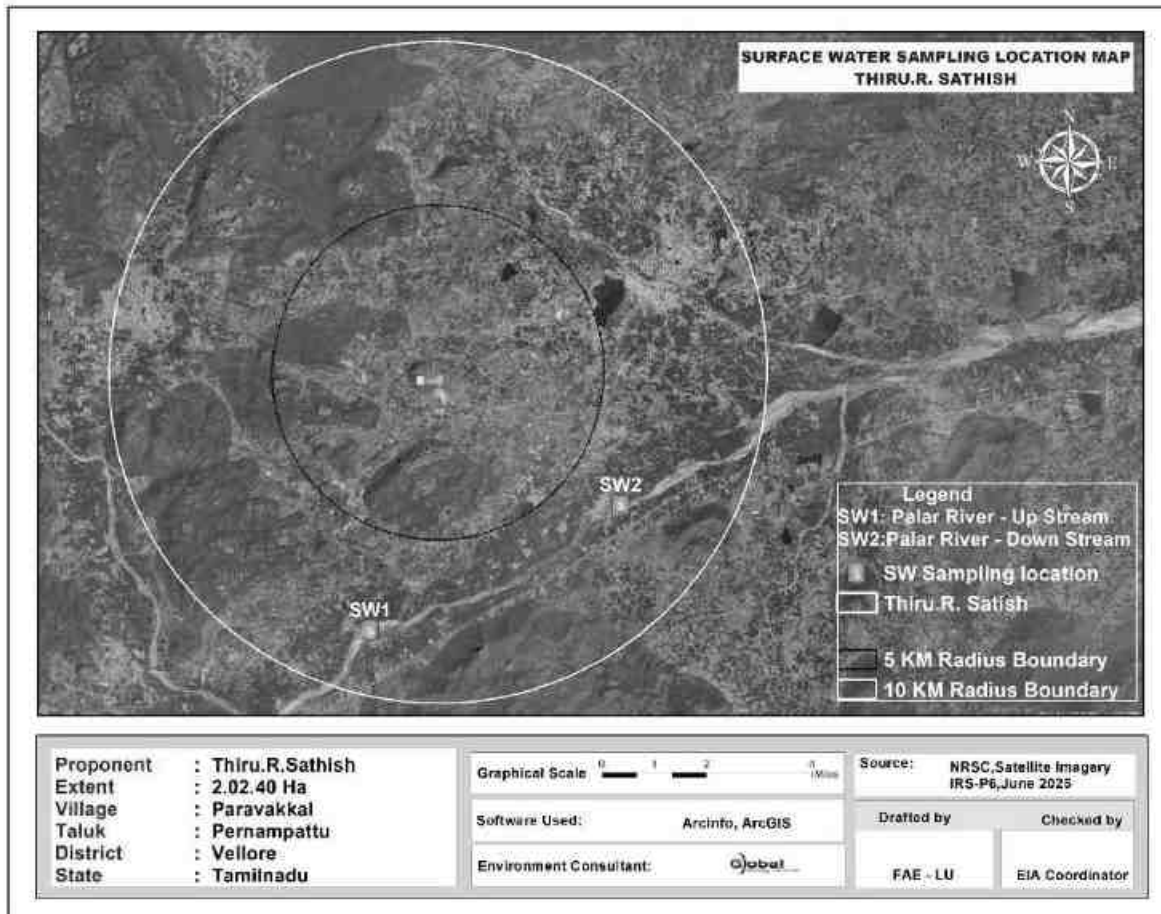


**Table 3.6 Surface Water Analysis Results**

| <b>Sr.No</b> | <b>Parameter</b>                           | <b>Unit</b> | <b>SW1</b>       | <b>SW2</b>       | <b>Surface water standard s (IS 2296 Class-A)</b> |
|--------------|--------------------------------------------|-------------|------------------|------------------|---------------------------------------------------|
| 1            | Odour                                      | -           | Agreeable        | Agreeable        | -                                                 |
| 2            | Turbidity                                  | NTU         | <1.0             | <1.0             | 1                                                 |
| 3            | pH at 25 °C                                | -           | 7.32             | 7.41             | 6.5-8.5                                           |
| 4            | Electrical Conductivity                    | µs/cm       | 262              | 370.4            | -                                                 |
| 5            | Total Dissolved Solids                     | mg/l        | 160              | 224              | 500                                               |
| 6            | Total hardness as CaCO <sub>3</sub>        | mg/l        | 73.6             | 96.5             | -                                                 |
| 7            | Calcium as Ca                              | mg/l        | 13.6             | 18.9             | 300                                               |
| 8            | Magnesium as Mg                            | mg/l        | 9.53             | 11.8             | -                                                 |
| 9            | Calcium as CaCO <sub>3</sub>               | mg/l        | 33.9             | 47.2             | -                                                 |
| 10           | Magnesium as CaCO <sub>3</sub>             | mg/l        | 39.7             | 49.3             | -                                                 |
| 11           | Total alkalinity as CaCO <sub>3</sub>      | mg/l        | 95.5             | 138              | -                                                 |
| 12           | Chloride as Cl <sup>-</sup>                | mg/l        | 43.3             | 49.5             | -                                                 |
| 13           | Free Residual chlorine as Cl <sup>-</sup>  | mg/l        | BDL (D.L - 0.2)  | BDL (D.L - 0.2)  | 250                                               |
| 14           | Sulphates as SO <sub>4</sub> <sup>2-</sup> | mg/l        | 21.2             | 33.8             | 400                                               |
| 15           | Iron as Fe                                 | mg/l        | 0.09             | 0.12             | 1.0                                               |
| 16           | Nitrate as NO <sub>3</sub>                 | mg/l        | 1.97             | 3.45             | 20                                                |
| 17           | Fluoride as F                              | mg/l        | 0.21             | 0.32             | 1.5                                               |
| 18           | Manganese as Mn                            | mg/l        | BDL (D.L - 0.05) | BDL (D.L - 0.05) | 0.5                                               |
| 19           | COD                                        | mg/l        | BDL (D.L - 4.0)  | BDL (D.L - 4.0)  |                                                   |
| 20           | BOD                                        | mg/l        | BDL (D.L - 2.0)  | BDL (D.L - 2.0)  |                                                   |
| 21           | TSS                                        | mg/l        | BDL (D.L - 5.0)  | BDL (D.L - 5.0)  |                                                   |

The samples were analyzed by Shrient Analytical & Research Labs Private Limited; Chennai and the results are summarized below.

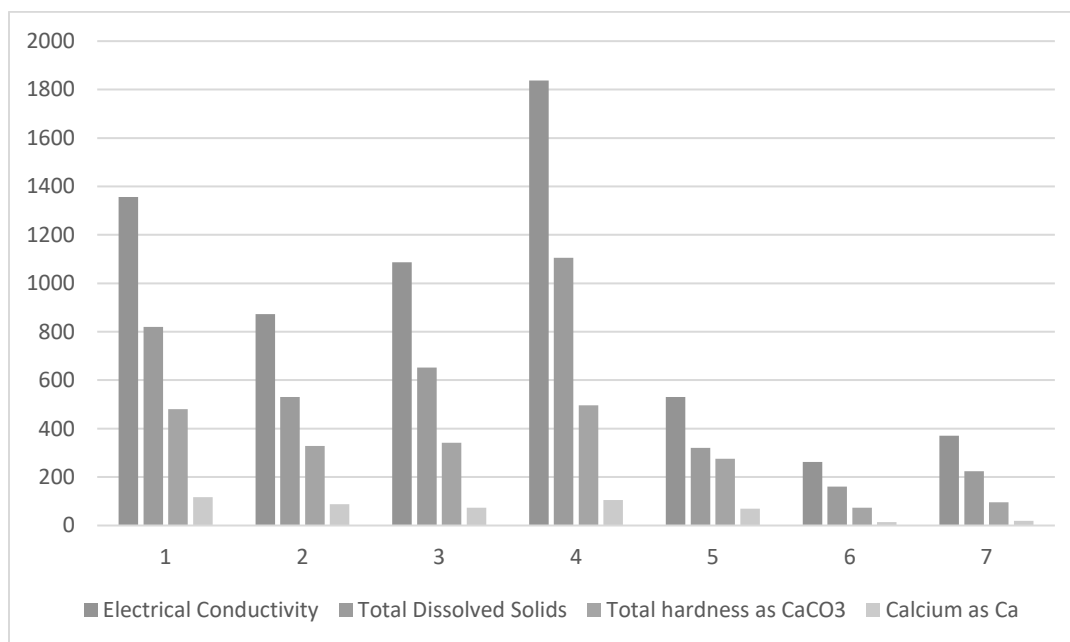


**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

| Table 3.7 Results of Ground Water sampling Analysis |                  |                  |                  |                  |                  | Standards as Per IS 10500: 2012 |                    |
|-----------------------------------------------------|------------------|------------------|------------------|------------------|------------------|---------------------------------|--------------------|
|                                                     | W1               | W2               | W3               | W4               | W5               | Acceptable Limits               | Permissible Limits |
| Odour                                               | AGREEABLE        | AGREEABLE        | Agreeable        | AGREEABLE        | AGREEABLE        | Agreeable                       | Agreeable          |
| Turbidity                                           | <1               | <1               | <1.0             | <1               | <1               | 1                               | 5                  |
| pH at 25 °C                                         | 7.56             | 7.39             | 8.01             | 7.51             | 7.69             | 6.5- 8.5                        | No Relaxation      |
| Electrical Conductivity                             | 1356             | 873.5            | 1087             | 1837             | 530.1            | -                               | -                  |
| Total Dissolved Solids                              | 820              | 530              | 652              | 1105             | 320              | 500                             | 2000               |
| Total hardness as CaCO <sub>3</sub>                 | 480              | 329              | 341              | 496              | 275              | 200                             | 600                |
| Calcium as Ca                                       | 118              | 87.6             | 73.2             | 105              | 69.6             | 75                              | 200                |
| Magnesium as Mg                                     | 44.6             | 26.4             | 37.9             | 56.2             | 24.2             | 30.0                            | 100                |
| Calcium as CaCO <sub>3</sub>                        | 294              | 219              | 183              | 262              | 174              | -                               | -                  |
| Magnesium as CaCO <sub>3</sub>                      | 186              | 110              | 158              | 234              | 101              | -                               | -                  |
| Total alkalinity as CaCO <sub>3</sub>               | 370              | 275              | 249              | 356              | 130              | 200                             | 600                |
| Chloride as Cl <sup>-</sup>                         | 234              | 174.0            | 234              | 324              | 92.2             | 250                             | 1000               |
| Free Residual chlorine as Cl <sup>-</sup>           | BDL (D.L - 0.2)  | BDL (D.L - 0.2)  | BDL (D.L - 0.2)  | BDL (D.L - 0.2)  | BDL (D.L - 0.2)  | 0.2                             | 1                  |
| Sulphates as SO <sub>4</sub> <sup>2-</sup>          | 186.0            | 62.5             | 131              | 276              | 45.3             | 200                             | 400                |
| Iron as Fe                                          | 0.07             | BDL(DL- 0.01)    | BDL(DL- 0.01)    | 0.05             | BDL(DL- 0.01)    | 0.3                             | No Relaxation      |
| Nitrate as NO <sub>3</sub>                          | 3.26             | 2.64             | 3.73             | 5.69             | 2.31             | 45                              | No Relaxation      |
| Fluoride as F                                       | 0.47             | 0.21             | 0.46             | 0.56             | 0.25             | 1                               | 1.5                |
| Manganese as Mn                                     | BDL (D.L - 0.05) | BDL (D.L - 0.05) | BDL (D.L - 0.05) | BDL (D.L - 0.05) | BDL (D.L - 0.05) | 0.1                             | 0.3                |

Some of the common parameters including EC, TDS, Total Hardness, Total Alkalinity, Chlorides and Sulphates in the 7 locations were plotted and the graph is provided below.

**FIG 3.13 VALUES OF FEW COMMON PARAMETERS IN WATER ANALYSIS**



All the values were found to be within the permissible limits.

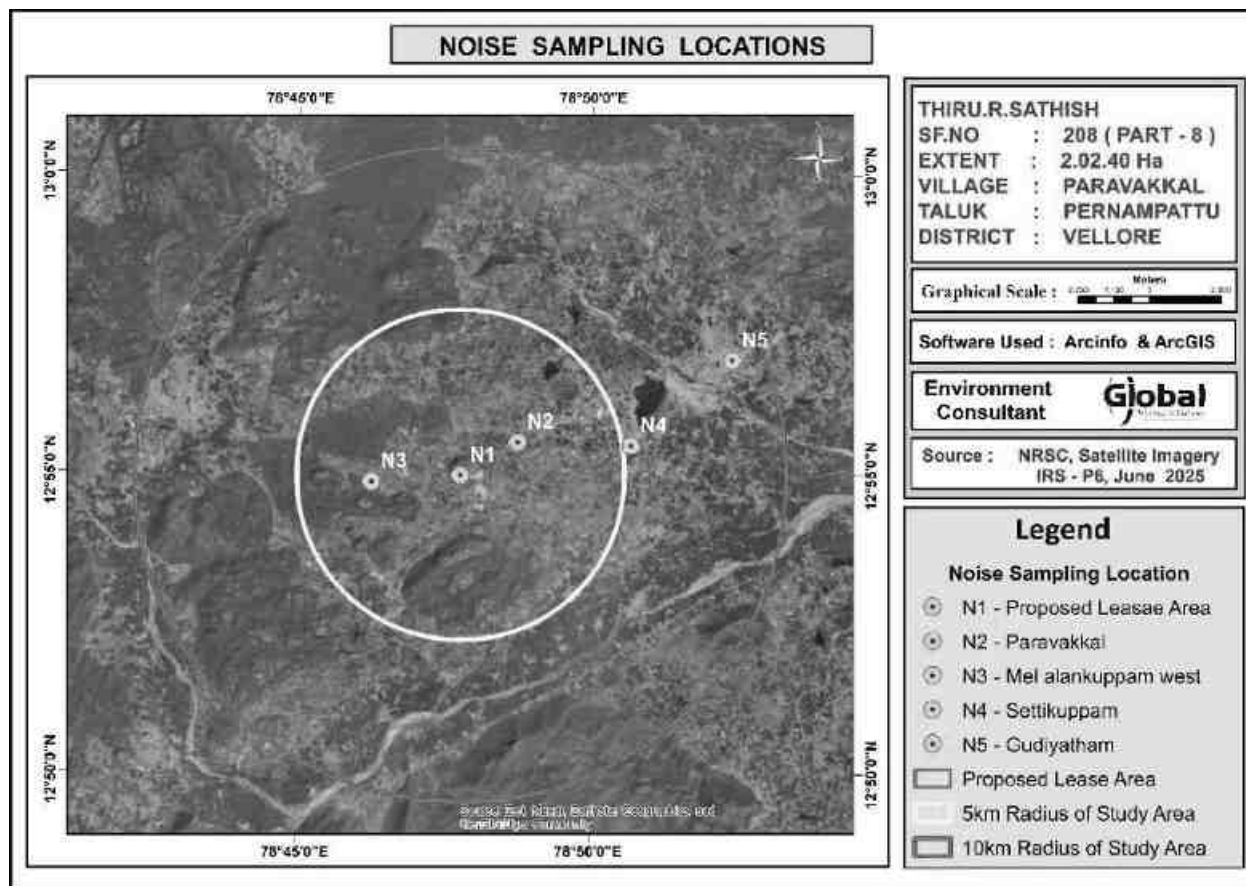
### **3.3.4 NOISE MONITORING**

Noise level monitoring was calculated using a noise level meter by NABL Accredited lab and the results are summarized below.

The noise monitoring locations are given in Fig 3.14

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

**FIG 3.14 BASE MAP OF NOISE MONITORING LOCATIONS**

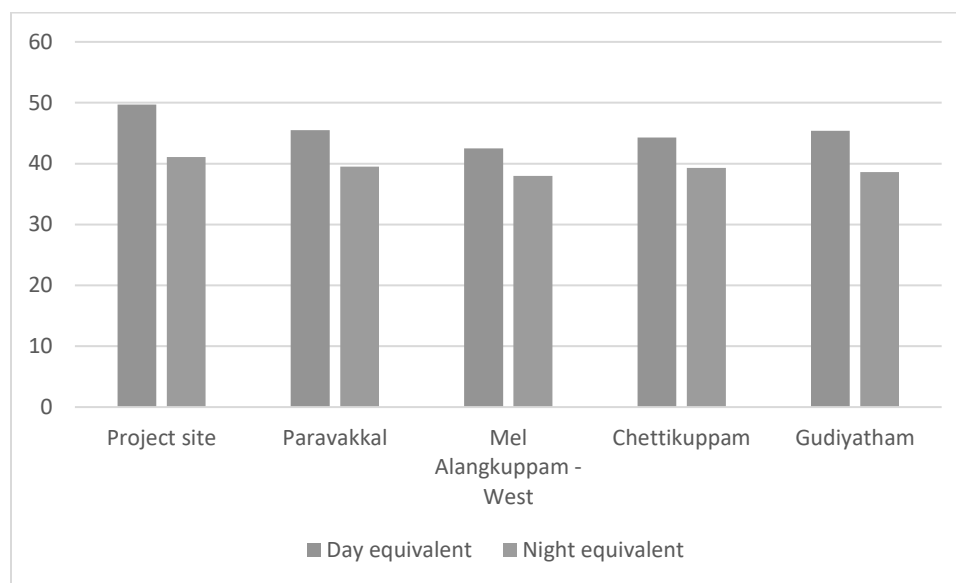


The results are given in Table below.

| Table 3.8 Noise monitoring results |                        |                |                  |                               |                                 |
|------------------------------------|------------------------|----------------|------------------|-------------------------------|---------------------------------|
| S. No                              | Location               | Day equivalent | Night equivalent | Day equivalent limits by CPCB | Night equivalent limits by CPCB |
| 1                                  | Project site           | 49.7           | 41.1             | 75                            | 70                              |
| 2                                  | Paravakkal             | 45.5           | 39.5             |                               |                                 |
| 3                                  | Mel Alangkuppam - West | 42.5           | 38.0             |                               |                                 |
| 4                                  | Chettikuppam           | 44.3           | 39.3             |                               |                                 |
| 5                                  | Gudiyatham             | 45.4           | 38.6             |                               |                                 |

The results are plotted as below.

**FIG 3.15 DAY AND NIGHT EQUIVALENT VALUES IN 5 LOCATIONS**



All the values are found to be within CPCB norms.

### **3.3.5 SOIL SAMPLING ANALYSIS**

Soil samples have been collected from the mine lease area and 4 other locations from Paravakkal, Mel Alangkuppam -West, Chettikuppam and Gudiyatham Villages. The locations are shown in figure below.

**FIG 3.16 BASE MAP OF SOIL SAMPLING LOCATIONS**

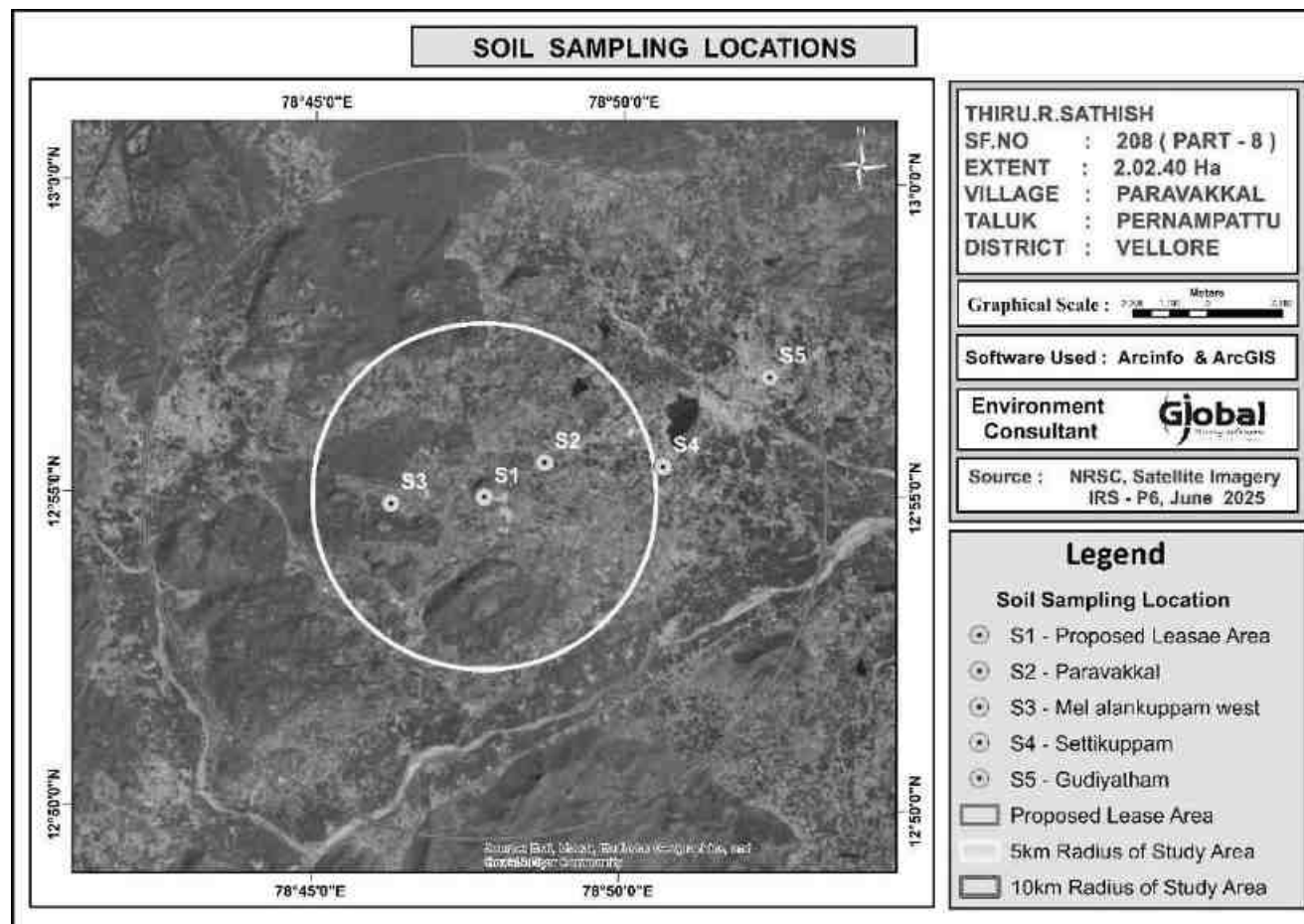


**Table 3.9 Results Of Soil Sample Analysis**

| S.No | Parameter               | Unit     | S1        | S2        | S3    | S4    | S5        |
|------|-------------------------|----------|-----------|-----------|-------|-------|-----------|
| 1    | pH at 25 °C             | -        | 6.98      | 7.89      | 8.24  | 7.78  | 8.12      |
| 2    | Electrical Conductivity | µmhos/cm | 52.69     | 286.7     | 136.2 | 155.4 | 122.1     |
| 3    | Dry matter content      | %        | 98.45     | 98.73     | 96.83 | 97.12 | 95.55     |
| 4    | Water Content           | %        | 1.55      | 1.27      | 3.17  | 2.73  | 4.34      |
| 5    | Organic Matter          | %        | 0.48      | 0.54      | 0.39  | 0.72  | 0.47      |
| 6    | Soil texture            | -        | SILT LOAM | SILT LOAM | LOAM  | LOAM  | SILT LOAM |
| 7    | Grain Size Distribution | %        | 31.02     | 27.15     | 44.39 | 40.64 | 24.02     |
|      |                         |          |           |           |       |       |           |
|      | i. Sand                 |          |           |           |       |       |           |
| 8    | ii. Silt                | %        | 50.96     | 61.58     | 45.47 | 47.63 | 58.36     |

|    |                                    |             |                |                |                |                |                |
|----|------------------------------------|-------------|----------------|----------------|----------------|----------------|----------------|
| 9  | iii. Clay                          | %           | 18.02          | 11.27          | 10.14          | 11.73          | 17.62          |
| 10 | Phosphorous as P                   | mg/kg       | 1.06           | 1.52           | 1.34           | 2.19           | 1.22           |
| 11 | Sodium as Na                       | mg/kg       | 654            | 682            | 810            | 645            | 836            |
| 12 | Potassium as K                     | mg/kg       | 832            | 786            | 914            | 986            | 1020           |
| 13 | Nitrogen and Nitrogenous Compounds | mg/kg       | 245            | 345            | 265            | 242            | 310            |
| 14 | Total Soluble Sulphate             | %           | BDL(D.L.O. 02) | BDL(D.L.O. 02) | BDL(D.L.O. 02) | BDL(D.L.O. 02) | BDL(D.L.O. 02) |
| 15 | Porosity                           | %           | 40             | 45             | 48             | 42             | 39             |
| 16 | Water Holding Capacity             | Inches/foot | 15.4           | 14.2           | 14.5           | 15.9           | 13.8           |

### 3.3.6 BIOLOGICAL ENVIRONMENT

The biological study of the area has been conducted in order to understand the ecological status of the existing flora and fauna to generate baseline information and evaluate the probable impacts on the biological environment. The details are given below.

#### Flora in the study area

Field survey is done. For measuring the extent of flora present in the study area, the area is divided into 4 quadrants. The flora population in each quadrant is summed up for the total population in the study area. Also, data from the State Forest department is used.

#### Core Zone

During the field visit, it is observed that there are no national parks / Sanctuaries / forests in the 10km buffer area. The study area is devoid of any major plantations.

| Table 3.10 Flora in Core Zone |                     |                         |               |
|-------------------------------|---------------------|-------------------------|---------------|
| S.No.                         | Scientific name     | Vernacular/English name | Type of flora |
| 1                             | Calotropis gigantea | Erukku                  | Shrubs        |
| 2                             | Cassia auriculata   | Aavarai                 |               |
| 3                             | Achyranthes aspera  | Nayuruvi                |               |

### Buffer zone

Only common trees, shrubs, bushes, etc. are found. The list is given below.

| <b>Table 3.11 Flora in Buffer zone</b> |                                |                                |                      |
|----------------------------------------|--------------------------------|--------------------------------|----------------------|
| <b>S.No.</b>                           | <b>Scientific name</b>         | <b>Vernacular/English name</b> | <b>Type of flora</b> |
| 1                                      | <i>Azadirachta indica</i>      | Neem                           | Trees                |
| 2                                      | <i>Carica papaya</i>           | Papaya                         |                      |
| 3                                      | <i>Mangifera indica</i>        | Mango                          |                      |
| 4                                      | <i>Acacia leucophloea</i>      | Velamaram                      |                      |
| 5                                      | <i>Acacia nilotica</i>         | Karu- velamaram                |                      |
| 6                                      | <i>Moringa oleifera</i>        | Murungai                       |                      |
| 7                                      | <i>Tamarindus indica</i>       | Puli                           |                      |
| 8                                      | <i>Tectona grandis</i>         | Theku                          |                      |
| 9                                      | <i>Manilkara zapota</i>        | Sappota                        |                      |
| 10                                     | <i>Musa paradisiaca</i>        | Valzhlai                       |                      |
| 11                                     | <i>Borassus flabelliformis</i> | Panna-maram                    |                      |
| 12                                     | <i>Ficus benghalensis</i>      | Alamaram                       |                      |
| 13                                     | <i>Ficus religiosa</i>         | Arasamaram                     |                      |
| 14                                     | <i>Phyllanthus emblica</i>     | Nelli                          |                      |
| 15                                     | <i>Calotropis gigantea</i>     | Yerukku                        | Shrubs               |
| 16                                     | <i>Cassia auriculata</i>       | Aavarai                        |                      |
| 17                                     | <i>Ricinus communis</i>        | Aamanakku                      |                      |
| 18                                     | <i>Tecoma stans</i>            | Arali                          |                      |
| 19                                     | <i>Aloe vera</i>               | Kathalai                       |                      |
| 20                                     | <i>Catharanthus roseus</i>     | Nithyakalyani                  | Herbs                |
| 21                                     | <i>Acalypha indica</i>         | Kuppaimeni                     |                      |
| 22                                     | <i>Coccinia grandis</i>        | Kovai                          | Climbers             |
| 23                                     | <i>Cissus quadrangularis</i>   | Pirandai                       |                      |
| 24                                     | <i>Jasminum angustifolium</i>  | malli                          |                      |
| 25                                     | <i>Ziziphus oenoplia</i>       | Ilandai                        |                      |
| 26                                     | <i>Cymbopogon</i>              | Kanam                          | Grasses              |
| 27                                     | <i>Cyperus rotundus</i>        | Kora grass                     |                      |
| 28                                     | <i>Cynodon dactylon</i>        | Arugu                          |                      |

### **Fauna in the study area**

There is no specific Fauna found within ML area. The buffer zone Fauna in the area is studied by direct observation method. Secondary data collected from Forest department and the same is used in this report. People in the nearby locality were also consulted. The commonly found fauna in the area are given below.

| <b>Table 3.12 Fauna in buffer zone</b> |                        |                      |                      |                                             |
|----------------------------------------|------------------------|----------------------|----------------------|---------------------------------------------|
| <b>S.No.</b>                           | <b>Scientific name</b> | <b>Common name</b>   | <b>Type of fauna</b> | <b>Schedule to which the species belong</b> |
| 1                                      | Canis familiaris       | Common dog           | Mammals              | IV                                          |
| 2                                      | Felis catus domesticus | Domestic cat         |                      | IV                                          |
| 3                                      | Golunda ellioti        | Indian bush rat      |                      | IV                                          |
| 4                                      | Funambulus palmarum    | Squirrel             |                      | IV                                          |
| 5                                      | Lepus nigricollis      | Indian hare          |                      | IV                                          |
| 6                                      | Bos indicus            | Domestic cow         |                      | IV                                          |
| 7                                      | Common Crow            | Corvus splendens     | Birds                | V                                           |
| 8                                      | House Sparrow          | Passer domesticus    |                      | IV                                          |
| 9                                      | Common Myna            | Acridotheres tristis |                      | IV                                          |
| 10                                     | Streptopelia chinensis | Pigeon               |                      | IV                                          |
| 11                                     | Calotes versicolor     | Lizard               | Amphibia             | IV                                          |
| 12                                     | Ptyas mucosa           | Snake                |                      | IV                                          |
| 13                                     | Rana hexadactyla       | Frog                 |                      | IV                                          |

### **3.3.7 LAND USE**

#### **Remote Sensing Satellite Data Used for the Study**

For Land-use and land cover study, sensing satellite data of Geo EYE has been used as per Figure No. 1. A land use map showing 10 Km radial distance. The geographical coordinates of the project are Latitude: 12°54'55.26"N to 12°55'01.28"N and Longitude: 78°47'45.04"E to 78°47'48.74"E.



**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

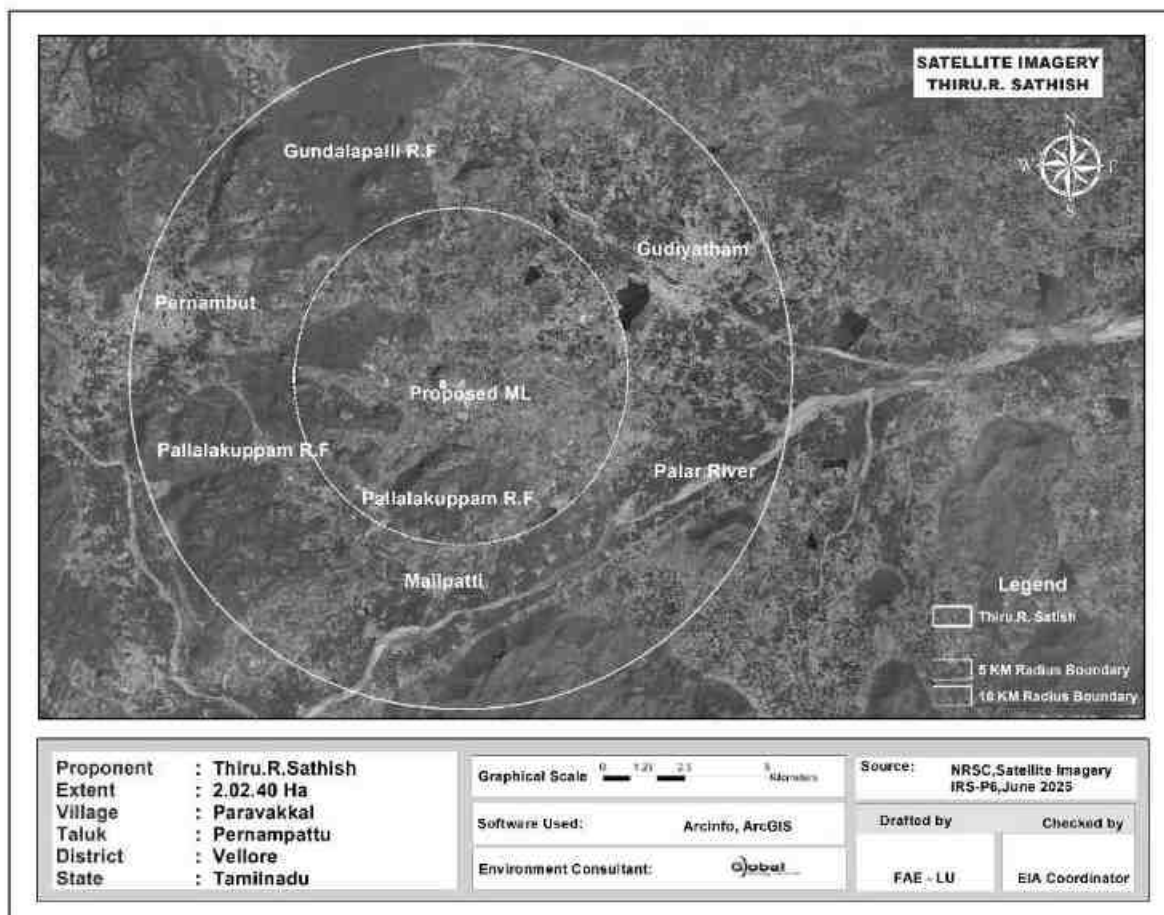


**Figure No. 3.17: Remote Sensing Satellite Image**

Selection of remote sensing satellite image (RSI) is on the availability of cloud free data and interpretability of predominant landuse and land cover (LULC) category. The examination of satellite data showed that the region is always covered by clouds with lesser percentage during summer due to cluster habitation. But rained crops are cultivated during southwest monsoon and hence a data acquired during first onset of precipitation is preferred so as to delineate crop and fallow land parcels of agricultural category. Delineation of scrub land is also possible since land with scrub could be easily distinguished from crop vegetation and separated. This may be an arduous task during monsoon since the entire area would be witnessed with sudden sprout of lush natural vegetation, mostly *prosopis*, with first onset of precipitation.

### **Methodology Adopted for the Land Use Study**

Present study involves micro level analysis of landuse pattern showing 10 km radius and changes in landuse pattern using satellite data. This necessitates a careful analysis of satellite data adopting a well-defined methodology.

To cater the requirement, a preliminary assessment of terrain using digital analysis helping to infer relationship between terrain and landuse has been carried out. Such an approach provides lucid understanding of landuse units and enhances the knowledge on the landuse pattern assisting in impact assessment.

The knowledge base thus generated is used to delineate various landuse units while carrying out interpretation of the satellite image. The derived landuse information is transformed into a GIS based spatial database using geo-referencing techniques. Besides, a limited but well focused field investigation also carried out and coordinates of significant landuse units using handheld GPS (Global Positioning System) are gathered to be used as control points for geo-referencing. Interpreted landuse units are verified in the field to carryout necessary corrections wherever is required before preparing final landuse map.

Using the image elements such as color, tone, texture, size, shape and associated elements various landuse units are delineated following the categorization and nomenclature adopted for the national level landuse classification system as recommended by National Remote Sensing Centre (NRSC), Department of Space, Government of India. Some of the landuse units that are identified in the study area are listed in Table No. 3.13 given below.

### **Field Verification:**

Field verification involved collection, verification and record of the different surface features that create specific spectral signatures / image expressions on FCC. In the study area, doubtful areas identified in course of interpretation of imagery is systematically listed and transferred on to the corresponding SOI topographical maps for ground verification. In addition to these, traverse routes were planned with reference to SOI topographical maps to verify interpreted LU/LC classes in such a manner that all the different classes are covered by at least 5 sampling

areas, evenly distributed in the area. Ground truth details involving LU/LC classes and other ancillary information about crop growth stage, exposed soils, landform, nature and type of land degradation are recorded and the different land use classes are taken the Land use map.

**Table No.3.13: Major Land use Units**

| <b>Sr.No</b> | <b>1<sup>st</sup> level classification</b> | <b>2<sup>nd</sup> level classification</b> |
|--------------|--------------------------------------------|--------------------------------------------|
| 1            | Built-Up Or Habitation                     | Residential                                |
|              |                                            | Commercial / Industrial                    |
| 2            | Agriculture                                | Crop / Fallow Land                         |
|              |                                            | Plantation                                 |
| 3            | Water Bodies                               | Reservoir / Lake / Pond                    |
|              |                                            | River                                      |
| 4            | Vegetation Cover                           | Scrub                                      |
|              |                                            | Open Vegetation                            |
|              |                                            | Close Vegetation                           |
|              |                                            | Mangroves                                  |
| 5            | Waste Land                                 | Open Without Scrub                         |
|              |                                            | Open With Scrub                            |
| 6            | Others                                     | Mudflow                                    |
|              |                                            | Salt Pan                                   |
|              |                                            | Brick Manufacturing                        |

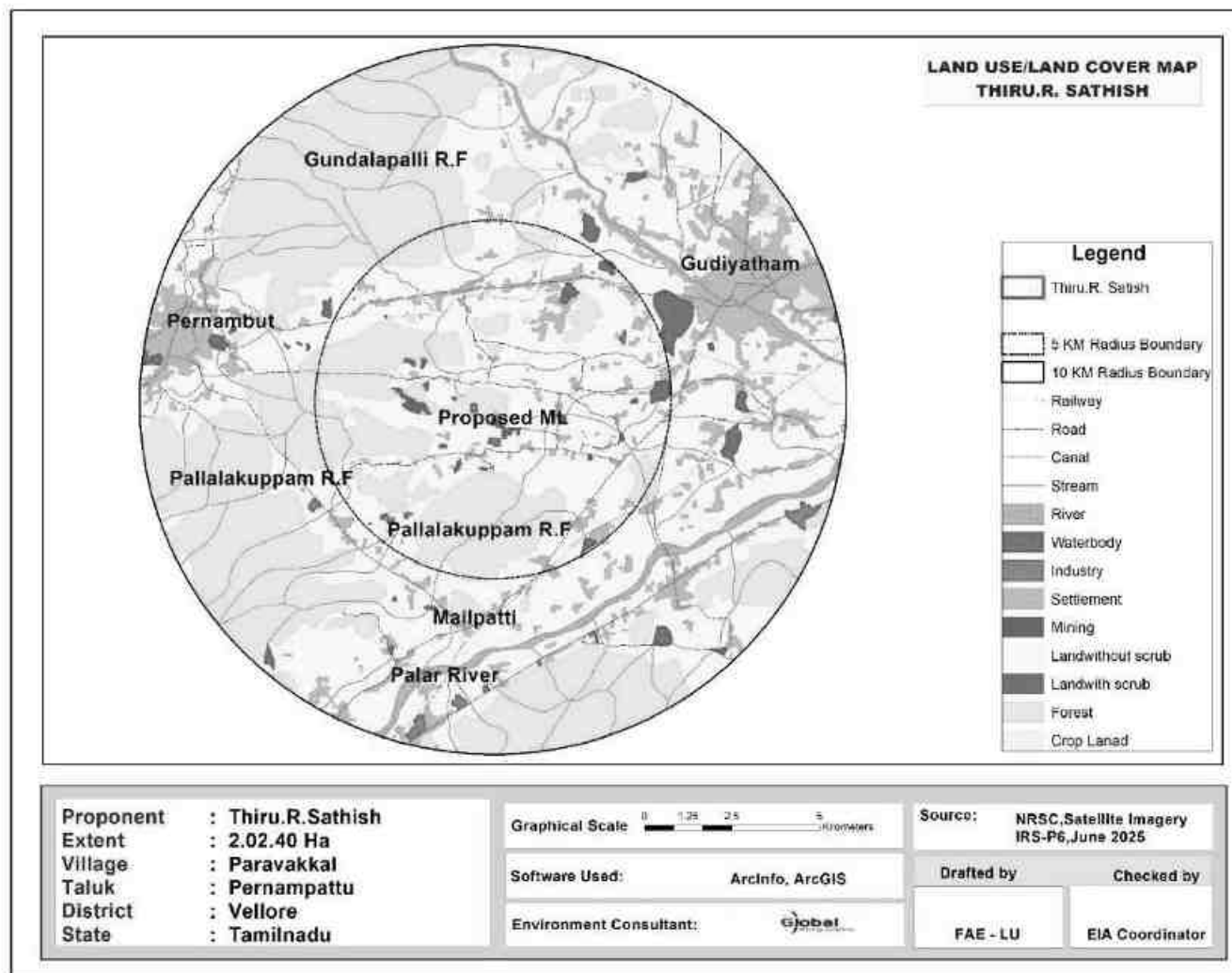
### **Land Use Pattern of 10 km Radial Buffer Area of Project Site**

The existing land use pattern and land cover distribution of the whole acquired block, have been studied from the satellite imagery and subsequent ground checking during the field surveys.

It mainly comprises of agricultural land with bi-annual crops of Kharif (Kharif: Jowar, Bajra, Cotton, etc. Season: July to October) and Rabi (Rabi: Wheat, Rai etc. Season: December to March). The presence of the agricultural land is followed by few dense settlements Paravakkal village0 natural or man-made pond etc. The shortage of rainfall, availability of ground water at deeper level and other climatic condition do not support good agricultural productivity inspite of having enough land. There is no demarcated forest land within the study area, however, some scattered forest is found throughout the 10 km radius, especially along the periphery of the villages.

The general landuse pattern of the core and buffer may be broadly classified into four major types – Buildup or habitation, Agriculture, Water Bodies, Waste land and Other categories. Under buildup or habitation category covered villages, town and infrastructure. Under agriculture category considered crop land/fallow land and plantation. Under the water body categories Reservoir/ lake, pond, River and stream. Under wasteland category considered landwith scrub and land without scrub is interpreted. Lastly other category's covered Mines area and forest are interpreted under this category. These categories are delineated from the selected satellite image using image elements such as color, tone, texture, size, shape and associated elements. The delineated landuse units are transformed into a spatial database in GIS environment. Estimated for area and representation of each category in the study area. The total area of LULC in the study area is calculated as 320 sq. km and spatial distribution of various LULC categories within buffer area are discussed below. The 5km and 10km radius landuse map is shown above. The details are given below.

**FIG 3.18 LAND USE/LAND COVER MAP OF THE STUDY AREA**



Land Use / Land Cover Classification classified into first level classification and second level classification and major land use/land cover classes were demarcated in the study area following Level II classification. A thematic map of 1:50,000 scale was generated incorporating these classified categories considering the area of the project.

### **Built-up / Settlements**

Settlements in the study area are generally small to medium size in stature and area scattered. Palavakkam is the relatively larger settlements observed at the north part of the study area.

Interpretation of settlement from the satellite image is based upon the image elements such as color, tone, texture and association. It is delineated by their typical red color. Association with linear features such as roads reaffirmed the presence of delineation of settlements. The spatial extent of settlement is estimated as 41.96 sq. km representing 13.11 % of the study area and Industrial + Commercial area covers 1.27 sq. km with 0.40%.

### **Agricultural Land**

Under the broad category of agriculture crop land, fallow land and plantation is delineated. Cultivation is mostly dependent upon river water for irrigational activities are good. River, Ponds and tanks in each village act as rainwater storage units and do support domestic requirement and even cultivation to some extent. Because of these conditions, minimal water requiring crops such as corn, sunflower, oil seeds, grams, millets and coriander are cultivated. Cultivation is the most predominant crop cultivated and even if it failed their stalks are used as fodder for cattle.

Crop and Fallow land are interpreted using their image elements such as light to green, smooth to medium tone, they are the second most predominant landuse category delineated in the buffer area. As explained earlier, cultivation mostly depends upon river, canal and rainfall and majority of the land parcels are tilled and

ready for cultivation with even a scanty Canal. Hence, cropland is the predominant category estimated at 151.14 Sq.km representing 47.23 % of the buffer area.

### **Wasteland**

The last category of the land use units in the study area is "Wasteland" which denotes land parcels that could not be utilized for cultivation even after conservation measures – such as land with scrub, land without scrub area.

Next to agricultural area, natural vegetation such as land with scrub forms the predominant LULC category of the buffer area. Land with scrub is sparse and delineated as patches scattered in all the parts of the buffer area. The spatial pattern of scrub suggests it is closely associated with water courses. This category occupies land with scrub an area of 0.02 sq.km representing 0.1 % of the total core and buffer area.

Land without scrub, on the other hand is interpreted using brown to white color, medium tone and medium texture and is generally restricted around land covered with scrub and fallow land. They occur as small patches and very minimal area covering 0.44 sq.km representing 0.14 % of the buffer area.

### **Water bodies**

Many Streams small and big water bodies are seen in the study area distributed all over the study area. They support the domestic water requirements and for cattle. At some places, they may also use for irrigation purpose and are very limited. Few dry stream courses are also seen in the study area. In the satellite image, water bodies are interpreted by their light blue to greyish blue color, smooth tone and smooth texture.

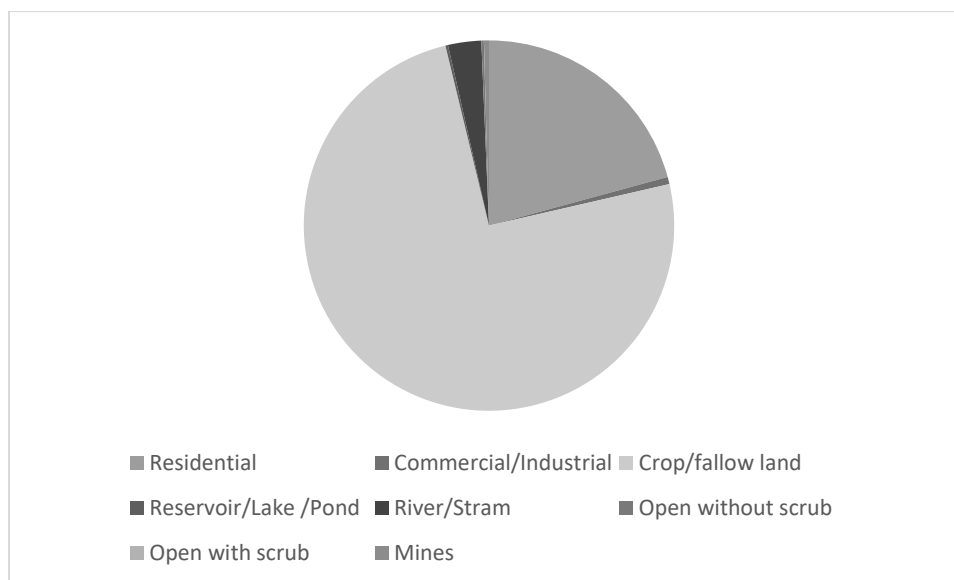
Most of the water bodies retain water for a shorter period after precipitation due to the soil constraint and hence go dry soon. Spatial extent of rivers, stream and water bodies is estimated at 6.3 sq.km and 1.97 %.

### **Mining area a**

Mining area seen in the study area distributed all over the study area. Major domestic income from mining business. Spatial extent of mining is estimated at 0.88 sq.km 0.28 % and forest cover is estimated 117.99 sq.km and 36.87%.

**Table No. 3.14: Major Land Use Units of the Study Area in Percentage**

| S. No        | 1st Level Classification | Area in (sq.km) | Percentage (%) | 2nd Level Classification | Area in (sq.km) | Percentage (%) |
|--------------|--------------------------|-----------------|----------------|--------------------------|-----------------|----------------|
| 1            | Built-up or habitation   | 43.23           | 13.51          | Residential              | 41.96           | 13.11          |
|              |                          |                 |                | Commercial/Industrial    | 1.27            | 0.40           |
| 2            | Agriculture              | 151.14          | 47.23          | Crop/fallow land         | 151.14          | 47.23          |
| 3            | Water bodies             | 6.3             | 1.97           | Reservoir/Lake /Pond     | 0.45            | 0.14           |
|              |                          |                 |                | River/Stram              | 5.85            | 1.83           |
| 4            | Waste Land               | 0.46            | 0.14           | Open without scrub       | 0.44            | 0.14           |
|              |                          |                 |                | Open with scrub          | 0.02            | 0.01           |
| 5            | Mines                    | 0.88            | 0.28           | Mines                    | 0.88            | 0.28           |
| 6            | Forest                   | 117.99          | 36.87          | Forest                   | 117.99          | 36.87          |
| <b>Total</b> |                          | <b>320</b>      | <b>100</b>     |                          | <b>320</b>      | <b>100</b>     |





### 3.3.8 SOCIOECONOMIC ENVIRONMENT

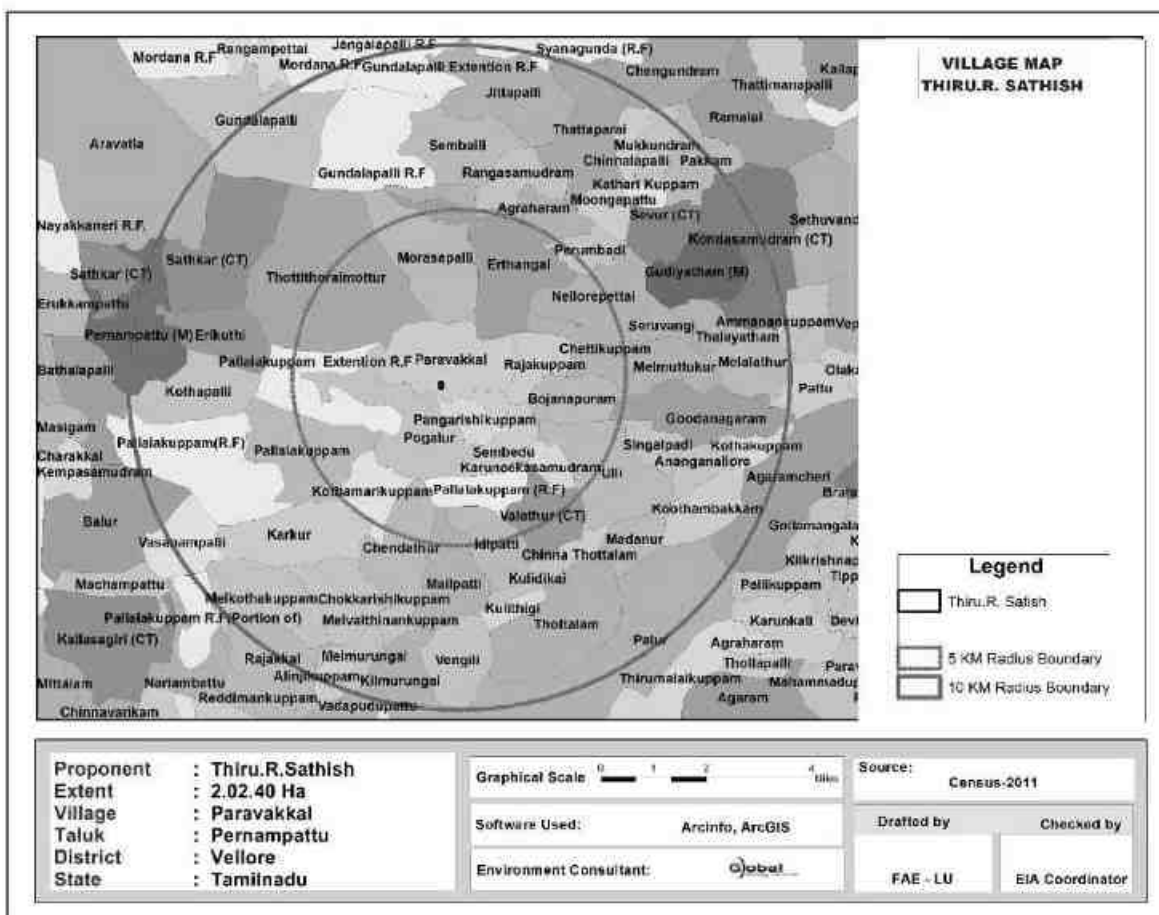
The socio-economic environment of the study area is studied by conducting primary sites through site visits and conducting sample surveys. The secondary data obtained from Census 2011 is also used. The following data area collected from secondary data:

- Demographic pattern.
- Health pattern
- Occupational structure.

#### 3.11.1 DETAILS OF VILLAGES

The profile of the villages located in the study area is given in Fig 3.19 below.

**FIG 3.19 VILLAGE MAP OF THE STUDY AREA**



## **DETAILS OF VILLAGES**

The project is located in Pernampattu Taluk, Vellore District. The total population is 288704 which comprise of 142511 males and 146193 females. There are 47 rural villages and one urban area in the study area. List of villages are given below.

| Table 3.15 Village details in study area |                    |        |            |               |
|------------------------------------------|--------------------|--------|------------|---------------|
| S.No.                                    | Village/Town Name  | Radius | Taluk Name | District Name |
| 1                                        | Pallalakuppam      | 1-5km  | Pernambut  | Vellore       |
| 2                                        | Kothamarikuppam    |        |            |               |
| 3                                        | Thottithoraimottur |        |            |               |
| 4                                        | Morasapalli        |        |            |               |
| 5                                        | Pogalur            |        |            |               |
| 6                                        | Paravakkal         |        |            |               |
| 7                                        | Chendathur         |        | Gudiyatham |               |
| 8                                        | Agraharam          |        |            |               |
| 9                                        | Pangarishikuppam   |        |            |               |
| 10                                       | Rajakuppam         |        |            |               |
| 11                                       | Chettikuppam       |        |            |               |
| 12                                       | Ulli               |        |            |               |
| 12                                       | Sathkar (CT)       | 6-10km | Pernambut  |               |
| 14                                       | Kothapalli         |        |            |               |
| 15                                       | Pernampattu (M)    |        |            |               |
| 16                                       | Erikuthi           |        |            |               |
| 17                                       | Karkur             |        |            |               |
| 18                                       | Melvaithinankuppam |        |            |               |
| 19                                       | Chokkarishikuppam  |        |            |               |
| 20                                       | Melkothakuppam     |        |            |               |
| 21                                       | Melmurungai        |        |            |               |
| 22                                       | Alinjikuppam       |        |            |               |
| 23                                       | Gundalapalli       |        |            |               |
| 24                                       | Rajakkal           |        |            |               |
| 25                                       | Kilmurungai        |        |            |               |
| 26                                       | Thottalam          |        |            |               |
| 27                                       | Kulithigi          |        |            |               |
| 28                                       | Vengili            |        |            |               |
| 29                                       | Palur              |        |            |               |
| 30                                       | Madanur            |        | Gudiyatham |               |
| 31                                       | Jittapalli         |        |            |               |
| 32                                       | Semballi           |        |            |               |
| 33                                       | Gudiyatham (M)     |        |            |               |
| 34                                       | Sevur (CT)         |        |            |               |
| 35                                       | Erthangal          |        |            |               |
| 36                                       | Nellorepettai      |        |            |               |

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|    |                    |  |  |  |
|----|--------------------|--|--|--|
| 37 | Seruvangi          |  |  |  |
| 38 | Thalayatham        |  |  |  |
| 39 | Melmuttukur        |  |  |  |
| 40 | Kulidikai          |  |  |  |
| 41 | Chinna Thottalam   |  |  |  |
| 42 | Karuneeekasamudram |  |  |  |
| 43 | Singalpadi         |  |  |  |
| 44 | Ananganallore      |  |  |  |
| 45 | Kothakuppam        |  |  |  |
| 46 | Pattu              |  |  |  |
| 47 | Goodanagaram       |  |  |  |

The above table shows that the male and female population ratio

| <b>Table 3.16 Population profile of the study area</b> |                         |                       |
|--------------------------------------------------------|-------------------------|-----------------------|
| <b>Particulars</b>                                     | <b>No of Population</b> | <b>Percentage (%)</b> |
| <b>A. Population break-up by Gender</b>                |                         |                       |
| Male Population                                        | 142511                  | 49                    |
| Female Population                                      | 146193                  | 51                    |
| Total                                                  | 288704                  | 100                   |

## **Infrastructure facilities in the study area**

### **Education**

| <b>Table 3.17 Educational infrastructure -10 km radius from proposed mine lease</b> |                                       |                                   |
|-------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------|
| <b>S. No.</b>                                                                       | <b>Particulars</b>                    | <b>Available in village (Nos)</b> |
| 1                                                                                   | Govt. Primary School                  | Palavakkam- 26                    |
| 2                                                                                   | Govt. Middle School                   | 20                                |
| 3                                                                                   | Govt. Secondary School                | 19                                |
| 4                                                                                   | Govt. Senior Secondary School         | 16                                |
| 5                                                                                   | Govt. Arts and Science Degree College | 40                                |
| 6                                                                                   | Govt. Engineering College             | 0                                 |
| 7                                                                                   | Govt. Medicine College                | 0                                 |
| 8                                                                                   | Govt. Management Institute            | 0                                 |
| 9                                                                                   | Govt. Polytechnic                     | 0                                 |
| 10                                                                                  | Govt. Vocational Training School/ITI  | 0                                 |

In the study area, there are totally 26 Primary Schools functioning in these 22 urban areas. Among them 40 villages have 12 primary school, 22 villages have 13 primary schools & 20 villages have more than 11 primary school.

### **Healthcare**

In the study area, the following facilities are available.

| <b>Table 3.18 Medical Infrastructure-10 km radius from proposed mine lease</b> |                                    |                                   |
|--------------------------------------------------------------------------------|------------------------------------|-----------------------------------|
| <b>S.No.</b>                                                                   | <b>Particulars</b>                 | <b>Available in village (Nos)</b> |
| 1                                                                              | Community Health Centre            | 11                                |
| 2                                                                              | Primary Health Centre              | 4                                 |
| 3                                                                              | Primary Health Sub Centre          | 20                                |
| 4                                                                              | Maternity And Child Welfare Centre | 13                                |
| 5                                                                              | TB Clinic                          | 12                                |
| 6                                                                              | Hospital Allopathic                | 0                                 |

### **Other Infrastructure**

The other infrastructure facilities available are given below.

| <b>Table 3.19 Other Infrastructure-10 km radius from proposed mine lease</b> |                     |                             |
|------------------------------------------------------------------------------|---------------------|-----------------------------|
| <b>S.No.</b>                                                                 | <b>Particulars</b>  | <b>Available in village</b> |
| 1                                                                            | Tap Water-Treated   | 22                          |
| 2                                                                            | Covered Well        | 17                          |
| 3                                                                            | Hand Pump           | 15                          |
| 4                                                                            | Tube Wells/Borehole | 16                          |
| 5                                                                            | Post office         | 7                           |
| 6                                                                            | Public bus services | 44                          |
| 7                                                                            | Commercial Bank     | 22                          |
| 8                                                                            | Cooperative bank    | 23                          |

### **Sample Survey**

The expert visited 6 villages in the study area namely Paravakkal, Mel Alangkuppam -West, Chettikuppam, Gudiyatham, Pogalur and Morsapalli Villages. Discussions were held with the people from nearby locality to study the social and economic conditions prevailing in the area. The expert also visited nearby hospitals, primary health centres and Nalmukkal. The following observations were made.

Primary schools are available in many villages. For hospital facilities, people in the locality have to go to hospital in Paravakkal which is about 630m (N) from the lease

area. Major schools with higher secondary and senior secondary schools are located in Paravakkal. The major Paravakkal Union located in the area is Vellore. Facilities like petrol pump stations, ATM facility are available in Paravakkal.

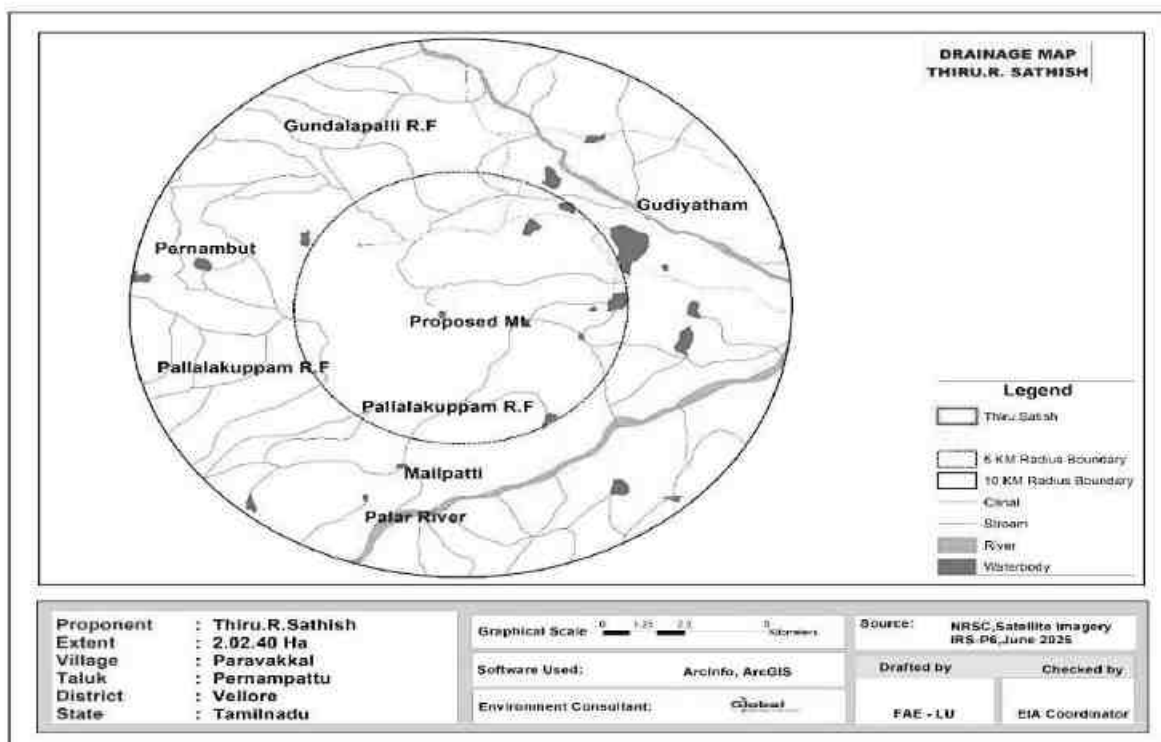
### 3.3.9 HYDROGEOLOGY OF THE STUDY AREA

There is Palar River is located at a distance of 6.8 km in South direction of lease area & Kaundinya Nadi is located at a distance of 6.37 km in Northeast direction of lease area. The hydrological and hydrogeological pattern of the study area is studied in detail using satellite imagery.

### HYDROGEOLOGICAL STUDY

To assess the hydrogeological condition of the surrounding proposed mine lease area. The study area is located in Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State is considered to understand the nature of the general hydrogeological conditions of the surrounding proposed mine lease area.

**FIGURE 3. 23 10 KM RADIUS OF THE DRAINAGE MAP**



## **PHYSIOGRAPHY AND DRAINAGE**

**Physiography:** The area applied for quarry lease is exhibits plain topography covered by rough stone formation. The massive Charnockite formation is clearly visible right from the surface and gentle towards Southwestern side of the area, the altitude of the area is above 510 m (maximum) from MSL.

**Drainage:** The drainage pattern study reveals that from the proposed mine lease area with around 1 Km radius and 10 Km study observed in Figure 3.20. There is Periya River is located at a distance of 0.46 km in South west direction, Agaram Aru is located at a distance of 4.30 km in North west direction, Palar is located at a distance of 7.44 km in North direction and Bahuda River is located at a distance of 7.96 km in N direction from the proposed site

## **GEOLOGY, GEOMORPHOLOGY AND SOIL**

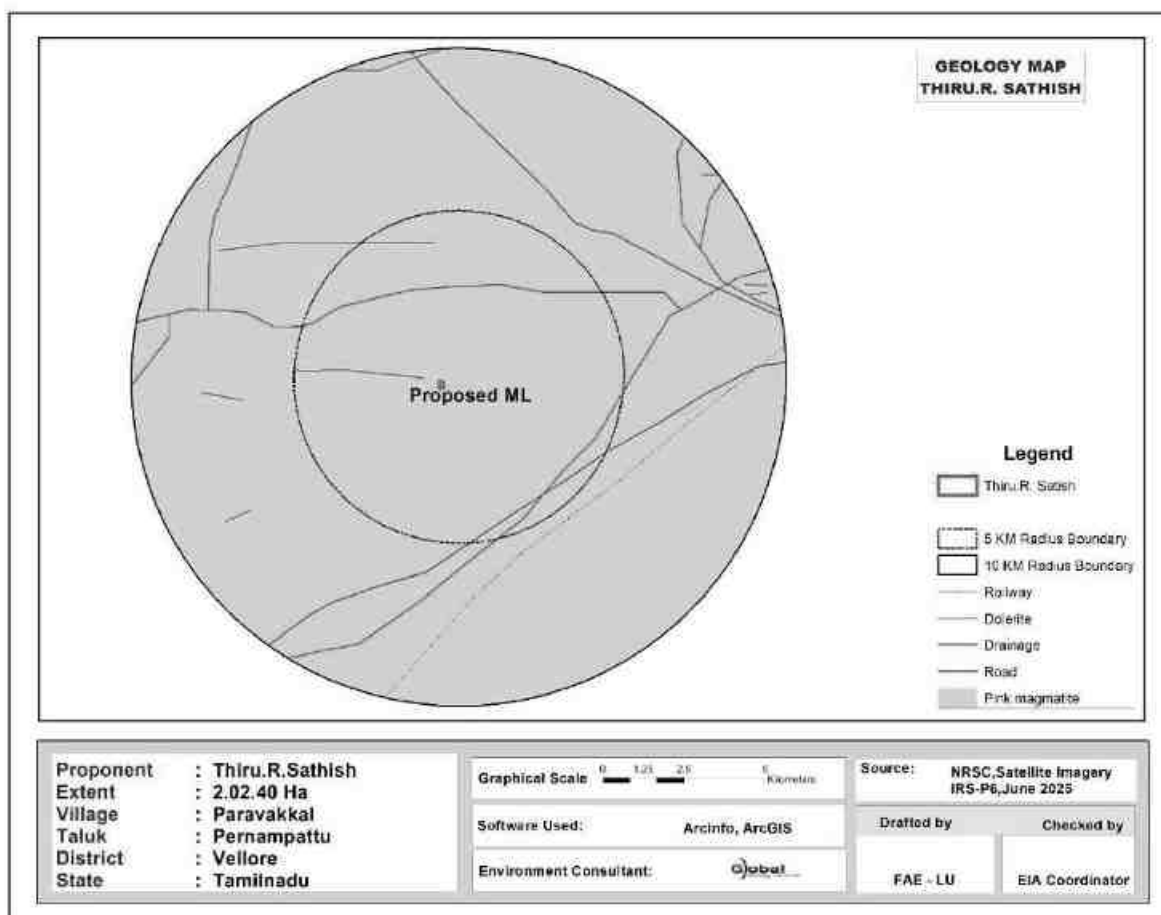
### **Geology:**

The Core and 10 Km buffered zone geological features (Figure 3.23) shows that the Vellore District comprises rocks of Satyamangalam Group and Older Supracrustal Group of Archaean Age, Charnockite and Migmatite Groups of Southern Granulite Terrain of Archaean to Proterozoic age, Peninsular Gneissic Complex-II(PGC-II) of Archean to Palaeoproterozoic, basic intrusives of Mesoproterozoic age, epidote hornblende gneiss of Proterozoic, Alkali Complex and acid instructive of Neoproterozoic age and Quaternary viz., black silty clay of Palar-Swarnamukhi Formation of Late Holocene in age. The grey hornblende-biotite gneiss of PGC-II is occurring in the north-western parts of the district. Epidote hornblende gneiss occurs as north-south trending body near Odugattur and Agaram with Charnokite Group. Charnockite is most predominant rock type at south Palar river and forms the mail hill masses and plains. Apart from Charnockite,pyroxene granulite, pink migmatite, hornblende biotite gneiss and biotite gneiss are the main lithologies observed at south of vellore and in an around kaniyambadi. The major lithologies at north palar river near Katpadi are migmatite gneiss, pink migmatite and pink hornblende biotite granite.

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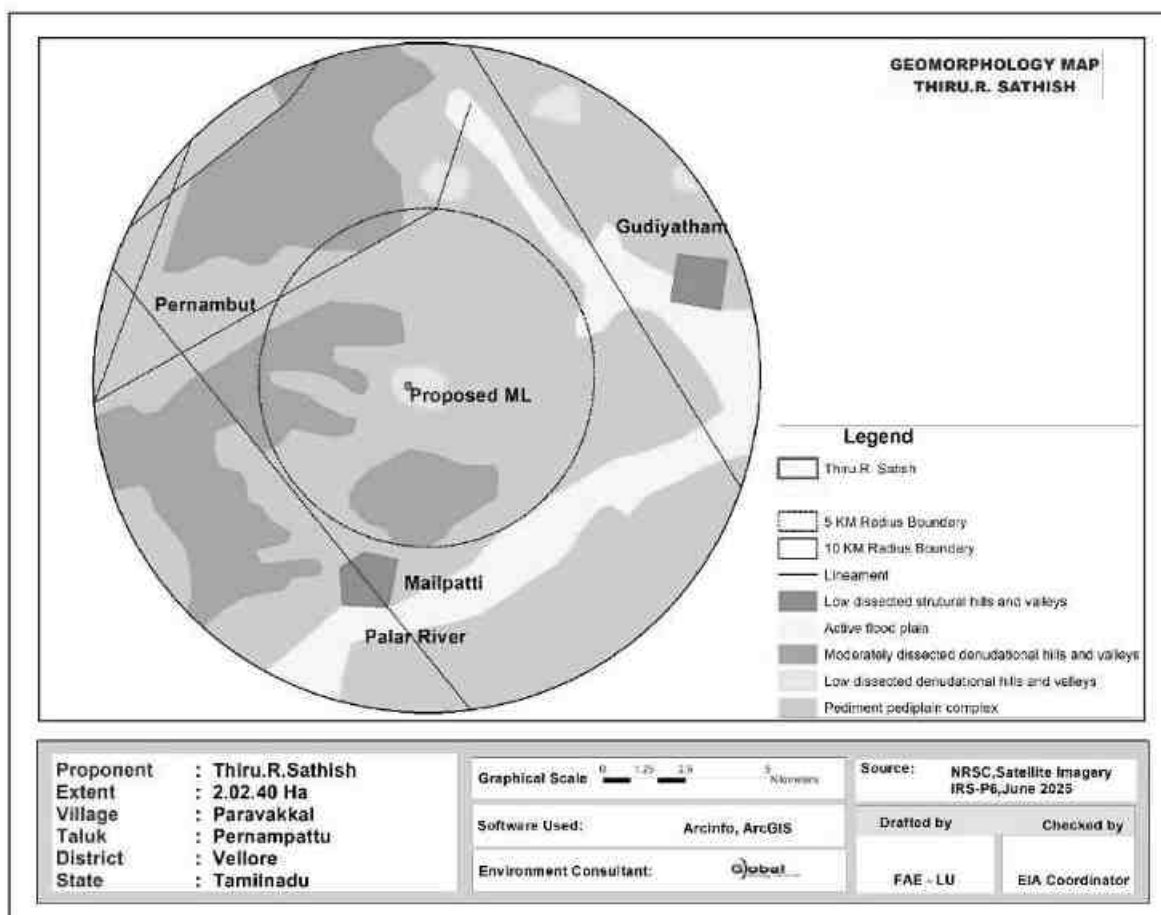
Charnockite Group of rocks with interbanded sequence of pyroxene granulite and banded magnetite quartzite have undergone wide spread migmatization giving rise to epidote-hornblende gneiss that show extensive shearing at the east of odugathur. Dolerite dykes occur profusely throughout the area of the district and trending NS,NE-SW and E-W with minor variations and extent over a few meters to 70m width. The granites, pegmatite, quartz and aplite veins occurs as a last phase of magmatism and mainly intruded rocks of peninsular Gneissic Complex (PCG-II). The late Holocene active fluvial deposits is marked by black silty clay and part of Palar Swarnamukhi formation. Regional Geology map for the 10 Km radius from the proposed project site is given as Figure 2.6.

**FIGURE 3. 24 10 KILOMETER RADIUS OF THE GEOLOGY MAP**



**Geomorphology:** The Core and 10 Km buffered zone geomorphological features (Figure 3.24) shows that the district is pediment pediplain complex, western, southern and eastern part of the district are covered by moderately dissected denudational hills & valley near rangampettai & east of kaniyambadi. The area at south of Odugattur is falls under moderately dissected structural hills & valley. Active flood plains on the banks of palar river. The isolated water bodies are through the district. The most of the lineament are trending in NNE-SSW direction, while geomorphic lineaments are trending in E-W direction. The study area falls Moderately denudational hills and valleys, Pediment pediplain complex, Moderately dissected structural hills and valleys, low dissected structural hill and valleys.

**FIGURE 3. 25 10 KM RADIUS OF THE STUDY AREA GEOMORPHOLOGY MAP**





**Soil:** The soil developed in and around odugattur is moderately deep excessively drained, gravelly clay soil on hills, whereas, on NW part of the district near Rangampettai, shallow, well drained, gravelly clay soil on gently sloping lands. The soil developed on both the banks of Palar River is deep drained, calcareous clayey soil on gently sloping low lands. The soil develops on isolated patch at SE of Odugattur is moderately deep, excessively drained, gravelly loam soil high hills.

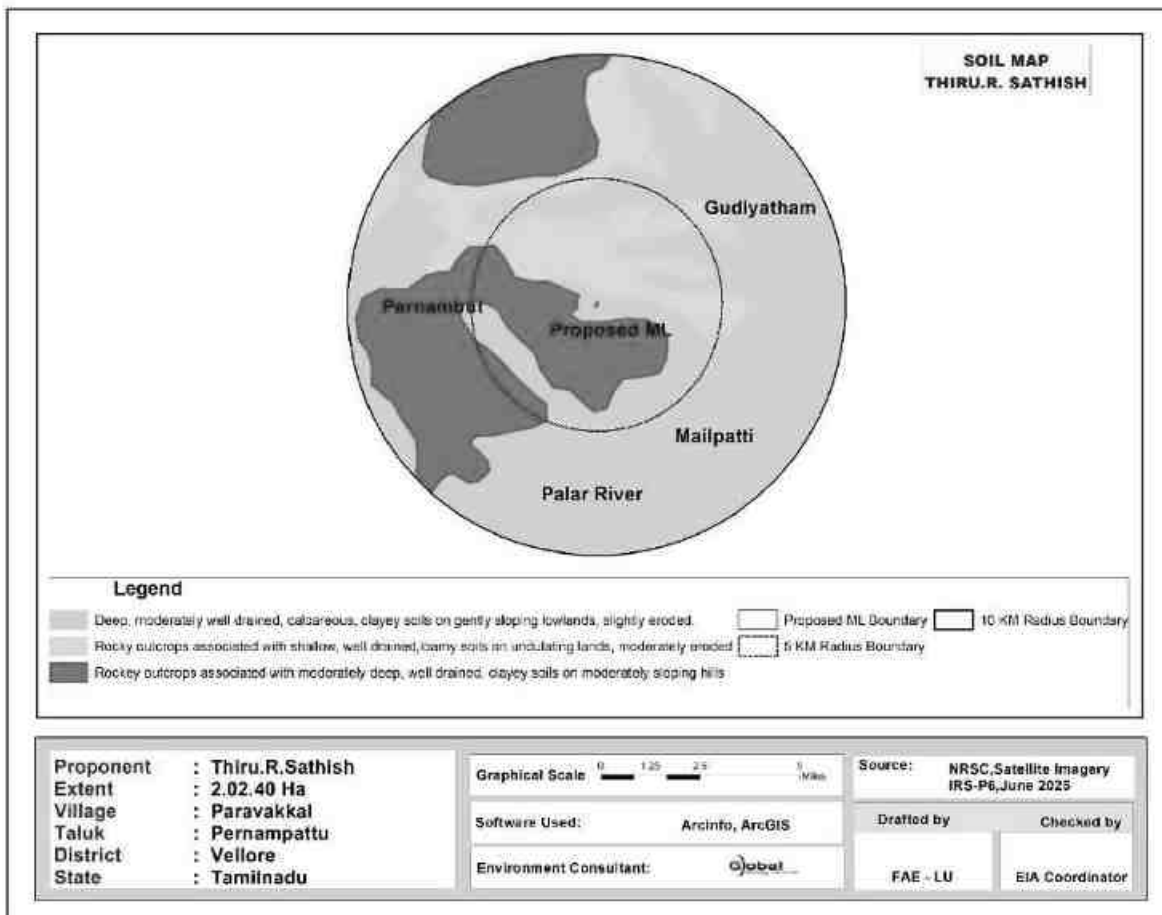


**FIGURE 3.26 10 KM RADIUS OF THE STUDY AREA SOIL TYPE MAP**

### **BELOW GROUND LEVEL (BGL)**

Figure 3.26 & 3.27 shows the Non-Monsoon and Monsoon water level map of the study area.

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

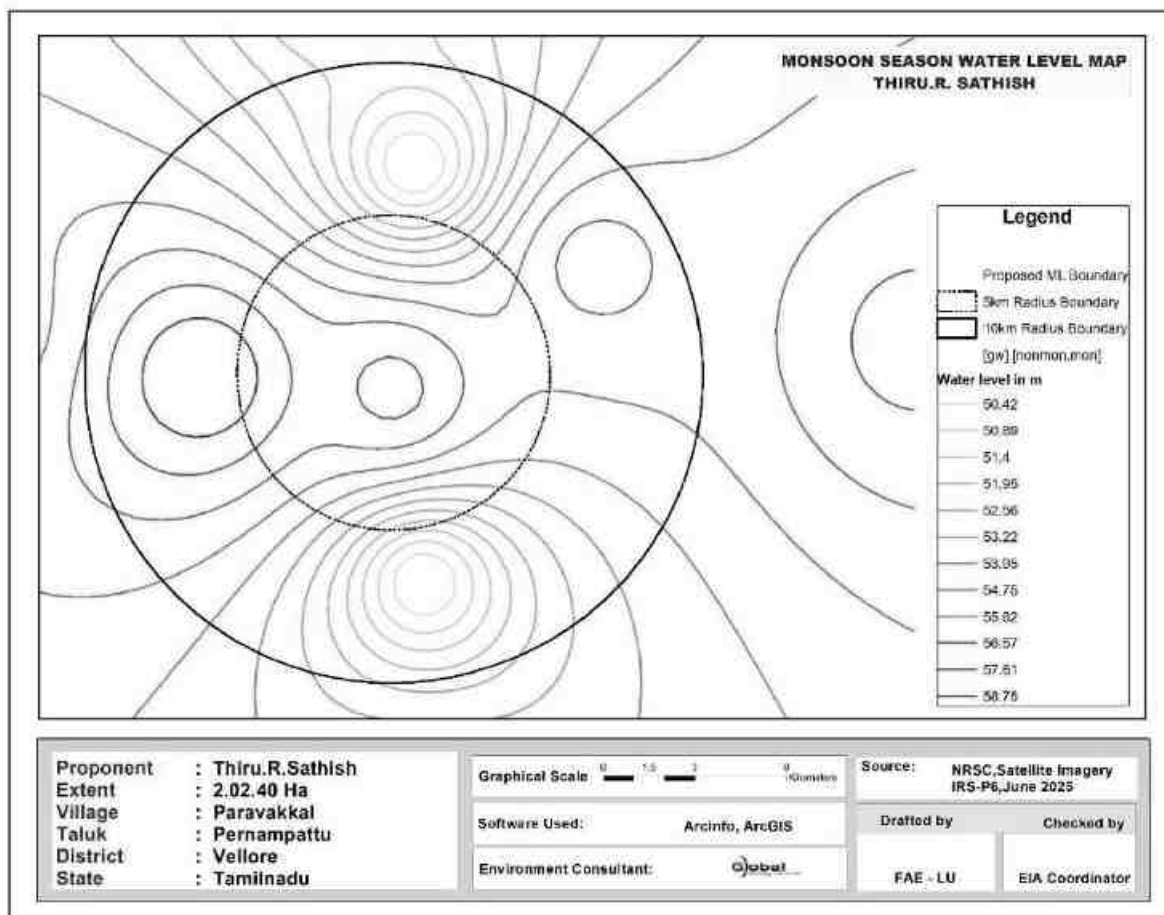


**FIGURE 3.27 NON-MONSOON WATER LEVEL MAP OF THE STUDY AREA**

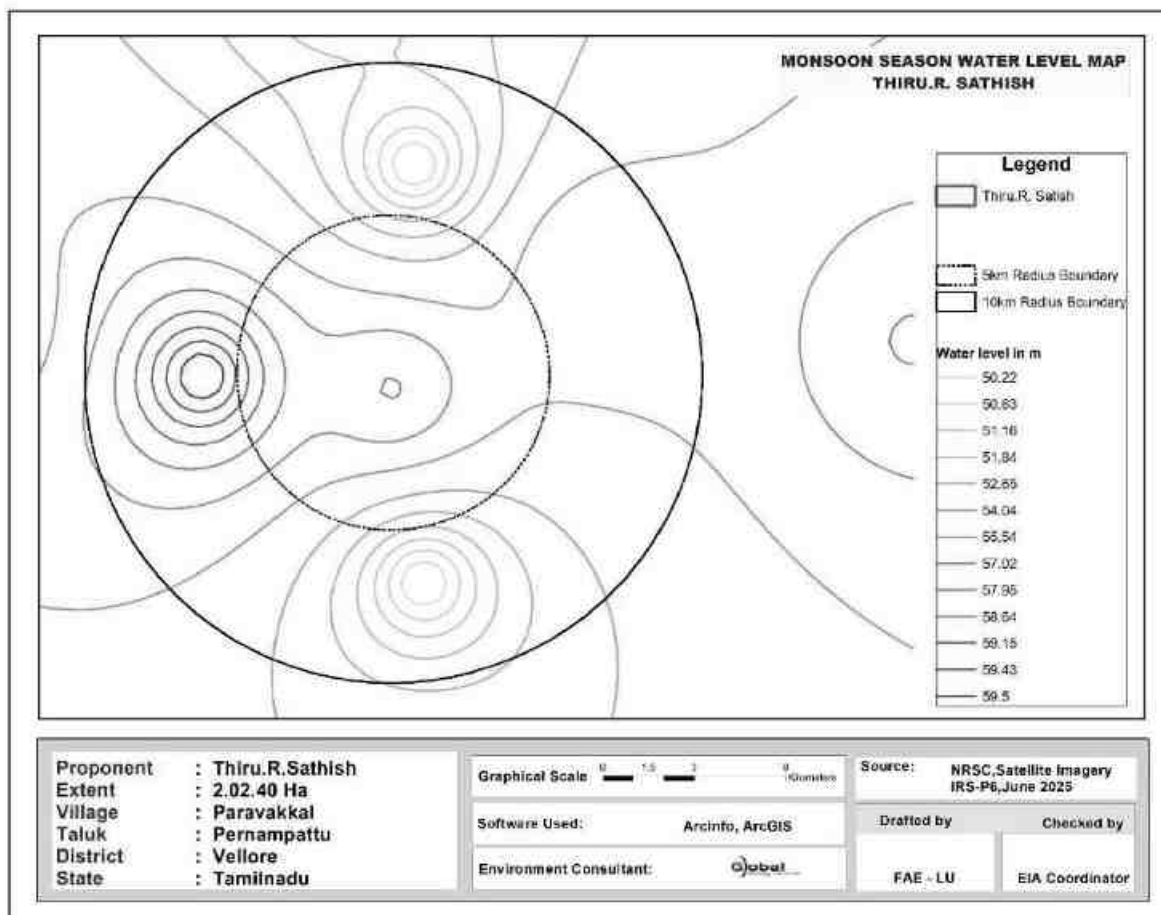


**FIGURE 3.28 MONSOON WATER LEVEL MAP OF THE STUDY AREA**

## **FIELD INVESTIGATION**

The temporary seasonal streams water flow from center to outer most area. There is Palar River is located at a distance of 6.8 km in South direction of lease area & Kaundinya Nadi is located at a distance of 6.37 km in Northeast direction of lease area.

The water is temporarily found only during the rainy season.

In this representation in the two seasons, the water level substantially gets fall-down in the non-monsoon season, because of the rainfall impact and it extended up to the Monsoon season. Some of the wells water level is shallow depth in both

seasons. These dug wells are located nearby water bodies. So, clearly shows that surface water is impact in these wells.

The shallow depth of groundwater level in the monsoon season. It is interesting to note that the water level is increased because of heavy rainfall during the southwest and northeast monsoon. The groundwater table level is substantially increased in the monsoon season.

In the study area, the shallow aquifer is developed through dug wells and deeper aquifer through tube wells. The study has revealed that potential fractures are encountered at deeper levels. The water in the wells are available mainly monsoon and it reduces during non-monsoon demanding the groundwater. Bore wells are deep and it reflects that the yield is only better at deeper water levels.

Rain water collected in the tanks in the region acts as a good source of water during monsoon season. In order to increase the recharge, tanks, and percolation ponds may be provided with the recharge wells/recharge shafts penetrating this impervious layer to make it more effective in recharging the aquifer.

## **CHAPTER 4**

### **ANTICIPATED ENVIRONMENTAL IMPACTS AND** **MITIGATION MEASURES**

#### **INTRODUCTION**

This chapter deals with the various anticipated environmental impacts and mitigation measures of the proposed mining activity. The proposed method of mining is Opencast Mechanized and the quarry operation involves Shallow Jack Hammer Drilling, Blasting, Excavation, Formation of benches, Loading and Transportation of minerals. The above activities may affect the surrounding environment like removal of rock mass, Loss of flora and fauna of the area, surface water discharge, change in air and water quality, etc., If adequate measures are not taken for the proposed operations, it will cause the environmental degradation of the area and it will lead to affect to the ecosystem of the surrounding environment.

In order to maintain the existing environmental scenario of the proposed mine lease area it is mandatorily required to assess the present ecology and environment of the proposed mine lease area and buffer area of the project before starting mining operations. The various environmental impacts which are identified by the proposed quarrying activities have been discussed below and its subsequent paragraphs.

- ❖ Land Environment
- ❖ Soil Environment
- ❖ Water Environment
- ❖ Air Environment
- ❖ Noise Environment
- ❖ Biological Environment
- ❖ Socio Economic Environment

#### **4.1 DETAILS OF INVESTIGATED ENVIRONMENTAL IMPACTS DUE TO PROJECT LOCATION POSSIBLE ACCIDENTS, PROJECT DESIGN, PROJECT CONSTRUCTION, REGULAR OPERATIONS FINAL DECOMMISSIONING OR REHABILITATION OF A COMPLETE PROJECT.**

This is a proposed Rough Stone Quarry of S.F.No. 208 (Part-8) over an extent of 2.02.40 Ha in Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State. The method of mining is Opencast mechanized with a bench width and height of 5m. It is proposed to excavate to 2,42,660m<sup>3</sup> of Rough Stone for the period of 10 years upto a depth of 45m AGL for the period of ten years. There is no stream/odai within the mine lease area.

The main anticipated impact on the Land Environment due to quarrying operation is change in Landscape, change in Land – use Pattern.

The entire mine lease area is Government Poramboke Land. The project area of 2.03.00 Ha boundary barrier except in eastern direction. It is proposed to be altered by effective quarrying operation such as excavation (1.47.60 Ha), Infrastructure (0.01.0), Road (0.01.0 Ha) and green belt will be developed in the safety zone of 0.52.80 Ha. The ultimate depth of quarrying is proposed with maximum depth of 45m AGL and will not intersect the ground water table.

## **4.2 MEASURES FOR MINIMIZING AND /OR OFFSETTING ADVERSE IMPACTS IDENTIFIED**

| Aspect         | Impact                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Mitigation measures      |                                                |                                                |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------|------------------------------------------------|---------------|-----|---------|----------------|-----|---------|-------|-----|---------|------------|-----|---------|------------|---------|-----|--------------|----------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------|--------------------------|---------|------------|---------|----------------|---------|--------------|----------------|------|---------|--------------|---------|----------|---|-----------------------|-----|---------|-----|----|---|-----|---|
| Topography     | <p>The area is hilly topography covered by rough stone and top soil. Quarrying activity will lead to change in geological setting of the area i.e., Due to the quarrying activity in the mine lease area will leads to affect the aesthetic view on the environment. Further, due to the movement of heavy vehicles in and around the mine lease area will leads to affect the surrounding agricultural lands, ecology and biodiversity, human habitations due to the emissions from vehicles like SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, etc., The existing land use pattern is given as under.</p> <table><thead><tr><th>Land Use</th><th>Present Area (Hect)</th><th>Area in use during the quarrying period (Hect)</th></tr></thead><tbody><tr><td>Quarrying Pit</td><td>Nil</td><td>1.47.60</td></tr><tr><td>Infrastructure</td><td>Nil</td><td>0.01.00</td></tr><tr><td>Roads</td><td>Nil</td><td>0.01.00</td></tr><tr><td>Green Belt</td><td>Nil</td><td>0.52.80</td></tr><tr><td>Unutilized</td><td>2.02.40</td><td>Nil</td></tr><tr><td><b>Total</b></td><td><b>2.02.40</b></td><td><b>2.02.40</b></td></tr></tbody></table> | Land Use                 | Present Area (Hect)                            | Area in use during the quarrying period (Hect) | Quarrying Pit | Nil | 1.47.60 | Infrastructure | Nil | 0.01.00 | Roads | Nil | 0.01.00 | Green Belt | Nil | 0.52.80 | Unutilized | 2.02.40 | Nil | <b>Total</b> | <b>2.02.40</b> | <b>2.02.40</b> | <p>The major impact due to this project on land environment is the change in land use. Mining activity will be carried out upto a depth of 45 m Above ground level. At the end of mining period, the quarried pit will act as a water reservoir to store the rain water. Land Use at the end of mine will be as follows.</p> <table><thead><tr><th>Land Use</th><th>Area in use during the quarrying period (Hect)</th></tr></thead><tbody><tr><td>Area left for water body</td><td>1.47.60</td></tr><tr><td>Green Belt</td><td>0.52.80</td></tr><tr><td>Remaining area</td><td>0.02.00</td></tr><tr><td><b>Total</b></td><td><b>2.02.40</b></td></tr></tbody></table> <p>At the mine closure stage 1.47.60 Ha of lease area will be left as rain water harvesting pond 0.52.80 Ha will be developed with green belt.</p> <p>Greenbelt shall be developed around the mine lease area and the details has been given below.</p> <table><thead><tr><th>Year</th><th>Species</th><th>No. of trees</th><th>Spacing</th><th>Survival</th></tr></thead><tbody><tr><td>I</td><td rowspan="3">Pungai, Vagai, Vembu,</td><td>528</td><td rowspan="3">3m x 3m</td><td rowspan="3">90%</td></tr><tr><td>II</td><td>-</td></tr><tr><td>III</td><td>-</td></tr></tbody></table> | Land Use | Area in use during the quarrying period (Hect) | Area left for water body | 1.47.60 | Green Belt | 0.52.80 | Remaining area | 0.02.00 | <b>Total</b> | <b>2.02.40</b> | Year | Species | No. of trees | Spacing | Survival | I | Pungai, Vagai, Vembu, | 528 | 3m x 3m | 90% | II | - | III | - |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Land Use                 | Present Area (Hect)                            | Area in use during the quarrying period (Hect) |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Quarrying Pit            | Nil                                            | 1.47.60                                        |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Infrastructure           | Nil                                            | 0.01.00                                        |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Roads                    | Nil                                            | 0.01.00                                        |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Green Belt               | Nil                                            | 0.52.80                                        |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Unutilized               | 2.02.40                                        | Nil                                            |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Total</b>             | <b>2.02.40</b>                                 | <b>2.02.40</b>                                 |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Land Use                 | Area in use during the quarrying period (Hect) |                                                |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Area left for water body | 1.47.60                                        |                                                |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
| Green Belt     | 0.52.80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |                                                |                                                |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
| Remaining area | 0.02.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                          |                                                |                                                |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
| <b>Total</b>   | <b>2.02.40</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                                                |                                                |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
| Year           | Species                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No. of trees             | Spacing                                        | Survival                                       |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
| I              | Pungai, Vagai, Vembu,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 528                      | 3m x 3m                                        | 90%                                            |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
| II             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -                        |                                                |                                                |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |
| III            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -                        |                                                |                                                |               |     |         |                |     |         |       |     |         |            |     |         |            |         |     |              |                |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                                                |                          |         |            |         |                |         |              |                |      |         |              |         |          |   |                       |     |         |     |    |   |     |   |

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|                                                         | <p>The ultimate pit dimension of the mine lease area is given below.</p> <table><tr><th colspan="4">Ultimate Pit dimension at the end of Mining plan Period</th></tr><tr><th>Pit No.</th><th>Length (max) (m)</th><th>Width (Avg) (m)</th><th>Depth (max) (m)</th></tr><tr><td>I</td><td>164</td><td>90</td><td>45 m Above ground level</td></tr></table> <p>If mining is not done systematically it will leads to the dumping failure in the mining area.</p> | Ultimate Pit dimension at the end of Mining plan Period                                                                                                                                                                                                                                                                                               |                         |  |  | Pit No. | Length (max) (m) | Width (Avg) (m) | Depth (max) (m) | I | 164 | 90 | 45 m Above ground level | <table><tr><td>IV</td><td rowspan="2">Manjal<br/>konrai,<br/>Naval,<br/>Puvarasu,<br/>etc</td><td>-</td><td rowspan="2"></td><td rowspan="2"></td></tr><tr><td>V</td><td>-</td></tr><tr><td colspan="2">Total</td><td>528</td><td></td><td></td></tr></table> <p>Due to the thick vegetation around the mine lease area and sprinkling of water around the haul roads the dust emissions arise from the vehicles will be controlled. At the end of mining period, fencing will be provided around the mine lease area to arrest the entry of public/cattle to the mining area. The rough stone are proposed to quarry 5m bench height and 5m width with 45<sup>o</sup> slope and with conventional opencast Mechanized method. As per the approved mining plan a safety distance of 7.5m shall be provided. There is no overburden anticipated during the entire Rough Stone quarrying operation. The excavated rough stone will be directly loaded into tipper to the needy crusher/other buyers.</p> | IV | Manjal<br>konrai,<br>Naval,<br>Puvarasu,<br>etc | - |  |  | V | - | Total |  | 528 |  |  |
|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--|--|---------|------------------|-----------------|-----------------|---|-----|----|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------------------------------------------|---|--|--|---|---|-------|--|-----|--|--|
| Ultimate Pit dimension at the end of Mining plan Period |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                       |                         |  |  |         |                  |                 |                 |   |     |    |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |                                                 |   |  |  |   |   |       |  |     |  |  |
| Pit No.                                                 | Length (max) (m)                                                                                                                                                                                                                                                                                                                                                                                                                                               | Width (Avg) (m)                                                                                                                                                                                                                                                                                                                                       | Depth (max) (m)         |  |  |         |                  |                 |                 |   |     |    |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |                                                 |   |  |  |   |   |       |  |     |  |  |
| I                                                       | 164                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 90                                                                                                                                                                                                                                                                                                                                                    | 45 m Above ground level |  |  |         |                  |                 |                 |   |     |    |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |                                                 |   |  |  |   |   |       |  |     |  |  |
| IV                                                      | Manjal<br>konrai,<br>Naval,<br>Puvarasu,<br>etc                                                                                                                                                                                                                                                                                                                                                                                                                | -                                                                                                                                                                                                                                                                                                                                                     |                         |  |  |         |                  |                 |                 |   |     |    |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |                                                 |   |  |  |   |   |       |  |     |  |  |
| V                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -                                                                                                                                                                                                                                                                                                                                                     |                         |  |  |         |                  |                 |                 |   |     |    |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |                                                 |   |  |  |   |   |       |  |     |  |  |
| Total                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 528                                                                                                                                                                                                                                                                                                                                                   |                         |  |  |         |                  |                 |                 |   |     |    |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |                                                 |   |  |  |   |   |       |  |     |  |  |
| Drainage                                                | Mine drainage is surface water or groundwater that drains from an active or abandoned mine. One of the adverse impact of mine drainage is it will contaminate the ground water.                                                                                                                                                                                                                                                                                | As per the approved mining plan the ultimate pit limit is 45 m (AGL) in ten year. The ground water table is reported as 67 m. In the proposed mining plan only 45 m above ground level has been envisaged as workable depth for safe & economic quarrying for the entire lease period. Hence the quarrying operation may not affect the ground water. |                         |  |  |         |                  |                 |                 |   |     |    |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |                                                 |   |  |  |   |   |       |  |     |  |  |
| Soil Quality and Agriculture                            | In monsoon seasons due to the excavation of minerals soil erosion and sediment deposition will occur in the nearby water bodies.                                                                                                                                                                                                                                                                                                                               | It is proposed to quarry upto a depth of 45 m above ground level and Water table is found at a depth of 67m in summer and 64m in rainy seasons. So, the mining activity will not affect the ground water. To prevent the                                                                                                                              |                         |  |  |         |                  |                 |                 |   |     |    |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |    |                                                 |   |  |  |   |   |       |  |     |  |  |



**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | soil erosion during monsoon season, garland drain will be constructed with silt traps.                                                                                                                                                                                                                           |
| <b>Visual impact on surrounding environment</b> | Quarrying activities and rock extraction generally cause several environmental effects on the surrounding areas. The alteration of landscape due to activities like excavation, drilling or blasting, in particular, often generates a visual impact on the receptors set in the surroundings. Among these effects, the shape, extent, or chromatic contrast of the mining surface with the original land form may represent a huge loss of appeal for the growth of new urban settlements. | The reclamation of the post mined quarry surface is aimed at restoring the ecological balance taking into account geological parameters but also local flora and climate. Further the ultimate depth of mining is 45m AGL. In the post mining stage, the quarried out pit will be used for rainwater harvesting. |

#### **4.2.1 SOLID WASTE GENERATION AND MANAGEMENT**

The plastic waste generation is very negligible and it will be collected from the source level in specific dustbin and disposed through the municipal bins.

- Identification of solid waste generations
- Providing dustbins to collect with different color coding
- Creating awareness among the employees
- Developing common storage yards
- Disposal to the nearby municipal yards
- Record keeping
- Review once in quarter

#### **4.2.2 WATER ENVIRONMENT**

##### **Impact on Surface Water Resources**

There is no seasonal or perennial Odai within the M.L area. The drainage pattern of the region is plane to sub-dendritic. Surface run-off water of the M.L. area is drained through proposed drainage and collected in the bottom of the quarry and collected water will be used for same quarry operation as such for plantation & dust suppression.

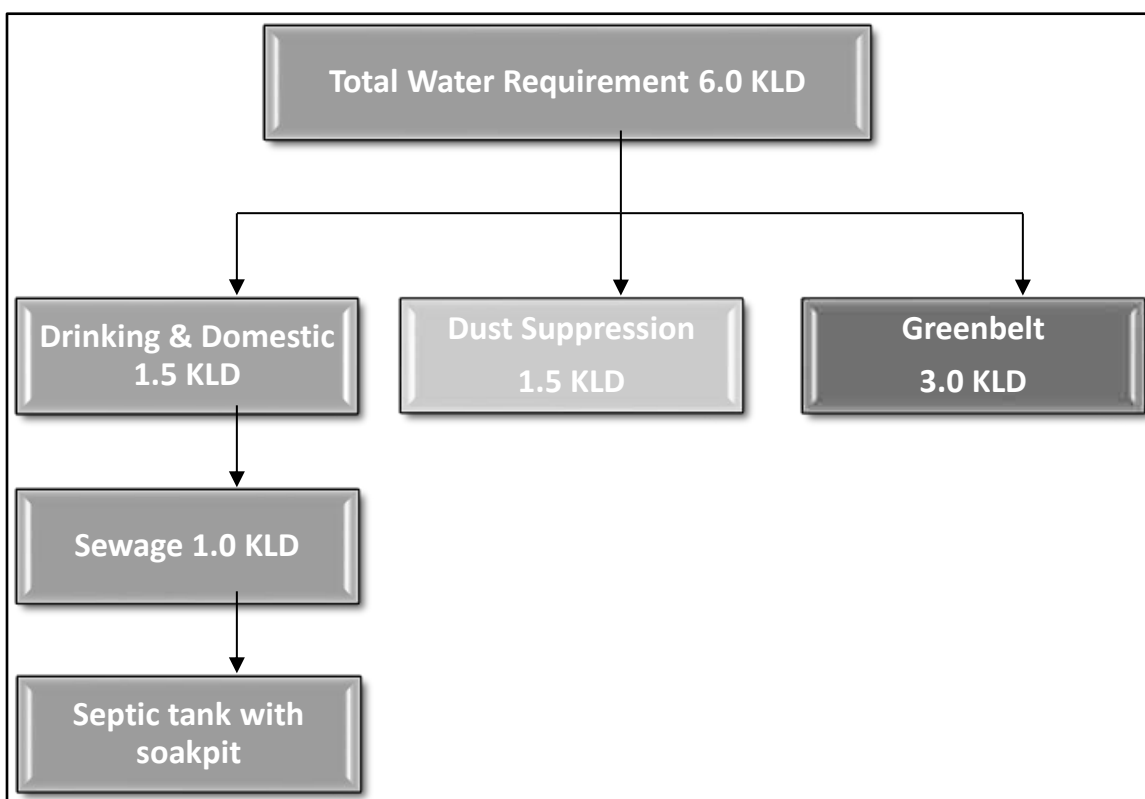
There is Palar River is located at a distance of 6.8 km in South direction of lease area & Kaundinya Nadi is located at a distance of 6.37 km in Northeast direction of lease area. Water table is found at a depth of 67m in summer and 64m in rainy seasons.

Since these water bodies are located outside the lease area and there is no discharge of effluent or any untreated water from the mines will be made into these water bodies, there is no major impact. The project proponent will restrict the mining operation only within the lease and no other work will be carried out near the canal or any area outside the mining lease.

### **Impact due to Water use in Mines**

In the proposed mines water will be mainly used for domestic purpose, dust suppression & plantation. Total water requirement for the project is 6.0 KLD which will be sourced from outside agencies. Negligible sewage of 1.0 KLD will be generated, for which a septic tank with soak pit will be set up. The water balance diagram is given below.

**FIG 4.1 WATER BALANCE DIAGRAM**



### **Impact on Ground Water**

The mining activity is not likely to intersect ground water as the Water table is found at a depth of 67m in summer and 64m in rainy seasons. The mining will go up to the maximum depth of 45 m AGL. So, there will be no chance of intersecting the ground water table by the mining activity. So, the impact of mining on the ground water is not envisaged.

### **Mitigation measures**

- Entire lease area will be provided with proper garland drains.
- Check wears will be provided to prevent solids from wash off.
- Construction of garland drains around freshly excavated so that flow of water with loose material is prevented.
- The mine water will be passed through the natural slopes and valleys and gets accumulated in the settling tank (Bottom pit)

### **Ground water environment in buffer zone**

The scenario of ground water in Vellore District, Pernampattu Taluk is given below.

| <b>TABLE 4.1 Ground Water Level Status in Vellore District</b> |                                |                                             |                                                               |                                                                                         |                                                             |                                          |                 |
|----------------------------------------------------------------|--------------------------------|---------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------|-----------------|
| <b>S. No.</b>                                                  | <b>Assessment Unit (Firka)</b> | <b>Net Annual Ground water availability</b> | <b>Existing gross ground water consumption for irrigation</b> | <b>Existing gross ground water consumption for domestic and industrial water supply</b> | <b>Existing gross ground water consumption for all uses</b> | <b>Stage of ground water development</b> | <b>Category</b> |
| 1                                                              | Vellore                        | 58,970.76                                   | 54,257.79                                                     | 6,548.26                                                                                | 60,806.05                                                   | 103 %                                    | Over Exploited  |

Source: nwm.gov.in

It is planned to carryout appropriate rainwater harvesting schemes and artificial recharge schemes in the area.

#### **4.2.3 VEGETATIONVEGETATION IN THE CORE ZONE**

The mine lease area is devoid of major plantation. Shrubs and bushes are majorly found within the lease area. The proponent has planned to develop green belt in an area of 0.52.80 Ha. Trees like Pongamia pinnata, Syzigium cumini, Albizia lebbeck, Thespesia populnea, Bauhinia racemose, Cassia siamea, Azadirachta indica will be planted around the mine lease area. A total of 528 trees are planned to be planted. Spacing will be 3m x 3m.

## **FAUNA**

There are no sanctuaries/national parks in the buffer zone of 10km study area. The commonly found fauna in the buffer zone are given in Chapter III. During mining activity the impacts and mitigation measures for Fauna are given in below table.

| <b>Table 4.2 Impacts and mitigation measures for Fauna</b> |                                               |                                                                                                                                                                                              |
|------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>S.No.</b>                                               | <b>Impact</b>                                 | <b>Mitigation measure</b>                                                                                                                                                                    |
| 1                                                          | Fauna is affected due to noise and vibration. | Sirens will be blown before blasting in the mines. To reduce noise levels, plantation will be done. Blasting will be carried out only in the allotted time.                                  |
| 2                                                          | Dust generation due to mining activities      | To reduce dust generation, mist sprayers will be used. During transportation, the material will be covered with tarpaulin. Water sprinkling will be done to reduce generation of pollutants. |
| 3                                                          | Change in land use of the lease area          | After the mine closure stage, the mine pit will be left as rain water collecting tank, which can attract bird population in the nearby areas.                                                |
| 4                                                          | Accidental falling of animals                 | To prevent entry of animals, the mine lease surrounding area will be properly fenced with barbed wire.                                                                                       |

### **4.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF ENVIRONMENTAL COMPONENTS.**

#### **4.3.1 IMPACT DUE TO MINING OPERATION**

Impact prediction is a very important phenomenon in evaluating the environmentally potential adverse impacts for any proposed mine project. The impact prediction is always carried out under worst possible conditions so as to mitigate or to eliminate the environmental hazards. These predictions thus calculated are superimposed over the baseline data to calculate the net impact on the environment after the proposed mine Project comes into production.

#### **4.3.2 IMPACT ON AIR ENVIRONMENT**

The impacts on air environment from a mining activity depend on various factors like production capacity, machinery involved, operations and maintenance of various equipments and vehicle. Apart from these, there will be other activities associated viz transportation of mineral and waste, stocking facilities and dump management within the mine lease area that may contribute to pollution.

#### **4.3.3 Air Emissions**

The impacts on air environment from a mining activity depend on various factors like production capacity, machinery involved, operations and maintenance of various equipments and vehicle. Apart from these, there will be other activities associated viz transportation of mineral and waste, stocking facilities and dump management within the mine lease area that may contribute to pollution.

#### **4.3.4 Quantitative Estimation of Impacts on Air Environment**

An attempt has been made to predict the incremental rise of various ground level concentrations above the baseline status in respect of air pollution due to proposed is 2,42,660m<sup>3</sup> of Rough Stone for the period of 10 years upto a depth of 45m AGL.

The pollutants released into the atmosphere will disperse in the down wind direction and finally reach the ground at farther distance from the source. The concentration of ground level concentrations mainly depends upon the strength of the emission source and micrometeorology of the study area.

In order to estimate the ground level concentrations due to the emission from the proposed project, EPA approved Industrial Source Complex ISC AERMOD View Model has been employed.

The mathematical model used for predictions on air quality impact in the present study is ISC-AERMOD View-6.8.6. It is the next generation air dispersion model, which incorporates planetary boundary layer concepts.

The AERMOD is actually a modeling system with three separate components:

AERMOD (AERMIC Dispersion Model), AERMAP (AERMOD Terrain Preprocessor) and AERMET (AERMOD Meteorological Preprocessor).

Special features of AERMOD include its ability to treat the vertical inhomogeneity of the planetary boundary layer special treatment of surface releases, irregularly shaped area sources, a plume model for the convective boundary layer, limitation of vertical mixing in the stable boundary layer, and fixing the reflecting surface at the stack base.

The AERMET is the meteorological preprocessor for the AERMOD. Input data can come from hourly cloud cover observations, surface meteorological observations and twice-a-day upper air soundings. Output includes surface meteorological observations and parameters and vertical profiles of several atmospheric parameters.

The AERMAP is a terrain preprocessor designed to simplify and standardize the input of terrain data for the AERMOD. Input data include receptor terrain elevation data. Output includes, for each receptor, location and height scale, which are elevations used for the computation of airflow around hills.

**Salient features of the AERMOD model are given hereunder:**

- ❖ Excavation operations are considered as area sources.
- ❖ Transportation of material on haulage roads has been considered as line source

The predicted ground level concentrations for study period computed using AERMOD model are plotted as isopleths.

#### **4.3.5 Sources of Dust Emission**

The proposed mining is carried out by mechanized opencast method. The air borne particulate matter generated by ore handling operations, transportation and screening of ore is the main air pollutant. The emissions of sulphur dioxide (SO<sub>2</sub>),

Oxides of Nitrogen (NO<sub>x</sub>) contributed by diesel operated excavation/loading equipment and vehicles plying on haul roads are marginal. Prediction of impacts on air environment has been carried out taking into consideration proposed production and net increase in emissions. Based on the various operations involved in the production of minerals, the various emission sources has been identified as given below.

- a. Area sources.
- b. Line sources.

Extraction of mineral from mine, are considered as area sources. Transportation of material from mining benches to various end points are considered as line sources. The impact of above sources on air environment is discussed below:

The other sources of air pollution are the dust generated during the movement of tippers on the haul road. Water tankers with spraying arrangement will be used for regular water sprinkling on the haul roads to ensure effective dust suppression. The tippers are well maintained so that exhaust smoke does not contribute abnormal values of noxious gases and un-burnt hydrocarbons.

#### **4.3.6 Emission Details**

All the emissions discussed above are quantified for proposed maximum production of is 2,42,660m<sup>3</sup> of Rough Stone for the period of 10 years upto a depth of 45m AGL by the open-cast mechanised mining method. The existing air quality levels are covered in the baseline scenario. Excavation, loading and transportation through tippers are the major sources, which are of significance. Therefore, the emissions considered for modeling are from drilling blasting, excavation & transportation rough stone.

The emissions are computed based on AP-42 emission factors. Operational hours, activity rate, wind speed and moisture content have been considered for estimation of emissions from point and area sources. For line source, apart from operational hours, activity rate, moisture, silt content and vehicle weight have been considered.



Predictions are carried out for the worst-case scenario of simultaneous operation of excavators (area sources) and tippers for transportation from mine pit to loading pit (line sources) over a distance of 500 m.

The number of working days has been taken at 300 days per year with 8 hours of operation/day, hence the concentrations predicted are considered to be the worst case. With control measures, the emissions have been taken at 30% of uncontrolled emissions for handling and 10% of uncontrolled emissions for transportation.

#### **4.3.7 Meteorological Data**

The meteorological data recorded continuously during the month of March 2025 – May 2025 on hourly basis on wind speed, wind direction and temperature has been processed to extract the 24- hourly mean meteorological data as per the guidelines of IMD and MoEF for application of AERMOD model. Stability classes computed for the mean hours is based on guidelines issued by CPCB on modeling. Mixing heights representative of the region have been taken from the available published literature.

#### **4.3.8 Summary of Predicted Ground Level Concentrations**

Ground level concentrations due to the mining activities have been estimated to know the incremental raise and extent of impact in the study area.

The maximum ground level concentration is estimated to be about 1.54  $\mu\text{g}/\text{m}^3$  of PM 2.5 & 3.58  $\mu\text{g}/\text{m}^3$  of PM10 within the mine area and surrounding cluster area 2.07  $\mu\text{g}/\text{m}^3$  of PM 2.5 & 4.95  $\mu\text{g}/\text{m}^3$  of PM10, where mining operations are being carried out. The impact of mining operations would be negligible beyond 0.5 km.

**Figure – 4.1** represents the spatial distribution of the predicted ground level concentrations of PM<sub>10</sub> due to emissions from mine.

#### **4.3.9 Emission sources & Quantification**

Various point and non-point sources of emissions from Proposed Rough Stone Quarry of Thiru. R.Sathish /o. S/o. Ramoorthy, is quantified and presented below:

**Area Emissions – Total Material handling (Rough Stone)**

|                                                    |                                                |
|----------------------------------------------------|------------------------------------------------|
| Quantity, TPA                                      | Rough Stone: 2,42,660m <sup>3</sup> (10 Years) |
| Operational Hours Per Year                         | 2400                                           |
| Activity Rate, t/hr.                               | 392.152                                        |
| Emission of dust, g/t.                             | 0.15                                           |
| Emission of dust, g /hr.                           | 51.45                                          |
| Area of influence, m <sup>2</sup>                  | 622                                            |
| Uncontrolled emission rate g/s/m <sup>2</sup>      | 0.00003535                                     |
| Controlled emission rate, PM10 g/s/m <sup>2</sup>  | 0.000035350                                    |
| Controlled emission rate, PM2.5 g/s/m <sup>2</sup> | 0.00002356                                     |

**Area Emissions – Total Material handling (Cluster Rough Stone)**

|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Quantity, m <sup>3</sup>                           | <b>Existing Quarries:</b> <ul style="list-style-type: none"> <li>JPJ Stone Crusher (Extent – 1.21.50Ha) - Rough Stone</li> <li>Thiru.D.Baskaran (Extent – 1.00.00Ha) - Rough Stone</li> </ul> <b>Proposed Quarries:</b> <ul style="list-style-type: none"> <li>Thiru.R.Sathish Rough Stone: 2,42,660m<sup>3</sup> (10 Years)</li> <li>Tvl.Sri. Sai Constructions (Extent – 2.03.00 Ha)- Rough Stone – 240630 m3 (10 Years)</li> <li>Thiru.J. Nareshkrishna (Extent – 2.03.0 Ha)- Rough Stone 2,17,495 m3(10 Years)</li> </ul> |
| Operational Hours Per Year                         | 2400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Activity Rate, t/hr.                               | 392.34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Emission of dust, g/t.                             | 0.24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Emission of dust, g /hr.                           | 55.232                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Area of influence, m <sup>2</sup>                  | 625                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Uncontrolled emission rate g/s/m <sup>2</sup>      | 0.00158422                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Controlled emission rate, PM10 g/s/m <sup>2</sup>  | 0.00015842                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Controlled emission rate, PM2.5 g/s/m <sup>2</sup> | 0.00001056                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

**Line Source – Transport of Rough Stone from Pit to Boundary**

**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|                                       |                                                |
|---------------------------------------|------------------------------------------------|
| Quantity, TPA                         | Rough Stone: 2,42,660m <sup>3</sup> (10 Years) |
| Operational Hours Per Year            | 2400                                           |
| Capacity of each Dumper (T)           | 10                                             |
| Total No. of Tippers/ year            | 1760                                           |
| Lead length/trip, Km                  | 0.15                                           |
| Total VKT/Year                        | 55426                                          |
| Emission Kg/VKT                       | 0.23                                           |
| Total emission Kg/Year                | 121562                                         |
| Uncontrolled emission rate g/s/m      | 0.00058917                                     |
| Controlled emission rate, PM10 g/s/m  | 0.0005891                                      |
| Controlled emission rate, PM2.5 g/s/m | 0.00003456                                     |

**Line Source – Transport of Rough Stone (Cluster)**

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Quantity, m <sup>3</sup>              | <b>Existing Quarries:</b> <ul style="list-style-type: none"> <li>JPJ Stone Crusher (Extent – 1.21.50Ha) - Rough Stone</li> <li>Thiru.D.Baskaran (Extent – 1.00.00Ha) - Rough Stone</li> </ul> <b>Proposed Quarries:</b> <ul style="list-style-type: none"> <li>Thiru.R.Sathish Rough Stone: 2,42,660m<sup>3</sup> (10 Years)</li> <li>vl.Sri. Sai Constructions (Extent – 2.03.00 Ha)- Rough Stone – 240630 m<sup>3</sup> (10 Years)</li> <li>Thiru.J. Nareshkrishna (Extent – 2.03.0 Ha)- Rough Stone 2,17,495 m<sup>3</sup>(10 Years)</li> </ul> |
| Operational Hours Per Year            | 2400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Capacity of each Dumper (T)           | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Total No. of Tippers/ year            | 10150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Lead length/trip, Km                  | 0.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Total VKT/Year                        | 11200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Emission Kg/VKT                       | 0.24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Total emission Kg/Year                | 224561                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Uncontrolled emission rate g/s/m      | 750321                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Controlled emission rate, PM10 g/s/m  | 0.7503212                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Controlled emission rate, PM2.5 g/s/m | 0.0223424                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

Note: \*Emission factor computed based on wind speed of 2 m/s, and moisture content of 10 %. + Emission factor computed based on silt content of 10 % and moisture content of 10 %

**FIG 4.2 Isopleth of GLC Prediction for PM<sub>2.5</sub>**

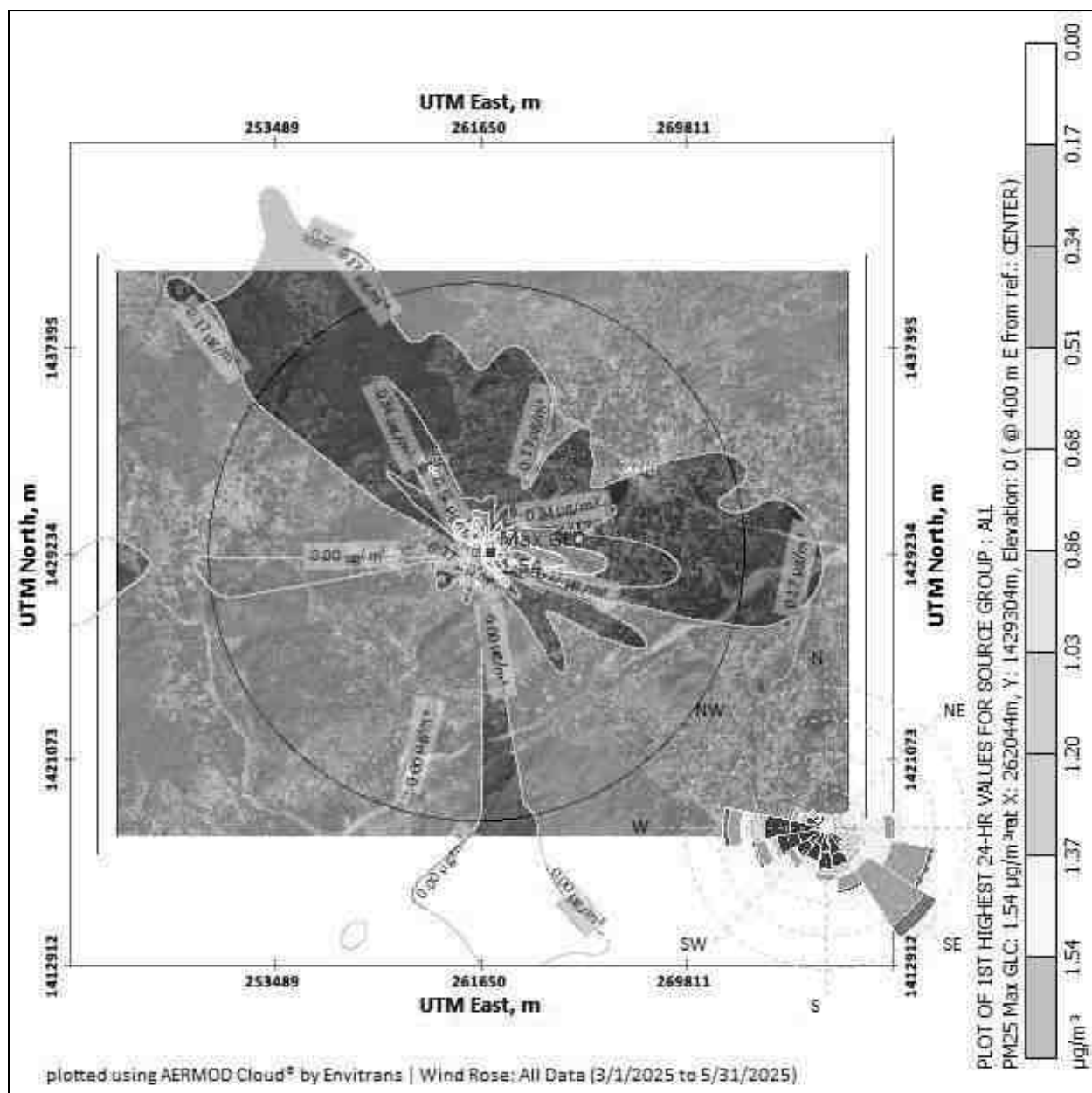


**FIG 4.3 Isopleth of GLC Prediction for PM<sub>10</sub>**

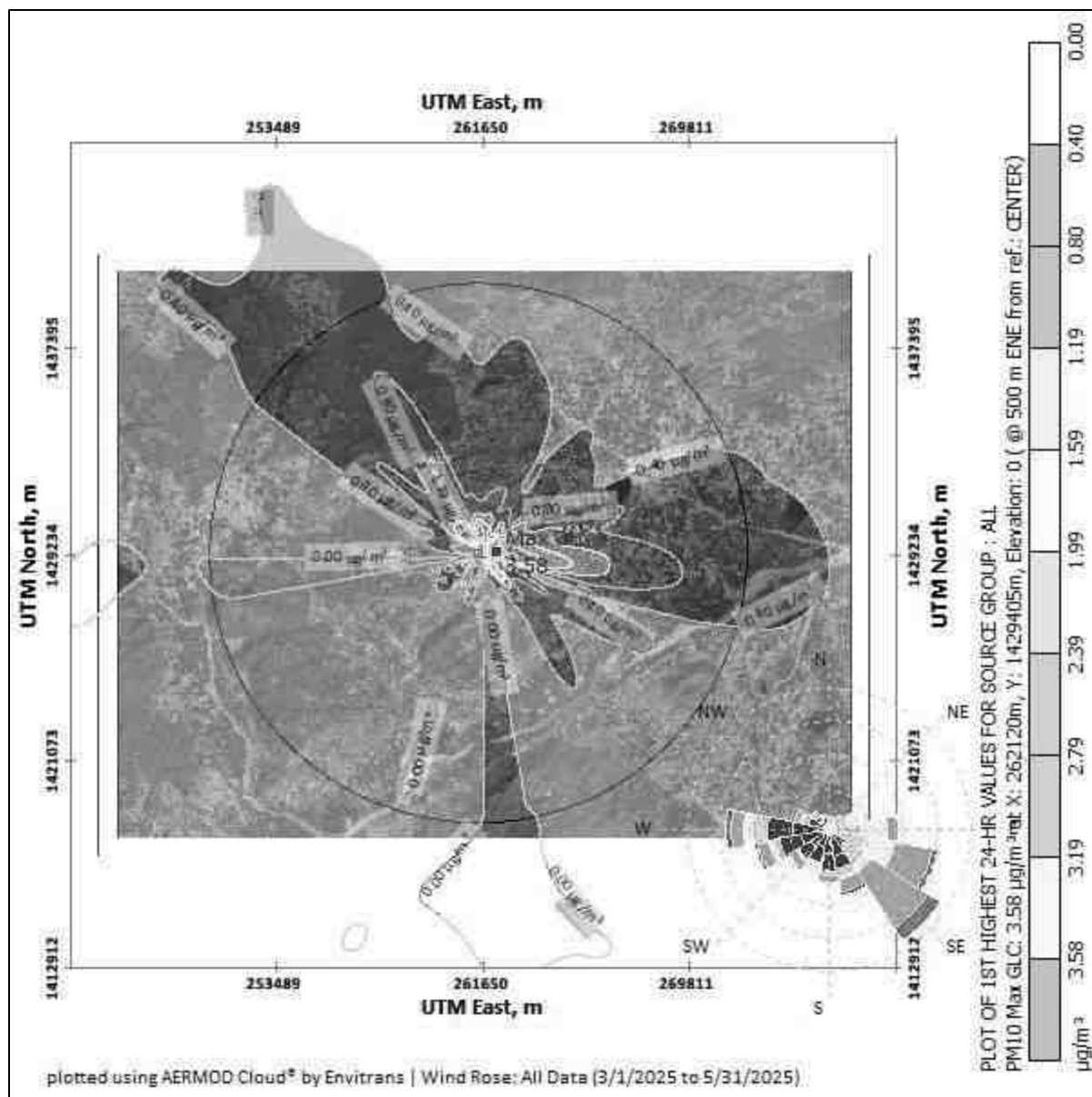


**FIG 4.4 Isopleth of GLC Prediction –Cumulative for PM<sub>2.5</sub>**

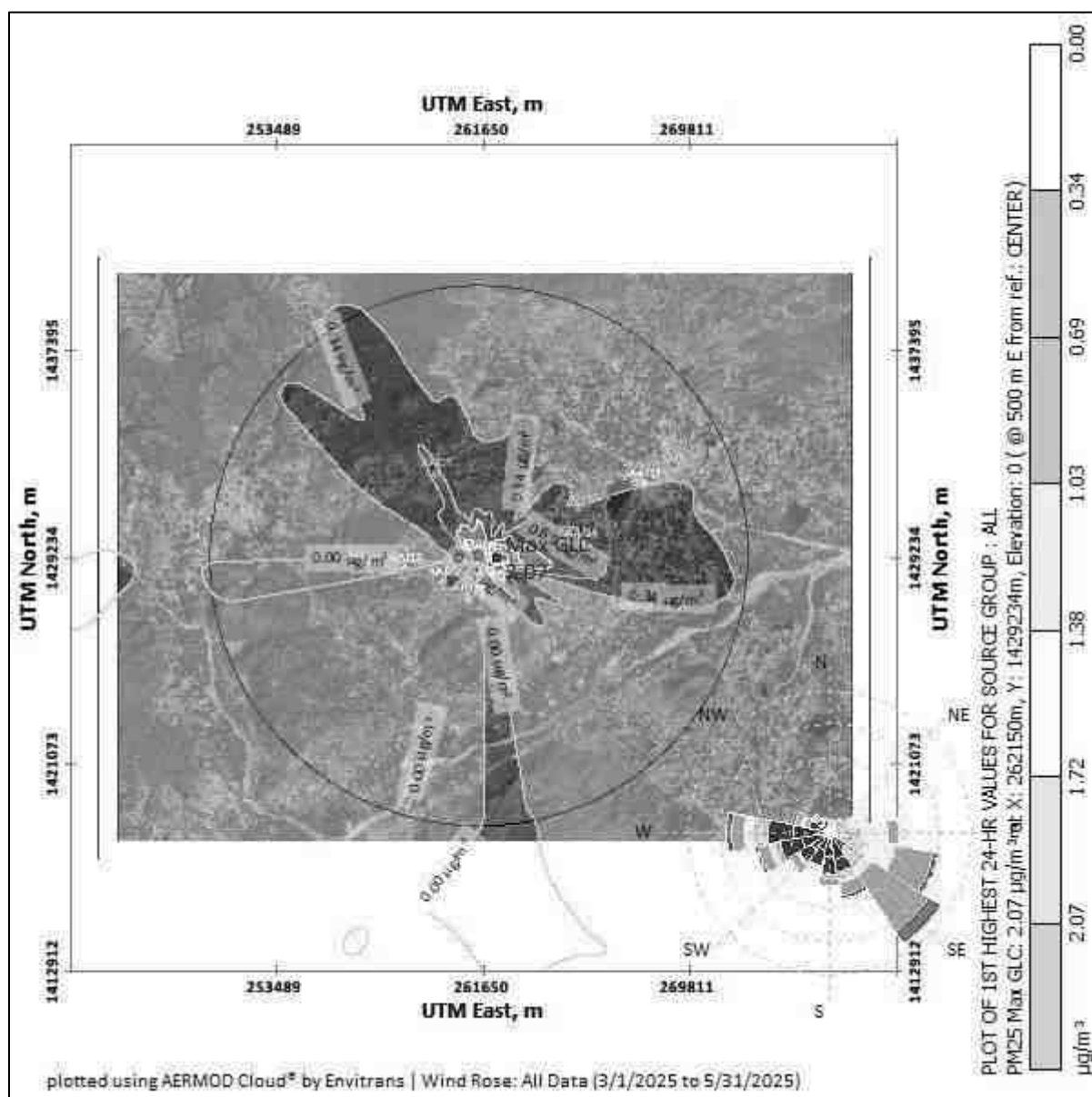
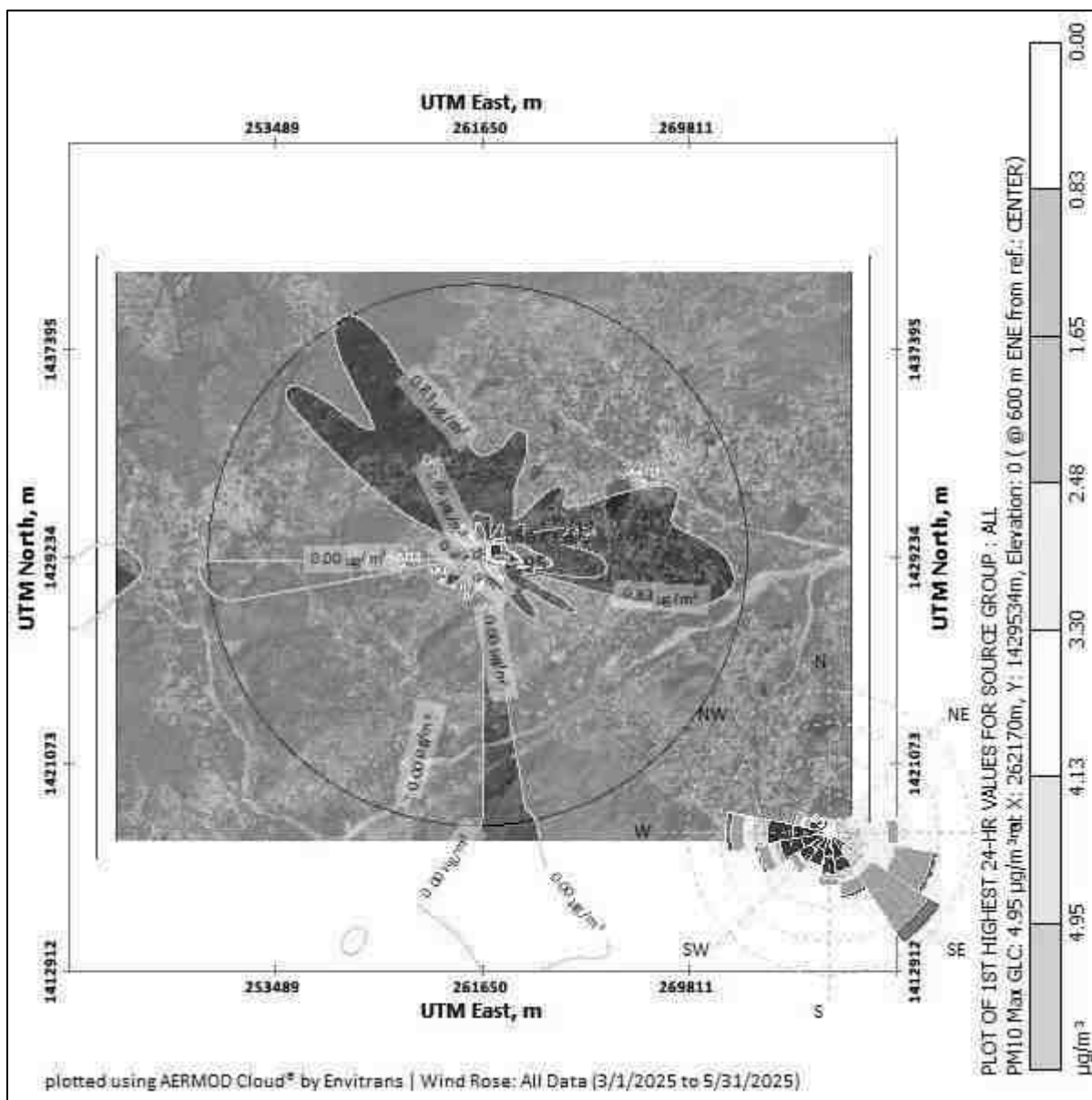


**FIG 4.5 Isopleth of GLC Prediction –Cumulative for PM<sub>10</sub>**



**PREDICTED AMBIENT AIR QUALITY:**

The post project Concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, (GLC) (base line + incremental) after adopting necessary control measures is given in Table No - 4.3 to 4.3c.

| Table 4.3 Concentrations of PM2.5 after Project Implementation          |                       |                          |                                     |                            |                           |
|-------------------------------------------------------------------------|-----------------------|--------------------------|-------------------------------------|----------------------------|---------------------------|
| SL. No                                                                  | Location              | Background Concentration | Predicted incremental Concentration | Post Project Concentration | Statutory Limits in µg/m³ |
| 1                                                                       | Project site          | 21.6                     | 31.5                                | 26.55                      | 60                        |
| 2                                                                       | Paravakkal            | 24.95                    | 1.48                                | 26.43                      |                           |
| 3                                                                       | Mel Alangkuppam -West | 26.05                    | 1.19                                | 27.24                      |                           |
| 4                                                                       | Chettikuppam          | 25.7                     | 0.89                                | 26.59                      |                           |
| 5                                                                       | Gudiyatham            | 24.5                     | 0.59                                | 25.09                      |                           |
| 6                                                                       | Pogalur               | 23.75                    | 0.30                                | 24.05                      |                           |
| 7                                                                       | Morsapalli            | 23.15                    | 0.22                                | 23.37                      |                           |
| Table 4.3a Cluster Concentrations of PM2.5 after Project Implementation |                       |                          |                                     |                            |                           |
| SL. No                                                                  | Location              | Background Concentration | Predicted incremental Concentration | Post Project Concentration | Statutory Limits in µg/m³ |
| 1                                                                       | Project site          | 26.3                     | 2.07                                | 28.37                      | 60                        |
| 2                                                                       | Paravakkal            | 24.95                    | 1.72                                | 26.67                      |                           |
| 3                                                                       | Mel Alangkuppam -West | 26.05                    | 1.38                                | 27.43                      |                           |
| 4                                                                       | Chettikuppam          | 25.7                     | 1.03                                | 26.73                      |                           |
| 5                                                                       | Gudiyatham            | 24.5                     | 0.69                                | 25.19                      |                           |
| 6                                                                       | Pogalur               | 23.75                    | 0.34                                | 24.09                      |                           |
| 7                                                                       | Morsapalli            | 23.15                    | 0.21                                | 23.36                      |                           |
| Table 4.3b Concentrations of PM10 after Project Implementation          |                       |                          |                                     |                            |                           |
| SL. No                                                                  | Location              | Background Concentration | Predicted incremental Concentration | Post Project Concentration | Statutory Limits in µg/m³ |
| 1                                                                       | Project site          | 48.4                     | 67.9                                | 58.15                      | 100                       |
| 2                                                                       | Paravakkal            | 55.45                    | 2.77                                | 58.22                      |                           |
| 3                                                                       | Mel Alangkuppam       | 49.6                     | 2.22                                | 51.82                      |                           |



**PROPOSED ROUGH STONE QUARRY OF THIRU.R. SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|   |              |       |      |       |  |
|---|--------------|-------|------|-------|--|
|   | -West        |       |      |       |  |
| 4 | Chettikuppam | 54.35 | 1.66 | 56.01 |  |
| 5 | Gudiyatham   | 50.5  | 1.11 | 51.61 |  |
| 6 | Pogalur      | 52.7  | 0.55 | 53.25 |  |
| 7 | Morsapalli   | 50.9  | 0.25 | 51.15 |  |

**Table 4.3c Cluster Concentrations of PM10 after Project Implementation**

| SL. No | Location              | Background Concentration | Predicted incremental Concentration | Post Project Concentration | Statutory Limits in $\mu\text{g}/\text{m}^3$ |
|--------|-----------------------|--------------------------|-------------------------------------|----------------------------|----------------------------------------------|
| 1      | Project site          | 57.15                    | 4.95                                | 62.1                       | 100                                          |
| 2      | Paravakkal            | 55.45                    | 4.13                                | 59.58                      |                                              |
| 3      | Mel Alangkuppam -West | 49.6                     | 3.30                                | 52.9                       |                                              |
| 4      | Chettikuppam          | 54.35                    | 2.48                                | 56.83                      |                                              |
| 5      | Gudiyatham            | 50.5                     | 1.65                                | 52.15                      |                                              |
| 6      | Pogalur               | 52.7                     | 0.83                                | 53.53                      |                                              |
| 7      | Morsapalli            | 50.9                     | 0.51                                | 51.41                      |                                              |

The above report seems that, even in the worst-case scenario, the resultant added concentrations with baseline figures show that the values of ambient air quality for  $\text{PM}_{10}$  are in the range of  $51.15 \mu\text{g}/\text{m}^3$  to  $58.22 \mu\text{g}/\text{m}^3$  and for  $\text{PM}_{2.5}$  are in the range of  $24.05 \mu\text{g}/\text{m}^3$  to  $26.59 \mu\text{g}/\text{m}^3$  and  $\text{PM}_{10}$  are surrounding area range of  $51.41 \mu\text{g}/\text{m}^3$  to  $62.1 \mu\text{g}/\text{m}^3$  and for  $\text{PM}_{2.5}$  are in the range of  $23.36 \mu\text{g}/\text{m}^3$  to  $28.37 \mu\text{g}/\text{m}^3$  which are within the statutory limits in each case. The mitigation measures undertaken in the mine for control of air pollution are given below.

- Wet drilling will be practiced in drilling operation.
- Water sprinkling will be done in haul roads & loading etc.
- The mines workers are provided with the dust masks.
- Three-layer plantation in the safety zone.
- DG sets shall be periodically maintained as per manufacturer's specifications.

#### **4.4 ASSESSMENT OF SIGNIFICANCE OF IMPACTS (CRITERIA FOR DETERMINING SIGNIFICANCE, ASSIGNING SIGNIFICANCE).**

#### **4.4.1 NOISE ENVIRONMENT**

The main noise generating source during mining operation and related activities are drilling, excavation, loading and transportation. Intermittent noise is generated due to operation of diesel generator.

#### **4.4.2 Likely Noise Levels in Lease Area due to mining activity**

| <b>S.No.</b> | <b>Source Name</b>  | <b>Noise Level in dB (A)</b> |
|--------------|---------------------|------------------------------|
| 1            | Diesel generator    | 90                           |
| 2            | Excavator Operation | 86                           |
| 3            | Trucks movement     | 82                           |
| 4            | Drilling            | 96                           |
| 5            | Blasting            | 102                          |

It is expected that the generated noise will be limited within the mine lease area and there will be no profound effect of noise on the buffer zone. The noise level will be maintained below the threshold limit by vigorous maintenance of the machineries. Wet drilling with dust extractor is being used to reduce the noise level during the mining operation.

Noise levels were measured in the lease area and in the nearby Paravakkal, Mel Alangkuppam -West, Chettikuppam, Gudiyatham Villages, the values are given below.

| <b>TABLE 4.4 Noise Levels in Monitoring Locations</b> |                       |                                                    |                                |                               |
|-------------------------------------------------------|-----------------------|----------------------------------------------------|--------------------------------|-------------------------------|
| <b>S. No.</b>                                         | <b>Location</b>       | <b>Distance and direction from Mine lease area</b> | <b>Day Equivalent (in dBA)</b> | <b>Night Equivalent (dBA)</b> |
| 1                                                     | Project site          | Core Zone                                          | 49.7                           | 41.1                          |
| 2                                                     | Paravakkal            | 1.13 km, NW                                        | 45.5                           | 39.5                          |
| 3                                                     | Mel Alangkuppam -West | 2.64 km, SW                                        | 42.5                           | 38.0                          |
| 4                                                     | Chettikuppam          | 3.75 km, E                                         | 44.3                           | 39.3                          |
| 5                                                     | Gudiyatham            | 7.0 Km, NE                                         | 45.4                           | 38.6                          |

The noise levels are within the MoEF & CC limits of 70 dB(A) in the working area and in the buffer areas, the values are below the limit of 75 dB(A). Since, the

residential area norm has been considered for all six locations mentioned above, during mining operation mine lease area will be considered as industrial area/quarry area for which DGMS norms 85 dB(A)/CPCB guidelines 75 dB(A).

#### **4.4.3 Impact of Noise due to mining**

- ✚ Noise generation in mining is due to operation like drilling, blasting and transportation of minerals within and outside the lease area.
- ✚ As per DGMS (Directorate General of Mines Safety) limits, the acceptable noise level is 85 dB(A) for an exposure period of 8 hours.
- ✚ Exposure to loud noise can also cause high blood pressure, heart disease, sleep disturbances, and stress. Noise pollution also impacts the health and well-being of wildlife.
- ✚ Noise exceeding prescribed limits may cause impairment like abnormal loudness perception, tinnitus which causes a persistent high-pitched ringing in the ears, paracusis or distorted hearing.

### **4.5 MITIGATION MEASURES**

#### **4.5.1 Noise level control.**

- ✚ As the distance between the source and receptor increases, the noise level decreases. Hence, there will be a natural attenuation.
- ✚ The proponent has planned to develop green belt in the periphery of the lease area which diminishes sound volume by dampening them.
- ✚ All the equipment/machinery/tippers involved will be properly maintained to control noise generation.
- ✚ Conducting regular health checkups for employees involved.
- ✚ Employees will be made to work on shifts to reduce their exposure time.
- ✚ Providing earplugs to all employees.
- ✚ Providing green walls/nets wherever possible.

By adopting these measures, the noise levels will be maintained well within MoEF & CC limits since the baseline value is low.

#### **4.5.2 IMPACTS DUE TO VIBRATION**

There will be negligible vibration of ground due to the following activities.

- ✚ Due to Blasting
- ✚ Due to Drilling
- ✚ Due to movement of machinery

### **Impacts**

- ✚ Though vibration will be only felt by the people working inside the lease area it is usually undesired.
- ✚ Vibration may also cause fly rocks.
- ✚ It may frighten the birds and small insects in the lease area. However, it will be felt only for a short period.

### **Mitigation measures**

- ✚ The DG set will be kept within the acoustic enclosure made by the stone blocks.
- ✚ Drills will be equipped with sharp bits and wet drilling will be adopted.
- ✚ A well-planned green belt is proposed for the mining to reduce noise level.
- ✚ Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.
- ✚ Regular maintenance of the machineries and vehicles to reduce the noise level.
- ✚ Use of ear muffs by the workers with occupational exposure to noise.
- ✚ Carrying out blasting on limited scale, only from 12:00 PM to 2:00 PM
- ✚ Control of fly rock and vibration by maintaining peak particle velocity within the standard as prescribed by the DGMS and MOEF & CC.
- ✚ Shallow depth jackhammer drilling and blasting is proposed to be carried out with minimum use of explosive.
- ✚ Supervising blasting by competent and statutory Foreman/ Mines Manager.

### **4.5.3 SOCIO ECONOMIC IMPACT**

The lease area is Government Poramboke Land. The proponent has planned to spend INR 5,00,000 for CER activities.

### **4.5.4 OCCUPATIONAL HEALTH**

#### **Impacts on humans due to various mining activities**

The occupational risk due to proposed mining may be due to drilling, blasting, excavation and transportation. A total of 25 workers will be engaged in the mining activity. Mining activity may cause various health problems to the mines workers as follows:

- Dust generated during excavation, drilling, stone cutting, sizing and transportation may cause health problems like Silicosis, Asthma, Tuberculosis and other respiratory lungs disorders.
- Heavy weight lifting by the workers may cause injuries to arms, legs and back.
- Noise generated during the mining activity may cause Noise Induced Hearing Loss (NIHL).

| <b>Table 4.5 Impacts on humans due to various mining activities</b> |                                               |                                                                                                                                               |
|---------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>S.No.</b>                                                        | <b>Type of activity</b>                       | <b>Impact</b>                                                                                                                                 |
| 1                                                                   | Dust generation due to drilling and blasting  | Continuous exposure to dust causes Pneumonia, Tuberculosis, Rhematic arthritis and Segmental Vibration                                        |
| 2                                                                   | Noise generation due to drilling and blasting | Short term impact will be lack of sleep, high blood pressure and heart ailments. Long term exposure may lead to partial or permanent deafness |
| 3                                                                   | Unexpected accidents                          | Risks include fly rocks, cracks or fissures due to improper mining methods                                                                    |

### **Mitigation measures**

- The mines worker will be provided with dust mask to minimize the inhalation of the dust.
- Water sprinkling twice in a day is in practice on the haul roads, near excavation and roads to reduce the fugitive dust emission.
- Wet drilling and drilling with dust extractor will be practiced.
- Ear muffs will be supplied to the workers working in the noise prone area
- The mining site will be supplied with first aid facilities and the entire mines worker will have access to that.
- The mines workers will be well trained about the safety practices in the mining activities.

- As per Mines Rules, 1955, medical examination of employees at the initial stage and periodically, shall be done by a team of qualified medical officers provided by the project proponent.
- Regular medical checkup camps shall also be arranged for detection of occupational diseases and minor disease in the nearby rural population.
- Free checkup and medicine for treatment for their acute and chronic illness shall be provided by the lessee. Conducting periodical Medical Examination as per DGMS.
- Making all first aid kits available in mines office
- Keeping fire extinguisher in place
- Educating the employees about how to handle unexpected happenings
- Posting information containing emergency contact numbers in mines office
- By adopting all these measures, the safety of the employees working in the quarry will be ensured.

#### **4.5.5 WASTE MANAGEMENT**

##### **Solid Waste**

Since the entire mined out material will be utilized there will not be any solid waste generation from this project. However, the Solid waste (MSW) generated from administrative activities will be properly collected and disposed to Govt. Authorized yards / Re-cylers / Disposers.

##### **Liquid Waste**

There is no process effluent generation from this mine. Hence no liquid waste is generated. Domestic wastewater i.e 1.0 KLD will be discharged in soak pit via septic tank.

##### **Hazardous Waste Management**

In this project the following management practices will be followed:

In the quarrying operation, the source of hazardous waste is from machinery maintenance activities that are waste oil/ Waste lubricants / Used filters / Used Hydraulic hoses. The said hazardous waste are very negligible quantity, it will be properly collected in the source level, stored in impervious storage yards and disposed of as per the Hazardous waste (Trans-boundary Movement) Management Rules, 2016.

### **Plastic Waste**

Single use plastics/ use and throwaway plastics will be banned in the site as directed by the Tamil Nadu Government vide GO(Ms)No.84 regarding ban on use of plastic products. The employees will be encouraged to use compostable material or reusable material.

\*\*\*\*

## **CHAPTER 5**

### **ANALYSIS OF ALTERNATIVES**

#### **5.1 DESCRIPTION OF EACH ALTERNATIVE**

Analysis of alternative site helps in selection of best possible site for the project. On one hand it helps to closeness to the existing infrastructure and on other hand it also helps to minimize the impact of project on environment.

#### **5.2 SUMMARY OF ADVERSE IMPACTS OF EACH ALTERNATIVE**

The project proponent has prepared mining plan under rule 8, 41 & 42 of Tamil Nadu Minor Mineral Concession Rules, 1959 and the same has been approved by the Assistant Director, Dept. of Geology & Mining, Vellore vide Rc.No. 441/2024(Mines) dated 30.04.2025.

- There is no forest land or other Eco-sensitive places.
- Proposed mine site is selected on the basis of occurrence of mineral for suitable end use.

Hence seeking alternative site is not required.

#### **5.3 MITIGATION MEASURES PROPOSED FOR EACH ALTERNATIVE**

The mining technology is mechanized Opencast in single-shift operation without any change in technology. The operation will be carried out as per DGMS norms. No alternate technology will be used. Details of the technology used are given in Chapter II.

#### **5.4 SELECTION OF ALTERNATIVE**

In case of Mining projects alternate site selection is not necessary as the mining is site specific and the area in which mining will be carried out has been adequately proved for presence of mineral. The deposit is also having good infrastructural facilities for access and development.

The mining technology is mechanized Opencast in single-shift operation without any change in technology. The operation will be carried out as per DGMS norms. No alternate technology will be used. Details of the technology used are given in Chapter II.

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## **CHAPTER 6**

### **ENVIRONMENTAL MONITORING PROGRAMME**

#### **6.1 TECHNICAL ASPECTS OF THE MONITORING THE EFFECTIVENESS OF MITIGATION MEASURES (INCL MEASUREMENTS, METHODOLOGIES, FREQUENCY LOCATION DATA ANALYSIS, REPORTING SCHEDULES EMERGENCY PROCEDURES DETAILED BUDGET AND PROCUREMENT SCHEDULES)**

##### **6.1.1 ENVIRONMENTAL MONITORING**

Monitoring is done to measure the efficiency of control measures implemented. Regular monitoring of various environmental parameters like air, water, noise and soil environments is needed to assess the status of environment during the project operation.

A schedule is framed with timeline to monitor various parameters during the operation of the project. The schedule is framed based on MoEF & CC and Tamil Nadu State Pollution Control Board. In case the SEIAA/TNPCB/MoEF & CC or other statutory bodies demand monitoring of any additional parameter/factor, the same will also be done.

The proposed quarry is a small quarry. Hence the Mines-in-charge will be responsible for environmental related activities. After obtaining EC, the conditions mentioned in EC will be strictly followed. The Mines-in-charge will be responsible for implementing the conditions. EC compliance report will also be submitted periodically.

##### **6.1.2 OBJECTIVES OF ENVIRONMENTAL MONITORING**

The objectives of Environmental Monitoring are as follows.

- ✚ Monitoring and analysis of air and water samples
- ✚ Implementing the control and protective measures.
- ✚ Coordinating the environment related activities within the project as well as with outside agencies. Collecting statistics of health of workers and population of the surrounding villages. Green belt development etc.

- ✚ Monitoring the progress of implementation of Environmental Management Programme.
- ✚ Monitoring the noise generation in and around the project areas.
- ✚ Monitoring of wastewater treatment and disposal of solid waste.
- ✚ The laboratory will be suitably equipped for sampling/testing for various environmental pollutants.

### **6.1.3 ENVIRONMENTAL MONITORING SCHEDULE**

To evaluate the effectiveness of Environmental Management Programme, regular monitoring of the important environmental parameters will be taken up. The frequency of monitoring different parameters is given in table 6.1.

| <b>Table 6.1 Environmental Monitoring Schedule</b> |                                  |                                                                         |                                            |
|----------------------------------------------------|----------------------------------|-------------------------------------------------------------------------|--------------------------------------------|
| <b>Sl.No.</b>                                      | <b>Description of Parameters</b> | <b>Parameters</b>                                                       | <b>Frequency</b>                           |
| 1                                                  | Air                              | Air Quality for SPM, PM-10, PM-2.5, SO <sub>2</sub> and NO <sub>x</sub> | 24-hour average samples Once in a 3 month. |
| 2                                                  | Water                            | General, Physical, and chemical parameters                              | Once per season                            |
| 3                                                  | Noise                            | Leq, L <sub>max</sub> , L <sub>min</sub> , Leq Day & Leq Night dB(A)    | 8-hour average samples Once in a 3 month.  |
| 4                                                  | Soil                             | Physical and Chemical characteristics.                                  | Once per season                            |

### **6.1.4 LOCATION**

Monitoring of the above-mentioned environmental parameters would be done at appropriate and sensitive areas. The exact location of monitoring is given as Figure – 3.4, 3.10, 3.12 & 3.14.

### **6.1.5 MEASUREMENT METHODOLOGY**

#### **(a) Ambient Air Quality**

Ambient air quality will be monitored for SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>. The instruments like high volume air samplers and Respirable dust samplers would be used for this purpose. These parameters will be monitored as mentioned in the monitoring schedule previously.

### **(b) Water Quality**

Water quality analysis will be done quarterly and the monitored parameters include pH, Temperature, TDS, etc. as specified by SPCB from time to time.

### **(c) Noise Monitoring**

Noise level will be monitored in working environment mainly noise producing sources over the boundary and around the mining area.

### **(d) Green Belt and Afforested Areas**

Continuous vigilance and monitoring of green belt will be done for performance and survival rate of the saplings. Watch and ward personnel will properly guard the plantation. Provision will be made for fertilizers application and watering on schedule.

### **(e) Socio-Economics**

Socio-economic of the core and buffer zone details elaborated in Chapter-3.

## **6.1.6 TECHNICAL ASPECTS OF MONITORING THE EFFECTIVENESS OF MITIGATION MEASURES**

The above monitoring schedule will be followed periodically. After collection of the data, the mines-in-charge will analyze the data obtained. The data thus obtained will be incorporated in the EC Compliance report submitted to the regional office, MoEF & CC. The measurement methodologies will be as per CPCB/BIS/MoEF & CC/DGMS norms.

## **6.1.7 EMERGENCY PROCEDURES**

In case of any emergency due to environmental conditions, the mines in-charge will immediately report to the top-level management and the emergency response protocol will be implemented as per MoEF & CC/ SPCB / DGMS norms.

## **6.1.8 REPORTS TO BE GENERATED**

The Project Proponent will maintain records of each test and its interpretation so as to formulate an adequate Environmental Management Plan. The set of records planned to be maintained by Project Proponent are given in below table 6.2.

**Table 6.2 Important Records to be maintained by PP**

| <b>S.No.</b> | <b>Particulars</b>                                   |
|--------------|------------------------------------------------------|
| 1            | Monitoring results for Air, Water & Soil.            |
| 2            | Records of slope failure, land erosion & drainage.   |
| 3            | Plantation Records                                   |
| 4            | Environmental and related standards/ norms           |
| 5            | Records pertaining to statutory consents, approvals. |
| 6            | Periodic Medical examination (PME) records.          |
| 7            | Complain register (Environmental pollution)          |
| 8            | Records on water and electricity consumption         |
| 9            | Periodic progress records.                           |
| 10           | Environmental Expenses Records                       |

#### **6.1.9 DETAILED BUDGET AND PROCUREMENT SCHEDULES**

The budget planned for environmental monitoring is given below.

**Table 6.3 - Environmental Management Plan Budget**

| <b>Sl. No</b> | <b>Budget planned for</b>                          | <b>Capital Cost Amount (INR)</b> | <b>Recurring Cost/Annum Amount (INR)</b> |
|---------------|----------------------------------------------------|----------------------------------|------------------------------------------|
| 1             | Air Environment                                    | 7.36                             | 1.11                                     |
| 2             | Noise Environment                                  | 0.30                             | 0.02                                     |
| 3             | Waste Management                                   | 0.25                             | 0.12                                     |
| 4             | Mine Closure                                       | 0.53                             | 0.11                                     |
| 5             | Implementation of EC, Mining Plan & DGMS Condition | 0.70                             | 0.73                                     |
| <b>Total</b>  |                                                    | 9.14                             | 2.09                                     |

## **CHAPTER 7**

### **ADDITIONAL STUDIES**

The following Additional Studies were done as per items identified by project proponent and the regulatory authority.

- Public Consultation
- Risk Assessment
- Disaster Management Plan
- Cumulative Impact Study
- Mine Closure Plan
- Slope Stability Plan

#### **7.1 PUBLIC CONSULTATION**

This draft EIA/EMP report will be exposed to public consultation as per mandatory procedures through the District Collector and State Pollution Control Board officials after giving 30 days advance notice in two local newspapers about the scheduled date and time for conduct of the public hearing procedures. The opinions, concerns and objections of stakeholders will be recorded during the public hearing. All the public queries and the replies to the query by the project proponent and officials concerned will be recorded and incorporated in the EIA/EMP report for approval by SEIAA, Tamil Nadu.

#### **7.2 RISK ASSESSMENT**

The DGMS risk assessment process is intended to identify existing and probable hazards in the work environment and all operations and assess the risk levels of those hazards in order to prioritize those that need immediate attention. Further, mechanisms responsible for these hazards are identified and their control measures, set to timetable are recorded along with pinpointed responsibilities.

The whole quarry operation will be carried out under the direction of a Qualified Competent person holding certificate of competency to manage a metalliferous mine granted by the DGMS. Factors of risks involved due to human induced activities in connection with this proposed mining & allied activity with detailed analysis of causes and control measures for the mine is given in below Table 7.1.

**Table 7.1 Risk Assessment and Control Measures**

| <b>S.NO</b> | <b>Risk Factor</b>                                       | <b>Causes of risk</b>                                                                                        | <b>Control Measures</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1           | Accidents due to explosives and heavy mining machineries | Improper handling and unsafe working practice                                                                | <ul style="list-style-type: none"> <li>• All safety precautions and provisions of Mine Act, 1952, Metalliferous Mines Regulation, 1961 and Mines Rules, 1955 will be strictly followed during all mining operations.</li> <li>• Entry of unauthorized persons will be prohibited.</li> <li>• Fire-fighting and first-aid provisions in the mine office complex and mining area.</li> <li>• Provisions of all the safety appliances such as safety boot, helmets, goggles etc. will be made available to the employees and regular check for their use.</li> <li>• Quarry operation will be done as per approved mining plan and other applicable statutory guidelines issued by DGMS, Dept. of Mining &amp; Geology-TamilNadu.</li> <li>• Handling of explosives, charging and firing shall be carried out under competent statutory persons.</li> <li>• A comprehensive standard operating procedure (SOP) will be prepared as per DGMS guidelines and the same will be circulated to all the employees and it will be strictly followed in the all face of mining operation.</li> </ul> |
| 2           | Drilling                                                 | Improper and unsafe practices. Due to high pressure of compressed air, hoses may burst. Drill Rod may break. | <ul style="list-style-type: none"> <li>• Safe operating procedure established for drilling (SOP) will be strictly followed.</li> <li>• Only trained operators will be deployed.</li> <li>• No drilling shall be commenced in an area where shots have been fired until the blaster/blasting foreman has made a thorough Examination of all places.</li> <li>• Drilling shall not be carried on simultaneously on the benches at places directly one above the other.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|   |                |                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                |                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>Periodical preventive maintenance and replacement of worn-out accessories in the compressor and drill equipment as per operator manual.</li> <li>Drills unit shall be provided with wet drilling to ensure efficient working.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                   |
| 3 | Blasting       | Fly rock, ground vibration, Noise and dust. Improper charging, stemming & Blasting/ fining of blast holes. Vibration due to movement of vehicles.                                                    | <ul style="list-style-type: none"> <li>Restrict maximum charge per delay as per approved mining plan.</li> <li>Proper blasting design with optimum spacing &amp; burden, Charge per delay and stemming.</li> <li>SOP for Charging, Stemming &amp; Blasting/Firing of Blast Holes will be followed by blasting crew during initial stage of operation.</li> <li>Shots are fired during day time only.</li> <li>Charging and firing shall be carried out in the same day.</li> <li>Siren will be done for each blasting. Blasting evacuation plan prepared and executed.</li> <li>The danger zone will be distinctly demarcated (by means of red flags).</li> </ul> |
| 5 | Transportation | Potential hazards and unsafe workings contributing to accident and injuries. Overloading of material. While reversal & overtaking of vehicle. Operator of truck leaving his cabin when it is loaded. | <ul style="list-style-type: none"> <li>Before commencing work, drivers personally check the dumper/truck/tipper for oil(s), fuel and water levels, tyre inflation, general cleanliness and inspect the brakes, steering system, warning devices including automatically operated audio-visual reversing alarm, rear view mirrors, side indicator lights etc., are in good condition. Unauthorized person will not be allowed to operate or ride on the vehicle.</li> <li>Loading according to the vehicle capacity.</li> <li>Periodical maintenance of vehicles as per operator manual.</li> </ul>                                                                |

**DRAFT EIA REPORT FOR PROPOSED ROUGH STONE QUARRY OF THIRU.R.SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|   |                                       |                                      |                                                                                                                                                                                                                                                                                                                                                                    |
|---|---------------------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6 | Natural calamities                    | Unexpected happenings                | <ul style="list-style-type: none"> <li>• An emergency management plan will be prepared considering all possible national calamity and the same will be executed if any such situation occurs.</li> <li>• Escape Routes will be provided to prevent inundation of storm water.</li> <li>• Fire Extinguishers &amp; Sand Buckets in the designated areas.</li> </ul> |
| 7 | Failure of Mine Benches and Pit Slope | Slope geometry, Geological structure | Ultimate or over all pit slope shall be below 60° and each bench height shall be 5m height.                                                                                                                                                                                                                                                                        |



### **7.3 DISASTER MANAGEMENT PLAN**

This being a small rough stone project that too working in a safe area, no major disaster is expected after following all the statutory rules and regulations.

#### **7.3.1 MODEL DISASTER MANAGEMENT PLAN**

The lessee has formulated the disaster Management plan keeping all eventualities in mind.

The mining operation will be carried out under the direction of qualified mines manager and supervisors, based on the guidelines and directions of Directorate General of Mines Safety (DGMS) and Indian Bureau of Mines. Code of practice of different operations will be formulated to ensure safety of men and machines and to avoid various hazards mentioned above. Mine workers will be provided training on safe work practices. The following natural/ industrial hazards may occur during normal operation; slope failure at the mine faces; accident due to heavy equipment/ machinery.

In order to prevent or take care of hazard / disasters if any the following control measures have been adopted.

- All safety precautions and provisions of Metalliferous Mines Regulations (MMR), 1961 is strictly followed during all mining operations.
- Observance of all safety precautions for blasting and storage of explosives as per MMR 1961.
- Entry of unauthorized persons into mine & allied areas is completely prohibited.
- Fire-fighting and first-aid provisions in the mines office complex and mining area are provided.
- Provisions of all the safety appliances such as safety boot, helmets, goggles, dust masks, ear plugs and ear muffs etc. are made available to the employees and the use of same is strictly adhered to through regular monitoring.
- Training and refresher courses for all the employees working in hazardous premises. Working of mine, as per approved plans and regularly updating the mine plans.
- Handling of explosives, charging and blasting are carried out only by qualified

persons following SOP.

- Checking and regular maintenance of garland drains and earthen bunds to avoid any inflow of surface water in the mine pit.
- Provision of high-capacity standby pumps with generator sets with enough quantity of diesel for emergency pumping especially during monsoon.
- A blasting SIREN is used at the time of blasting for audio signal.
- Before blasting and after blasting, red and green flags are displayed as visual signals. Warning notice boards indicating the time of blasting and NOT TO TRESPASS are displayed at prominent places.
- Regular maintenance and testing of all mining equipment were carried out as per manufacturer's guidelines.

### **7.3.2 OBJECTIVE OF DISASTER MANAGEMENT PLAN**

The objective of disaster management plan is to identify mitigation measures to avoid hazards turning in to risk, the materials required for implementing the same, the personnel requirement and their roles and responsibilities, and the communication and operating procedures to be adopted in case of an emergency.

#### **Communication System**

The telephone numbers and addresses of mine sites in the vicinity, nearest fire station, police station, local hospital, electricity department, ambulance, and local public representatives and revenue officials shall be prepared and kept in custody of PP.

#### **Facilities**

The office shed will have provision of first aid centre to provide first aid in the event of an emergency. The office shed will also function as emergency control room. It will be provided with telephone and mobile phones, and a vehicle for emergency transport.

## **Personnel**

The PP is responsible for overall supervision of the disaster management plan. He will be assisted by supervisors, in implementing the emergency management plan and procedures.

## **Operating Procedures**

The operating procedures during emergencies are related communication to the immediate supervisor, who would relay the same to PP. The PP may assess the requirement of first aid, external assistance, transportation to nearby hospital contingent on the emergency. In the absence of mines manager, the senior most supervisor will be made responsible for disaster management.

### **7.4 CLUSTER MINE CLOSURE PLAN**

In the mine closure stage all necessary measures will be taken as per Act & Rules, there is no proposal for back filling, reclamation and rehabilitation in any of the proposals. The quarried pits after the end of life of mine will be properly fenced all around to prevent inherent entry of public and cattle and all the statutory requirements will be fulfilled. As already explained, in the post mining stage the rainwater harvested in the mined- out void shall be utilized for irrigation and domestic needs locally. The mine closure plan is provided in Figure 2.11.

### **7.5 SLOPE STABILITY PLAN**

The factors that affect slope stability of the mine are detailed below.

- Geological structure comprising dip, intervening shear zone formation, clay intrusion, joints / discontinuities, faults etc.,
- Lithology of formation
- slope geometry
- Ground water availability which may cause increased thrust on the faces

### **Site Specific Analysis**

The quarry lease area is plain terrain which is covered by topsoiled rock formation. The rock type noticed in the lease area is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian.

- Since the formation is of homogeneous rock type probability of slope failure is low and can be avoided if proper measures are adopted.
- There will be a 7.5m safety zone which will form a ridge which can also take care of the top section and as such no risk is envisaged on this front.

### **Mitigation Measures**

- Regular inspection of the mine faces to be carried out by pp for ensuring absence of any structural features like faults, joints, dyke, intrusive material in the rock strata which may affect the slope stability and cleared.
- No loose material or boulders is to be stacked on the mine top or pit benches.
- Height of the benches should be 5m.
- Haul road formation will be at 1 in 15 slope with adequate road width.
- There will be no ground water table intersection.
- No seepage is expected due to formation. Adequate drainage management system comprising peripheral garland drain, settling pond to regulate monsoon water will be created to prevent saturation of compact layers, apparent drainage over the bench slope to avert damages to quarry face and manage the water flow.

\*\*\*\*

## **CHAPTER 8**

### **PROJECT BENEFITS**

The project area is located on barren land, thereby causing no impact on the loss of agriculture or forest land. The project will create employment opportunities in the area. There will be no adverse effect of mining on the socioeconomic status of the people; rather, mining activities will improve their standard of living. The mining activity creates employment opportunities for the local people, and this definitely raises their economic status. Apart from the overall beneficial impact of the project on the local people of the region, it is felt necessary to augment facilities in the fields of education, health, and social awareness, including concern for the environment and ecosystem.

The mining activity at proposed Rough Stone Quarry of Thiru.R.Satish will create direct employment opportunity for 25 local people.

Based on the request letter received from Government High School, Sempedu, the PP has proposed CER amount of Rs. 5.0 Lakhs for various activities. The copy of the letter is enclosed below.

The list of activities proposed for CER is mentioned below

**Table 8.1 CER Activities**

| <b>S. No.</b>                                                                        | <b>PROPOSED CER ACTIVITIES</b>                                                             | <b>COST IN LAKHS.</b> |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------|
| 1                                                                                    | Plantations inside and outside the school premises                                         | 5.0                   |
| 2                                                                                    | Installation of R.O, Providing Eyelid, Fan, Table and Chairs. Repair School Infrastructure |                       |
| <b>Total</b>                                                                         |                                                                                            | <b>5.0</b>            |
| The above-mentioned CER activities will be spent for Government High School, Sempedu |                                                                                            |                       |

\*\*\*\*\*

## **CHAPTER 9**

### **ENVIRONMENTAL COST BENEFIT ANALYSIS**

As per EIA Notification dated 14th Sept., 2006, as amended from time to time, 'Environmental Cost Benefit Analysis' is applicable only if the same is recommended at the Scoping stage.

As per the ToR points issued by SEIAA-TN vide ToR Identification No. TO25B0108TN5803895N, Dated: 30.07.2025 for the proposed project, the 'Environmental Cost Benefit Analysis' is not prescribed.

\*\*\*\*\*

## **CHAPTER 10**

### **ENVIRONMENTAL MANAGEMENT PLAN**

#### **10.1 DESCRIPTION OF THE ADMINISTRATIVE ASPECTS OF ENSURING OF ENSURING THAT MITIGATIVE MEASURES ARE IMPLEMENTED AND THEIR EFFECTIVENESS MONITORED AFTER APPROVAL OF THE EIA.**

##### **10.1.1 OBJECTIVES**

The Environmental Management Plan is developed to ensure that a project is implemented in an environmentally sustainable manner, where all contractors and subcontractors, including consultants, understand the potential environmental risks arising from the project and take appropriate actions to minimize those risks. EMP also ensures that the project implementation is carried out in accordance with the planned design and by taking appropriate mitigation measures to reduce adverse environmental impacts during the project's life cycle. The impacts due to this mining project are detailed in Chapter 4 and Mitigation measures at the source level and an overall Management Plan at the site level are elaborated on in this chapter.

##### **10.1.2 BASIC OF EMP**

The Environmental Management Plan for the proposed project activities is formulated taking into considerations the following key environmental issues.

- ✚ Project activities
- ✚ Studies on Environmental Impact Assessment
- ✚ Air & water pollution control
- ✚ Working zone environment improvement
- ✚ Occupational hazards & safety
- ✚ Environmental monitoring facilities
- ✚ Environmental management costs

EMP covers all phases of the project considering the impacts with mitigation measures and monitoring programme. The plan outlines the measures that will be undertaken to ensure compliance with environmental legislations and to minimize adverse impact. Details of EMP measures for implementation in the mine are given below.

| <b>Table 10.1 Environmental Management Plan</b> |                                                                                                                                                                                                              |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environmental Parameter</b>                  | <b>Mitigation Measures</b>                                                                                                                                                                                   |
| Air                                             | Wet drilling to suppress the dust emission from drill machine                                                                                                                                                |
|                                                 | Regular water sprinkling on haulage road through fixed water sprinkler.                                                                                                                                      |
|                                                 | 1.5 KLD of water will be used for dust suppression.                                                                                                                                                          |
|                                                 | Avoiding blasting during high wind period, night times and temperature inversion periods.                                                                                                                    |
|                                                 | Regular grading of haul road to clear accumulation of loose material.                                                                                                                                        |
|                                                 | It will be ensured that vehicles are properly maintained to comply with exhaust emission requirements                                                                                                        |
|                                                 | Maintenance as per operator manual of the equipment and machinery in the mines to minimizing air pollution                                                                                                   |
|                                                 | Ambient Air Quality Monitoring carried out in the project area and in surrounding villages to access the impact due to the mining activities and the efficacy of the adopted air pollution control measures. |
|                                                 | Afforestation for control of dust.                                                                                                                                                                           |
| Surface water                                   | There is Palar River is located at a distance of 6.8 km in South direction of lease area & Kaundinya Nadi is located at a distance of 6.37 km in Northeast direction of lease area..                         |



|                                             |                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                             | <p>Surface runoff management structures like garland drain of required length which is connected to a settling pond will be constructed around the quarry to collect the rain water.</p> <p>Monthly or after rainfall, inspection will do to ensure performance of water management structures and systems.</p> <p>There is no discharge of any effluent into nearby water bodies.</p> |
| Ground Water                                | <p>The quarrying operation is proposed upto a depth of 45 m above ground level, Water table is found at a depth of 67 m, hence the project will not intersect the Ground water table during entire quarry period.</p>                                                                                                                                                                  |
| Water Consumption and Wastewater generation | <p>Water required for this project will be sourced from vendors.</p>                                                                                                                                                                                                                                                                                                                   |
|                                             | <p>Domestic wastewater generation of 1.0 KLD will be treated in septic tank with soak pit.</p>                                                                                                                                                                                                                                                                                         |
|                                             | <p>Conduct ground water and surface water monitoring for parameters specified by CPCB</p>                                                                                                                                                                                                                                                                                              |
| Noise                                       | <p>The workers employed are provided with protection equipment, earmuffs and ear- plugs for the protection from high noise level generated at the mine site wherever required.</p>                                                                                                                                                                                                     |
|                                             | <p>Noise levels are controlled by using optimum explosive charge, proper delay detonators and proper stemming to prevent blow out of holes.</p>                                                                                                                                                                                                                                        |
|                                             | <p>Development of thick greenbelt all along the safety Zone (7.5 m and 10m) of the project area to attenuate the noise and the same will be maintained.</p>                                                                                                                                                                                                                            |
|                                             | <p>Preventive maintenance of mining machinery and replacement of worn-out accessories to control noise generation.</p>                                                                                                                                                                                                                                                                 |
|                                             | <p>Annual ambient noise level monitoring is carried out in the project area and in surrounding villages to assess the impact due to the mining activities and the efficacy of the adopted noise control measures. Additional noise control measures will be adopted if required as per the observations during monitoring.</p>                                                         |
| Ground Vibration and Fly Rock Control       | <p>Controlled blasting using delay detonators will be carried out to maintain the PPV value well within the prescribed standards of DGMS.</p>                                                                                                                                                                                                                                          |
|                                             | <p>Drilling and blasting will be carried under the supervision of qualified persons.</p>                                                                                                                                                                                                                                                                                               |

|                        |                                                                                                                                                                                                                   |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | Will be Ensured that blast holes are adequately stemmed for the depth of the hole and stemmed with suitable angular material.                                                                                     |
|                        | To be Undertake noise or vibration monitoring.                                                                                                                                                                    |
| Land Environment       | At conceptual stage, the mining pits will be converted into Rain Water Harvesting pit. Remaining area will be converted into greenbelt area.                                                                      |
|                        | No external dumping i.e., outside the project area. The entire material will be sold.                                                                                                                             |
|                        | Garland drains with catch pits / settlement traps to be provided all around the project area to prevent run off affecting the surrounding lands.                                                                  |
|                        | The periphery of Project area will be planted with thick plantation to arrest the fugitive dust, which will also act as acoustic barrier.                                                                         |
|                        | Frequent Soil and ground water testing as per Environmental Monitoring Plan.                                                                                                                                      |
| Top Soil / Overburden  | There is no overburden anticipated during the quarrying operation.                                                                                                                                                |
| Biological Environment | During mining, thick plantation will be carried out on the mentioned safety zone areas.                                                                                                                           |
|                        | The main attributes that retard the survival of sapling is fugitive dust, this fugitive dust can be controlled by water sprinkling on the haul roads and installing a sprinkler unit near the newly planted area. |
|                        | Regular review on green belt development programme.                                                                                                                                                               |
|                        | Year wise greenbelt development plan mentioned in Chapter III will be monitored.                                                                                                                                  |

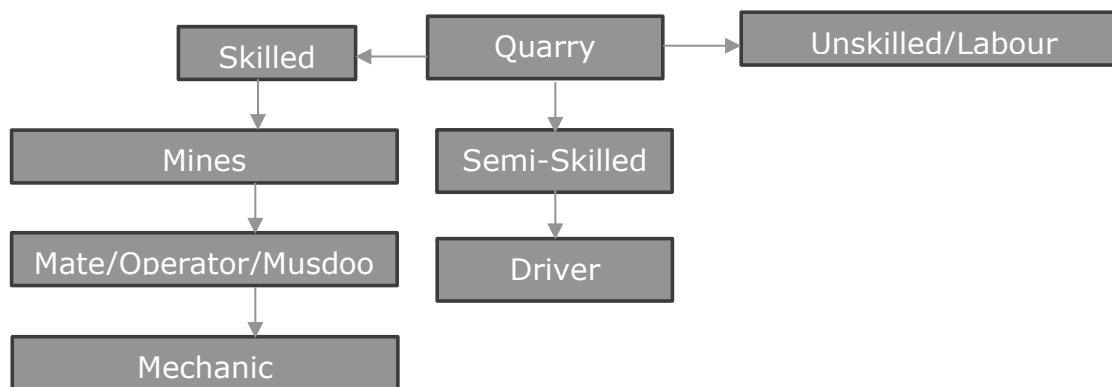
### **10.1.3 ADMINISTRATION AND TECHNICAL SETUP**

Since this is a very small quarry, the mines in-charge will take care of all environment related aspects. He will ensure effective implementation of environment management plan and to ensure compliance of environmental statutory guidelines through Mine Management Level. The action plan for monitoring consists of monitoring of following environmental components.

- ✚ Monitoring of the water/ waste water quality, air quality and solid waste generated.

- ✦ Analysis of the water and air samples collected through external laboratory.
- ✦ Implementation and monitoring of the pollution control and protective measures/ devices which shall include financial estimation, ordering, installation of air pollution control equipment, waste water treatment plant, etc.
- ✦ Co-ordination of the environment related activities within the project as well as with outside agencies.
- ✦ Collection of health statistics of the workers and population of the surrounding villages.
- ✦ Green belt development.
- ✦ Monitoring the progress of implementation of the environmental monitoring programme.
- ✦ Compliance to statutory provisions, norms of State Pollution Control Board, Ministry of Environment and Forests and the conditions of the environmental clearance as well as the consents to establish and consents to operate.

**Fig. 10.1 Organization Chart**



|              |              |                         |              |
|--------------|--------------|-------------------------|--------------|
| 1            | Skilled      | Mines Manager(II Class) | 1 No         |
|              |              | Foreman/Mine Mate       | 2 Nos        |
|              |              | Operator                | 6 Nos        |
|              |              | Mechanic                | 1 No         |
| 2            | Semi-Skilled | Diver                   | 3 Nos        |
| 3            | Un-skilled   | Labours                 | 12 Nos       |
| <b>Total</b> |              |                         | <b>25Nos</b> |

#### **10.1.4 ENVIRONMENTAL POLICY**

- The Project Proponent has stipulated a well-defined Environmental policy by which the lessee is committed to conducting business with a strong environmental conscience towards the community, customers, and employees. The Environment policy is given as below.
- The Environment policy of "Rough Stone Quarry of Thiru.R.Satish is that the rules and commitment are driven towards conservation of the environment.
- The lessee is committed to efficient use of natural resources based on the reduce, recycle and reuse method.
- The project is committed to the identification of possible impacts and will take the necessary management steps to mitigate the impacts.
- Environment performance will be regularly monitored and reported for continual improvement of our environment and health performance.

#### **10.1.5 OCCUPATIONAL SAFETY & HEALTH MANAGEMENT**

Occupational safety and health are very closely related to productivity and a good employer-employee relationship. The main factors affecting occupational health in quarries are fugitive dust and noise. Safety of employees during quarrying operations and maintenance of mining equipment will be taken care of as per the Mines Act 1952 and Rule 29 of the Mines Rules 1955. To avoid any adverse effect on the health of workers due to dust, noise, and vibration, sufficient measures have been provided. The health status of workers in the mine will be regularly monitored under an occupational surveillance programme. Under this programme, all employees are subjected to a detailed medical examination at the time of employment. Before the induction of employees, a pre-medical checkup is done. In addition, a periodical medical checkup will be done annually for all employees.

#### **10.1.6 COST OF ENVIRONMENTAL CONTROL MEASURES**

The effective implementation of EMP is not only reduce pollution load and comply the regulatory requirement but also increase productivity and improve marketability of product. The capital and recurring cost of EMP for the cluster of mines has been given in below table.

**Table 10.2 - Environmental Management Plan Budget**

| <b>Sl. No</b> | <b>Budget planned for</b>                          | <b>Capital Cost Amount (INR)</b> | <b>Recurring Cost/Annum Amount (INR)</b> |
|---------------|----------------------------------------------------|----------------------------------|------------------------------------------|
| 1             | Air Environment                                    | 7.36                             | 1.11                                     |
| 2             | Noise Environment                                  | 0.30                             | 0.02                                     |
| 3             | Waste Management                                   | 0.25                             | 0.12                                     |
| 4             | Mine Closure                                       | 0.53                             | 0.11                                     |
| 5             | Implementation of EC, Mining Plan & DGMS Condition | 0.70                             | 0.73                                     |
| <b>Total</b>  |                                                    | <b>9.14</b>                      | <b>2.09</b>                              |

#### **10.1.7 CONCLUSION**

Various aspects of mining activities were considered, and related impacts were evaluated. Considering all the possible ways to mitigate the Environmental concerns, an Environmental Management Plan was prepared, and INR 35.43 lakhs has been allocated for the same. The EMP is dynamic, flexible, and subjected to periodic review. For projects where major environmental impacts are associated, EMP will be under regular review. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP, and the project will have a positive impact on the study area.

## **CHAPTER 11**

### **SUMMARY AND CONCLUSION**

#### **11.1 OVER ALL JUSTIFICATION FOR IMPLEMENTATION OF THE PROJECT**

##### **INTRODUCTION**

Thiru.R.Sathish S/o. Ramoorthy, has obtained Precise Area Communication Letter from Assistant Director, Department of Geology and Mining, Vellore, to quarry out 2,42,660m<sup>3</sup> of Rough Stone from an extent of 2.02.40 Ha located in S.F. Nos. 208 (Part-8) at Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State.

As per EIA notification, 2006 and its subsequent amendments the proposed "Rough Stone Quarry of Thiru.R.Sathish S/o. S/o. Ramoorthy mines cluster falls under Schedule 1(a) of EIA Notification and its subsequent amendments the project comes under Category B1. The ToR for preparation of EIA/EMP report of the project was approved vide ToR Identification No. TO25B0108TN5803895N, Dated: 30.07.2025. This report has been prepared in line with the approved TOR for production of maximum excavation of 2,42,660m<sup>3</sup> of Rough Stone.

| <b>S.No.</b> | <b>Description</b>                          | <b>Status/Remarks</b>                   |
|--------------|---------------------------------------------|-----------------------------------------|
| 1.           | Sector                                      | 1(a), non-coal mining                   |
| 2.           | Category of the project                     | B1                                      |
| 3.           | Proposed mineral                            | Rough Stone                             |
| 4.           | Type of Lease                               | Fresh Project                           |
| 5.           | Extent of the lease                         | 2.02.40 Ha                              |
| 6.           | Proposed depth of Mining                    | 45 m AGL (5 Year )<br>45m AGL (10 Year) |
| 7.           | Method of mining                            | Opencast Mechanized                     |
| 8.           | Proposed lease period                       | 10 Years                                |
| 9.           | Proposed Environmental Clearance            | 10 Years                                |
| 10.          | Proposed production quantity for five years | 2,42,660m <sup>3</sup> of Rough Stone   |

The Lessee Thiru.R.Sathish S/o. S/o. Ramoorthy is an individual with sound experience in the identification, quarrying and marketing of Rough Stone. The proposed land is a Government Poramboke land and attached as **Annexure 6**.

#### **1.1.1 LOCATION**

This project site is located in Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State with Latitude 12°54'55.26"N to 12°55'01.28"N and Longitude 78°47'45.04"E to 78°47'48.74"E.. with Survey of India Topo Sheet No.57 L/13. To conduct the study, the proposed mine lease area (core zone) and an impact zone of 10 km radius (called buffer zone) around the proposed mine site were considered. The EIA report is based on three months baseline data (i.e. March 2025 to May 2025)

#### **11.1.2 GEOLOGY**

The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Charnockite is part of peninsular Gneisses, a high-grade metamorphic rock. The strike of the Charnockite formation is N70°W –S70°E with dipping towards SE70°.

#### **11.1.3 PROJECT DESCRIPTION**

This is a proposed Rough Stone quarry by Opencast Mechanized mining method with drilling and blasting. The quarrying is restricted up to a depth of 45m AGL. The geological reserves are estimated to be 6,83,760m<sup>3</sup> of Rough Stone. The mineable reserve calculated by deducting 10m safety distance and bench loss. The mineable reserves 2,42,660m<sup>3</sup> of Rough Stone which will be recovered at the rate of 100% recovery upto a depth of 45m Above ground level for the period of ten years.

- It is proposed to quarry out rough stone with 5m bench height, 5m width with 45° slope using conventional Open cast Mechanized method. The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, Loading and transportation of Rough Stone.

- There is no overburden anticipated during entire rough stone quarrying operation.

| S.No. | Type of Detail                  | Description                                                                                    |
|-------|---------------------------------|------------------------------------------------------------------------------------------------|
| 1     | Sector                          | 1(a) Non coal mining                                                                           |
| 2     | Fresh/Existing project          | Fresh Project                                                                                  |
| 3     | Category                        | B1                                                                                             |
| 4     | Nature of mineral               | Minor mineral                                                                                  |
| 5     | Production                      | Rough Stone: 2,42,660m <sup>3</sup>                                                            |
| 6     | Life                            | 10 years                                                                                       |
| 7     | Waste generation and management | There is no overburden anticipated during the quarrying operation. Hence, no waste generation. |
| 8     | Bench height and width          | Height and Width – 5m                                                                          |
| 9     | Ultimate pit depth              | 45 m AGL (5 Year)<br>45m AGL (10 Year)                                                         |
| 10    | End use                         | Rough Stone will be loaded into tippers to needy buyers for producing aggregates, M-sand.      |

#### **11.1.4 PROJECT REQUIREMENTS**

The requirements of the project is given below.7

| S.No. | Nature of requirement | Description                                                                                                                                                                                         |
|-------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Water requirement     | Total water requirement of 6.0 KLD which will be procured from the outside agencies. Out of 1.5 KLD drinking water requirements, Green belt development is 3.0 KLD and dust suppression is 1.5 KLD. |
| 2     | Power requirement     | No electricity is needed for mining operations, for office demands, it will be met from the state grid. Total Fuel requirement is 1,94,128 KL for entire life of the project.                       |
| 3     | Manpower requirement  | Permanent employees – 15, temporary employees – 10                                                                                                                                                  |



|   |                                      |                                                                                                                      |
|---|--------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 4 | Financial requirement                | The total project cost as per PFR will be INR 281.13 lakhs including Operational cost, Fixed Asset cost and EMP cost |
| 5 | Funds for Socio economic development | INR 5.0 Lakhs is allocated. In addition, any demand raised by people during public hearing will also be met.         |

#### **11.1.5 DESCRIPTION OF LEASE AREA**

The features in the study area is given below.

| Table 11.1 Description of the lease area |                                                                                                                                                 |                                                                                                                                                                                          |          |           |  |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|--|
| S.No.                                    | Areas                                                                                                                                           | Distance from project site                                                                                                                                                               |          |           |  |
| 1                                        | Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value | Nil within 15km radius                                                                                                                                                                   |          |           |  |
| 2                                        | Areas which are important or sensitive for ecological reasons                                                                                   |                                                                                                                                                                                          |          |           |  |
| A                                        | Wetlands, water courses or other water bodies,                                                                                                  | Water bodies                                                                                                                                                                             | Distance | Direction |  |
|                                          |                                                                                                                                                 | Odai                                                                                                                                                                                     | 599 m    | NE        |  |
|                                          |                                                                                                                                                 | Cheruvanki Eri                                                                                                                                                                           | 5.65 km  | NE        |  |
|                                          |                                                                                                                                                 | Palar River                                                                                                                                                                              | 6.8 km   | S         |  |
|                                          |                                                                                                                                                 | Kavundinya Nadi                                                                                                                                                                          | 6.37 km  | NE        |  |
|                                          |                                                                                                                                                 | Godd Ar                                                                                                                                                                                  | 7.3 km   | NE        |  |
|                                          |                                                                                                                                                 | Stream                                                                                                                                                                                   | 9.89 km  | W         |  |
|                                          |                                                                                                                                                 | Kottaramadugu Small Dam                                                                                                                                                                  | 9.8 km   | N         |  |
| B                                        | Coastal zone, biospheres,                                                                                                                       | Nil within 10km radius                                                                                                                                                                   |          |           |  |
| C                                        | Mountains, forests                                                                                                                              | Pallalakuppam Extn R.F1- 1.26 km(NW),<br>Pallalakuppam Extn R.F2- 1.89 km(S),<br>Gundlapalli R.F – 4.28 km (NW),<br>Pallalakuppam R.F – 5.53 km (SW) &<br>Sanankuppam R.F – 7.56 km (SE) |          |           |  |

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|    |                                                                                                                                                                                                                         |                                                        |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| 3  | Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, overwintering, migration                                                                            | Nil within 15km radius                                 |
| 4  | Inland, coastal, marine or underground waters                                                                                                                                                                           | Nil within 15km radius                                 |
| 5  | State, National boundaries                                                                                                                                                                                              | Nil within 15km radius                                 |
| 6  | Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas                                                                                                                        | Nil within 15km radius                                 |
| 7  | Defense installations                                                                                                                                                                                                   | Nil within 15km radius                                 |
| 8  | Densely populated or built-up area                                                                                                                                                                                      | Pangarishikuppam – 1.8 km - SE                         |
| 9  | Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)                                                                                                            | Pangarishikuppam – 1.8 km - SE                         |
| 10 | Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)                                                           | Nil                                                    |
| 11 | Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)                                                                                         | Nil                                                    |
| 12 | Areas susceptible to natural hazard which could cause the project to present environmental problems (earth quakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions) similar effects | No. The area is not prone to earthquakes, floods, etc. |

The baseline data collection for meteorology, air, water, noise and soil environments have been carried out during March 2025 to May 2025.

Air, water, noise and soil samples are collected and analyzed through NABL accredited lab.

## **11.2 EXPLANATION OF HOW ADVERSE EFFECTS HAVE BEEN MITIGATED**

### **11.2.1 AIR ENVIRONMENT**

The air monitoring have been carried out in 7 locations and the results are given below.

| <b>Table 11.2 : Details Of Ambient Air Quality Monitoring Locations</b> |                     |                       |                                 |                                |
|-------------------------------------------------------------------------|---------------------|-----------------------|---------------------------------|--------------------------------|
| <b>S. No.</b>                                                           | <b>Station Code</b> | <b>Locations</b>      | <b>Distance &amp; Direction</b> | <b>Coordinates</b>             |
| 1                                                                       | AAQ 1               | Project site          | Core Zone                       | 12°54'58.27"N<br>78°47'46.90"E |
| 2                                                                       | AAQ 2               | Paravakkal            | 1.13 km, NW                     | 12°55'24.57"N<br>78°47'22.62"E |
| 3                                                                       | AAQ 3               | Mel Alangkuppam -West | 2.64 km, SW                     | 12°54'44.62"N<br>78°46'35.64"E |
| 4                                                                       | AAQ 4               | Chettikuppam          | 3.75 km, E                      | 12°55'12.99"N<br>78°50'11.28"E |
| 5                                                                       | AAQ 5               | Gudiyatham            | 7.0 Km, NE                      | 12°56'17.75"N<br>78°51'41.28"E |
| 6                                                                       | AAQ6                | Pogalur               | 1.65 Km, NE                     | 12°54'6.90"N<br>78°47'32.93"E  |
| 7                                                                       | AAQ7                | Morsapalli            | 2.97 Km, E                      | 12°56'45.52"N<br>78°47'40.19"E |

All the values of pollutant concentrations were found to be within the NAAQs Standards.

| <b>Station ID</b>                            | <b>Min</b> | <b>Max</b> | <b>Avg.</b> |
|----------------------------------------------|------------|------------|-------------|
| <b>Particulate matter PM-2.5 (µg/m³)</b>     |            |            |             |
| AAQ-1                                        | 21.6       | 31.5       | 26.55       |
| AAQ-2                                        | 22.9       | 27         | 24.95       |
| AAQ-3                                        | 21.1       | 31         | 26.05       |
| AAQ-4                                        | 22.8       | 28.6       | 25.7        |
| AAQ-5                                        | 21.5       | 27.5       | 24.5        |
| AAQ-6                                        | 21.4       | 26.1       | 23.75       |
| AAQ-7                                        | 21.1       | 25.2       | 23.15       |
| <b>CPCB NAAQS 2009 for PM 2.5 - 60 µg/m³</b> |            |            |             |
| <b>Particulate matter PM-10 (µg/m³)</b>      |            |            |             |
| AAQ-1                                        | 48.4       | 67.9       | 58.15       |
| AAQ-2                                        | 48.6       | 62.3       | 55.45       |
| AAQ-3                                        | 42.7       | 56.5       | 49.6        |
| AAQ-4                                        | 47.3       | 61.4       | 54.35       |
| AAQ-5                                        | 45.1       | 55.9       | 50.5        |

|                                                                   |      |      |       |
|-------------------------------------------------------------------|------|------|-------|
| AAQ-6                                                             | 47.2 | 58.2 | 52.7  |
| AAQ-7                                                             | 44.7 | 57.1 | 50.9  |
| <b>CPCB NAAQS 2009 for PM<sub>10</sub> - 100 µg/m<sup>3</sup></b> |      |      |       |
| <b>Sulphur Di-oxide as SO<sub>2</sub> (µg/m<sup>3</sup>)</b>      |      |      |       |
| AAQ-1                                                             | 3.9  | 6.2  | 5.05  |
| AAQ-2                                                             | 3.6  | 5.8  | 4.7   |
| AAQ-3                                                             | 4.6  | 6    | 5.3   |
| AAQ-4                                                             | 4.1  | 5.8  | 4.95  |
| AAQ-5                                                             | 4.1  | 5.9  | 5     |
| AAQ-6                                                             | 3.8  | 6    | 4.9   |
| AAQ-7                                                             | 4.6  | 6.2  | 5.4   |
| <b>CPCB NAAQS 2009 for SO<sub>2</sub> – 80 µg/m<sup>3</sup></b>   |      |      |       |
| <b>Oxide of Nitrogen as NO<sub>2</sub> (µg/m<sup>3</sup>)</b>     |      |      |       |
| AAQ-1                                                             | 7.4  | 12.3 | 9.85  |
| AAQ-2                                                             | 7.1  | 10.2 | 8.65  |
| AAQ-3                                                             | 8.5  | 10.9 | 9.7   |
| AAQ-4                                                             | 7.5  | 13.3 | 10.4  |
| AAQ-5                                                             | 8.2  | 12.1 | 10.15 |
| AAQ-6                                                             | 7.7  | 13.6 | 10.65 |
| AAQ-7                                                             | 7.6  | 10.9 | 9.25  |
| <b>CPCB NAAQS 2009 for NO<sub>2</sub> – 80 µg/m<sup>3</sup></b>   |      |      |       |

### **11.2.2 WATER ENVIRONMENT**

| <b>Table 11.3 Results of Ground Water sampling Analysis in 7 locations</b> |           |           |           |           |           |
|----------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|
|                                                                            | W1        | W2        | W3        | W4        | W5        |
| Odour                                                                      | AGREEABLE | AGREEABLE | Agreeable | AGREEABLE | AGREEABLE |
| Turbidity                                                                  | <1        | <1        | <1.0      | <1        | <1        |
| pH at 25 °C                                                                | 7.56      | 7.39      | 8.01      | 7.51      | 7.69      |
| Electrical Conductivity                                                    | 1356      | 873.5     | 1087      | 1837      | 530.1     |
| Total Dissolved Solids                                                     | 820       | 530       | 652       | 1105      | 320       |
| Total hardness as CaCO <sub>3</sub>                                        | 480       | 329       | 341       | 496       | 275       |
| Calcium as Ca                                                              | 118       | 87.6      | 73.2      | 105       | 69.6      |
| Magnesium as Mg                                                            | 44.6      | 26.4      | 37.9      | 56.2      | 24.2      |
| Calcium as CaCO <sub>3</sub>                                               | 294       | 219       | 183       | 262       | 174       |
| Magnesium as CaCO <sub>3</sub>                                             | 186       | 110       | 158       | 234       | 101       |
| Total alkalinity as CaCO <sub>3</sub>                                      | 370       | 275       | 249       | 356       | 130       |

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|                               |                  |                  |                  |                  |                  |
|-------------------------------|------------------|------------------|------------------|------------------|------------------|
| Chloride as Cl-               | 234              | 174.0            | 234              | 324              | 92.2             |
| Free Residual chlorine as Cl- | BDL (D.L - 0.2)  | BDL (D.L - 0.2)  | BDL (D.L - 0.2)  | BDL (D.L - 0.2)  | BDL (D.L - 0.2)  |
| Sulphates as SO42-            | 186.0            | 62.5             | 131              | 276              | 45.3             |
| Iron as Fe                    | 0.07             | BDL(DL-0.01)     | BDL(DL-0.01)     | 0.05             | BDL(DL-0.01)     |
| Nitrate as NO3                | 3.26             | 2.64             | 3.73             | 5.69             | 2.31             |
| Fluoride as F                 | 0.47             | 0.21             | 0.46             | 0.56             | 0.25             |
| Manganese as Mn               | BDL (D.L - 0.05) | BDL (D.L - 0.05) | BDL (D.L - 0.05) | BDL (D.L - 0.05) | BDL (D.L - 0.05) |
| COD                           | -                | -                | -                | -                | -                |
| BOD                           | -                | -                | -                | -                | -                |
| TSS                           | -                | -                | -                | -                | -                |

All the values were found to be within permissible limits

### **11.2.3 NOISE ENVIRONMENT**

Noise levels were measured in 5 locations and the results are given below.

| <b>Table 11.4 Noise monitoring results</b> |                        |                       |                         |                                      |                                        |
|--------------------------------------------|------------------------|-----------------------|-------------------------|--------------------------------------|----------------------------------------|
| <b>S. No</b>                               | <b>Location</b>        | <b>Day equivalent</b> | <b>Night equivalent</b> | <b>Day equivalent limits by CPCB</b> | <b>Night equivalent limits by CPCB</b> |
| 1                                          | Project site           | 49.7                  | 41.1                    | 75                                   | 70                                     |
| 2                                          | Paravakkal             | 45.5                  | 39.5                    |                                      |                                        |
| 3                                          | Mel Alangkuppam - West | 42.5                  | 38.0                    |                                      |                                        |
| 4                                          | Chettikuppam           | 44.3                  | 39.3                    |                                      |                                        |
| 5                                          | Gudiyatham             | 45.4                  | 38.6                    |                                      |                                        |

### **11.2.4 SOIL ENVIRONMENT**

Soil samples are collected from 6 locations and the results are given below.

| <b>Table 11.5 Results of Soil Sample Analysis</b> |                         |             |           |           |           |           |           |
|---------------------------------------------------|-------------------------|-------------|-----------|-----------|-----------|-----------|-----------|
| <b>S.No</b>                                       | <b>Parameter</b>        | <b>Unit</b> | <b>S1</b> | <b>S2</b> | <b>S3</b> | <b>S4</b> | <b>S5</b> |
| 1                                                 | pH at 25 °C             | -           | 6.98      | 7.89      | 8.24      | 7.78      | 8.12      |
| 2                                                 | Electrical Conductivity | µmhos/cm    | 52.69     | 286.7     | 136.2     | 155.4     | 122.1     |
| 3                                                 | Dry matter              | %           | 98.45     | 98.73     | 96.83     | 97.12     | 95.55     |

|    | content                                  |                 |                   |                   |                   |                   |                   |
|----|------------------------------------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 4  | Water Content                            | %               | 1.55              | 1.27              | 3.17              | 2.73              | 4.34              |
| 5  | Organic Matter                           | %               | 0.48              | 0.54              | 0.39              | 0.72              | 0.47              |
| 6  | Soil texture                             | -               | SILT<br>LOAM      | SILT<br>LOAM      | LOAM              | LOAM              | SILT<br>LOAM      |
| 7  | Grain Size<br>Distribution               | %               | 31.02             | 27.15             | 44.39             | 40.64             | 24.02             |
|    | i. Sand                                  |                 |                   |                   |                   |                   |                   |
| 8  | ii. Silt                                 | %               |                   |                   |                   |                   |                   |
| 9  | iii. Clay                                | %               | 50.96             | 61.58             | 45.47             | 47.63             | 58.36             |
| 10 | Phosphorous as P                         | mg/kg           | 18.02             | 11.27             | 10.14             | 11.73             | 17.62             |
| 11 | Sodium as Na                             | mg/kg           | 1.06              | 1.52              | 1.34              | 2.19              | 1.22              |
| 12 | Potassium as K                           | mg/kg           | 654               | 682               | 810               | 645               | 836               |
| 13 | Nitrogen and<br>Nitrogenous<br>Compounds | mg/kg           | 832               | 786               | 914               | 986               | 1020              |
| 14 | Total Soluble<br>Sulphate                | %               | 245               | 345               | 265               | 242               | 310               |
| 15 | Porosity                                 | %               | BDL(D.L.O.<br>02) | BDL(D.L.O.<br>02) | BDL(D.L.O.<br>02) | BDL(D.L.O.<br>02) | BDL(D.L.O.<br>02) |
| 16 | Water Holding<br>Capacity                | Inches/f<br>oot | 40                | 45                | 48                | 42                | 39                |

### **11.2.5 BIOLOGICAL ENVIRONMENT**

#### **FLORA**

For measuring the extent of flora present in the study area, the area is divided in to 4 quadrants. The flora population in each quadrant is summed up for the total population in the study area. Field survey is done. Erukku, Aavarai and Nayuruvi are found in lease area. In the buffer zone, common trees like Neem, papaya, mango, teak, etc and shrubs like Avarai, Aloe vera, etc, climbers like Kovai,jasmine etc are found.

#### **FAUNA**

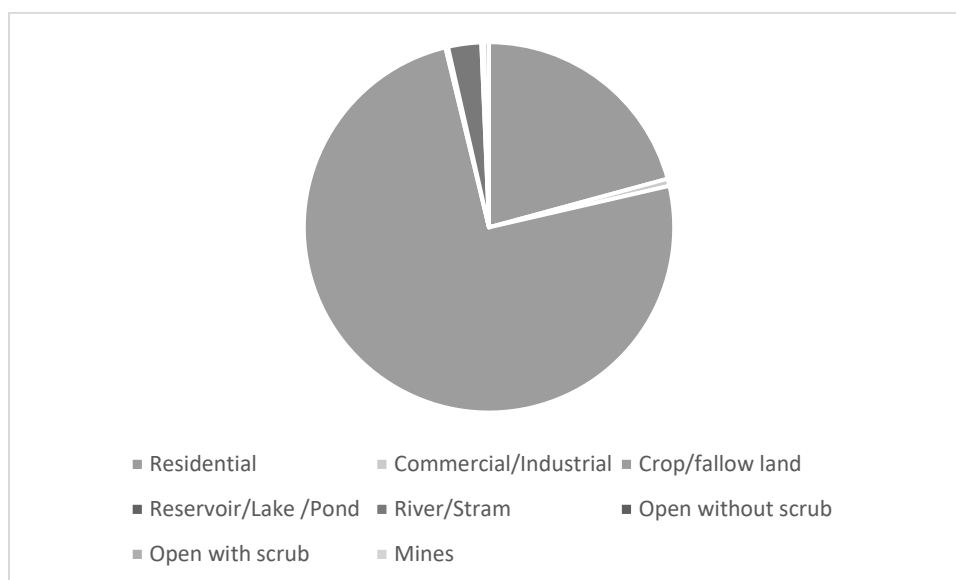
In the study area, commonly found animals like dogs, cats, bush rat, cows, birds like crow, Myna, Sparrow, etc were found.

### **11.2.6 LAND USE**

The land use land cover data is found using the LANDSAT – 9 satellite imagery. The number of bands used are 11. The land use pattern is given below:

#### **Major Land Use Units of the Study Area in Percentage**

| S. No        | 1st Level Classification | Area in (sq.km) | Percentage (%) | 2nd Level Classification | Area in (sq.km) | Percentage (%) |
|--------------|--------------------------|-----------------|----------------|--------------------------|-----------------|----------------|
| 1            | Built-up or habitation   | 43.23           | 13.51          | Residential              | 41.96           | 13.11          |
|              |                          |                 |                | Commercial/Industrial    | 1.27            | 0.40           |
| 2            | Agriculture              | 151.14          | 47.23          | Crop/fallow land         | 151.14          | 47.23          |
| 3            | Water bodies             | 6.3             | 1.97           | Reservoir/Lake /Pond     | 0.45            | 0.14           |
|              |                          |                 |                | River/Stram              | 5.85            | 1.83           |
| 4            | Waste Lanvd              | 0.46            | 0.14           | Open without scrub       | 0.44            | 0.14           |
|              |                          |                 |                | Open with scrub          | 0.02            | 0.01           |
| 5            | Mines                    | 0.88            | 0.28           | Mines                    | 0.88            | 0.28           |
| 6            | Forest                   | 117.99          | 36.87          | Forest                   | 117.99          | 36.87          |
| <b>Total</b> |                          | <b>320</b>      | <b>100</b>     |                          | <b>320</b>      | <b>100</b>     |



### **11.2.7 SOCIO ECONOMIC ENVIRONMENT**

The socio economic environment of the study area is studied by conducting primary sites through site visits and conducting sample surveys. The secondary data obtained from Census 2011 is also used.

The following data area collected from secondary data.

- Demographic pattern.
- Health pattern
- Occupational structure.
- Amenities available.

The expert visited 6 villages in the study area namely Paravakkal, Mel Alangkuppam -West, Chettikuppam, Gudiyatham, Pogalur and Morsapalli Villages. Discussions were held with the people from nearby locality to study the social and economic conditions prevailing in the area. The expert also visited nearby hospitals, primary health centres and Paravakkal. The following observations were made.

Primary schools are available in many villages. For hospital facilities, people in the locality have to go to hospital in Paravakkal which is about 630m (N) from the lease area. Major schools with higher secondary and senior secondary schools are located in Paravakkal. The major Paravakkal Union located in the area is Vellore. Facilities like petrol pump stations, ATM facility are available in Paravakkal.

### **11.2.8 HYDROGEOLOGY OF THE LEASE AREA**

There is Palar River is located at a distance of 6.8 km in South direction of lease area & Kaundinya Nadi is located at a distance of 6.37 km in Northeast direction of lease area.

There are many tanks located in the study area, which are mostly dry throughout the year. These tanks get water only during monsoons. The factors may be monsoon failure, insufficient rainfall, poor rain water management and water consuming patterns.



### **11.2.9 GROUND WATER STUDY**

For Ground water study, satellite imagery is used. Water levels from monitoring levels are collected through imaging. The pre-monsoon and post-monsoon data are collected and the results are analyzed.

During field visit, it is observed that water is available in wells only after monsoon. The yield is obtained at deep levels only.

As far as the mining lease area is considered, the area is rocky and no major seepage is envisaged. The production quantity is very less and the depth proposed is 45 m AGL. Hence, there will not be any major impact due to mining on water levels or ground water levels in the area.

### **ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Environmental impacts on the following environments are identified.

- Land environment
- Water environment
- Vegetation
- Fauna
- Air environment
- Noise environment
- Socio-economic impacts

### **11.2.10 LAND ENVIRONMENT: IMPACT AND MITIGATION MEASURES**

The major impact due to this project on land environment is the change in land use. Since this quarry is a small one and the production is less, mining activity will be carried out upto 45 m AGL. Other than quarrying of minerals, no other change will be done since there is no dumping. To prevent soil erosion during monsoon season, garland drain will be constructed with silt traps. At the mine closure stage, 1.47.60 Ha of lease area will be left as rain water harvesting pond. 0.52.80 Ha will be developed with green belt. For this, plants like Pongamia pinnata, Syzigium cumini, Albizia lebbeck, Thespesia populnea, Bauhinia racemose, Cassia siamea,

Azadirachta indica are selected. A total of 528 trees are planned to be planted. Spacing will be 3m x 3m.

#### **11.2.11 WATER ENVIRONMENT: IMPACT AND MITIGATION MEASURES**

There is no water body present inside the lease area. The entire water requirement for the project is 6.0 KLD which will be sourced from outside agencies. Negligible sewage will be generated, for which a septic tank with soak pit will be set up.

During monsoon season, the excess rain water, if any, will be led through garland drain of 0.6m width and 0.3 m depth to the collection pond with silt traps.

Since the mining operation will be limited upto depth of 45m (AGL), there will not be any seepage. However, the rain water percolation and collection of water from seepage shall be less than 300lpm and it shall be pumped out periodically by a stand by diesel powered Centrifugal pump motivated with 7.5H.P.Motor. The quality of water is expected to be potable. Hence, water stored in the quarry pit will be pumped into the adjacent agricultural fields. Further the water can also be used for plantation purposes

The major water bodies found in the buffer zone are.

| Water bodies            | Distance | Direction |
|-------------------------|----------|-----------|
| Odai                    | 599 m    | NE        |
| Cheruvanki Eri          | 5.65 km  | NE        |
| Palar River             | 6.8 km   | S         |
| Kavundinya Nadi         | 6.37 km  | NE        |
| Godd Ar                 | 7.3 km   | NE        |
| Stream                  | 9.89 km  | W         |
| Kottaramadugu Small Dam | 9.8 km   | N         |

Since these water bodies are located outside the lease area and there is no discharge of effluent or any untreated water from the mines will be made in to these water bodies, there is no major impact. For the canal, adequate safety distance is left. The proponent will restrict the mining operation only within the

lease and no other work will be carried out near the canal or any area outside the lease.

It is planned to carryout appropriate rainwater harvesting schemes and artificial recharge schemes in the area.

- Rain water falling in the quarry will be collected efficiently through garland drains.
- Water thus collected will be passed through collection tank with silt traps. This water can be used by the proponent for water sprinkling and for green belt purposes.
- Excess water after desiltation will be provided to downstream users, if any

#### **11.2.12 BIOLOGICAL ENVIRONMENT: IMPACT AND MITIGATION MEASURES**

##### **Impacts**

- Fauna is affected due to noise and vibration.
- Dust generation due to mining activities
- Change in land use of the lease area
- Accidental falling of animals

##### **Mitigation measures**

- Sirens will be blown before blasting in the mines. To reduce noise levels, plantation will be done. Blasting will be carried out only in the allotted time.
- To reduce dust generation, mist sprayers will be used. During transportation, the material will be covered with tarpaulin. Water sprinkling will be done to reduce generation of pollutants
- After the mine closure stage, the mine pit will be left as rain water collecting tank, which can attract bird population in the nearby areas.
- To prevent entry of animals, the mining area will be properly fenced.

### **11.2.13 AIR ENVIRONMENT: IMPACT AND MITIGATION MEASURES**

The major air pollutants due to mining operations are fugitive emissions like PM<sub>10</sub>, PM<sub>2.5</sub>. Other than these pollutants, gaseous emissions of sulfur dioxide (SO<sub>2</sub>) and oxides of nitrogen (NO<sub>x</sub>) due to excavation/loading equipment and vehicles plying on haul roads are the cause of air pollution in the project area.

The major impacts are Dust emission due to drilling, blasting and transportation. The major mitigation measures include Using Wet drilling methods, Allowing drilling only with PPE, Carrying out blasting only during specified times, Avoiding blasting during unfavourable weather conditions, Using explosives of good quality, Using mist sprayers Regular wetting of transport, Covering the materials carried in tippers with tarpaulin, Proper maintenance of vehicles used for transportation, Conducting regular emission tests for vehicles used for transport Development of greenbelt is proposed in the safety zone 7.5m barriers in the lease area.

The anticipated data is calculated using AERMOD software and the projected values are found to be within limits.

### **11.2.14 NOISE ENVIRONMENT: IMPACT AND MITIGATION MEASURES**

#### **Impacts**

- ✚ Noise generation in mining is due to operation like drilling, blasting and transportation of minerals within and outside the lease area.
- ✚ As per DGMS (Directorate General of Mines Safety) and OSHA (Occupational Safety and Health Administration) limits, the acceptable noise level is 85 dB(A) for an exposure period of 8 hours.
- ✚ Exposure to loud noise can also cause high blood pressure, heart disease, sleep disturbances, and stress. Noise pollution also impacts the health and well-being of wildlife.
- ✚ Noise exceeding prescribed limits may cause impairment like abnormal loudness perception, tinnitus, which causes a persistent high-pitched ringing in the ears, paracusis or distorted hearing

### **Mitigation measures**

- ✚ As the distance between the source and receptor increases, the noise level also decreases. Hence, there will be a natural attenuation
- ✚ The proposed has planned to develop green belt in the periphery of the lease area, which diminishes sound volume by dampening them.
- ✚ All the equipment/machinery/trucks involved will be properly maintained to control noise generation
- ✚ Conducting regular health checkups for employees involved
- ✚ Employees will be made to work on shifts to reduce their exposure time
- ✚ Providing earplugs to all employees

By adopting these measures, the noise levels will be maintained well within MoEF & CC limits since the baseline value is low.

### **11.2.15 VIBRATION: IMPACT AND MITIGATION MEASURES**

#### **Impacts**

- ✚ Though vibration will be only felt by the people working inside the lease area, it is usually undesired.
- ✚ Vibration may also cause flyrocks
- ✚ It may frighten the birds and small insects in the lease area. However, it will be felt only for a short period

#### **Mitigation measures**

- ✚ Carrying out blasting on limited scale, only from 12:00 PM to 2:00 PM
- ✚ Control of fly rock and vibration by maintaining peak particle velocity with in standard as prescribed by the DGMS and MOEF & CC.
- ✚ Shallow depths jackhammer drilling and blasting is proposed to be carried out with minimum use of explosive
- ✚ Supervising blasting by competent and statutory foreman/ mines manager

### **11.2.16 SOCIO ECONOMIC ENVIRONMENT**

#### **Impact and Mitigation measures**

No land is acquired from anyone. No rehabilitation is needed. Hence, there is no negative impact. The proponent has planned to spend INR 5,00,000 for CER activities. This amount will be subjected to change after public hearing.

### **11.2.17 OCCUPATIONAL HEALTH**

#### **Impacts**

Dust generation due to drilling and blasting, Noise generation due to drilling and blasting, unexpected accidents. Continuous exposure to dust causes Pneumonia, Tuberculosis, Rhematic arthritis and Segmental Vibration, Short term impact will be lack of sleep, high blood pressure and heart ailments. Long term exposure may lead to partial or permanent deafness, Risks include fly rocks, cracks or fissures due to improper mining methods

#### **Mitigation measures**

- Using dust suppression measures like water spraying on roads to reduce rise of air pollutants
- Providing green belt for air pollutant and noise attenuation
- Ensuring slope stability
- Employing only trained professionals for blasting
- Conducting Pre-Medical Examination for employees before inducting
- Conducting periodical Medical Examination once in 6 months.
- Making all first aid kits available in mines office
- Keeping fire extinguisher in place
- Educating the employees about how to handle unexpected happenings
- Posting information containing emergency contact numbers in mines office
- By adopting all these measures, the safety of the employees working in the quarry will be ensured.

### **11.2.18 ENVIRONMENTAL MONITORING PROGRAMME**

Monitoring is done to measure the efficiency of control measures implemented. Regular monitoring of various environmental parameters like air, water, noise and soil environments is needed to assess the status of environment during the project operation. A schedule is framed with timeline to monitor various parameters during the operation of the project. To evaluate the effectiveness of environmental management programme, regular monitoring of the important environmental parameters will be taken up. Air monitoring will be carried out once in 3 months, water sample will be collected once in a season, noise will be monitored once in 3 months, soil samples will be analyzed once per season. For EMP, a budget of INR 33.63 lakhs is allocated.

### **11.2.19 PROJECT BENEFITS**

#### **Financial benefits**

- This project will contribute financially through payment of taxes like royalty, GST, etc
- The project will also contribute via CSR.
- The demands of people during public hearing will also be considered by the project proponent

#### **Social benefits**

- This project provides employment to 25 people directly. Local people will be hired for unskilled labour.
- Through CSR, nearby schools, hospitals will be benefitted.
- For CSR, INR 5,00,000 is allocated.
- Based on the demand of the people during public hearing, further funds will be allocated, if necessary.

Various aspects of mining activities were considered and related impacts were evaluated. Considering all the possible ways to mitigate the environmental concerns

Environmental Management Plan was prepared and 33.63 lakhs for the ten years has been allocated as EMP cost. The EMP is dynamic, flexible and subjected to periodic review. For project where the major environmental impacts are associated, EMP will be under regular review. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will bring the positive impact in the study area.

\*\*\*\*\*



## **CHAPTER 12**

### **DISCLOSURE OF CONSULTANTS**

*Global Mining Solutions is a NABET Accredited EIA consultant as per NABET certificate NABET/EIA/23-26/SA 0241. The registered office of Global Mining Solutions is at Plot No.6, S.F.No.13/2 A2, VS City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamilnadu-636455.*

*Declaration by Experts contributing to the proposed Rough Stone Quarry over an extent 2.02.40 Ha, while total cluster area of 8.29.90 Ha at. TO25B0108TN5803895N, Dated: 30.07.2025*

*I, hereby, certify that I was a part of the EIA team that developed the above EIA.*

*EIA Coordinator Name: M. Manikandan*



*Signature & Date*

*Period of involvement: March 2025 to May 2025.*

**Contact information:**

**M/s Global Mining Solutions**

**Plot No.6, SF No. 13/2, A2, VS City, RC Chettypatty,**

**Kottamettupatty, Omalur,**

**Salem, Tamil Nadu – 636 455**

**DRAFT EIA REPORT FOR PROPOSED ROUGH STONE QUARRY OF THIRU.R.SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

| <b>S. No.</b> | <b>Functional areas</b> | <b>Name of the expert/s</b> | <b>Involvement (period and task**)</b>                                                                                                                                                                 | <b>Signature and Date</b> |
|---------------|-------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 1             | AP                      | Dhanalakshmi Ramanathan     | Assessment of existing air quality, Impact of the project on ambient air and suggested mitigation measures for air pollution.<br><br><u>Period: March 2025 to May 2025.</u>                            | R. Dhanalakshmi           |
| 2             | WP                      | Abirami Kaliaperumal        | Assessment of existing water quality, impact of the project on surface and ground water quality, suggested mitigation measures for minimizing the impact.<br><br><u>Period: March 2025 to May 2025</u> | K. Abirami                |
| 3             | SHW                     | Ramadoss N                  | Assessment of waste generated from the project, suggested waste management practices.<br><br><u>Period: March 2025 to May 2025</u>                                                                     | N. Ramadoss               |
| 4             | SE                      | Sarasvathy K                | Baseline SE studies. Data compilation and assessment. Impact of the project on SE status of the area. Formulation of CER plan.<br><br><u>Period: March 2025 to May 2025</u>                            | K. Sarasvathy             |
| 5             | EB                      | Saravanan S                 | Baseline data collection of related to ecology of the area.<br><br><u>Period: March 2025 to May 2025</u>                                                                                               | S. Saravanan              |
| 6             | HG                      | Ravinthiran N               | Hydrogeological feature of the area. Ground water depth and impact of project on ground water of the area.<br><br><u>Period: March 2025 to May</u>                                                     | N. Ravinthiran            |

**DRAFT EIA REPORT FOR PROPOSED ROUGH STONE QUARRY OF THIRU.R.SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|    |     |                         |                                                                                                                                                                                                              |               |
|----|-----|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
|    |     |                         | <u>2025</u>                                                                                                                                                                                                  |               |
| 7  | AQ  | Srilatha Thiruveedhula  | Air quality modeling utilizing the area source model. Predication of the ground level concentration of the dust. Suggesting suitable mitigation measures.<br><u>Period: March 2025 to May 2025</u>           | T Srilatha    |
| 8  | NV  | Dhanalakshmi Ramanathan | Ambient noise study of the area. Incremental noise generation due to quarry operation and impact of the noise due to the project.<br><u>Period: March 2025 to May 2025</u>                                   | R. Dhanu      |
| 9  | LU  | Srilatha Thiruveedhula  | Preparation of land use map based on satellite imagery. Land use classification and analysis. Impact prediction of the project on the surrounding land environment.<br><u>Period: March 2025 to May 2025</u> | T Srilatha    |
| 10 | RH  | S.V. Prashant           | Identification of the Risk related to the mining activities. Preparation of emergency disaster management plan. Plan for supply of safety equipment for the worker.<br><u>Period: March 2024 to May 2024</u> | S. Prashanth  |
| 11 | SC  | Shisupal Sing           | Soil monitoring, secondary data collection on soil type, soil management practices, utilization of topsoil.<br><u>Period: March 2025 to May 2025</u>                                                         | Shisupal Sing |
| 12 | GEO | Valliappan Meyyappan    | Geological map, stability of quarry and dump, management plan for mine stability, after use of mining                                                                                                        | Valliappan    |

**DRAFT EIA REPORT FOR PROPOSED ROUGH STONE QUARRY OF THIRU.R.SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

---

|  |  |  |                                                                                              |  |
|--|--|--|----------------------------------------------------------------------------------------------|--|
|  |  |  | <i>quarry and geological<br/>feature of the area.<br/>Period: March 2025 to May<br/>2025</i> |  |
|--|--|--|----------------------------------------------------------------------------------------------|--|

**DRAFT EIA REPORT FOR PROPOSED ROUGH STONE QUARRY OF THIRU.R.SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

**TM- EC**

| S. No | Name of TM (EC)       | Sector (s) proposed | Approved (to work under) | Period of involvement      | Type of work                                                                    | Signature                                                                           |
|-------|-----------------------|---------------------|--------------------------|----------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1.    | Abirami Kaliyaperumal | 1(a)                | Manikandan Manickam      | Period: March to May 2025. | Associated with EIA Coordinator in overall preparation of Draft EIA/EMP report. |  |

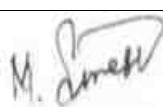
**TM- FAE:**

| S. No | Name of TM (FAE) | Functional Area | Approved FAE (to work under) | Period of involvement      | Type of work                                                                                                                                   | Signature                                                                             |
|-------|------------------|-----------------|------------------------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1     | Kamaraj S        | HG              | Ashok Kumar Rajagopal        | Period: March to May 2025. | Associated with Experts in studying hydrogeological pattern of study area, Studying ground water and the impact of the project on ground water |  |
| 2     | B.J.Sampatkkumar | SE              | Saraswathy K                 | Period: March to May 2025. | Assisted by the Expert in preparation of socio-economic report.                                                                                |  |
|       |                  | SC              | Shishupal Singh              | Period: March to May 2025. | Assisted by the Expert in interpretation of soil sampling and their quality involved                                                           |                                                                                       |

**DRAFT EIA REPORT FOR PROPOSED ROUGH STONE QUARRY OF THIRU.R.SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|   |                   |    |                         |                                   |                                                                                                                                                                                                                         |                    |
|---|-------------------|----|-------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
|   |                   |    |                         |                                   | in the project.                                                                                                                                                                                                         |                    |
| 3 | Mownica Balaji    | NV | Dhanalakshmi Ramanathan | <i>Period: March to May 2025.</i> | Associated with the expert team in suggesting control measures for noise and Ground Vibration.                                                                                                                          | Mownica            |
|   |                   | AP | Dhanalakshmi Ramanathan |                                   | Associated with expert team in assessing existing air quality, impact of the project on ambient air and suggesting mitigation measures for air pollution                                                                |                    |
| 4 | Balasubramanian G | NV | Dhanalakshmi Ramanathan | <i>Period: March to May 2025.</i> | Associated with the expert in selection of base line monitoring stations, Review of Noise quality results, Review of emission sources – drilling, blasting, excavation and transportation, Identification of impacts on | B. Balasubramanian |

**DRAFT EIA REPORT FOR PROPOSED ROUGH STONE QUARRY OF THIRU.R.SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|   |             |     |                         |                                   |                                                                                                                                                                        |                                                                                     |
|---|-------------|-----|-------------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|   |             |     |                         |                                   | environment, identification of remedial measures and input to EIA preparation                                                                                          |                                                                                     |
|   |             | Geo | Valliappa n Meyyappa n  |                                   | Associated with the expert in preparing Geological map.                                                                                                                |                                                                                     |
| 5 | Suresh Mani | LU  | Srilatha Thiruvee dhula | <i>Period: March to May 2025.</i> | Associated with Experts in preparing Land use map based on satellite imagery, Land use classification and analysis, Impact prediction on surrounding land environment. |  |
|   |             | HG  | Ashok Kumar Rajagopa l  |                                   | Associated with Experts in studying hydro-geology pattern of study area, studying water and the impact of the project on ground water.                                 |                                                                                     |
| 6 | Asan Ali S  | NV  | Srilatha Thiruvee dhula | <i>Period: March to May</i>       | Associated with the expert in monitoring and                                                                                                                           |                                                                                     |

|  |  |     |                                 |       |                                                                                                                                                                                                                                                                     |             |
|--|--|-----|---------------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|  |  |     |                                 | 2025. | analysis of blast induced ground vibration in order to develop the site-specific equation for its prediction, monitoring of fly rocks & air blast (noise), preparation of SOP's for the safety blasting practice in the mines.                                      |             |
|  |  | Geo | Valliappa<br>n<br>Meyyappa<br>n |       | Associated with the Qualified Person & Experts in preparing Geological map, assessing stability of quarry slope faces and dump, management plan for mine stability and after use of mining quarry and geological features of the area during mine plan preparation. | S. Asan ali |

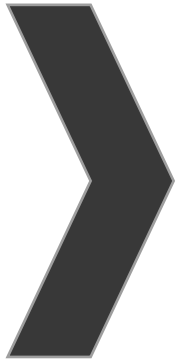


**DRAFT EIA REPORT FOR PROPOSED ROUGH STONE QUARRY OF THIRU.R.SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|    |                            |     |                                 |                                               |                                                                                                                                                                 |                                                                                       |
|----|----------------------------|-----|---------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 7  | Prabu M                    | Geo | Valliappa<br>n<br>Meyyappa<br>n | <i>Period:<br/>March to<br/>May<br/>2025.</i> | Associated with Experts and involved in Field Investigations, Mapping /Geo-referencing                                                                          |    |
| 8  | Abirami<br>Kaliyaperumal   | RH  | S V<br>Prashant                 | <i>Period:<br/>March to<br/>May<br/>2025.</i> | Associated with experts and involved in the identification risk and hazard, suggesting safeguard measures.                                                      |    |
| 9  | Dhanalakshmi<br>Ramanathan | AQ  | Srilatha<br>Thiruvee<br>dhula   | <i>Period:<br/>March to<br/>May<br/>2025</i>  | Involved with Expert team and involved in calculating air emission values using Meteorological data and Providing inputs for running modelling (ISCT3, AERMOD). |    |
| 10 | Manikandan<br>Manickam     | AP  | Ramados<br>s N                  | <i>Period:<br/>March to<br/>May<br/>2025.</i> | Associated with expert team in assessing existing air quality, impact of the project on ambient air and suggesting mitigation measures for air pollution        |  |

**DRAFT EIA REPORT FOR PROPOSED ROUGH STONE QUARRY OF THIRU.R.SATHISH, OVER AN EXTENT OF 2.02.40 HA LOCATED AT THE S.F.NO. 208 (PART-8) OF PARAVAKKAL VILLAGE, PERNAMPATTU TALUK, VELLORE DISTRICT, TAMIL NADU STATE.**

|  |  |    |                              |                                                                                                                                                      |  |
|--|--|----|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  |  | WP | Abirami<br>Kaliyaper<br>umal | Involved in the<br>identification of<br>source of water<br>and waste<br>generation,<br>suggesting<br>treatment for<br>safe disposal of<br>wastewater |  |
|--|--|----|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--|



# ANNEXURE-1



**File No: 12350**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(Issued by the State Environment Impact Assessment Authority(SEIAA),**  
**TAMIL NADU)**

\*\*\*



Dated 30/07/2025



To,

Thiru.R.Sathish  
S/o. Ramoorthy, No.236, Kidangu Ramapuram Village, Pogalur Post, Peranampattu Taluk, Vellore  
District, Tamil Nadu-635813  
srivariblue metals36@gmail.com

**Subject:** Grant of **Terms of Reference along with Public Hearing** under the provision of the EIA Notification 2006 as amended-regarding.

**Sir/Madam,**

**Sub:** SEIAA, Tamil Nadu – Proposed Rough stone Quarry lease over an extent of 2.02.40 Ha at S.F. Nos. 208 (Part-8), Paravakkal, Peranampattu Taluk, Vellore District, Tamil Nadu, By Thiru.R.Sathish - under project category – “B1” and Schedule S.No. 1(a) – **ToR issued along with Public Hearing** - preparation of EIA report – Regarding.

**Ref:** 1. Online proposal No. SIA/TN/MIN/539674/2025, Dated: 31/05/2025.

2. Your application submitted for Terms of Reference dated: 23.06.2025.

3. Minutes of the 587th SEAC -I Meeting held on 07.07.2025.

4. Minutes of the 859th Authority meeting held on 24.07.2025.

2. The particulars of the proposal are as below :

|                                            |                                       |
|--------------------------------------------|---------------------------------------|
| (i) TOR Identification No.                 | TO25B0108TN5803895N                   |
| (ii) File No.                              | 12350                                 |
| (iii) Clearance Type                       | TOR                                   |
| (iv) Category                              | B1                                    |
| (v) Project/Activity Included Schedule No. | 1(a) Mining of minerals               |
| (vii) Name of Project                      | Rough Stone Quarry of Thiru.R.Sathish |
| (viii) Name of Company/Organization        | SATHISH RAMOORTHY                     |
| (ix) Location of Project (District, State) | VELLORE, TAMIL NADU                   |
| (x) Issuing Authority                      | SEIAA                                 |
| (xi) Applicability of General Conditions   | no                                    |
| (xii) Applicability of Specific Conditions | no                                    |

1.In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1(Part A and B) were

submitted to the SEIAA for an appraisal by the SEAC under the provision of EIA notification 2006 and its subsequent amendments.

2.The above-mentioned proposal has been considered by SEIAA in the meeting held on 24.07.2025 The minutes of the meeting and all the Application and documents submitted [(viz. Form-1 Part A, Part B,)] are available on PARIVESH portal which can be accessed by scanning the QR Code above.

3.The State Expert Appraisal Committee (SEAC), based on the information & clarifications provided by the project proponent and after detailed deliberations on all technical aspects recommended the proposal for grant of Terms of Reference with public hearing under the provision of EIA Notification, 2006 and as amended thereof subject to the stipulation of specific and general conditions as detailed in Annexure (2).

4.The SEIAA has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the SEAC hereby decided to issue the following Terms of Reference with public hearing for instant proposal of Thiru.R.Sathish under the provisions of EIA Notification, 2006 and as amended thereof.

5.The Ministry/SEIAA-TN reserves the right to stipulate additional conditions, if found necessary.

6.The Terms of Reference with public hearing to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

7.This issues with the approval of the Competent Authority.

8.The TORs with public hearing prescribed shall be valid for a period of three years from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.

#### **Copy To**

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. The Additional Chief Secretary to Government, Environment, Climate Change and Forests Department, Secretariat, Chennai, Tamil Nadu 600 009.
3. The Additional Chief Secretary to Government, Natural Resources Department, Tamil Nadu.
4. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
5. The Chair Person, TNPC Board,76, Mount Salai, Guindy, Chennai-32
6. The District Collector, Vellore District
7. The Commissioner of Geology and Mines, Guindy, Chennai-32
8. The Assistant Director, Department of Geology & Mining, Vellore District
9. EI Division, Ministry of Environment & Forests, Paryavaran Bhawan, New Delhi.
10. Integrated Regional office of MoEF&CC, Sasthri Bhawan, Nungambakkam, Chennai
11. File Copy

#### **Annexure 1**

#### **Specific Terms of Reference for (Mining Of Minerals)**

#### **1. Seiaa Specific Conditions:**

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1   | The Authority noted that the subject was placed in the 587th meeting of SEAC-I held on 07.07.2025. After detailed discussions, <b>the Authority accepts the recommendation of SEAC-I and decided to grant Terms of Reference (ToR) along with Public Hearing for the quantity of 2,42,660 cu.m of Rough stone upto the depth of 45 m AGL as per the approved mining plan,</b> under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC-I & normal conditions & the conditions mentioned below. |

## 2. Seac Conditions - Site Specific

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1   | <p>1. A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic &amp; scientific approach with appointment of required statutory personnel, appropriate environmental management, system of maintaining the haul roads and village/panchayat roads, authorized blasting operation, Monitoring system of the environmental &amp; other statutory compliances &amp; its reporting status, etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal:</p> <ol style="list-style-type: none"> <li>Copy of the agreement forming CMC.</li> <li>The Organisation chart of the Committee with defining the role of the members.</li> <li>The 'Standard Operating Procedures' (SoP) executing the planned activities.</li> </ol> <p>2. The PP shall ensure the installation of CCTV at the proposed quarry site and ensure its inclusion during the EIA presentation.</p> |

## 3. Seac Standard Conditions

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.1   | <p>1. In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following:</p> <ol style="list-style-type: none"> <li>Original pit dimension</li> <li>Quantity achieved Vs EC Approved Quantity</li> <li>Balance Quantity as per Mineable Reserve calculated.</li> <li>Mined out Depth as on date Vs EC Permitted depth</li> <li>Details of illegal/illicit mining</li> <li>Violation in the quarry during the past working.</li> <li>Quantity of material mined out outside the mine lease area</li> <li>Condition of Safety zone/benches</li> <li>Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.</li> </ol> <p>2. Details of habitations around the proposed mining area and latest VAO certificate regarding the location of habitations within 300m radius from the periphery of the site.</p> <p>3. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.</p> <p>4. The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within 1 km of the proposed quarry.</p> <p>5. The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report.</p> <p>6. The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.</p> <p>7. In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining &amp; Fuel Research / Dhanbad, NIRM/Bangalore, Division of</p> |

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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|       | <p>Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.</p> <p>8. However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.</p> <p>9. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.</p> <p>10. The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.</p> <p>11. The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.</p> <p>12. If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,</p> <p>13. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?</p> <p>14. Quantity of minerals mined out.</p> <ul style="list-style-type: none"> <li>· Highest production achieved in any one year</li> <li>· Detail of approved depth of mining.</li> <li>· Actual depth of the mining achieved earlier.</li> <li>· Name of the person already mined in that leases area.</li> <li>· If EC and CTO already obtained, the copy of the same shall be submitted.</li> <li>· Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.</li> </ul> <p>15. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).</p> <p>16. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,</p> <p>17. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees &amp; safety distance between the adjacent quarries &amp; water bodies nearby provided as per the approved mining plan.</p> <p>18. The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same.</p> <p>19. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.</p> <p>20. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping &amp; open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.</p> <p>21. The proponent shall furnish the baseline data for the environmental and ecological parameters</p> |

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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|       | <p>with regard to surface water/ground water quality, air quality, soil quality &amp; flora/fauna including traffic/vehicular movement study.</p> <p>22. The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control &amp; health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.</p> <p>23. Rain water harvesting management with recharging details along with water balance (both monsoon &amp; non-monsoon) be submitted.</p> <p>24. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.</p> <p>25. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&amp;R issues, if any, should be provided.</p> <p>26. Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.</p> <p>27. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.</p> <p>28. Impact on local transport infrastructure due to the Project should be indicated.</p> <p>29. A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area &amp; 300m buffer zone and its management during mining activity.</p> <p>30. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.</p> <p>31. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.</p> <p>32. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix-I in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.</p> <p>33. Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner</p> <p>34. A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.</p> <p>35. A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.</p> <p>36. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.</p> |



| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|       | <p>37. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.</p> <p>38. The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.</p> <p>39. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.</p> <p>40. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.</p> <p>41. If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&amp;CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.</p> <p>42. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.</p> <p>43. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.</p> |

#### 4. Seiaa Standard Conditions:

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| 4.1   | <p><b><u>Cluster Management Committee</u></b></p> <p>1. Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.</p> <p>2. The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,</p> <p>3. The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.</p> <p>4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.</p> <p>5. The committee shall deliberate on risk &amp; emergency management plan, fire safety &amp; evacuation plan and sustainable development goals pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.</p> <p>6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the Environmental policy devised shall be given in detail in the EIA Report.</p> <p>7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.</p> <p>8. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public in the vicinity.</p> <p><b><u>Agriculture &amp; Agro-Biodiversity</u></b></p> <p>9. Impact on surrounding agricultural fields around the proposed mining Area.</p> <p>10. Impact on soil flora &amp; vegetation around the project site.</p> <p>11. Details of type of vegetation including no. of trees &amp; shrubs within the proposed mining area</p> |

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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|       | <p>and. If so, transplantation of such vegetation all along the boundary of the proposed mining area shall committed mentioned in EMP.</p> <p>12. The Environmental Impact Assessment should study the agro-biodiversity, agro- forestry, horti-cultural plantations, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.</p> <p>13. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.</p> <p>14. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.</p> <p><b><u>Forests</u></b></p> <p>15. The project proponent shall detailed study on impact of mining on Reserve forests and free ranging wildlife.</p> <p>16. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.</p> <p>17. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.</p> <p>18. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.</p> <p><b><u>Water Environment</u></b></p> <p>19. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping &amp; open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.</p> <p>20. Erosion Control measures.</p> <p>21. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, &amp; any ecological fragile areas.</p> <p>22. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.</p> <p>23. The project proponent shall study and furnish the details on potential fragmentation impact on natural Environment, by the activities.</p> <p>24. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.</p> <p>25. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.</p> <p>26. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.</p> <p>27. The EIA shall include the impact of mining activity on the following:</p> <ol style="list-style-type: none"> <li>Hydrothermal/Geothermal effect due to destruction in the Environment.</li> <li>Bio-geochemical processes and its foot prints including Environmental stress.</li> <li>Sediment geochemistry in the surface streams.</li> </ol> <p><b><u>Energy</u></b></p> <p>28. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished.</p> <p><b><u>Climate Change</u></b></p> <p>29. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.</p> <p>30. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil &amp; below soil carbon stock, soil health and physical, chemical &amp;</p> |

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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|       | <p>biological soil features.</p> <p>31. Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood.</p> <p><b><u>Mine Closure Plan</u></b></p> <p>32. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.</p> <p><b><u>EMP</u></b></p> <p>33. Detailed Environment Management Plan along with adaptation, mitigation &amp; remedial strategies covering the entire mine lease period as per precise area communication order issued and the scope for achieving SDGs.</p> <p>34. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.</p> <p><b><u>Risk Assessment</u></b></p> <p>35. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.</p> <p><b><u>Disaster Management Plan</u></b></p> <p>36. To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards &amp; to cope with disaster/unfavorable accidents in &amp; around the proposed mine lease area due to the proposed method of mining activity &amp; its related activities covering the entire mine lease period as per precise area communication order issued.</p> <p><b><u>Others</u></b></p> <p>37. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.</p> <p>38. As per the MoEF&amp; CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.</p> <p>39. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the Environment. The ecological risks and impacts of plastic &amp; microplastics on aquatic Environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.</p> |

**Standard Terms of Reference for (Mining of minerals)**

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| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                    |
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| 1.1   | Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994 |
| 1.2   | A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given                                                                                                                                                                                                                   |
| 1.3   | All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee                                                                      |

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| 1.4   | All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ toposheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone)                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1.5   | Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1.6   | Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 1.7   | It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report |
| 1.8   | Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1.9   | The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1.10  | Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given                                                                                                                                                                                                                                                                                                                |
| 1.11  | Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1.12  | A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the State Expert Appraisal Committees                                                                                                                 |
| 1.13  | Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| 1.14  | Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 1.15  | The vegetation in the RF / PF areas in the study area, with necessary details, should be given                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1.16  | A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1.17  | Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished                                                                                                                                                                                                                                               |
| 1.18  | A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled- I fauna found in the study area, the necessary plan alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost                                                   |
| 1.19  | Proximity to Areas declared as Critically Polluted or the Project areas likely to come under the Aravali Range, (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered                                                                                                                                                                                                                                                                                                                                                        |
| 1.20  | Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority)                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1.21  | R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report |
| 1.22  | One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-                                                                                                                                                                                                                                                                                                                                                                                             |

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|       | specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given                                                                                                                                                                                                                                                                                 |
| 1.23  | Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map                                                                                                                                                                                     |
| 1.24  | The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1.25  | Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 1.26  | Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1.27  | Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1.28  | Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from State Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished                                                                                                                                                         |
| 1.29  | Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1.30  | Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 1.31  | A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution |
| 1.32  | Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines                                                                                                                                                                                                                                                                                                                                            |
| 1.33  | Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 1.34  | Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 1.35  | Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed                                                                                                                                                                                                                                                                                                                          |
| 1.36  | Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1.37  | Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1.38  | Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1.39  | Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 1.40  | Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1.41  | The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1.42  | A Disaster management Plan shall be prepared and included in the EIA/EMP Report                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1.43  | Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1.44  | Besides the above, the below mentioned general points are also to be followed:- a) All documents to be properly referenced with index and continuous page numbering. b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated. c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project. d) Where the documents provided are in a language other than English, an English translation should be provided. e) The Questionnaire for |

| S. No | Terms of Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <p>environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted. f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed. g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&amp;CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation. h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable. i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area</p> |





## **STANDARD TERMS OF REFERENCE**

- 1) Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
- 2) A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 3) All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
- 4) All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/ topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
- 5) Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
- 6) Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
- 7) It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.
- 8) Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.

- 9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
- 10) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
- 11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
- 12) Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- 13) Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
- 14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- 16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly

authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.

- 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
- 20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
- 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
- 22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on

ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.

- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
- 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
- 28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 29) Details of any stream, seasonal or otherwise, passing through the lease area and

modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.

- 30) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 31) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
- 32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
- 33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
- 35) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
- 36) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
- 37) Measures of socio-economic significance and influence to the local community

proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.

- 38) Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed:-
  - a) Executive Summary of the EIA/EMP Report
  - b) All documents to be properly referenced with index and continuous page numbering.
  - c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
  - d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
  - e) Where the documents provided are in a language other than English, an English translation should be provided.
  - f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
  - g) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.

- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
- i) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
- j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

**In addition to the above, the following shall be furnished:-**

**The Executive summary of the EIA/EMP report in about 8-10 pages should be prepared incorporating the information on following points:**

1. Project name and location (Village, District, State, Industrial Estate (if applicable).
2. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes.
3. Measures for mitigating the impact on the environment and mode of discharge or disposal.
4. Capital cost of the project, estimated time of completion.
5. The proponent shall furnish the contour map of the water table detailing the number of wells located around the site and impacts on the wells due to mining activity.
6. A detailed study of the lithology of the mining lease area shall be furnished.
7. Details of village map, "A" register and FMB sketch shall be furnished.
8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be submitted along with EIA report.
9. Obtain a letter /certificate from the Assistant Director of Geology and Mining standing that there is no other Minerals/resources like sand in the quarrying area within the approved depth of mining and below depth of mining and the same shall be furnished in the EIA report.

10. EIA report should strictly follow the Environmental Impact Assessment Guidance Manual for Mining of Minerals published February 2010.
11. Detail plan on rehabilitation and reclamation carried out for the stabilization and restoration of the mined areas.
12. The EIA study report shall include the surrounding mining activity, if any.
13. Modeling study for Air, Water and noise shall be carried out in this field and incremental increase in the above study shall be substantiated with mitigation measures.
14. A study on the geological resources available shall be carried out and reported.
15. A specific study on agriculture & livelihood shall be carried out and reported.
16. Impact of soil erosion, soil physical chemical and biological property changes may be assumed.
17. Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./ private land, status of its acquisition, nearby (in 2-3 km.) water body, population, within 10km other industries, forest, eco-sensitive zones, accessibility, (note - in case of industrial estate this information may not be necessary)
18. Baseline environmental data - air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
19. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
20. Likely impact of the project on air, water, land, flora-fauna and nearby population
21. Emergency preparedness plan in case of natural or in plant emergencies
22. Issues raised during public hearing (if applicable) and response given
23. CER plan with proposed expenditure.
24. Occupational Health Measures
25. Post project monitoring plan
26. The project proponent shall carry out detailed hydro geological study through intuitions/NABET Accredited agencies.
27. A detailed report on the green belt development already undertaken is to be furnished and also submit the proposal for green belt activities.
28. The proponent shall propose the suitable control measure to control the fugitive emissions during the operations of the mines.
29. A specific study should include impact on flora & fauna, disturbance to migratory pattern of animals.
30. Reserve funds should be earmarked for proper closure plan.



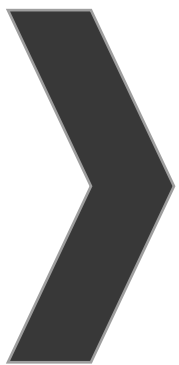
31. A detailed plan on plastic waste management shall be furnished. Further, the proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throw away plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986. In this connection, the project proponent has to furnish the action plan.

**Besides the above, the below mentioned general points should also be followed:-**

- a. A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b. All documents may be properly referenced with index, page numbers and continuous page numbering.
- c. Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF& CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- e. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no F. No.J -11013/77/2004-IA-II(I) dated 2<sup>nd</sup> December, 2009, 18<sup>th</sup> March 2010, 28<sup>th</sup> May 2010, 28<sup>th</sup> June 2010, 31<sup>st</sup> December 2010 & 30<sup>th</sup> September 2011 posted on the Ministry's website <http://www.moef.nic.in/> may be referred.
  - After preparing the EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above-mentioned points, the proponent will take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.
  - The final EIA report shall be submitted to the SEIAA, Tamil Nadu for obtaining Environmental Clearance.

- The TORs with public hearing prescribed shall be **valid for a period of three years** from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-II(I)(part) dated 29<sup>th</sup> August, 2017.





# **ANNEXURE-2**



**PRECISE AREA COMMUNICATION LETTER**

பொருள்: கனிமங்களும் குவாரிகளும் - வேலூர் மாவட்டம் - சாதாரண கற்கள் - அரசு புறம்போக்கு நிலத்தில் அமைந்துள்ள புதிய கற்குவாரிகளை 1959-ம் ஆண்டு தமிழ்நாடு சிறுகனிம சலுகை விதிகள், விதி எண்.8-ன்படி மின்னணு பொதுஏலம் (E-Auction) முறையில் - பொது ஏலத்திற்கு கொண்டு வருவது - மாவட்ட அரசிதழ் சிறப்பு வெளியீடு செய்யப்பட்டது - பேர்ணாம்பட்டு வட்டம் - பரவக்கல் கிராமம் - அரசு புறம்போக்கு புலஎண்.208(பகுதி.8)-ல் 2.02.4 ஹெக்டேர் பரப்பு அரசு புறம்போக்கு புலத்திற்கு - மின்னணு ஏல விண்ணப்பங்கள் வரவேற்கப்பட்டது - மின்னணு ஏலம் நடத்தப்பட்டது - ரூ.1,86,20,000/-க்கு ஏலம் கோரிய திரு. சதீஷ் த/பெ.ராஜார்த்தி என்பவர் தகுதியான மற்றும் உயர்ந்தபட்ச ஏலதாரராக தேர்ந்தெடுக்கப்பட்டது - ஏலத் தொகையில் 10% மற்றும் 90% தொகை முழுவதும் அரசு கணக்கில் செலுத்தப்பட்டது - குவாரி அனுமதி வழங்குவது தொடர்பாக ஒப்புதல் பெறப்பட்ட சுரங்கத்திட்ட வரைவு அறிக்கை (Mining Plan) மற்றும் மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (SEIAA) தடையின்மைச்சான்று பெற்று சமர்ப்பிக்குமாறு தெரிவிப்பது - தொடர்பாக.

- பார்வை: 1.ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை கடிதம் நக.எண். 7232/MM.4/2023, நாள் 08.11.2023.
- 2.இவ்வலுவலக கடிதம் நக.எண்.250/2018(கனிமம்) நாள் 08.06.2022. 03.07.2022 மற்றும் 11.09.2024.(வருவாய் கோட்டாட்சியர், குடியாத்தம் அவர்களுக்கு முகவரிவிடப்பட்டது).
- 3.அரசாணை எண்(MS) 21, இயற்கை வளங்கள்(MMC.1)துறை நாள்.31.07.2024.
- 4.குடியாத்தம் வருவாய் கோட்டாட்சியர்(பொறுப்பு) (ம) உதவி ஆணையர் (கலால்) வேலூர் அவர்கள் கடிதம் நக.பி1/969/2024, நாள்.19.09.2024.
- 5.வேலூர் மாவட்ட அரசிதழ் சிறப்பு வெளியீடுஎண்.04, நாள்: 04.12.2024.
- 5.திரு.சதீஷ் த/பெ.ராஜார்த்தி மின்னணு விண்ணப்ப நாள்.20.12.2024.
- 7.நேரடி மற்றும் பொது மின்னணு ஏல நாள் 06.01.2025.
- 8.இவ்வலுவலக குறிப்பாணை இதே எண் நாட்கள் 07.01.2025, 09.01.2025 மற்றும் 06.02.2025.
- 9.திரு.சதீஷ் த/பெ.ராஜார்த்தி மனு நாட்கள்.07.01.2025 மற்றும் 06.02.2025.

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பார்வை-1ல் காணும் ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை அவர்களின் கடிதத்தில் அறிவுறுத்தியவாறு வேலூர் மாவட்டத்தில் கல் குவாரி குத்தகை அனுமதி முடிவுற்ற இனங்கள் மற்றும் புதியதாக கல்குவாரி அனுமதி வழங்க வாய்ப்புள்ள குவாரிகள் குறித்து விரிவான தணிக்கை மேற்கொண்டு அறிக்கை அளிக்குமாறு வருவாய்துறை அலுவலர்களிடம் பார்வை-2ல் காணும் இவ்வலுவலக கடிதத்தில் குடியாத்தம் வருவாய் கோட்டாட்சியரிடம் அறிக்கை கோரப்பட்டது.



2) பார்வை-4ல் காணும் குடியாத்தம் வருவாய் கோட்டாட்சியர் அலுவலரின் அலுவலகத்தில், பேர்ணாம்பட்டு வட்டம், பரவக்கல் கிராம புலஎண்.208-ல் அமைந்துள்ள மலைப் புறம்போக்கில் பகுதி.8-க்கு 2.02.40 ஹெக்டேர் பரப்பளவில் குவாரி செய்ய முன்மொழிவுகள் தயார் செய்ப்பட்டுள்ளது என்றும், இந்த இடத்தைச் சுற்றி 300 மீட்டருக்குள் பொதுமக்கள் வசிக்கும் குடியிருப்புகள், அங்கீகரிக்கப்பட்ட வீட்டுமனைப்பிரிவுகள் ஏதுமில்லை என்றும், 50 மீட்டர் சுற்றளவிற்குள் உயர் மற்றும் மின்னழுத்த கம்பிகள், நீர்நிலைகள், புராதனச் சின்னங்கள், இருப்பு பாதைகள் ஏதும் செல்லவில்லை என்றும், தற்போது குவாரி செய்ய உத்தேசிக்கப்பட்டுள்ள பகுதி 8-க்கு செக்பந்தி விவரம் பின்வருமாறு அளித்துள்ளார்.

| வ. எண். | குவாரி செய்ய உத்தேசிக்கப்பட்டுள்ள பகுதி | வடக்கு         | கிழக்கு        | தெற்கு         | மேற்கு         |
|---------|-----------------------------------------|----------------|----------------|----------------|----------------|
| 1.      | பகுதி-8                                 | புலஎண்.208 மலை | புலஎண்.208 மலை | புலஎண்.208 மலை | புலஎண்.208 மலை |

மேற்கண்ட பரவக்கல் கிராம புலஎண்.208-ல் அமைந்துள்ள மலைபுறம்போக்கில் பகுதி.8-ல் கற்குவாரி அமைக்க போதிய அளவில் கனிம இருப்பு உள்ளதென்றும், குவாரியிலிருந்து கனிமங்களை வெட்டி, வெளியே எடுத்துச்செல்ல போதிய பாதை வசதி உள்ளது என்றும், இப்புலத்தில் கற்குவாரி அமைப்பது தொடர்பாக பொகனூர் கிராம நிர்வாக அலுவலர் அ1 நோட்டீஸ் கடந்த 26.08.2024 பொதுமக்கள் பார்வைக்கு விளம்பரம் செய்யப்பட்டதில் அன்றைய தேதியிலிருந்து 15 நாட்களுக்குள் அப்பகுதிக்கு அப்பால் வசிக்கும் கிராம பொதுமக்களிடமிருந்து ஆட்சேபனை ஏதும் வரப்பெறவில்லை என்றும், மேலும் அப்பகுதி கிராமத்தில் வசிக்கும் சில பொது மக்கள் மேற்படி விளம்பரத்தினை தெரிந்துக்கொண்டு குவாரிக்கு அனுமதி வழங்க தங்களுக்கு ஆட்சேபனை ஏதும் இல்லை என மேல்பட்டி உள்வட்ட வருவாய் ஆய்வாளரிடம் வாக்குமூலம் அளித்துள்ளனர் என்றும் எனவே, பேர்ணாம்பட்டு வட்டம், பரவக்கல் கிராம புலஎண்.208-ல் தீர்வை ஏற்படாத தரிசு (மலை) புறம்போக்கில் மொத்த பரப்பு - 119.38.5 ஹெக்டேரில் 2.02.40 ஹெக்டேர் பரப்பளவில் பகுதி-8 என உத்தேசித்துள்ள பகுதிக்கு அரசு விதிகளின்படி அறிவிக்கை செய்து கற்குவாரி செய்ய குத்தகை உரிமம் வழங்கலாம் என தெரிவித்துள்ளார்.

3) வருவாய் கோட்டாட்சியர், குடியாத்தம் அலுவலரின் பரிந்துரையின் அடிப்படையில் வேலூர் மாவட்டம், பேர்ணாம்பட்டு வட்டம், பரவக்கல் கிராமம், அரசு புறம்போக்கு புல எண்.208 (பகுதி.8)-ல் 2.02.40 ஹெக்டேர் பரப்பளவு பகுதிக்கு பத்தாண்டுகளுக்கு கற்குவாரி குத்தகை அனுமதி வழங்க, பார்வை-5ல் காணும் வேலூர் மாவட்ட சிறப்பு அரசிதழ் எண்.04, நாள் 04.12.2024-ன்படி கற்குவாரிக்கு இணையதளம் மூலம் விண்ணப்பங்கள் வரபெற்று, தொழில்நுட்ப மதிப்பீடு (Technical Evaluation) செய்யப்பட்டு, தகுதியான நபர்கள் திரண்டாம்



கட்ட மின்னணு நேரடி ஏலத்திற்கு தேர்வு செய்யப்பட்டு 06.01.2025 அன்று மின்னணு ஏலம் நடத்தப்பட்டது. மின்னணு ஏலத்தில் 1) திரு.சதீஷ் 2) பிரபாகரன் ஆகியோர் கலந்துக்கொண்டனர். அதில் அரசு நிர்ணயித்த ஏலத்தொகை (Floor price) மற்றும் பொது மின்னணு ஏலத்தில் கலந்துக்கொண்ட மற்ற ஏலதாரர்கள் கோரிய ஏலத் தொகையை விட அதிகமாக ரூ.1,86,20,000/- (ரூபாய் ஒரு கோடியே எண்பத்து அறு லட்சத்து இருபதாயிரம் மட்டும்)-க்கு ஏலம் கோரிய திரு.சதீஷ் த/பெ.ராஜார்த்தி என்பவர் தகுதியான மற்றும் உயர்ந்தபட்ச ஏலதாரராக தேர்ந்தெடுக்கப்பட்டுள்ளார்.

4) உயர்ந்தபட்ச ஏலதாரராக அறிவிக்கப்பட்ட திரு.சதீஷ் த/பெ.ராஜார்த்தி என்பவரை 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதி எண்.8(16)(ii)(D)-ன்படி உடன் 10% ஏல தொகை ரூ.18,62,000/-ஐ (ரூபாய் பதினெட்டு லட்சத்து அறுபத்து கிரண்டாயிரம் மட்டும்) 24 மணிநேரத்திற்குள் அரசு கணக்கு தலைப்பில் செலுத்தி அசல் சலானை இவ்வலுவலகத்தில் சமர்ப்பிக்க பார்வை-8ல் காணும் அறிவிப்பாணை நாள் 07.01.2025 முதல் அறிவுறுத்தப்பட்டதின் பேரில் பார்வை 9-ல் காணும் கடித்தின்படி ரூ.18,62,000/-ஐ (ரூபாய் பதினெட்டு லட்சத்து அறுபத்து கிரண்டாயிரம் மட்டும்) சலான் எண். 20250107008710, நாள் 07.01.2025-ல் அரசு கணக்கில் செலுத்தி அதன் அசல் சலானை இவ்வலுவலகத்தில் சமர்ப்பித்துள்ளார்.

5) திரு.சதீஷ் த/பெ.ராஜார்த்தி என்பவரை தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் விதி 1959, 8(16)(ii)(H)-ன்படி மீதமுள்ள 90% ஏலத் தொகையான ரூ.1,67,58,000/-ல் (ரூபாய் ஒரு கோடியே அறுபத்தேழு லட்சத்து ஐம்பத்தெட்டாயிரம் மட்டும்) ஏற்கனவே செலுத்தப்பட்டுள்ள பிணை வைப்புத்தொகை ரூ.18,51,500/- (ரூபாய் பதினெட்டு லட்சத்து ஐம்பத்தொறாயிரத்து கிந்நாறு மட்டும்) போக மீதமுள்ள ரூ.1,49,06,500/-ஐ (ரூபாய் ஒரு கோடியே நூற்பத்தொன்பது லட்சத்து ஆறாயிரத்து கிந்நாறு மட்டும்) ஏலம் நடைபெற்ற நாளிலிருந்து 1 (மாதம்) 30 தினங்களுக்குள் செலுத்துமாறு இவ்வலுவலக 09.01.2025-ஆம் நாளிட்ட குறிப்பாணை வாயிலாக அறிவுறுத்தப்பட்டது.

6) அதன்படி மீதமுள்ள 90% ஏலத்தொகை ரூ.1,49,06,500/-ஐ திரு.சதீஷ் த/பெ. ராஜார்த்தி என்பவர் கீழ்க்கண்ட விபரப்படி பாரத மாநில வங்கியில் கிணைய வழி மூலம் செலுத்தி அசல் சலானை சமர்ப்பித்துள்ளார்.

| வ.எண்   | வங்கி                                | செலுத்திய<br>விபரம் | தொகை              | சலான் எண்      | நாள்       |
|---------|--------------------------------------|---------------------|-------------------|----------------|------------|
| 1.      | பாரத மாநில<br>வங்கி<br>சத்துவாச்சாயி | கிணைய வழி           | ரூ. 50,00,000/-   | 20250129015290 | 29.01.2025 |
| 2.      |                                      | கிணைய வழி           | ரூ. 50,00,000/-   | 20250203015580 | 03.02.2025 |
| 3.      |                                      | கிணைய வழி           | ரூ. 46,56,500/-   | 20250207004497 | 08.02.2025 |
| 4.      |                                      | கிணைய வழி           | ரூ. 2,50,000/-    | 20250207015268 | 08.02.2025 |
| மொத்தம் |                                      |                     | ரூ. 1,49,06,500/- |                |            |

6) மேற்கண்ட விபரப்படி உயர்ந்தபட்ச ஏலதாரர் திரு.சதீஷ் த/பெ.ராஜா செலுத்த வேண்டிய தொகையினை அரசுகணக்கில் முழுவதும் செலுத்திவிட்டதால் மேலும் பேர்ணாம்பட்டு வட்டம், பரவக்கல் கிராமம், அரசு புறம்போக்கு புலஎண்.208(பகுதி) ஹெக்டேர் பரப்பில் பத்தாண்டுகளுக்கு காலத்திற்கு கற்குவாரி செய்ய தகுதியான நிரப்பார்ப்பாக கருதப்படுகிறது. மேலும் 1959ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதி எண். 41 மற்றும் 42ன்படி குவாரி பணி மேற்கொள்வது தொடர்பாக இக்குறிப்பாணை கிடைக்கப்பெற்ற 90 நாட்களுக்குள் வரைவு சுரங்கத்திட்டத்தினை கீழ்க்காணும் நிபந்தனைகளின்படி சமர்ப்பிக்குமாறும் உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, வேலூர் அவர்களால் ஏற்பளிக்கப்பட்ட சுரங்க வரைவு திட்டத்தினை பெற்றும் மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் தடையின்மைச் சான்று பெற்று சமர்ப்பிக்குமாறும் உயர்ந்தபட்ச ஏலதாரருக்கு அறிவுறுத்தப்படுகிறது.

#### நிபந்தனைகள்

1. அருகிலுள்ள பட்டா நிலத்திற்கு 7.5 மீ மற்றும் புறம்போக்கு நிலத்திற்கு 10 மீ பாதுகாப்பு இடைவெளி விட வேண்டும்.
2. நிலையான அமைப்புகளுக்கு (நீர் நிலைகள், நெடுஞ்சாலைகள், மின்சாதனங்கள், ரயில் பாதைகள்) 50மீ பாதுகாப்பு இடைவெளி விட வேண்டும்.
3. அருகிலுள்ள விவசாய நிலங்கள் மற்றும் பொதுமக்களுக்கும் எவ்வித பாதிப்புமின்றி குவாரிப் பணி மேற்கொள்ள வேண்டும்.
4. பாறைகளைத் தகர்க்க கைத்துளைப்பான்களை கொண்டு பாறைகளை துளையிட்டு குறைவான வெடிபொருட்கள் பயன்படுத்த வேண்டும்.
5. 1959 தமிழ்நாடு சிறுகனிம சலுகை விதிகள், அட்டவணை-IIல் கண்டுள்ளபடி, குவாரி செய்யப்படும் கனிமங்களுக்குரிய சீனியரேஜ் தொகை அவ்வப்போது செலுத்தி கனிமம் கொண்டு செல்லப்பட வேண்டும்.
5. அருகிலுள்ள கிராமச்சாலைகள், வண்டிப்பாதைகளுக்கு 10மீ பாதுகாப்பு இடைவெளி விட்டு குவாரிப்பணி மேற்கொள்ளப்பட வேண்டும்.
7. அருகிலுள்ள மின்கம்பி/மின்கம்பங்கள், நீர்நிலைகள் புறம்புகல், தேசிய நெடுஞ்சாலைகள், இரயில்பாதைகள், கோவில்கள், கட்டிடங்களுக்கு 50மீ பாதுகாப்பு இடைவெளிவிட்டு குவாரிப்பணி மேற்கொள்ளப்பட வேண்டும்.
8. அருகிலுள்ள குடியிருப்பு பகுதிகள் மற்றும் தொல்லியியல்/புராதனச்சின்னங்கள் ஆகியவற்றுக்கு 300மீ பாதுகாப்பு இடைவெளி விட்டு குவாரிப்பணி மேற்கொள்ளப்பட வேண்டும்.

*yshanga*  
உதவி இயக்குநர், 29/11/25  
புவியியல் மற்றும் சுரங்கத்துறை,  
வேலூர்

பெறுநர்

திரு.சதீஷ் த/பெ.ராஜார்த்தி

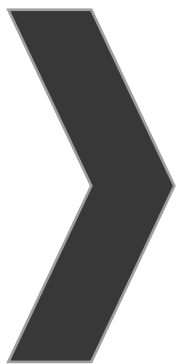
எண்.236, கிடங்கு ராமாபுரம் கிராமம், பொகனூர் அஞ்சல்,

பேர்ணாம்பட்டு வட்டம், வேலூர் மாவட்டம்.

/ புதிது தபால் அஞ்சல் அட்டையுடன்

முகல் சமர்ப்பிக்கப்படுகிறது

ஆணையர் மற்றும் உதவி ஆணையர் அவர்களின் கையொப்பம்



# **ANNEXURE-3**



From

Tmt.G.Shanmugavalli, M.Sc., M.Tech.,  
Assistant Director,  
Geology and Mining,  
Vellore District.

To

Thiru.R.Sathish  
S/o.Ramoorthy  
No.236, Kidangu Ramapuram  
Village,  
Pogalur Post, Pernambut Taluk,  
Vellore District.

Rc.No.441/2024 (Mines) dated. 30.04.2025

Sir,

Sub: Mines and Minerals – Minor Mineral – Rough Stone – Vellore District  
– Pernambut Taluk – Paravakkal Village – Government land –  
S.F.No.208(Part.8) – Over an extent of 2.02.4 hectares – Application  
preferred by Thiru.R.Sathish – Precise Area Communicated – Draft  
Mining Plan submitted – Approval accorded – Regarding.

- Ref: 1. G.O. Ms. No.21, Natural Resources (MMC.1) Dept, dt. 31.07.2024.  
2. Vellore District Gazette Notification No.04, dt.04.12.2024.  
3. Thiru.R.Sathish S/o.Ramamoorthy e-application dt 20.12.2024.  
4. This office Precise Area Communication letter Rc.No.441/2024  
(Mines), Dated.24.04.2025.  
5. Letter from Thiru.R.Sathish S/o.Ramoorthy along with Mining  
plan received from 28.04.2025.

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In the above reference 1<sup>st</sup> cited, Thiru.R.Sathish S/o.Ramoorthy, No.236, Kidangu Ramapuram Village, Pogalur Post, Pernambut Taluk, Vellore District has declared as successful bidder and Precise Area Communicated by the Assistant Director to Thiru.R.Sathish with a direction to submit the mining plan for the S.F.No.208(Part.8) Over an extent of 2.02.4 hectares of Paravakkal Village, Pernambut Taluk, Vellore District as stipulated in Rule 41 & 42 of Tamil Nadu Minor Mineral Concession Rules,1959.

Accordingly, Thiru.R.Sathish S/o.Ramoorthy has submitted the Draft Mining Plan and the same has been examined in detail and found correct. The mining plan submitted by Thiru.R.Sathish in respect of the subject area is approved subject to the following conditions:

- (i) That the Mining plan is approved without prejudice to any other law applicable to grant of quarry lease from time to time whether such laws are made by the State Government or any other Authority.

- (iii) This approval of the Mining plan does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development and Regulation) Act, 1957, or any other connected laws including Forest (Conservation) Act, 1980, Forest Conservation Rules, 1981, Environment Protection Act, 1980, Indian Explosives Act, 1884 (Central Act IV of 1884) and the rules made there under the Tamil Nadu Minor Mineral Conservation Rules, 1959.
- (iii) That the Mining plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.
- (iv) Quarrying shall be done as per the approved Mining Plan and that the mining plan and that the mining plan is approved without prejudice to any other law applicable to the quarry lease from time to time whether such laws are made by the Central Government, State Government or any other authority.
- (v) If anything is found to be concealed as required by the Mines Act in the contents of the Mining Plan and the proposal for rectification has not been made, the approval shall be deemed to have been withdrawn with immediate effect.
- (vi) Waste material should be dumped within the lease grated area as earmarked in the Mining Plan.
- (vii) Quarrying operations and production shall be carried out as per the approved Mining Plan and the applicant shall be liable to pay the cost of mineral if there is any deviation in the quantum indicated in the approved year wise quantum of production and any such cases as on date are to be dealt within as per court direction.
- (viii) If any violation is found during quarrying operation, the penal Provisions of Tamil Nadu Minor Mineral Concession Rules 1959 and other rules and act in force will attract.
- (ix) The applicant shall strictly adhere to the statutory and safety requirements.

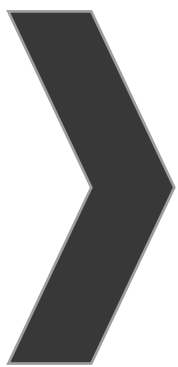
Encl: Approved Mining Plan.

*Y. S. Rangaraj*  
Assistant Director, 30/4/25  
Geology and Mining,  
Vellore District.

Copy submitted to:

The Commissioner,  
Department of Geology and Mining,  
Guindy, Chennai-32.

*S. S. Suresh*  
30/4/25



# **APPROVAL MINING PLAN**

# MINING PLAN FOR PARAVAKKAL ROUGH STONE QUARRY

(Prepared Under Rule 8, 41 & 42 of Tamil Nadu Minor Mineral Concession  
Rules, 1959)

## LOCATION OF THE QUARRY LEASE APPLIED AREA

STATE : TAMIL NADU  
DISTRICT : VELLORE  
TALUK : PERNAMPATTU  
VILLAGE : PARAVAKKAL  
S.F.NO : 208 (PART-8)  
EXTENT : 2.02.4Ha

FOR

### APPLICANT

Thiru. R.Sathish,  
S/o. Ramoorthy,  
No.236, Kidangu Ramapuram Village,  
Pogalur Post, Peranampattu Taluk,  
Vellore District.

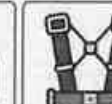
### ECO-FRIENDLY



### SUSTAINABILITY



### SAFETY



(PPE)

### PREPARED BY

C.Natarajan, M.Sc.,M.Phil.,  
Qualified Person

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

PLOT NO. 6, SF NO. 13/2, A2, VS CITY, RC CHETTYPATTY,  
KOTTAMETTUPATTY,

OMALUR, SALEM, TAMIL NADU – 636 455

NABET ACCREDITATION NO – NABET/EIA/2326/IA 0110

CONTACT: 97502 23535, 94446 54520

Email: [infoglobalmining@gmail.com](mailto:infoglobalmining@gmail.com), [globalminingsolutionsaleam@gmail.com](mailto:globalminingsolutionsaleam@gmail.com)



R.Sathish,  
S/o. Ramoorthy,  
No.236, Kidangu Ramapuram Village,  
Pogalur Post, Peranampattu Taluk,  
Vellore District.



**CONSENT LETTER FROM THE APPLICANT**

The Mining Plan in respect of **Rough Stone** quarry over an extent of 2.02.4Hectares of Government land in S.F.No.208 (Part-8) of Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State has been prepared by

**C.Natarajan, M.Sc., M.Phil.,  
Qualified Person**

I request to the Assistant Director, Department of Geology and Mining, Vellore District to make further correspondence regarding modifications of the Mining Plan with the said Qualified Person on this following address.

**C.Natarajan, M.Sc., M.Phil.,  
Qualified Person**

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

PLOT No. 6, SF No. 13/2, A2, Vs City, RC Chettypatty,

Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455

NABET ACCREDITATION NO – NABET/EIA/2326/IA 0110

CONTACT: 97502 23535, 94446 54520

I hereby undertake that all modifications so made in the Mining Plan by the Qualified Person may be deemed to have been made with my knowledge and consent and shall be acceptable to me and building on me in all respects.

Signature of the Applicant

  
R.Sathish

Place: Vellore

Date: .05.2025



R.Sathish,  
S/o. Ramoorthy,  
No.236, Kidangu Ramapuram Village,  
Pogalur Post, Peranampattu Taluk,  
Vellore District.

**DECLARATION**

The Mining Plan in respect of **Rough Stone** quarry over an extent of 2.02.4 Hectares of Government land in S.F.No.208 (Part-8) of Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State has been prepared with my consultation and I have understood the contents and agree to implement the same in accordance with the Mining Laws.

Signature of the Applicant

*R. Sathish*

R.Sathish

Place: Vellore

Date: .05.2025



**C.Natarajan, M.Sc., M.Phil.,**

**Qualified Person**

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

PLOT No. 6, SF No. 13/2, A2, Vs City, RC Chettypatty,

Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455

NABET ACCREDITATION NO – NABET/EIA/2326/IA 0110

CONTACT: 97502 23535, 94446 54520

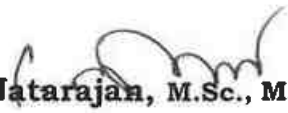
### CERTIFICATE

This is to certify that, the provisions of Minor Minerals Conservation and Development Rules, 2010 (MMCDR) have been observed in the Mining Plan for the grant of **Rough Stone** quarry lease over an extent of 2.02.4 Hectares of Government land in S.F.No.208 (Part-8) of Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State applied by Thiru.R.Sathish, for fresh quarry lease.

Wherever specific permission / exemptions / relaxations or approvals are required, the applicant will approach the concerned authorities of State and Central Governments for granting such permissions etc.

Certified

Signature of Qualified Person.

  
**C.Natarajan, M.Sc., M.Phil.,**

**Qualified Person**

**C.NATARAJAN M.Sc., M.Phil.,**

**Qualified Person**

Place: Salem

Date: .05.2025



**C.Natarajan, M.Sc., M.Phil.,**

**Qualified Person**

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

PLOT No. 6, SF No. 13/2, A2, Vs City, RC Chettypatty,

Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455

NABET ACCREDITATION NO – NABET/EIA/2326/IA 0110

CONTACT: 97502 23535, 94446 54520

### CERTIFICATE

Certified that, in preparation of Mining Plan for **Rough Stone** quarry over an extent of 2.02.4 Hectares of Government land in S.F.No.208 (Part-8) of Paravakkal Village, Pernampattu Taluk, Vellore District, Tamil Nadu State for Thiru.R.Sathish, covers all the provisions of Mines Act, Rules and Regulations etc. made there under and whenever specific permission are required, the applicant will approach the Director General of Mines Safety, Chennai. The standards prescribed by DGMS in respect of Mines Health will be strictly implemented.

Certified

Signature of Qualified Person.

  
**C.Natarajan, M.Sc., M.Phil.,**

**Qualified Person**

Place: Salem

Date: .05.2025

**C.NATARAJAN M.Sc.,M.Phil.,**  
**Qualified Person**





## **CERTIFICATE**

Certified that I, C.Natarajan, M/s. GLOBAL MINING SOLUTIONS (NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT) Plot No. 6, SF No. 13/2, A2, Vs City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamil Nadu - 636 455 NABET ACCREDITATION NO - NABET/EIA/2326/IA 0110. I am a Post graduate in Geology (M.Sc., Geology) from Annamalai university and more than five years of experience in mining Field.

Rule 15(1)(a) and (b) of Minerals (Other than Atomic, Hydro Carbons Energy Minerals) concession Rules 2016 stipulates the eligibility for preparing Mining Plans as *"(1)(a) a post graduate degree in Geology granted by a university established"* and *(1)(b) "Professional experience of five years of working in a supervisory capacity in the field of mining after obtaining the degree"*. Since my qualification and experience are satisfied the Rule (1)(a) and (1)(b) of 15 of the Said Rules, I am eligible to prepare Mining Plans for both Major and Minor Minerals.

Accordingly I prepared this Mining Plan in respect of Rough Stone quarry lease applied for an extent of 2.02.4Ha of (Government land) in S.F.No.208 (Part-8) of Paravakkal Village, Pernampattu Taluk, Vellore District, by Thiru.R.Sathish, for a period of ten years. Since the Mining Plan is prepared as per the provisions contained in Rule 15(1) (a) and (b) of Minerals (Other than Atomic, Hydro Carbons Energy Minerals) concession Rules 2016, the same may be approved by the Competent Authority.

  
**C.Natarajan, M.Sc., M.Phil.,**

**Qualified Person**

**C.NATARAJAN M.Sc.,M.Phil.,**

**Qualified Person**

Place: Salem

Date: .05.2025

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**LIST OF PLATES**

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## MINING PLAN FOR MINOR MINERALS

### ROUGH STONE

Over an extent of 2.02.4hectares of Government land in S.F.No. 208 (Part-8)  
of Paravakkal Village, Peranampattu Taluk, Vellore District,  
Tamil Nadu State.

(PREPARED UNDER RULE 8, 41 and 42 OF TNMMCR 1959)

#### **1.0 Introduction and Executive Summary:**

1. The present Mining Plan is prepared for Thiru.R.Sathish, S/o. Ramoorthy, residing No.236, Kidangu Ramapuram Village, Pogalur Post, Peranampattu Taluk, Vellore District.
2. The application was processed by the Assistant Director, Department of Geology and Mining, Vellore, and passed an order vide Rc.No.441/2024(Kanimam) dated .05.2025. directing the applicant to produce approved Mining Plan under Rule 41(5) of the Tamil Nadu Minor Mineral Concession Rules, 1959 and Environmental Clearance Certificate under Rule 42 from the State Level Environmental Impact Assessment Authority (SEIAA) for the grant of quarry lease to quarry Rough Stone over an extent of 2.02.4hectares of Government lands in S.F.No. 208 (Part-8) of Paravakkal Village, Peranampattu Taluk, Vellore District of Tamil Nadu State for a period of ten years.
3. Accordingly, Mining Plan is prepared under the provisions of rule 8, 41 and 42 as per the amendments under Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating following the conditions imposed in the precise area communication letter.
  - a) A safety distance of 7.5m for adjoining patta lands and 10m should be provided for poramboke lands while quarrying operation.
  - b) A safety distance of 50m should be provided to the permanent structure (Water bodies, Highways, Railway tracks) while quarrying operation.
  - c) No hindrance shall be caused to the adjoining agriculture land and public while carrying out quarrying operations.



- d) The applicant should use jackhammers and mild explosives during blasting in the quarry.
  - e) The applicant should pay seigniorage fee as per Tamil Nadu Minor Mineral Concession Rules – 1959 Appendix-II.
  - f) A safety distance of 10m should be provided to the village road and cart tracks while quarrying operation.
  - g) A safety distance of 50m should be provided to the Electrical lines/ Electrical Poles, Water bodies, National Highways, Railway tracks, Temples, Buildings while quarrying operation.
  - h) A safety distance of 300m should be provided to the Habitations and Archeological / Historical Monuments while quarrying operation.
4. Geological Resources is estimated at 18,80,340Ts of Rough stone and 46,842Ts of Topsoil and Mineable Reserves is estimated at 6,67,315Ts of Rough Stone and 34,216Ts of Topsoil after leaving necessary safety distance from the lease boundary as indicated in the precise area letter and relevant mining laws in force.
  5. The production Schedule is proposed production of 3,31,815Ts of Rough Stone and 34,216Ts of Topsoil for the period of first five years upto a depth of 46m above ground level and remaining quantity of 3,35,500Ts of Rough Stone will be proposed for the period of second five years.
  6. The applicant ensured that, child labours under 18 years of age will not be engaged for quarrying operation.
  7. The applicant ensure that will engage should have valid certified persons (Mines Manager, Foreman, Mate) during quarrying operation.
  8. Environmental parameters,
    - i) The area does not attract the Forest Conservation Act, 1980 as there is no forest around 1.2Km radius.
    - ii) There is no interstate boundary around 10kms radius.
    - iii) There is no wild life animal sanctuary within 10Kms radius from the project site area under the Wildlife (Protection) Act, 1972.

Therefore the project seeks clearance only from State Level Environmental Impact Assessment Authority (SEIAA).



9. Environmental measures to be adopted shall be,

- i) Dust Control at source while drilling and blasting,
- ii) Dust suppression at loading point and transport haul roads,
- iii) Noise Control in blasting, control of fly rock missiles and vibration by doing peak particle velocity with in standard as prescribed by the DGMS and MOEF.
- iv) Unnecessary land degradation should be avoided or damaged land should be reclaimed or rehabilitated.
- v) Avoid uneven rat hole mining and follow scientific and systematic mining by safe bench system of open cast mining.
- vi) Mining near major fracture zones if any should be avoided to control ground water fluctuation in the adjacent agricultural lands.
- vii) Emission test of vehicles should be in tack to maintain minimum emission level of flue gases.
- viii) Noise level should not exceed 80db and the vehicles should use only permitted Air Horn while on road near residential areas.
- ix) Safety zones as prescribed by the Department of Geology and Mining from adjacent infrastructures should be strictly adhere to.
- x) And any other conditions as stipulated by the concerned authorities should be followed to protect the environment.



### **EXECUTIVE SUMMARY:**

|    |                                                                                                              |                 |                                                                                                                                    |
|----|--------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------|
| a. | Name of the Village Panchayat                                                                                | :               | Paravakkal                                                                                                                         |
| b. | Name of the Panchayat Union                                                                                  | :               | Peranampattu                                                                                                                       |
| c. | The proposed total Minable Reserves                                                                          | :               | 6,67,315Ts of Rough Stone<br>34,216Ts of Topsoil                                                                                   |
| d. | The proposed quantity of reserves (level of production) for Five years to be mined is (Recoverable reserves) | :               | 3,31,815Ts of Rough Stone<br>34,216Ts of Topsoil                                                                                   |
| e. | Total extent of the area                                                                                     | :               | 2.02.4Ha                                                                                                                           |
| f. | Proposed Period of mining                                                                                    | :               | Five Years                                                                                                                         |
| g. | Existing depth                                                                                               | :               | It is fresh quarry lease applied area                                                                                              |
| h. | Proposed Depth of mining                                                                                     | :               | 46m (above ground level) for the proposed mining plan.                                                                             |
| i. | Method of mining/level of mechanization                                                                      | :               | Opencast, Semi-mechanized Mining with a bench height of 5m and bench width of 5m proposed.                                         |
| j. | Types of Machineries used in the quarry                                                                      | :               | Machineries like Tractor mounted compressor attached with Jack hammers, Excavators are proposed to deploy for quarrying operation. |
| k. | Cost of the Project<br>A. Fixed Assets Cost<br>B. Operational Cost<br>C. EMP Cost                            |                 | Rs.1,88,20,000/-<br>Rs. 51,50,000/-<br>Rs. 5,20,000/-<br>Total Project cost(A+B+C)= <b>Rs. 2,44,90,000/-</b>                       |
| l. | The area applied for lease is bounded by four corners and the coordinates are clearly marked in plate no II. |                 |                                                                                                                                    |
|    | Corners                                                                                                      | Co- ordinates   | Distance between the corners                                                                                                       |
|    |                                                                                                              | Latitude        | Longitude                                                                                                                          |
|    | 1                                                                                                            | 12° 54' 55.26"N | 78° 47' 45.09"E                                                                                                                    |
|    | 2                                                                                                            | 12° 55' 01.25"N | 78° 47' 45.04"E                                                                                                                    |
|    | 3                                                                                                            | 12° 55' 01.28"N | 78° 47' 48.69"E                                                                                                                    |
|    | 4                                                                                                            | 12° 54' 55.29"N | 78° 47' 48.74"E                                                                                                                    |
|    |                                                                                                              |                 | 1-2 = 184.0m<br>2-3 = 110.0m<br>3-4 = 184.0m<br>4-1 = 110.0m                                                                       |



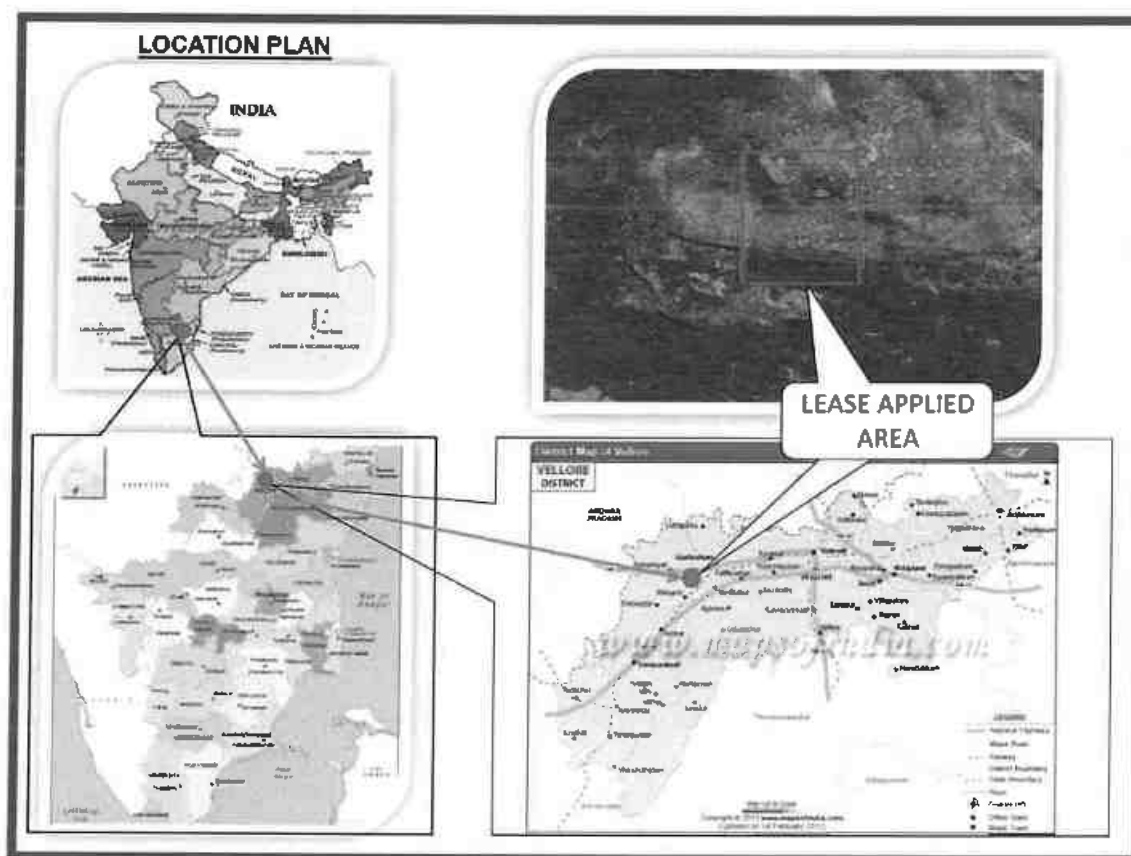
## 2.0 General Information:

|     |    |                                                             |   |                                                                                                                                                                                                                                                                                                                                                                                |
|-----|----|-------------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1 | a. | Name of the Applicant                                       | : | Thiru.R.Sathish,                                                                                                                                                                                                                                                                                                                                                               |
|     | b. | Address of the Applicant with phone No and e-mail id if any | : | S/o. Ramoorthy,<br>No.236, Kidangu Ramapuram Village,<br>Pogalur Post, Peranampattu Taluk,<br>Vellore District.<br>Pincode-635813.<br>Cell No.: 9677056680                                                                                                                                                                                                                     |
|     | c. | Status of the Applicant                                     | : | Individual                                                                                                                                                                                                                                                                                                                                                                     |
| 2.2 | a. | Mineral Which the applicant intends to mine                 | : | Rough Stone.                                                                                                                                                                                                                                                                                                                                                                   |
|     | b. | Precise area communication letter No.                       | : | Precise area communication letter received from the Assistant Director, department of Geology and Mining, Vellore vide Rc.No.441/2024 (Kanimam) dated .05.2025.                                                                                                                                                                                                                |
|     | c. | Period of permission / lease granted                        | : | The Assistant Director, Department of Geology and Mining, Vellore, has grant of lease Period for <b>ten years</b> .                                                                                                                                                                                                                                                            |
|     | d. | Name and Address of the QP preparing Mining Plan            | : | <b>C.Natarajan, M.Sc.,M.Phil.,<br/>Qualified Person</b><br><br><b>M/s. GLOBAL MINING SOLUTIONS</b><br>(NABET ACCREDITED & ISO 9001<br>CERTIFIED CONSULTANT)<br>PLOT No. 6, SF No. 13/2, A2, Vs City,<br>RC Chettypatty, Kottamettupatty,<br>Omalur, Salem,<br>Tamil Nadu - 636 455<br>NABET ACCREDITATION NO -<br>NABET/EIA/2326/IA 0110<br>Contact: 97502 23535, 94446 54520. |

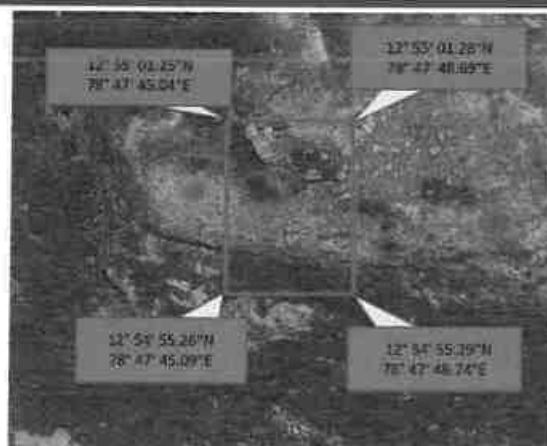


### 3.0 Location:

| S.No | Details of the Area:     |                                                                                         |
|------|--------------------------|-----------------------------------------------------------------------------------------|
| 1    | Corner Coordinates       | Latitude : 12°54'55.26"N to 12°55'01.28"N<br>Longitude : 78°47'45.04"E to 78°47'48.74"E |
| 2    | Toposheet Number         | 57 L/13                                                                                 |
| 3    | The altitude of the area | 510m (MSL)                                                                              |
| 4    | Extent                   | 2.02.4Ha                                                                                |
| 5    | Survey No                | 208 (Part-8)                                                                            |
| 6    | Village                  | Paravakkal                                                                              |
| 7    | Taluk                    | Peranampattu                                                                            |
| 8    | District                 | Vellore                                                                                 |
| 9    | State                    | Tamil Nadu                                                                              |



|    |                                                                                         |   |                                                                                                                                                                                                                                          |
|----|-----------------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a. | Classification of the Area (Ryotwari / poramboke / others)                              | : | Government poramboke land                                                                                                                                                                                                                |
| b. | Ownership / Occupancy of the Applied area (Surface rights)                              | : | It is Government land the applicant has obtained tender from the Government Please refer annexure no -I and IA.                                                                                                                          |
| c. | Toposheet No. with Latitude and Longitude                                               | : | Topo Sheet No: 57 L/13<br>Latitude : 12°54'55.26"N to 12°55'01.28"N<br>Longitude: 78°47'45.04"E to 78°47'48.74"E                                                                                                                         |
| d. | Existence of Public Road / Railway line if any nearby the area and approximate distance | : | There is an existing road from the area leads to Pangarishikuppam - Gidangu village road on south side of the area.<br><br>The Nearest Railway line is Vellore - Vaniyambadi line which is about 4.8Km on southeastern side of the area. |



SATELLITE IMAGERY OF THE LEASE APPLIED AREA



TOPOGRAPHICAL VIEW OF THE LEASE APPLIED AREA

**PART - A**

**4.0 Geology and Mineral Reserves:**

|     |    |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----|----|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.1 | a. | Topography                  | : <ul style="list-style-type: none"> <li>➤ The area applied for quarry lease is exhibits hilly terrain covered by covered by Topsoil formation. The massive Charnockite formation is noticed below 1m (Avg) Topsoil and sloping towards south side of the area, the altitude of the area is above 510m (maximum) from MSL.</li> <li>➤ No major river is found nearby the lease applied area.</li> <li>➤ Water table is found at a depth of 67m in summer and 64m in rainy seasons.</li> <li>➤ Temperature of the area is reported to be 18°C to a maximum of 42°C during summer.</li> <li>➤ Rainfall of this area is about 800mm to 900 mm during the both NE &amp; SW monsoons.</li> </ul> |
|     | b. | General Geology of the Area | : <p>The area is underlain by the wide range of metamorphic rocks of peninsular gneissic complex. These rocks are extensively weathered and overlain by the recent valley fills and alluvium at places. The geological formations found in the district are Archaean rocks like Gneisses, Granites, Charnockites basic granulites and calc-gneisses. The younger formations are Quartz veins and pegmatite.</p> <p>The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Charnockite is part of peninsular Gneisses, a high grade metamorphic rock.</p>                                               |



|            |    |                                                   | <p>The strike of the Charnockite formation is N45°E-S45°W with dipping towards SE.</p> <p>The general geological succession of the area is given as under.</p> <table><thead><tr><th><u>AGE</u></th><th></th><th><u>ROCK TYPE</u></th></tr></thead><tbody><tr><td>Recent</td><td>-</td><td>Topsoil</td></tr><tr><td></td><td></td><td>Unconformity</td></tr><tr><td>Archaean</td><td>-</td><td>Dolerite dyke</td></tr><tr><td></td><td></td><td>Charnockite.</td></tr><tr><td></td><td></td><td>Peninsular</td></tr><tr><td></td><td></td><td>Gneissic complex</td></tr><tr><td></td><td></td><td>and Calc Gneiss</td></tr></tbody></table> | <u>AGE</u> |  | <u>ROCK TYPE</u> | Recent | - | Topsoil |  |  | Unconformity | Archaean | - | Dolerite dyke |  |  | Charnockite. |  |  | Peninsular |  |  | Gneissic complex |  |  | and Calc Gneiss |
|------------|----|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--|------------------|--------|---|---------|--|--|--------------|----------|---|---------------|--|--|--------------|--|--|------------|--|--|------------------|--|--|-----------------|
| <u>AGE</u> |    | <u>ROCK TYPE</u>                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |  |                  |        |   |         |  |  |              |          |   |               |  |  |              |  |  |            |  |  |                  |  |  |                 |
| Recent     | -  | Topsoil                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |  |                  |        |   |         |  |  |              |          |   |               |  |  |              |  |  |            |  |  |                  |  |  |                 |
|            |    | Unconformity                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |  |                  |        |   |         |  |  |              |          |   |               |  |  |              |  |  |            |  |  |                  |  |  |                 |
| Archaean   | -  | Dolerite dyke                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |  |                  |        |   |         |  |  |              |          |   |               |  |  |              |  |  |            |  |  |                  |  |  |                 |
|            |    | Charnockite.                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |  |                  |        |   |         |  |  |              |          |   |               |  |  |              |  |  |            |  |  |                  |  |  |                 |
|            |    | Peninsular                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |  |                  |        |   |         |  |  |              |          |   |               |  |  |              |  |  |            |  |  |                  |  |  |                 |
|            |    | Gneissic complex                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |  |                  |        |   |         |  |  |              |          |   |               |  |  |              |  |  |            |  |  |                  |  |  |                 |
|            |    | and Calc Gneiss                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |  |                  |        |   |         |  |  |              |          |   |               |  |  |              |  |  |            |  |  |                  |  |  |                 |
| 4.2        |    | Details of Exploration already carried out if any | : No exploration was carried out, as the Rough stone formations are clearly visible from adjacent existing quarry pit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |  |                  |        |   |         |  |  |              |          |   |               |  |  |              |  |  |            |  |  |                  |  |  |                 |
| 4.3        | a. | Estimation of Reserves                            | : The Geological and Recoverable reserves are estimated by cross sectional method.<br>Two sections have been drawn, one section drawn length wise as (X-Y) and another one section drawn width wise as (A-B), to cover maximum area considered for lease.<br>The Plans and Sections have been drawn with a scale of 1:1000 and 1:500 respectively. Please refer plate No.III.                                                                                                                                                                                                                                                               |            |  |                  |        |   |         |  |  |              |          |   |               |  |  |              |  |  |            |  |  |                  |  |  |                 |

**a. Geological Resources**

The quarrying is restricted up to a depth of 46m (above ground level) only. Availability of resources is given below.

Table No-1

| Section | Topography               | Bench        | Length<br>in (m) | Width<br>in (m) | Depth<br>in (m) | Topsoil<br>m <sup>3</sup> | Rough<br>stone in<br>m <sup>3</sup> | Bulk<br>Density | Topsoil<br>in Ts | Geological<br>Resources of<br>Rough stone<br>in Ts |
|---------|--------------------------|--------------|------------------|-----------------|-----------------|---------------------------|-------------------------------------|-----------------|------------------|----------------------------------------------------|
| XY-AB   | Above<br>Ground<br>Level | I            | 211              | 111             | 1               | 23421                     | -                                   | 2               | 46842.00         | -                                                  |
|         |                          | II           | 88               | 84              | 5               | -                         | 36960                               | 2.75            | -                | 101640.00                                          |
|         |                          | III          | 105              | 110             | 5               | -                         | 57750                               | 2.75            | -                | 158812.50                                          |
|         |                          | IV           | 117              | 110             | 5               | -                         | 64350                               | 2.75            | -                | 176962.50                                          |
|         |                          | V            | 130              | 110             | 5               | -                         | 71500                               | 2.75            | -                | 196625.00                                          |
|         |                          | VI           | 142              | 110             | 5               | -                         | 78100                               | 2.75            | -                | 214775.00                                          |
|         |                          | VII          | 154              | 110             | 5               | -                         | 84700                               | 2.75            | -                | 232925.00                                          |
|         |                          | VIII         | 166              | 110             | 5               | -                         | 91300                               | 2.75            | -                | 251075.00                                          |
|         |                          | IX           | 178              | 110             | 5               | -                         | 97900                               | 2.75            | -                | 269225.00                                          |
|         |                          | X            | 184              | 110             | 5               | -                         | 101200                              | 2.75            | -                | 278300.00                                          |
|         |                          | <b>Total</b> |                  |                 |                 | <b>23421</b>              | <b>683760</b>                       | <b>-</b>        | <b>46842.00</b>  | <b>1880340.00</b>                                  |

The Geological Resources of Rough stone : 18,80,340Ts

Topsoil : 46,842Ts

**b. Mineable Reserve**

The mineable reserve calculated by deducting 10m safety distance and bench loss.

Table No-2

| Section | Topography               | Bench | Length<br>in (m) | Width<br>in (m) | Depth<br>in (m) | Topsoil<br>in m <sup>3</sup> | Rough<br>stone in<br>m <sup>3</sup> | Bulk<br>Density | Topsoil<br>in Ts | Mineable<br>Reserves of<br>Rough<br>stone in Ts |
|---------|--------------------------|-------|------------------|-----------------|-----------------|------------------------------|-------------------------------------|-----------------|------------------|-------------------------------------------------|
| XY-AB   | Above<br>Ground<br>Level | I     | 188              | 91              | 1               | 17108                        | -                                   | 2               | 34216.00         | -                                               |
|         |                          | II    | 78               | 74              | 5               | -                            | 28860                               | 2.75            | -                | 79365.00                                        |
|         |                          | III   | 90               | 85              | 5               | -                            | 38250                               | 2.75            | -                | 105187.50                                       |
|         |                          | IV    | 97               | 75              | 5               | -                            | 36375                               | 2.75            | -                | 100031.25                                       |
|         |                          | V     | 105              | 65              | 5               | -                            | 34125                               | 2.75            | -                | 93843.75                                        |
|         |                          | VI    | 112              | 55              | 5               | -                            | 30800                               | 2.75            | -                | 84700.00                                        |
|         |                          | VII   | 119              | 45              | 5               | -                            | 26775                               | 2.75            | -                | 73631.25                                        |
|         |                          | VIII  | 126              | 35              | 5               | -                            | 22050                               | 2.75            | -                | 60637.50                                        |
|         |                          | IX    | 129              | 25              | 5               | -                            | 16125                               | 2.75            | -                | 44343.75                                        |
|         |                          | X     | 124              | 15              | 5               | -                            | 9300                                | 2.75            | -                | 25575.00                                        |
| Total   |                          |       |                  |                 |                 | 17108                        | 242660                              | -               | 34216.00         | 667315.00                                       |

The mineable reserve is computed as 6,67,315Ts of Rough stone and 34,216Ts of Topsoil upto a depth of 46m (above ground level) only.

|                    |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>5.0 Mining:</b> |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 5.1                | Method of Mining                                                           | :<br>1. Opencast method of semi mechanized mining with 5.0m height 5m width the bench.<br>2. However, as far as the quarrying of Rough stone is concerned, observance of the provisions of Regulation 106(2) (b) as above is seldom[possible due to various inherent petrogenetic factors coupled with mining difficulties. Hence it is proposed to obtain relaxation to the provisions of the above regulation from the Director of mines safety for which necessary provision is available with the regulation 106 (2) (b) of MMR-1961, under Mine Act-1952.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 5.2                | Mode of Working                                                            | :<br>The rough stone is proposed to quarry 5m bench height, 5m width with conventional opencast semi-Mechanized method.<br>The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, Loading and transportation of Rough stone to the needy crusher/other buyers. The production of Rough stone in this quarry involves the following method which is typical for Rough Stone quarrying in contrast to other major mineral mining.<br>Splitting of rock mass of considerable volume from the parent rock mass by jackhammer drilling and blasting, hydraulic excavators are used for loading the Rough Stone from pithead to the needy crusher/other buyers.<br>Occasionally hydraulic excavators are attached with rock breakers for fragmentation to avoid secondary blasting. The primary boulders thus splitted are removed from the pits by excavators and further made to smaller sizes by rock breakers attached in excavators. It is a conventional opencast semi mechanized method of mining. |
| 5.3                | Proposed bench height & Width                                              | : Quarrying of Rough Stone is proposed bench height of 5m and bench width of 5m.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5.4                | Details of Overburden / Mineral Production proposed for the first 5 years. | : There is overburden in the form of topsoil, after excavation of topsoil will be utilized for afforestation purpose. The excavated rough stone will be directly loaded into tipper to the needy crusher/other buyers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**The Yearwise Production and Development Table**

Table No -3

| Year | Section | Topography               | Bench              | Length<br>in (m) | Width<br>in (m) | Depth<br>in (m) | Topsoil<br>in m <sup>3</sup> | Rough<br>stone in<br>m <sup>3</sup> | Bulk<br>Density | Topsoil<br>in Ts | Mineable<br>Reserves of<br>Rough<br>stone in Ts |
|------|---------|--------------------------|--------------------|------------------|-----------------|-----------------|------------------------------|-------------------------------------|-----------------|------------------|-------------------------------------------------|
| I    | XY-AB   | Above<br>Ground<br>Level | I                  | 188              | 91              | 1               | 17108                        | -                                   | 2               | 34216.00         |                                                 |
|      |         |                          | II                 | 39               | 74              | 5               | -                            | 14430                               | 2.75            | -                | 39682.50                                        |
|      |         |                          | <b>Total</b>       |                  |                 |                 | -                            | <b>14430</b>                        | -               | -                | <b>39682.50</b>                                 |
| II   | XY-AB   | Above<br>Ground<br>Level | II                 | 39               | 74              | 5               | -                            | 14430                               | 2.75            | -                | 39682.50                                        |
|      |         |                          | <b>Total</b>       |                  |                 |                 | -                            | <b>14430</b>                        | -               | -                | <b>39682.50</b>                                 |
| III  | XY-AB   | Above<br>Ground<br>Level | III                | 29               | 85              | 5               | -                            | 12325                               | 2.75            | -                | 33893.75                                        |
|      |         |                          | IV                 | 36               | 75              | 5               | -                            | 13500                               | 2.75            | -                | 37125.00                                        |
|      |         |                          | V                  | 15               | 65              | 5               | -                            | 4875                                | 2.75            | -                | 13406.25                                        |
|      |         |                          | <b>Total</b>       |                  |                 |                 | -                            | <b>30700</b>                        | -               | -                | <b>84425.00</b>                                 |
| IV   | XY-AB   | Above<br>Ground<br>Level | V                  | 29               | 65              | 5               | -                            | 9425                                | 2.75            | -                | 25918.75                                        |
|      |         |                          | VI                 | 51               | 55              | 5               | -                            | 14025                               | 2.75            | -                | 38568.75                                        |
|      |         |                          | VII                | 31               | 45              | 5               | -                            | 6975                                | 2.75            | -                | 19181.25                                        |
|      |         |                          | <b>Total</b>       |                  |                 |                 | -                            | <b>30425</b>                        | -               | -                | <b>83668.75</b>                                 |
| V    | XY-AB   | Above<br>Ground<br>Level | VII                | 27               | 45              | 5               | -                            | 6075                                | 2.75            | -                | 16706.25                                        |
|      |         |                          | VIII               | 65               | 35              | 5               | -                            | 11375                               | 2.75            | -                | 31281.25                                        |
|      |         |                          | IX                 | 68               | 25              | 5               | -                            | 8500                                | 2.75            | -                | 23375.00                                        |
|      |         |                          | X                  | 63               | 15              | 5               | -                            | 4725                                | 2.75            | -                | 12993.75                                        |
|      |         |                          | <b>Total</b>       |                  |                 |                 | -                            | <b>30675</b>                        | -               | -                | <b>84356.25</b>                                 |
|      |         |                          | <b>Grand total</b> |                  |                 |                 | <b>17108</b>                 | <b>120660</b>                       | -               | <b>34216.00</b>  | <b>331815.00</b>                                |

The applicant has proposed to carry out 3,31,815Ts of Rough stone and 34,216Ts of Topsoil upto a depth of 46m (above ground level) for the period of first five years and remaining quantity of 3,35,500Ts of Rough Stone will be proposed for the period of second five years.







**The proposed tentative yearwise production for 6<sup>th</sup> to 10<sup>th</sup> year is given below**

**Table No-4**

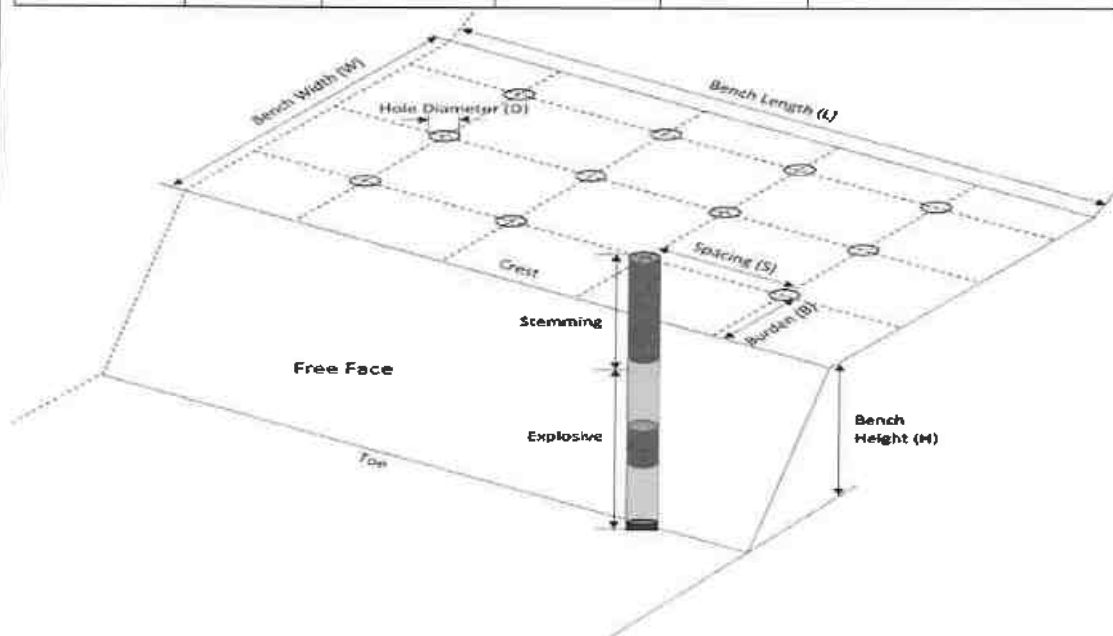
| Year        | Section   | Topography               | Bench | Length<br>in (m) | Width<br>in (m) | Depth<br>in (m) | Rough<br>stone in<br>m³ | Bulk<br>density | Mineable<br>Reserves of<br>Rough stone<br>in Ts |
|-------------|-----------|--------------------------|-------|------------------|-----------------|-----------------|-------------------------|-----------------|-------------------------------------------------|
| VI          | XY-<br>AB | Above<br>Ground<br>Level | III   | 56               | 85              | 5               | 23800                   | 2.75            | 65450.00                                        |
| Total       |           |                          |       |                  |                 |                 | 23800                   | -               | 65450.00                                        |
| VII         | XY-<br>AB | Above<br>Ground<br>Level | III   | 5                | 85              | 5               | 2125                    | 2.75            | 5843.75                                         |
|             |           |                          | IV    | 61               | 75              | 5               | 22875                   | 2.75            | 62906.25                                        |
| Total       |           |                          |       |                  |                 |                 | 25000                   | -               | 68750.00                                        |
| VIII        | XY-<br>AB | Above<br>Ground<br>Level | V     | 61               | 65              | 5               | 19825                   | 2.75            | 54518.75                                        |
|             |           |                          | VI    | 17               | 55              | 5               | 4675                    | 2.75            | 12856.25                                        |
| Total       |           |                          |       |                  |                 |                 | 24500                   | -               | 67375.00                                        |
| IX          | XY-<br>AB | Above<br>Ground<br>Level | VI    | 44               | 55              | 5               | 12100                   | 2.75            | 33275.00                                        |
|             |           |                          | VII   | 55               | 45              | 5               | 12375                   | 2.75            | 34031.25                                        |
| Total       |           |                          |       |                  |                 |                 | 24475                   | -               | 67306.25                                        |
| X           | XY-<br>AB | Above<br>Ground<br>Level | VII   | 6                | 45              | 5               | 1350                    | 2.75            | 3712.50                                         |
|             |           |                          | VIII  | 61               | 35              | 5               | 10675                   | 2.75            | 29356.25                                        |
|             |           |                          | IX    | 61               | 25              | 5               | 7625                    | 2.75            | 20968.75                                        |
|             |           |                          | X     | 61               | 15              | 5               | 4575                    | 2.75            | 12581.25                                        |
| Total       |           |                          |       |                  |                 |                 | 24225                   | -               | 66618.75                                        |
| Grand Total |           |                          |       |                  |                 |                 | 122000                  | -               | 335500.00                                       |

| 5.5                                                  | Machineries to be used |                                                                  |                          |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |             |                |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
|------------------------------------------------------|------------------------|------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------|----------------|------------------------------------------------------|--|--|--|--------|---------------------|--------------------|------------------|---|-----|----|--------------------------|------------------------------------------------|--|--|--|--------|---------------------|--------------------|------------------|---|-----|----|--------------------------|
|                                                      | a.                     | Drilling                                                         | :                        | It is proposed to use following machineries for quarrying rough stone                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |             |                |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
|                                                      |                        | S.No                                                             | Type                     | Nos                                                                                                                                              | Dia Hole mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Size Capacity | Make        | Motive power   |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
|                                                      |                        | 1                                                                | Jack hammer              | 2                                                                                                                                                | 32                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1.2m to 6m    | Atlas Copco | Compressed air |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
|                                                      |                        | 2                                                                | Compressor               | 1                                                                                                                                                | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -             | Atlas Copco | Diesel Drive   |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
|                                                      | b.                     | Loading                                                          |                          | :                                                                                                                                                | Excavator of 0.90m <sup>3</sup> bucket capacity (with Rock breaker attachment) (1No).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |               |             |                |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
|                                                      | c.                     | Transportation                                                   |                          | :                                                                                                                                                | Tipper 3Nos (5/10Ts) capacity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |             |                |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
| 5.6                                                  |                        | Disposal of Overburden                                           | :                        | The overburden in the form of topsoil, after excavation topsoil will be preserved along the boundary barrier utilized for afforestation purpose. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |             |                |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
| 5.7                                                  |                        | Brief Note on Conceptual Mining Plan for the entire lease period |                          | :                                                                                                                                                | <p>Conceptual Mining Plan is prepared with an object of ten years of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructures etc.</p> <p>Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc.</p> <p>Ultimate Pit dimension is given as under,</p> <table><tr><th colspan="4">Ultimate Pit dimension (M) end of Mining plan Period</th></tr><tr><th>Pit No</th><th>Length (max) in (m)</th><th>Width (Avg) in (m)</th><th>Depth(max) in(m)</th></tr><tr><td>I</td><td>164</td><td>90</td><td>46m (above ground level)</td></tr></table> <table><tr><th colspan="4">Ultimate pit dimension End of the lease period</th></tr><tr><th>Pit No</th><th>Length (max) in (m)</th><th>Width (Avg) in (m)</th><th>Depth(max) in(m)</th></tr><tr><td>I</td><td>164</td><td>90</td><td>46m (above ground level)</td></tr></table> <p>Afforestation has been proposed on all along the boundary barrier by planting trees.</p> <p>All the baseline information studies like Air Quality monitoring, Noise and Vibration monitoring, Water Analysis studies will be carried out every year as per the MOEF norms.</p> |               |             |                | Ultimate Pit dimension (M) end of Mining plan Period |  |  |  | Pit No | Length (max) in (m) | Width (Avg) in (m) | Depth(max) in(m) | I | 164 | 90 | 46m (above ground level) | Ultimate pit dimension End of the lease period |  |  |  | Pit No | Length (max) in (m) | Width (Avg) in (m) | Depth(max) in(m) | I | 164 | 90 | 46m (above ground level) |
| Ultimate Pit dimension (M) end of Mining plan Period |                        |                                                                  |                          |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |             |                |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
| Pit No                                               | Length (max) in (m)    | Width (Avg) in (m)                                               | Depth(max) in(m)         |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |             |                |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
| I                                                    | 164                    | 90                                                               | 46m (above ground level) |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |             |                |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
| Ultimate pit dimension End of the lease period       |                        |                                                                  |                          |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |             |                |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
| Pit No                                               | Length (max) in (m)    | Width (Avg) in (m)                                               | Depth(max) in(m)         |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |             |                |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |
| I                                                    | 164                    | 90                                                               | 46m (above ground level) |                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |             |                |                                                      |  |  |  |        |                     |                    |                  |   |     |    |                          |                                                |  |  |  |        |                     |                    |                  |   |     |    |                          |

## 6.0 Blasting:

- 6.1 Blasting Pattern : The massive formation shall be broken into pieces of portable size by drilling and blasting using jack hammers and shot hole blasting. Powder factor of explosives for breaking such hard rock shall be in the order of 6 to 7 Tonnes per K.g of explosives. Blasting parameters are as follows.

| Diameter of the hole | Spacing | Depth     | Burden for hole | Pattern of hole | Inclination of hole     |
|----------------------|---------|-----------|-----------------|-----------------|-------------------------|
| 32-36mm              | 0.6m    | 1 to 1.5m | 0.6m            | Zig Zag         | 70° from the horizontal |



- 6.2 Types of Explosives : Small dia, 25mm slurry explosive are proposed to be used for shattering and heaving effect for removal and winning of Rough stone. No deep hole drilling or primary blasting is proposed.



|                           |                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |      |               |                        |                          |                          |               |         |               |           |
|---------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------|---------------|------------------------|--------------------------|--------------------------|---------------|---------|---------------|-----------|
| 6.3                       | Measures proposed to minimize ground vibration due to blasting                   | <p>➤ Controlled blasting measures will be adopted for minimizing ground vibration and fly rock.</p> <p>➤ Shallow depths jackhammer drilling and blasting is proposed to be carried out with minimum use of explosive mainly to give shattering effect in rough stone for easy excavation and to control fly rock.</p> <table border="1"> <tr> <td>Number of holes</td> <td>: 74</td> </tr> <tr> <td>Powder factor</td> <td>: 6Ts/Kg of explosives</td> </tr> <tr> <td>Total explosive required</td> <td>: 37Kg slurry explosives</td> </tr> <tr> <td>Charge / hole</td> <td>: 0.5Kg</td> </tr> <tr> <td>Blasting time</td> <td>: 12-2 Pm</td> </tr> </table> | Number of holes | : 74 | Powder factor | : 6Ts/Kg of explosives | Total explosive required | : 37Kg slurry explosives | Charge / hole | : 0.5Kg | Blasting time | : 12-2 Pm |
| Number of holes           | : 74                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |      |               |                        |                          |                          |               |         |               |           |
| Powder factor             | : 6Ts/Kg of explosives                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |      |               |                        |                          |                          |               |         |               |           |
| Total explosive required  | : 37Kg slurry explosives                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |      |               |                        |                          |                          |               |         |               |           |
| Charge / hole             | : 0.5Kg                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |      |               |                        |                          |                          |               |         |               |           |
| Blasting time             | : 12-2 Pm                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |      |               |                        |                          |                          |               |         |               |           |
| 6.4                       | Storage of Explosives and safety measures to be taken while blasting.            | <p>➤ The applicant will engage an authorized explosive agency to carry out the small amount of blasting and it will be supervised by competent and statutory foreman/ mines manager.</p> <p>➤ <b><i>The applicant ensure that will appoint the Mate (Should have Valid Blaster Certificate) during Blasting Operation.</i></b></p>                                                                                                                                                                                                                                                                                                                           |                 |      |               |                        |                          |                          |               |         |               |           |
| <b>7.0 Mine Drainage:</b> |                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |      |               |                        |                          |                          |               |         |               |           |
| 7.1                       | Depth of Water table                                                             | <p>The ground water table is reported as 67m below ground level. In the proposed mining plan only 46m (above ground level) for the proposed mining plan period depth has been envisaged as workable depth for safe &amp; economic quarrying for the entire lease period. Hence the quarrying operation may not affect the ground water.</p>                                                                                                                                                                                                                                                                                                                  |                 |      |               |                        |                          |                          |               |         |               |           |
| 7.2                       | Arrangement and Places where the mine water is finally proposed to be discharged | <p>The ground water may not rise immediately in this type of mining. However, the rain water percolation and collection of water from the seepage shall be less than 300lpm and it shall be pumped about periodically by a stand by diesel powered Centrifugal pump motivated with 7.5H.P.Motor. The quality of water is potable and it is not contaminated with any hazardous things. Hence, water stored in the quarry pit will be pumped into the adjacent agricultural fields. Further the water stored in the old pit will also be used for plantation purposes</p>                                                                                     |                 |      |               |                        |                          |                          |               |         |               |           |



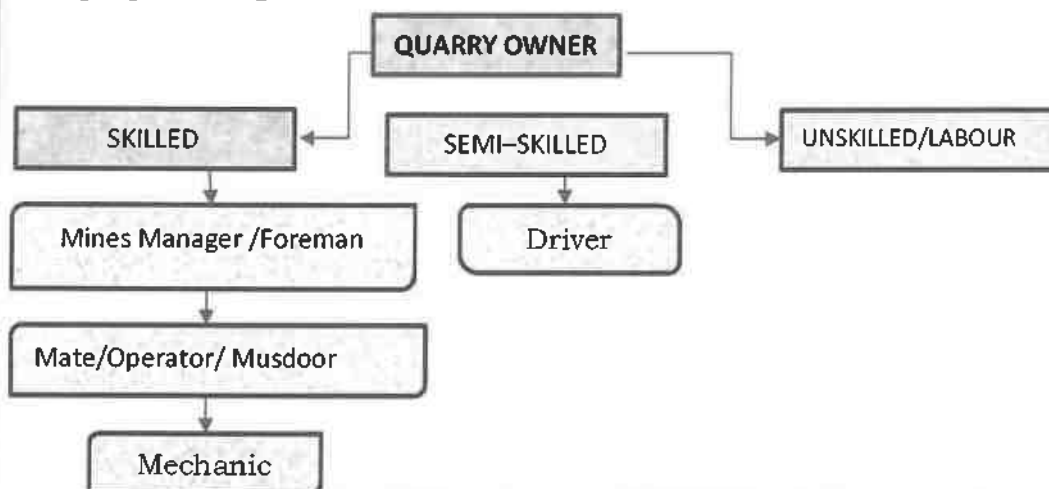
### 8.0 Other Permanent Structures:

|     |                                                                                                                                                                                                |   |                                                                                                                                                                                                   |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8.1 | Habitations / Village                                                                                                                                                                          | : | There are no habitations within a radius of 300m.                                                                                                                                                 |
| 8.2 | Power lines (HT/LT)                                                                                                                                                                            | : | There is no Power lines (HT/LT) within a radius of 50m.                                                                                                                                           |
| 8.3 | Water bodies (River, Pond, Lake, Odai, Channel etc)                                                                                                                                            | : | There is no Water bodies (River, Pond, Lake, Odai, Channel etc) within a radius of 500m.                                                                                                          |
| 8.4 | Archeological / Historical Monuments                                                                                                                                                           | : | There are no Archeological / Historical Monuments within a radius of 300m.                                                                                                                        |
| 8.5 | Road (NH, SH, Village Road etc)                                                                                                                                                                | : | The National Highway (NH-75) Vellore - Kolar is about 3.2km on northern side of the area.<br>The State Highway (SH-130) Vaniyambadi - Gudiyatham is about 4.1Km on southeastern side of the area. |
| 8.6 | Places of Worship                                                                                                                                                                              | : | There are no Places of Worship within a radius of 50m.                                                                                                                                            |
| 8.7 | Reserved Forest / Forest / Social Forest / Wild Life Sanctuary etc.,                                                                                                                           | : | There are no Reserved forest / Wild Life Sanctuary within a radius of 1Km.                                                                                                                        |
| 8.8 | Any Interstate Border, Protected areas under the Wild Life (Protection) Act, 1972, Critically Polluted Areas as Identified by Central Pollution Control Board and Notified Eco sensitive areas | : | There are No inter State border within a radius of 10kms.                                                                                                                                         |
| 8.9 | Any Other Structures                                                                                                                                                                           | : | Nil                                                                                                                                                                                               |

## 9.0 Employment Potential & Welfare Measures:

### 9.1 Employment Potential (Management & Supervisory personal)

#### The proposed organization chart



|         |              |                |       |
|---------|--------------|----------------|-------|
| 1.      | Skilled      | Mines Manager  | 1 No. |
|         |              | Foreman / Mate | 2 No. |
|         |              | Operator       | 6 No. |
|         |              | Mechanic       | 1 No. |
| 2.      | Semi-skilled | Driver         | 3 No. |
| 3.      | Unskilled    | Labours        | 12Nos |
| Total = |              |                | 25Nos |

Allowing 10% absentee, the no. of men of roll will be around 22.

The above man power is adequate to meet out the production schedule and the machinery strength envisaged in the mining plan and to comply the statutory provisions of Mines Safety Regulations.

- **It is been ensured that, child labours under 18 years of age will not be engaged for quarrying operation.**
- **Necessary life insurance policies will be taken by the applicant to all the employees up to the end of the lease period.**

### 9.2 Welfare Measures

|    |                     |   |                                                                                                                                                                                                                                                                                  |
|----|---------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a. | Drinking Water      | : | Packaged drinking water is available from the nearby approved water vendors in Paravakkal Village which is about 1.1 km on northwest side of the area.                                                                                                                           |
| b. | Sanitary facilities | : | Semi-permanent latrines & urinals shall be maintained at convenient places for use of labours as per the provisions of Rule (33) of the Mines Rules, 1960 separately for males and females. Washing facilities shall also be arranged as per rule (36) of the Mines Rules, 1960. |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |                                                                                                                                                                                                                                                                                                                                            |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| c. | First Aid Facility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | : | First aid kits are kept in Mines office room, in case of such eventualities the victim will be given first aid immediately at the site and injured person will be taken to the hospital. Hospital is available at distance of 7.2Km (NE) in Gudiyatham the competent and Statutory foreman/ permit manager will be in charge of first aid. |
| d. | Labour Health                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | : | As per Mines Rule, Periodic medical examination related to occupational health safety will be conducted to all the workers in applicant's own cost.                                                                                                                                                                                        |
| e. | Precautionary safety measures to the Labourers:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |                                                                                                                                                                                                                                                                                                                                            |
|    | <p>Safety provisions like helmet, goggles, safety shoes, Dust mask, Ear muffs etc., have to be provided as per the circulars and amendments made for Mine labours under the guidance of DGMS being a mechanized operation.</p> <p>Necessary training will be conducted once in a year to all the employees with the help of qualified and experienced officers to train about the safe and systematic quarrying operation.</p> <div style="display: flex; align-items: center;"> <div style="flex: 1;">  </div> <div style="flex: 1;">  </div> </div> |   |                                                                                                                                                                                                                                                                                                                                            |

**PART - B**

**10.0 Environmental Management Plan:**

| 10.1    | Existing Land Use Pattern | :                 | <p>1. The area exhibits hilly terrain covered by Chanockite formation.</p> <p>2. Quarrying operation is proposed up to a depth of 46m (above ground level) for the proposed mining plan period.</p> <p>3. Fluctuation of Water table in this area is in between 67m and 64m during a year.</p> <p>4. This region receives the average annual rainfall of 800mm to 900mm. The surrounding area is practiced by the seasonal cultivation.</p> <p>The existing land use pattern is given as under.</p> <p style="text-align: center;">Table No-5</p> <table border="1"> <thead> <tr> <th>Sl. No.</th><th>Land Use</th><th>Present Area (Ha)</th><th>Area in use during the quarrying period (Ha)</th></tr> </thead> <tbody> <tr> <td>1.</td><td>Quarrying Pit</td><td>Nil</td><td>1.47.6</td></tr> <tr> <td>2.</td><td>Infrastructure</td><td>Nil</td><td>0.01.0</td></tr> <tr> <td>3.</td><td>Roads</td><td>Nil</td><td>0.01.0</td></tr> <tr> <td>4.</td><td>Green Belt</td><td>Nil</td><td>0.52.8</td></tr> <tr> <td>5.</td><td>Unutilized</td><td>2.02.4</td><td>Nil</td></tr> <tr> <td></td><td>Total =</td><td>2.02.4</td><td>2.02.4</td></tr> </tbody> </table> | Sl. No. | Land Use | Present Area (Ha) | Area in use during the quarrying period (Ha) | 1. | Quarrying Pit | Nil | 1.47.6 | 2. | Infrastructure | Nil | 0.01.0 | 3. | Roads | Nil | 0.01.0 | 4. | Green Belt | Nil | 0.52.8 | 5. | Unutilized | 2.02.4 | Nil |  | Total = | 2.02.4 | 2.02.4 |
|---------|---------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------|-------------------|----------------------------------------------|----|---------------|-----|--------|----|----------------|-----|--------|----|-------|-----|--------|----|------------|-----|--------|----|------------|--------|-----|--|---------|--------|--------|
| Sl. No. | Land Use                  | Present Area (Ha) | Area in use during the quarrying period (Ha)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |          |                   |                                              |    |               |     |        |    |                |     |        |    |       |     |        |    |            |     |        |    |            |        |     |  |         |        |        |
| 1.      | Quarrying Pit             | Nil               | 1.47.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |          |                   |                                              |    |               |     |        |    |                |     |        |    |       |     |        |    |            |     |        |    |            |        |     |  |         |        |        |
| 2.      | Infrastructure            | Nil               | 0.01.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |          |                   |                                              |    |               |     |        |    |                |     |        |    |       |     |        |    |            |     |        |    |            |        |     |  |         |        |        |
| 3.      | Roads                     | Nil               | 0.01.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |          |                   |                                              |    |               |     |        |    |                |     |        |    |       |     |        |    |            |     |        |    |            |        |     |  |         |        |        |
| 4.      | Green Belt                | Nil               | 0.52.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |          |                   |                                              |    |               |     |        |    |                |     |        |    |       |     |        |    |            |     |        |    |            |        |     |  |         |        |        |
| 5.      | Unutilized                | 2.02.4            | Nil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |          |                   |                                              |    |               |     |        |    |                |     |        |    |       |     |        |    |            |     |        |    |            |        |     |  |         |        |        |
|         | Total =                   | 2.02.4            | 2.02.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |          |                   |                                              |    |               |     |        |    |                |     |        |    |       |     |        |    |            |     |        |    |            |        |     |  |         |        |        |
| 10.2    | Water Regime              | :                 | <p>Water table in this area is noticed at a depth of 67m and presently, in the proposed mining plan only 46m (above ground level) for the proposed mining plan period has been envisaged as workable depth for safe &amp; economic quarrying for the entire lease period. hence, it will not affect the ground water depletion of this area.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |          |                   |                                              |    |               |     |        |    |                |     |        |    |       |     |        |    |            |     |        |    |            |        |     |  |         |        |        |
| 10.3    | Flora and Fauna           | :                 | <p>Except acacia bushes, no other valuable trees are noticed in the applied area. Further, neither flora of botanical interest nor fauna of zoological interest is noticed in this area.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |          |                   |                                              |    |               |     |        |    |                |     |        |    |       |     |        |    |            |     |        |    |            |        |     |  |         |        |        |
| 10.4    | Climatic conditions       | :                 | <p>Generally subtropical climatic condition prevails throughout the year and there is no sharp variation in climate.</p> <p>This District receives rain both in south west and north east monsoon.</p> <p>The average rainfall is about 800mm to 900mm and the temperature ranges from 18°C during winter and to a maximum of 42°C during the summer.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |          |                   |                                              |    |               |     |        |    |                |     |        |    |       |     |        |    |            |     |        |    |            |        |     |  |         |        |        |

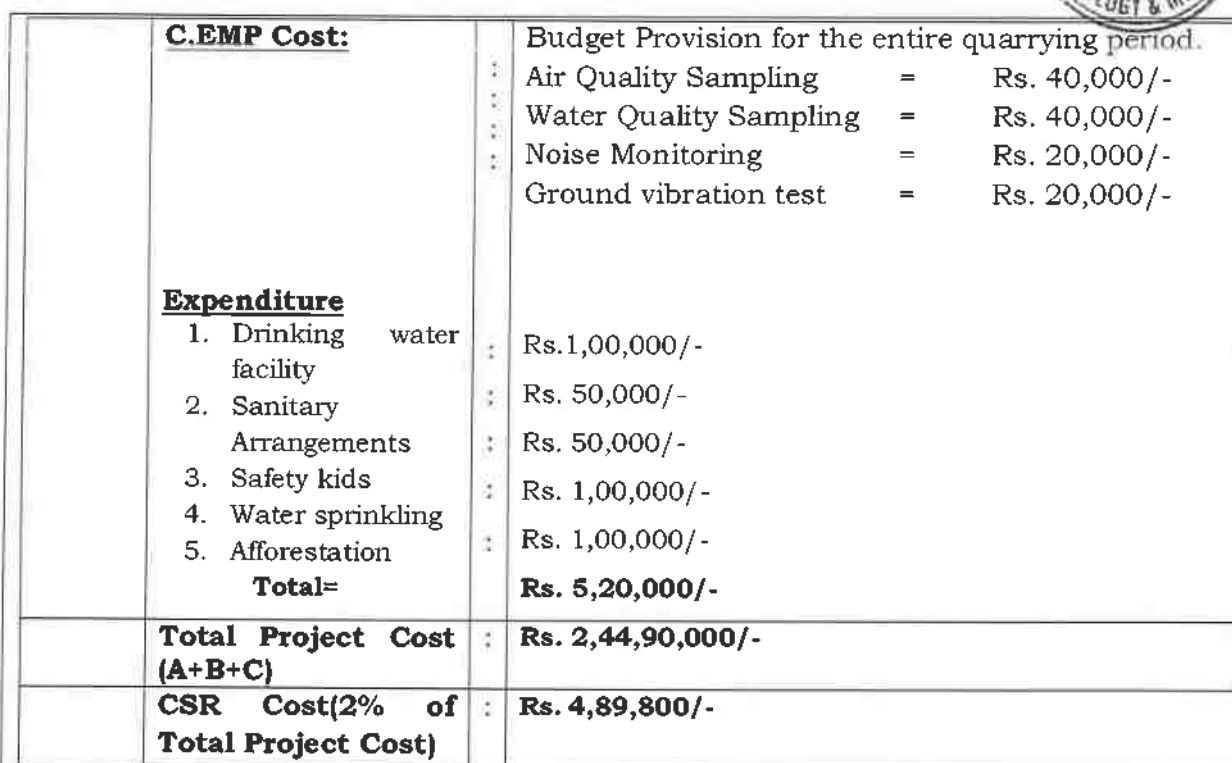




| 10.5  | Human Settlement                                                                                | : The nearest habitations with the population is given as under.<br><div>Table No-6</div> <table><tr><th>S. No</th><th>Name of the Village</th><th>Approximate distance &amp; Direction from lease applied area</th><th>Approximate population</th></tr><tr><td>1.</td><td>Rajakuppam</td><td>2.2km - NE</td><td>500</td></tr><tr><td>2.</td><td>Paravakkal</td><td>1.1km - NW</td><td>700</td></tr><tr><td>3.</td><td>Pangarishikuppam</td><td>1.8Km-SE</td><td>800</td></tr><tr><td>4.</td><td>Pogalur</td><td>1.7km-SW</td><td>600</td></tr></table> | S. No                  | Name of the Village | Approximate distance & Direction from lease applied area | Approximate population | 1. | Rajakuppam | 2.2km - NE | 500 | 2. | Paravakkal | 1.1km - NW | 700 | 3. | Pangarishikuppam | 1.8Km-SE | 800 | 4. | Pogalur | 1.7km-SW | 600 |
|-------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------|----------------------------------------------------------|------------------------|----|------------|------------|-----|----|------------|------------|-----|----|------------------|----------|-----|----|---------|----------|-----|
| S. No | Name of the Village                                                                             | Approximate distance & Direction from lease applied area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Approximate population |                     |                                                          |                        |    |            |            |     |    |            |            |     |    |                  |          |     |    |         |          |     |
| 1.    | Rajakuppam                                                                                      | 2.2km - NE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 500                    |                     |                                                          |                        |    |            |            |     |    |            |            |     |    |                  |          |     |    |         |          |     |
| 2.    | Paravakkal                                                                                      | 1.1km - NW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 700                    |                     |                                                          |                        |    |            |            |     |    |            |            |     |    |                  |          |     |    |         |          |     |
| 3.    | Pangarishikuppam                                                                                | 1.8Km-SE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 800                    |                     |                                                          |                        |    |            |            |     |    |            |            |     |    |                  |          |     |    |         |          |     |
| 4.    | Pogalur                                                                                         | 1.7km-SW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 600                    |                     |                                                          |                        |    |            |            |     |    |            |            |     |    |                  |          |     |    |         |          |     |
| 10.6  | Plan for Air, Dust Suppression                                                                  | : Air or dust expected to be generated from drilling process, hauling roads, places of excavation etc., will be suppressed by periodical wetting of land by water spraying. Wet drilling and dust extractor arrangements will be provided to drilling units so as to control raise of dust from the site of drilling. Operators, those exposed directly to such conditions will be provide such protective equipment like mask, ear plug, helmet, gloze etc., as per the Mines Act.                                                                     |                        |                     |                                                          |                        |    |            |            |     |    |            |            |     |    |                  |          |     |    |         |          |     |
| 10.7  | Plan for Noise Control                                                                          | : Quarrying of Rough Stone will be carried out by drilling and blasting by using low power explosives, and hence, noise will be very minimum. However, periodical noise level monitoring will be carried out to check the noise level in and around the quarry site. Nowhere the noise level should exceed the permissible limit of 80db during the quarry working hours.                                                                                                                                                                               |                        |                     |                                                          |                        |    |            |            |     |    |            |            |     |    |                  |          |     |    |         |          |     |
| 10.8  | Environmental Impact Assessment Statement<br>Describing Impact on mining on the next Five years | : The mining plan proposed is for a small production of Rough stone without involving deep hole drilling and heavy blasting. Such limited mining activity is not likely to cause any impact adversely on environment as far as pollution of air, water and noise is concerned, anyhow environmental impact studies will be conducted as per EIA notification issued by MOEF.                                                                                                                                                                            |                        |                     |                                                          |                        |    |            |            |     |    |            |            |     |    |                  |          |     |    |         |          |     |
| 10.9  | Proposal for Waste Management                                                                   | : There is no waste anticipated in this rough stone quarry operation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |                     |                                                          |                        |    |            |            |     |    |            |            |     |    |                  |          |     |    |         |          |     |



|       |                                                                                             |   |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------|---------------------------------------------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10.10 | Proposal of Reclamation of Land affected during mining activities and at the end of mining. | : | In the proposed mining plan 46m (above ground level) for the proposed mining plan period and has been envisaged as workable depth for safe & economic mining during the lease period. Hence, after quarry reaches ultimate pit limit (for this lease period) of 46m depth, fencing will be constructed around the quarried pits to prevent inherent entry of the public and cattle.                                                  |
| 10.11 | Program for Afforestation                                                                   | : | The 10m safety distance along the lease boundary has been identified to be utilized for afforestation. Appropriate native species of Neem/Pungan trees will be planted in the first year. Nearly 5280Sqm area is proposed to use under afforestation by planting 634nos of Neem/Pungan trees during first year with an anticipated survival rate of 80%. The Quarry landuse, layout and afforestation plan is shown in Plate No.III. |
| 10.12 | <b>Proposed Financial Estimate / Budget for (EMP) Environment Management</b>                |   |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|       | <b>A. Fixed Asset Cost:</b>                                                                 |   |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|       | 1. Land Cost (Tender amount)                                                                |   | Rs. 1,85,20,000                                                                                                                                                                                                                                                                                                                                                                                                                      |
|       | 2. First aid room and accessories                                                           |   | Rs. 1,00,000                                                                                                                                                                                                                                                                                                                                                                                                                         |
|       | 3. Labour Shed                                                                              |   | Rs. 1,00,000                                                                                                                                                                                                                                                                                                                                                                                                                         |
|       | 4. Sanitary Facility                                                                        |   | Rs. 1,00,000                                                                                                                                                                                                                                                                                                                                                                                                                         |
|       | <b>Total=</b>                                                                               |   | <b>Rs. 1,88,20,000/-</b>                                                                                                                                                                                                                                                                                                                                                                                                             |
|       | <b>B. Operational Cost:</b>                                                                 |   |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|       | 1. Machineries                                                                              | : | Rs.50,00,000-                                                                                                                                                                                                                                                                                                                                                                                                                        |
|       | 2. Fencing cost                                                                             | : | Rs. 1,50,000                                                                                                                                                                                                                                                                                                                                                                                                                         |
|       | <b>Total</b>                                                                                | : | <b>Rs.51,50,000/-</b>                                                                                                                                                                                                                                                                                                                                                                                                                |



|      |                                                                                                            |   |                                                                                                                                                                                                                                                                              |
|------|------------------------------------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11.1 | Steps proposed for phased restoration, reclamation of already mined out area.                              | : | There is no proposal for back filling, reclamation and rehabilitation. The quarried pits after the end of the life of lease will be fenced to prevent inherent entry of public and cattles.                                                                                  |
| 11.2 | Measures to be under taken on mine closure as per Act & Rules                                              | : | Measures will be taken as per the Acts and Rules. The quarried pit will be fenced by using Barbed wire fencing to prevent inherent entry of public and cattle.                                                                                                               |
| 11.3 | Mitigation measures to be undertaken for safety and restoration/ reclamation of the already mined out area | : | Mitigation measures: Drilling will be carried out by wet drilling mode to control the dust propagation into the air.<br><br>Blasting will be carried out on limited scale.<br><br>Mist Water spraying on haul road is proposed to prevent the dust propagation into the air. |



**12.0 Any Other Details Intend to Furnish by the Applicant:**

- (i) Permission will be obtained from the District Mines Office to extract the Rough Stone from the Boundary barriers and for slopes.
- (ii) Care and precautionary measures will be taken for the safety of workers as per Rules and Acts.
- (iii) The applicant will endeavor every attempt to quarry the Rough Stone economically without any wastage and to improve the environment and ecology.
- (iv) The Mining Plan is prepared by incorporating the conditions stipulated in the precise area communication issued and relevant mining laws in force.
- (v) Any violation pointed out by the inspecting authorities shall be rectified as per the guidelines of the Department.

Prepared by

  
C. Natarajan, M.Sc., M.Phil.,  
Qualified Person

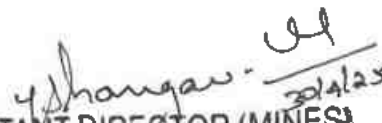
Place : Salem  
Date : .05.2025

C. NATARAJAN M.Sc., M.Phil.,  
Qualified Person

This Mining Plan is approved subject  
to the conditions stipulated in the  
Mining Plan approval

Letter No. Re NO 441/2024 (Mining)  
Dated. 30-04-2024

**This Mining Plan is approved as per the  
powers conferred under Rule 41 (2) of  
Tamil Nadu Minor Mineral Concession  
Rules 1959**

  
ASSISTANT DIRECTOR (MINES)  
VELLORE DISTRICT.





**PRECISE AREA COMMUNICATION LETTER**

பொருள்: கனிமங்களும் குவாரிகளும் - வேலூர் மாவட்டம் - சாதாரண கற்கள் - அரசு புறம்போக்கு நிலத்தில் அமைந்துள்ள புதிய கற்குவாரிகளை 1959-ம் ஆண்டு தமிழ்நாடு சிறுகனிம சலுகை விதிகள், விதி எண்.8-ன்படி மின்னணு பொதுஏலம் (E-Auction) முறையில் - பொது ஏலத்திற்கு கொண்டு வருவது - மாவட்ட அரசிதழ் சிறப்பு வெளியீடு செய்யப்பட்டது - பேர்ணாம்பட்டு வட்டம் - பரவக்கல் கிராமம் - அரசு புறம்போக்கு புலஎண்.208(பகுதி.8)-ல் 2.02.4 ஹெக்டேர் பரப்பு அரசு புறம்போக்கு புலத்திற்கு - மின்னணு ஏல விண்ணப்பங்கள் வரவேற்கப்பட்டது - மின்னணு ஏலம் நடத்தப்பட்டது - ரூ.1,86,20,000/-க்கு ஏலம் கோரிய திரு. சதீஷ் த/பெ.ராஜார்த்தி என்பவர் தகுதியான மற்றும் உயர்ந்தபட்ச ஏலதாரராக தேர்ந்தெடுக்கப்பட்டது - ஏலத் தொகையில் 10% மற்றும் 90% தொகை முழுவதும் அரசு கணக்கில் செலுத்தப்பட்டது - குவாரி அனுமதி வழங்குவது தொடர்பாக ஒப்புதல் பெறப்பட்ட சுரங்கத்திட்ட வரைவு அறிக்கை (Mining Plan) மற்றும் மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (SEIAA) தடையின்மைச்சான்று பெற்று சமர்ப்பிக்குமாறு தெரிவிப்பது - தொடர்பாக.

- பார்வை: 1.ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை கடிதம் நக.எண். 7232/MM.4/2023, நாள் 08.11.2023.
- 2.இவ்வலுவலக கடிதம் நக.எண்.250/2018(கனிமம்) நாள் 08.06.2022. 03.07.2022 மற்றும் 11.09.2024.(வருவாய் கோட்டாட்சியர், குடியாத்தம் அவர்களுக்கு முகவரிவிடப்பட்டது).
- 3.அரசாணை எண்(MS) 21, இயற்கை வளங்கள்(MMC.1)துறை நாள்.31.07.2024.
- 4.குடியாத்தம் வருவாய் கோட்டாட்சியர்(பொறுப்பு) (ம) உதவி ஆணையர் (கலால்) வேலூர் அவர்கள் கடிதம் நக.பி1/969/2024, நாள்.19.09.2024.
- 5.வேலூர் மாவட்ட அரசிதழ் சிறப்பு வெளியீடுஎண்.04, நாள்: 04.12.2024.
- 5.திரு.சதீஷ் த/பெ.ராஜார்த்தி மின்னணு விண்ணப்ப நாள்.20.12.2024.
- 7.நேரடி மற்றும் பொது மின்னணு ஏல நாள் 06.01.2025.
- 8.இவ்வலுவலக குறிப்பாணை இதே எண் நாட்கள் 07.01.2025, 09.01.2025 மற்றும் 06.02.2025.
- 9.திரு.சதீஷ் த/பெ.ராஜார்த்தி மனு நாட்கள்.07.01.2025 மற்றும் 06.02.2025.

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பார்வை-1ல் காணும் ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை அவர்களின் கடிதத்தில் அறிவுறுத்தியவாறு வேலூர் மாவட்டத்தில் கல் குவாரி குத்தகை அனுமதி முடிவுற்ற இனங்கள் மற்றும் புதியதாக கல்குவாரி அனுமதி வழங்க வாய்ப்புள்ள குவாரிகள் குறித்து விரிவான தணிக்கை மேற்கொண்டு அறிக்கை அளிக்குமாறு வருவாய்துறை அலுவலர்களிடம் பார்வை-2ல் காணும் இவ்வலுவலக கடிதத்தில் குடியாத்தம் வருவாய் கோட்டாட்சியரிடம் அறிக்கை கோரப்பட்டது.



2) பார்வை-4ல் காணும் குடியாத்தம் வருவாய் கோட்டாட்சியர் அலுவலரின் அலுவலகத்தில், பேர்ணாம்பட்டு வட்டம், பரவக்கல் கிராம புலஎண்.208-ல் அமைந்துள்ள மலைப் புறம்போக்கில் பகுதி.8-க்கு 2.02.40 ஹெக்டேர் பரப்பளவில் குவாரி செய்ய முன்மொழிவுகள் தயார் செய்ப்பட்டுள்ளது என்றும், இந்த இடத்தைச் சுற்றி 300 மீட்டருக்குள் பொதுமக்கள் வசிக்கும் குடியிருப்புகள், அங்கீகரிக்கப்பட்ட வீட்டுமனைப்பிரிவுகள் ஏதுமில்லை என்றும், 50 மீட்டர் சுற்றளவிற்குள் உயர் மற்றும் மின்னழுத்த கம்பிகள், நீர்நிலைகள், புராதனச் சின்னங்கள், இருப்பு பாதைகள் ஏதும் செல்லவில்லை என்றும், தற்போது குவாரி செய்ய உத்தேசிக்கப்பட்டுள்ள பகுதி 8-க்கு செக்பந்தி விவரம் பின்வருமாறு அளித்துள்ளார்.

| வ. எண். | குவாரி செய்ய உத்தேசிக்கப்பட்டுள்ள பகுதி | வடக்கு         | கிழக்கு        | தெற்கு         | மேற்கு         |
|---------|-----------------------------------------|----------------|----------------|----------------|----------------|
| 1.      | பகுதி-8                                 | புலஎண்.208 மலை | புலஎண்.208 மலை | புலஎண்.208 மலை | புலஎண்.208 மலை |

மேற்கண்ட பரவக்கல் கிராம புலஎண்.208-ல் அமைந்துள்ள மலைபுறம்போக்கில் பகுதி.8-ல் கற்குவாரி அமைக்க போதிய அளவில் கனிம இருப்பு உள்ளதென்றும், குவாரியிலிருந்து கனிமங்களை வெட்டி, வெளியே எடுத்துச்செல்ல போதிய பாதை வசதி உள்ளது என்றும், இப்புலத்தில் கற்குவாரி அமைப்பது தொடர்பாக பொகனூர் கிராம நிர்வாக அலுவலர் அ1 நோட்டீஸ் கடந்த 26.08.2024 பொதுமக்கள் பார்வைக்கு விளம்பரம் செய்யப்பட்டதில் அன்றைய தேதியிலிருந்து 15 நாட்களுக்குள் அப்பகுதிக்கு அப்பால் வசிக்கும் கிராம பொதுமக்களிடமிருந்து ஆட்சேபனை ஏதும் வரப்பெறவில்லை என்றும், மேலும் அப்பகுதி கிராமத்தில் வசிக்கும் சில பொது மக்கள் மேற்படி விளம்பரத்தினை தெரிந்துக்கொண்டு குவாரிக்கு அனுமதி வழங்க தங்களுக்கு ஆட்சேபனை ஏதும் இல்லை என மேல்பட்டி உள்வட்ட வருவாய் ஆய்வாளரிடம் வாக்குமூலம் அளித்துள்ளனர் என்றும் எனவே, பேர்ணாம்பட்டு வட்டம், பரவக்கல் கிராம புலஎண்.208-ல் தீர்வை ஏற்படாத தரிசு (மலை) புறம்போக்கில் மொத்த பரப்பு - 119.38.5 ஹெக்டேரில் 2.02.40 ஹெக்டேர் பரப்பளவில் பகுதி-8 என உத்தேசித்துள்ள பகுதிக்கு அரசு விதிகளின்படி அறிவிக்கை செய்து கற்குவாரி செய்ய குத்தகை உரிமம் வழங்கலாம் என தெரிவித்துள்ளார்.

3) வருவாய் கோட்டாட்சியர், குடியாத்தம் அலுவலரின் பரிந்துரையின் அடிப்படையில் வேலூர் மாவட்டம், பேர்ணாம்பட்டு வட்டம், பரவக்கல் கிராமம், அரசு புறம்போக்கு புல எண்.208 (பகுதி.8)-ல் 2.02.40 ஹெக்டேர் பரப்பளவு பகுதிக்கு பத்தாண்டுகளுக்கு கற்குவாரி குத்தகை அனுமதி வழங்க, பார்வை-5ல் காணும் வேலூர் மாவட்ட சிறப்பு அரசிதழ் எண்.04, நாள் 04.12.2024-ன்படி கற்குவாரிக்கு இணையதளம் மூலம் விண்ணப்பங்கள் வரபெற்று, தொழில்நுட்ப மதிப்பீடு (Technical Evaluation) செய்யப்பட்டு, தகுதியான நபர்கள் திரண்டாம்



கட்ட மின்னணு நேரடி ஏலத்திற்கு தேர்வு செய்யப்பட்டு 06.01.2025 அன்று மின்னணு ஏலம் நடத்தப்பட்டது. மின்னணு ஏலத்தில் 1) திரு.சதீஷ் 2) பிரபாகரன் ஆகியோர் கலந்துக்கொண்டனர். அதில் அரசு நிர்ணயித்த ஏலத்தொகை (Floor price) மற்றும் பொது மின்னணு ஏலத்தில் கலந்துக்கொண்ட மற்ற ஏலதாரர்கள் கோரிய ஏலத் தொகையை விட அதிகமாக ரூ.1,86,20,000/- (ரூபாய் ஒரு கோடியே எண்பத்து அறு லட்சத்து இருபதாயிரம் மட்டும்)-க்கு ஏலம் கோரிய திரு.சதீஷ் த/பெ.ராஜார்த்தி என்பவர் தகுதியான மற்றும் உயர்ந்தபட்ச ஏலதாரராக தேர்ந்தெடுக்கப்பட்டுள்ளார்.

4) உயர்ந்தபட்ச ஏலதாரராக அறிவிக்கப்பட்ட திரு.சதீஷ் த/பெ.ராஜார்த்தி என்பவரை 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதி எண்.8(16)(ii)(D)-ன்படி உடன் 10% ஏல தொகை ரூ.18,62,000/-ஐ (ரூபாய் பதினெட்டு லட்சத்து அறுபத்து கிரண்டாயிரம் மட்டும்) 24 மணிநேரத்திற்குள் அரசு கணக்கு தலைப்பில் செலுத்தி அசல் சலானை இவ்வலுவலகத்தில் சமர்ப்பிக்க பார்வை-8ல் காணும் அறிவிப்பாணை நாள் 07.01.2025 முதல் அறிவுறுத்தப்பட்டதின் பேரில் பார்வை 9-ல் காணும் கடித்தின்படி ரூ.18,62,000/-ஐ (ரூபாய் பதினெட்டு லட்சத்து அறுபத்து கிரண்டாயிரம் மட்டும்) சலான் எண். 20250107008710, நாள் 07.01.2025-ல் அரசு கணக்கில் செலுத்தி அதன் அசல் சலானை இவ்வலுவலகத்தில் சமர்ப்பித்துள்ளார்.

5) திரு.சதீஷ் த/பெ.ராஜார்த்தி என்பவரை தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் விதி 1959, 8(16)(ii)(H)-ன்படி மீதமுள்ள 90% ஏலத் தொகையான ரூ.1,67,58,000/-ல் (ரூபாய் ஒரு கோடியே அறுபத்தேழு லட்சத்து ஐம்பத்தெட்டாயிரம் மட்டும்) ஏற்கனவே செலுத்தப்பட்டுள்ள பிணை வைப்புத்தொகை ரூ.18,51,500/- (ரூபாய் பதினெட்டு லட்சத்து ஐம்பத்தொறாயிரத்து கிந்நூறு மட்டும்) போக மீதமுள்ள ரூ.1,49,06,500/-ஐ (ரூபாய் ஒரு கோடியே நூற்பத்தொன்பது லட்சத்து ஆறாயிரத்து கிந்நூறு மட்டும்) ஏலம் நடைபெற்ற நாளிலிருந்து 1 (மாதம்) 30 தினங்களுக்குள் செலுத்துமாறு இவ்வலுவலக 09.01.2025-ஆம் நாளிட்ட குறிப்பாணை வாயிலாக அறிவுறுத்தப்பட்டது.

6) அதன்படி மீதமுள்ள 90% ஏலத்தொகை ரூ.1,49,06,500/-ஐ திரு.சதீஷ் த/பெ. ராஜார்த்தி என்பவர் கீழ்க்கண்ட விபரப்படி பாரத மாநில வங்கியில் கிணைய வழி முதல் செலுத்தி அசல் சலானை சமர்ப்பித்துள்ளார்.

| வ.எண்   | வங்கி                             | செலுத்திய விபரம் | தொகை              | சலான் எண்      | நாள்       |
|---------|-----------------------------------|------------------|-------------------|----------------|------------|
| 1.      | பாரத மாநில வங்கி<br>சத்துவாச்சாயி | கிணைய வழி        | ரூ. 50,00,000/-   | 20250129015290 | 29.01.2025 |
| 2.      |                                   | கிணைய வழி        | ரூ. 50,00,000/-   | 20250203015580 | 03.02.2025 |
| 3.      |                                   | கிணைய வழி        | ரூ. 46,56,500/-   | 20250207004497 | 08.02.2025 |
| 4.      |                                   | கிணைய வழி        | ரூ. 2,50,000/-    | 20250207015268 | 08.02.2025 |
| மொத்தம் |                                   |                  | ரூ. 1,49,06,500/- |                |            |

6) மேற்கண்ட விபரப்படி உயர்ந்தபட்ச ஏலதாரர் திரு.சதீஷ் த/பெ.ராஜா செலுத்த வேண்டிய தொகையினை அரசுகணக்கில் முழுவதும் செலுத்திவிட்டதால் மேலும் பேர்ணாம்பட்டு வட்டம், பரவக்கல் கிராமம், அரசு புறம்போக்கு புலஎண்.208(பகுதி) ஹெக்டேர் பரப்பில் பத்தாண்டுகளுக்கு காலத்திற்கு கற்குவாரி செய்ய தகுதியான நிரப்பார்ப்பாக கருதப்படுகிறது. மேலும் 1959ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதி எண். 41 மற்றும் 42ன்படி குவாரி பணி மேற்கொள்வது தொடர்பாக இக்குறிப்பாணை கிடைக்கப்பெற்ற 90 நாட்களுக்குள் வரைவு சுரங்கத்திட்டத்தினை கீழ்க்காணும் நிபந்தனைகளின்படி சமர்ப்பிக்குமாறும் உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, வேலூர் அவர்களால் ஏற்பளிக்கப்பட்ட சுரங்க வரைவு திட்டத்தினை பெற்றும் மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் தடையின்மைச் சான்று பெற்று சமர்ப்பிக்குமாறும் உயர்ந்தபட்ச ஏலதாரருக்கு அறிவுறுத்தப்படுகிறது.

#### நிபந்தனைகள்

1. அருகிலுள்ள பட்டா நிலத்திற்கு 7.5 மீ மற்றும் புறம்போக்கு நிலத்திற்கு 10 மீ பாதுகாப்பு இடைவெளி விட வேண்டும்.
2. நிலையான அமைப்புகளுக்கு (நீர் நிலைகள், நெடுஞ்சாலைகள், மின்சாதனங்கள், ரயில் பாதைகள்) 50மீ பாதுகாப்பு இடைவெளி விட வேண்டும்.
3. அருகிலுள்ள விவசாய நிலங்கள் மற்றும் பொதுமக்களுக்கும் எவ்வித பாதிப்புமின்றி குவாரிப் பணி மேற்கொள்ள வேண்டும்.
4. பாறைகளைத் தகர்க்க கைத்துளைப்பான்களை கொண்டு பாறைகளை துளையிட்டு குறைவான வெடிபொருட்கள் பயன்படுத்த வேண்டும்.
5. 1959 தமிழ்நாடு சிறுகனிம சலுகை விதிகள், அிட்டவணை-IIல் கண்டுள்ளபடி, குவாரி செய்யப்படும் கனிமங்களுக்குரிய சீனியரேஜ் தொகை அவ்வப்போது செலுத்தி கனிமம் கொண்டு செல்லப்பட வேண்டும்.
5. அருகிலுள்ள கிராமச்சாலைகள், வண்டிப்பாதைகளுக்கு 10மீ பாதுகாப்பு இடைவெளி விட்டு குவாரிப்பணி மேற்கொள்ளப்பட வேண்டும்.
7. அருகிலுள்ள மின்கம்பி/மின்கம்பங்கள், நீர்நிலைகள் புறம்புகல், தேசிய நெடுஞ்சாலைகள், இரயில்பாதைகள், கோவில்கள், கட்டிடங்களுக்கு 50மீ பாதுகாப்பு இடைவெளிவிட்டு குவாரிப்பணி மேற்கொள்ளப்பட வேண்டும்.
8. அருகிலுள்ள குடியிருப்பு பகுதிகள் மற்றும் தொல்லியியல்/புராதனச்சின்னங்கள் ஆகியவற்றுக்கு 300மீ பாதுகாப்பு இடைவெளி விட்டு குவாரிப்பணி மேற்கொள்ளப்பட வேண்டும்.

yshanga  
உதவி இயக்குநர், 29/11/25  
புவியியல் மற்றும் சுரங்கத்துறை,  
வேலூர்

#### பெறுநர்

திரு.சதீஷ் த/பெ.ராஜார்த்தி

எண்.236, கிடங்கு ராமாபுரம் கிராமம், பொகனூர் அஞ்சல்,

பேர்ணாம்பட்டு வட்டம், வேலூர் மாவட்டம்.

/ புறிய தபால் அஞ்சல் அட்டையுடன்

முகல் சமர்ப்பிக்கப்படுகிறது

ஆணையர் மற்றும் உதவி ஆணையர் அவர்களின் கையொப்பம்

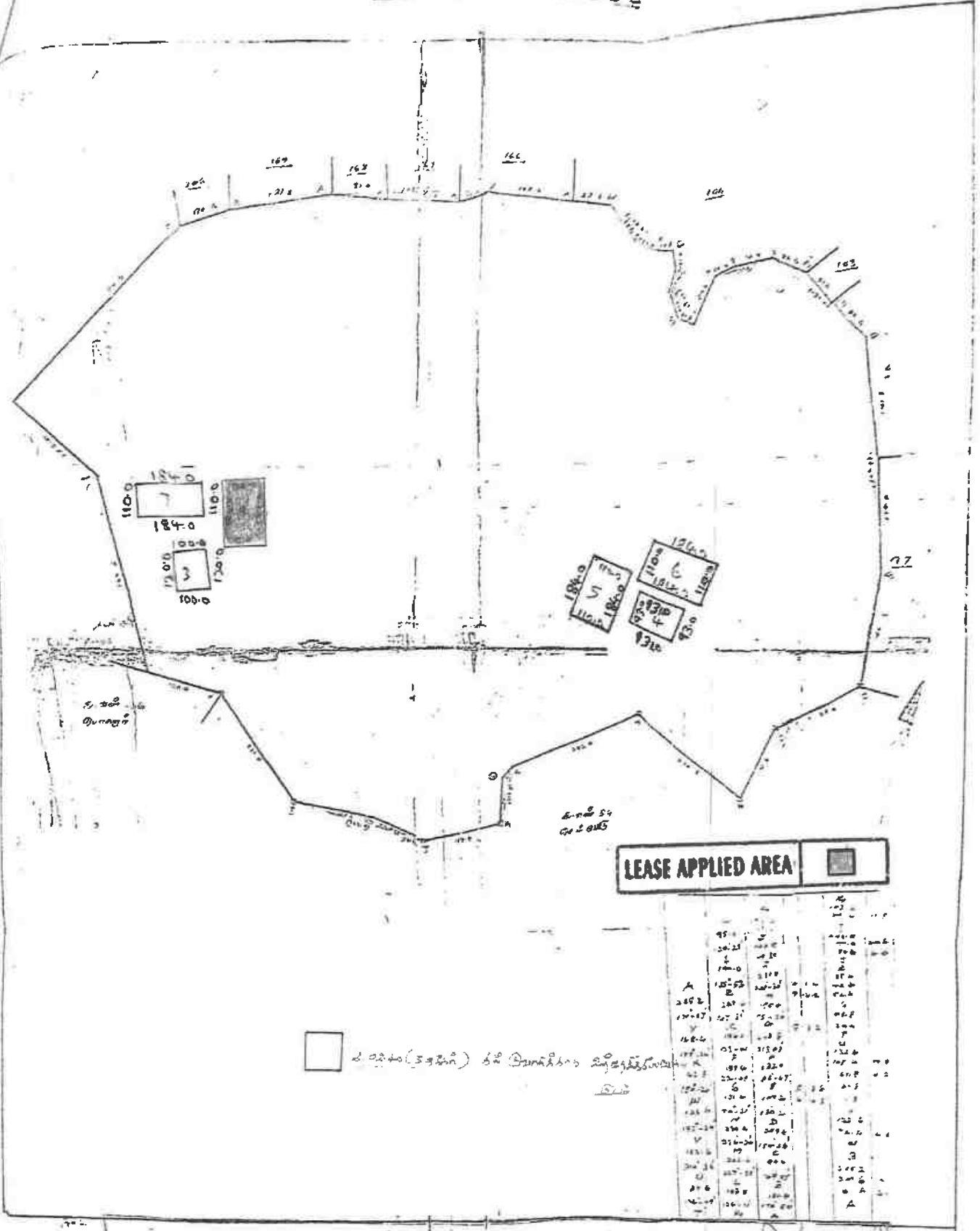




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LEASE APPLIED AREA

பெயர்: பரமசிவ

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பெயர்: பரமசிவ

TAHSILDAR

PERNAMBUTUR

INSPECTOR OF SURVEY  
TAMIL NADU  
10/09/24



எண் 2  
கிராமத்தில் வருடவாரி புவவாரி னைப்பற்றி சாளுபர ஆய்வுக் கணக்கு

[illegible]

புது - ஆம் பச்சிளிஸ்  
மாவட்டம்  
சிறப்பாகக் கடைபிடித்து  
வட்டம் பிடித்துப்

[illegible]



|     |         |     |     |     |     |     |     |     |     |    |      |    |                                                  |                                                     |                                             |
|-----|---------|-----|-----|-----|-----|-----|-----|-----|-----|----|------|----|--------------------------------------------------|-----------------------------------------------------|---------------------------------------------|
| 2A  | 206-207 | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 10 | 0    | 09 | 397 த. முனி ரத்தினம்(1).<br>கு. கண்ணியப்பன்(2).  |                                                     |                                             |
| 2B  | -207    | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 10 | 0    | 37 | 397 த. முனி ரத்தினம்(1).<br>கு. கண்ணியப்பன்(2).  |                                                     |                                             |
| 3A  | -307    | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 04 | 0    | 06 | 397 கு. முனி ரத்தினம்(1).<br>கு. கண்ணியப்பன்(2). | த. முனி ரத்தினம்(1).<br>கு. கண்ணியப்பன்(2).         |                                             |
| 3B  | -307    | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 03 | 5    | 0  | 33                                               | 397 கு. முனி ரத்தினம்(1).<br>கு. கண்ணியப்பன்(2).    | த. முனி ரத்தினம்(1).<br>கு. கண்ணியப்பன்(2). |
|     |         |     |     |     |     |     |     |     |     | 4  | 29.5 | 3  | 93                                               |                                                     |                                             |
| 1   | 207-பா  | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 60 | 0    | 0  | 62                                               | 44 மு. கிருஷ்ணன்.                                   |                                             |
| 2   | -பா     | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 53 | 5    | 0  | 06                                               | 398 மு. கோவிந்த மத்திரி(1).<br>மு. கிருஷ்ணன்(2).    | இலங்கை                                      |
| 3   | -பா     | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 59 | 0    | 0  | 54                                               | 66 மு. கோவிந்த மத்திரி.                             |                                             |
|     |         |     |     |     |     |     |     |     |     | 1  | 31.5 | 1  | 22                                               |                                                     |                                             |
| 208 | அ       | புற | ... | ... | ... | ... | ... | ... | ... | 19 | 38   | 5  | ...                                              | ...                                                 |                                             |
| 209 | அ       | 3.ஏ | ... | ... | ... | ... | ... | ... | ... | 0  | 12   | 5  | ...                                              | ...                                                 |                                             |
| 1A  | 210-1பா | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 13 | 5    | 0  | 08                                               | 450 வெ. கண்ணம்மாள்.<br>மற்றும் மூன்று பேர்களும்கூட. | திலகம்                                      |
| 1B  | -1பா    | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 16 | 0    | 0  | 24                                               | 450 வெ. கண்ணம்மாள்.<br>மற்றும் மூன்று பேர்களும்கூட. | திலகம்                                      |
| 1C  | -1பா    | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 09 | 0    | 0  | 08                                               | 310 இ. ராஜ கோபால்.                                  |                                             |
| 1D  | -1பா    | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 12 | 5    | 0  | 12                                               | 466 வெ. கண்ணம்மாள்.<br>மற்றும் மூன்று பேர்களும்கூட. | திலகம்                                      |

S = D.C. நிரந்தரப்பட்ட எழுத்துகள்

Dr. S. KATUPPANNAN, M.Sc. Ph.D.  
RGP/MAS/263/2014A

பேர்ணாம்பட்டு வட்டம் (வே.மா)



இந்திய அரசாங்கம்  
Government of India

இந்திய தனிப்பட்ட அடையாள ஆணைய அமைப்பு  
Unique Identification Authority of India

பதிவேட்டு எண் / Enrolment No.: 2193/13018/96177

To

சதிஷ் ராமூர்த்தி

SATHISH RAMOORTHY

S/O Ramoorthy,

236,

BEGALUR POST KADANGURAMPURAM VILLAGE,

GUDIYATHAM THALUKKA,

VTC: Pogalur,

PO: Pogalur,

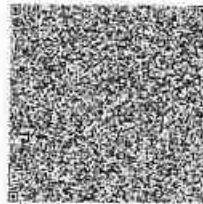
District: Vellore,

State: Tamil Nadu,

PIN Code: 635813,

Mobile: 9442402885

Validity  
unknown  
Validity unknown



உங்கள் ஆதார் எண் / Your Aadhaar No.:

4787 7328 7093

VID : 9129 0831 2811 7291

எனது ஆதார். எனது அடையாளம்



Aadhaar No. Issued: 22/01/2013



சதிஷ் ராமூர்த்தி

SATHISH RAMOORTHY

பிறந்த நாள்/DOB: 02/07/1983

ஆண் / MALE

ஆதார் என்பது அடையாளத்திற்கான சான்றாகும். குடிவரிசை அல்லது பிறந்த தேதிக்கான சான்றாகும். இது சரிபார்க்கப்பட வேண்டும். அடையாள ஆணைய அமைப்பின் அங்கீகரிக்கப்பட்ட முறைகள் மூலமாக அடையாள ஆதாரம் உருவாகியுள்ளது. (Aadhaar is proof of identity, not of citizenship or date of birth. It should be used with verification (online authentication, or scanning of QR code / offline XML).)

4787 7328 7093

எனது ஆதார். எனது அடையாளம்



Government of India



AADHAAR

தகவல் / INFORMATION

- ஆதார் என்பது அடையாளத்திற்கான சான்றாகும். குடிவரிசை அல்லது பிறந்த தேதிக்கான சான்றாகும். இது சரிபார்க்கப்பட வேண்டும். அடையாள ஆணைய அமைப்பின் அங்கீகரிக்கப்பட்ட முறைகள் மூலமாக அடையாள ஆதாரம் உருவாகியுள்ளது. (Aadhaar is proof of identity, not of citizenship or date of birth (DOB). DOB is based on information supported by proof of DOB document specified in regulations, submitted by Aadhaar number holder.)
- இந்த ஆதார் அடித்தளம் பிம்ப நியமித்த அங்கீகரிக்கப்பட்ட நிறுவனத்தால் ஆணையின் அங்கீகரிக்கப்பட்ட ஆப்ஸ்டோர்களைக் கிடைக்கும். ஆதார் அல்லது ஆதார் QR எங்கேனும் செயலியை பயன்படுத்தி QR குறியீடு ஸ்கேனிங் அல்லது [www.uidai.gov.in](http://www.uidai.gov.in) ல் கிடைக்கும் பாதுகாப்பான QR குறியீடு ரீடர் செயலியை பயன்படுத்தி சரிபார்க்க வேண்டும்.
- ஆதார் தனித்துவமானது மற்றும் பாதுகாப்பானது.
- ஆதார் பதிவு செய்யப்பட்ட நாளிலிருந்து ஒவ்வொரு 10 வருடங்களுக்கும் பிறகும் ஆதாரில் அடையாளம் மற்றும் முகவரிக்கான ஆவணங்கள் புதுப்பிக்கப்பட வேண்டும்.
- பல்வேறு அரசு மற்றும் அரசு சாரா பலன்கள் / சேவைகளைப் பெற ஆதார் உங்களுக்கு உதவுகிறது.
- உங்கள் மொபைல் எண் மற்றும் மின்னஞ்சல் ஐடியை ஆதாரில் புதுப்பிக்கவும்.
- ஆதார் சேவைகளைப் பெற mAadhaar செயலியை பதிவிறக்கவும்.
- ஆதார்பயோமெட்ரிக்ஸைப் பயன்படுத்தாதபோது பாதுகாப்பை உறுதிசெய்ய ஆதார்பயோமெட்ரிக்ஸ் லாக்அன்லாக் அம்சத்தைப் பயன்படுத்தவும்.
- ஆதார் கோரும் நிறுவனங்கள் ஒப்புதலைப் பெற வேண்டிய கட்டாயம் உள்ளது.
- Aadhaar is proof of identity, not of citizenship or date of birth (DOB). DOB is based on information supported by proof of DOB document specified in regulations, submitted by Aadhaar number holder.
- This Aadhaar letter should be verified through either online authentication by UIDAI-appointed authentication agency or QR code scanning using mAadhaar or Aadhaar QR Scanner app available in app stores or using secure QR code reader app available on [www.uidai.gov.in](http://www.uidai.gov.in).
- Aadhaar is unique and secure.
- Documents to support identity and address should be updated in Aadhaar after every 10 years from date of enrolment for Aadhaar.
- Aadhaar helps you avail of various Government and Non-Government benefits/services.
- Keep your mobile number and email id updated in Aadhaar.
- Download mAadhaar app to avail of Aadhaar services.
- Use the feature of Lock/Unlock Aadhaar/biometrics to ensure security when not using Aadhaar/biometrics.
- Entities seeking Aadhaar are obligated to seek consent.



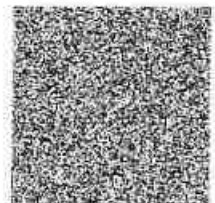
Details as on: 10/05/2025

இந்திய அரசாங்கம்  
Unique Identification Authority of India



முகவர்:  
S/O ராமூர்த்தி, எண் 236, பெரகூரை  
அஞ்சல் கட்டிடம்/தாமாபுரம் கிராமம்,  
குடியாத்தம் தாலுக்கா, குடியாத்தம்,  
பெரகூரை, வேலூர்,  
தமிழ்நாடு - 635813

Address:  
S/O Ramoorthy, 236, BEGALUR POST  
KADANGURAMPURAM VILLAGE,  
GUDIYATHAM THALUKKA, Pogalur, PO: Pogalur,  
DIST: Vellore,  
Tamil Nadu - 635813



4787 7328 7093

VID : 9129 0831 2811 7291

1947

help@uidai.gov.in | www.uidai.gov.in

## CHETTINAD CEMENT CORPORATION LTD.,

(Regd. Office: RANI SEETHAI HALL BUILDING IV &amp; V FLOORS, 603, ANNA SALAI, MADRAS-600009)

WORKS OFFICE: PULIYUR.

21144  
PHONE 22744 KARUR  
TELE 21745  
GRAM "CEMENT" Puliur C.F.  
Telex: 0456-215  
STD Code: 04324

All Correspondence  
Kumararajah Mangalath Nagar  
PULIYUR CEMENT FACTORY  
(Karur Taluk)



T.RAJU., B.E.,  
MINES MANAGER & DY. GENERAL MANAGER.

22<sup>nd</sup> September, 1987.CERTIFICATE.

This is to certify that Mr.C.Natarajan has been working as a Geologist from 14-12-1979 to till date. He has been incharge of supervision of day to day functions in respect of Exploration, Preparation of Geological Plans & Sections, Preparation of Mines Plans, and Quality control and other allied mining activities in the following Pits of our Seethainagar Limestone Mines in Anna District.

| <u>Name of the Pit.</u> | <u>Average Raising/day.</u> |
|-------------------------|-----------------------------|
| 1. Alambadi Pit.        | - 1,700 T.                  |
| 2. Mallapuram Pit.      | - 900 T.                    |
| 3. Karikkali Pit.       | - 150 T.                    |
|                         | -----                       |
| Total.                  | - 2,750 T.                  |
|                         | -----                       |

He has got nearly Eight years of total experience in our Mines in the above supervisory capacity.

for CHETTINAD CEMENT CORPORATION LTD.,

  
(T.RAJU).  
Mines Manager & Dy. General Manager.



## Faculty of Science

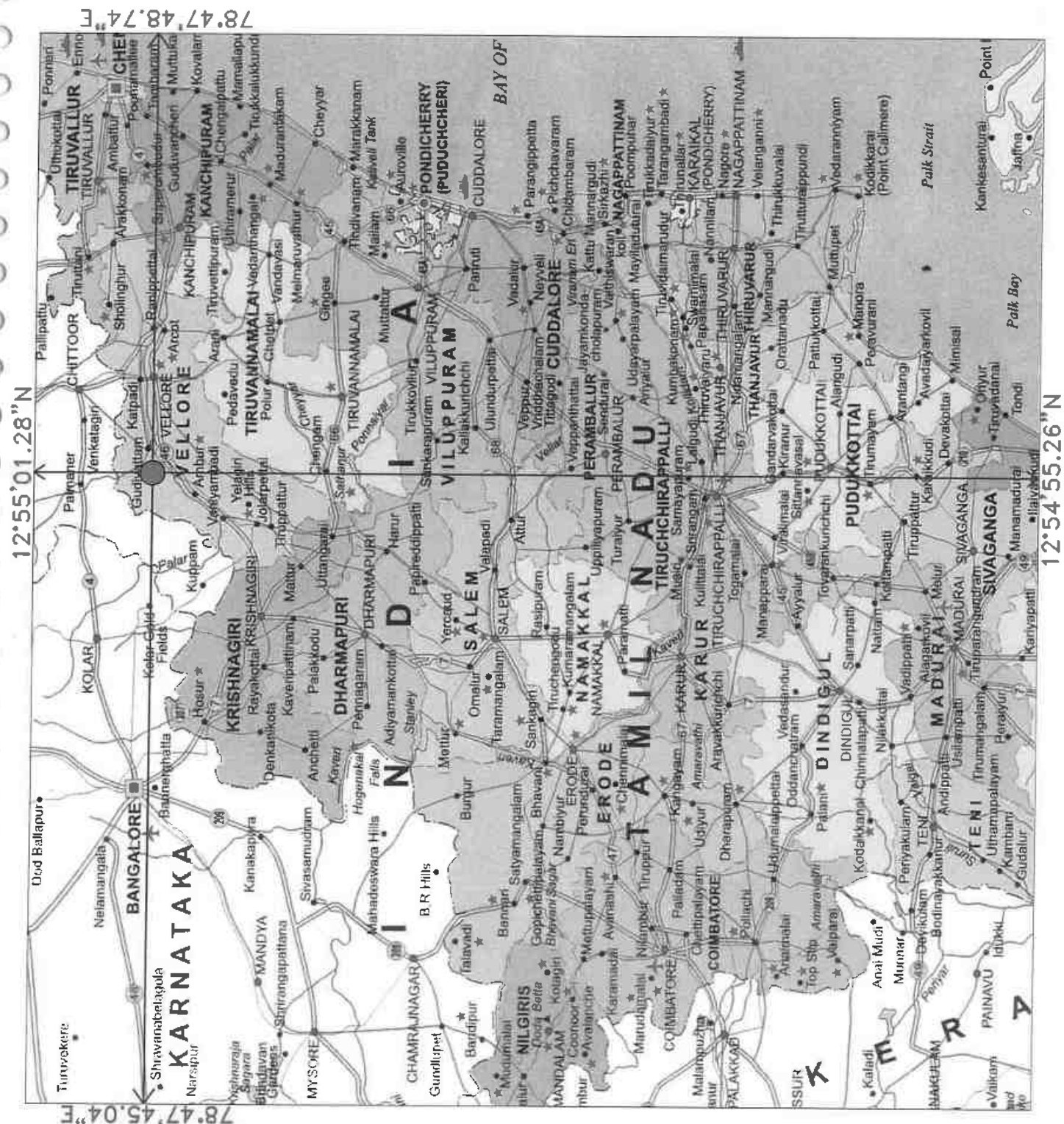
The Senate of the Annamalai University hereby makes known that E. Natarajan has been admitted to the Degree of Master of Science (by Examination) in Geology, he having been certified by duly appointed Examiners at the examination held in April, 1976, to be qualified to receive the same and that he was placed in the First Class.

Given under the seal of the University.

Annamalai Nagar  
8th December, 1976.

A. Chandrasekhar  
Vice-Chancellor.





APPLICANT:

S/O RAMOORTHY,

POGALUR POST,

VELLORE DISTRICT

QUARRY LEA

EXTENT : 2.02.4

## TALUK : PERAN

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LOCATION DI

PREPARED BY:

IN THIS PLATE

# THE LEASE MAP

2

Q11A



PLATE NO-IA

**APPLICANT:**

THIRU.SATHISH,  
S/o.RAMOORTHY,  
NO.236, KIDANGU RAMAPURAM VILLAGE  
POGALUR POST,  
PERANAMPATTU TALUK,  
VELLORE DISTRICT.

**QUARRY LEASE APPLIED**

S.F.NO : 208 (Part-8),  
EXTENT : 2.02.4 Ha,  
VILLAGE : PARAVAKKAL,  
TALUK : PERANAMPATTU,  
DISTRICT : VELLORE.

**INDEX**

TOPO SHEET NO : 57 L / 13

LATITUDE : 12°54'55.26"N to 12°55'01.28"N

LONGITUDE : 78°47'45.04"E to 78°47'48.74"E

Q.L.APPLIED AREA

10m SAFETY

300M RADIUS

500M RADIUS

1KM RADIUS

APPROACH ROAD

CART TRACK

VILLAGE ROAD

BARREN LAND

TREES

AGRICULTURAL LAND

HABITATIONS

QUARRY PIT

CRUSHER PLANT

ODAI

HILLOCK

HT LINE

POULTRY FORMY

| DESCRIPTION       | AREA IN (%) |
|-------------------|-------------|
| ROAD              | 05          |
| TREES             | 10          |
| BARREN LAND       | 40          |
| HABITATION        | 02          |
| AGRICULTURAL LAND | 05          |
| HILLOCK           | 35          |
| WATER BODIES      | 03          |

**ENVIRONMENTAL PLAN**

SCALE 1:10,000

PREPARED BY :

THIS IS TO CERTIFY THAT THE INFORMATION  
IN THIS PLATE IS TRUE AND CORRECT TO  
THE BEST OF MY KNOWLEDGE BASED UPON  
THE LEASE MAP AUTHENTICATED BY STATE

GOVERNMENT

C.NATARAJAN,M.Sc.,M.Phil.,  
QUALIFIED PERSON





# **PLATE NO-IB**

## **APPLICANT:**

THIRU.SATHISH,  
S/o.RAMOORTHY,  
NO.236, KIDANGU RAMAPURAM VILLAGE,  
POGALUR POST,  
PERANAMPATTU TALUK,  
VELLORE DISTRICT.

## **QUARRY LEASE APPLIED AREA:**

S.F.NO : 208 (Part-8),  
EXTENT : 2.02.4 Ha,  
VILLAGE : PARAVAKKAL,  
TALUK : PERANAMPATTU,  
DISTRICT : VELLORE.

## **INDEX**

TOPO SHEET NO : 57 L / 13

LATITUDE : 12°54'55.26"N to 12°55'01.28"N

LONGITUDE : 78°47'45.04"E to 78°47'48.74"E

|                  |  |
|------------------|--|
| Q.L.APPLIED AREA |  |
| 10m SAFETY       |  |
| 300M RADIUS      |  |
| 500M RADIUS      |  |
| 1KM RADIUS       |  |
| APPROACH ROAD    |  |
| CART TRACK       |  |
| VILLAGE ROAD     |  |

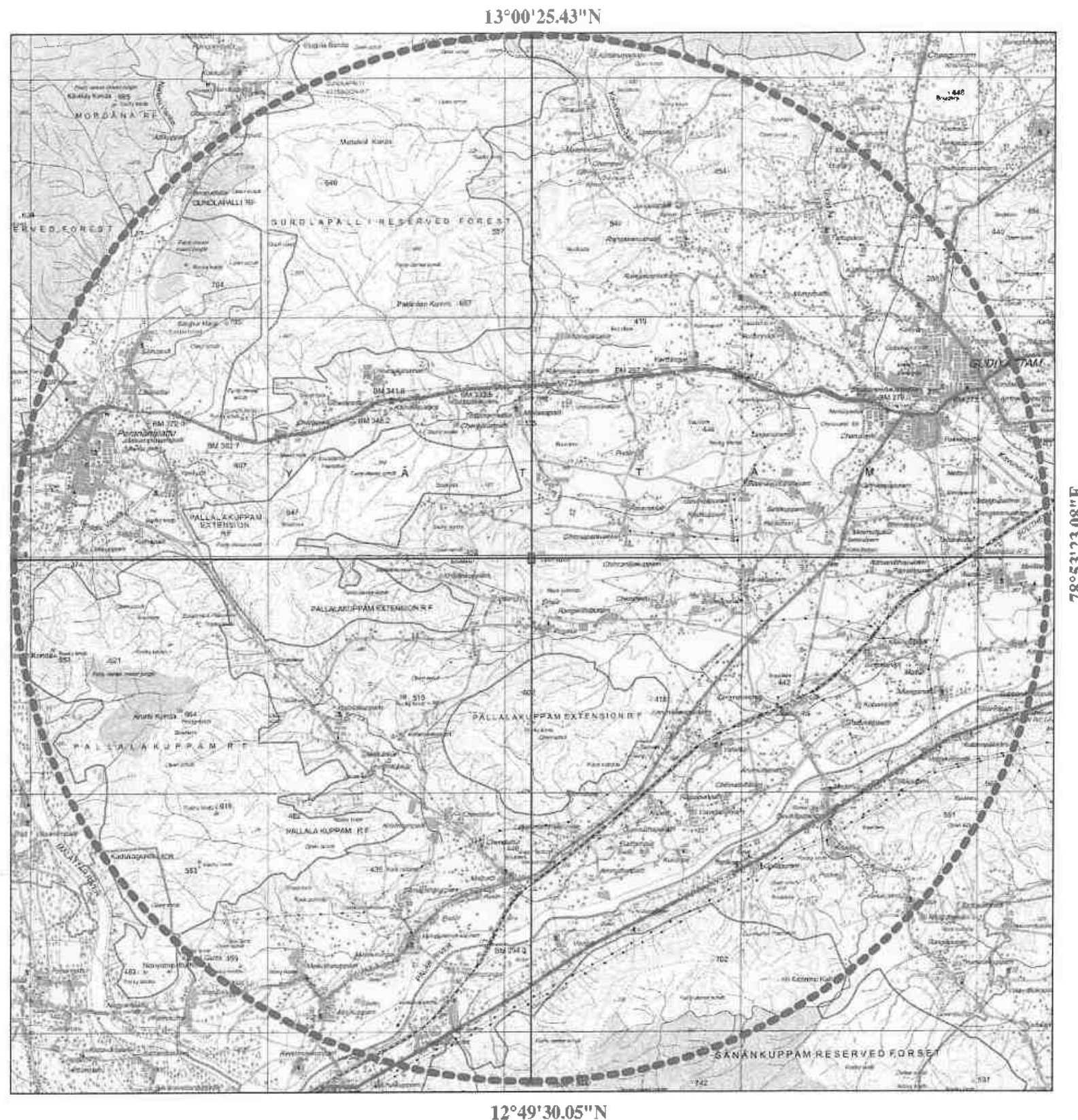
## **SATELLITE IMAGERY MAP**

SCALE 1:10,000

## **PREPARED BY :**

THIS IS TO CERTIFY THAT THE INFORMATION  
IN THIS PLATE IS TRUE AND CORRECT TO  
THE BEST OF MY KNOWLEDGE BASED UPON  
THE LEASE MAP AUTHENTICATED BY STATE  
GOVERNMENT

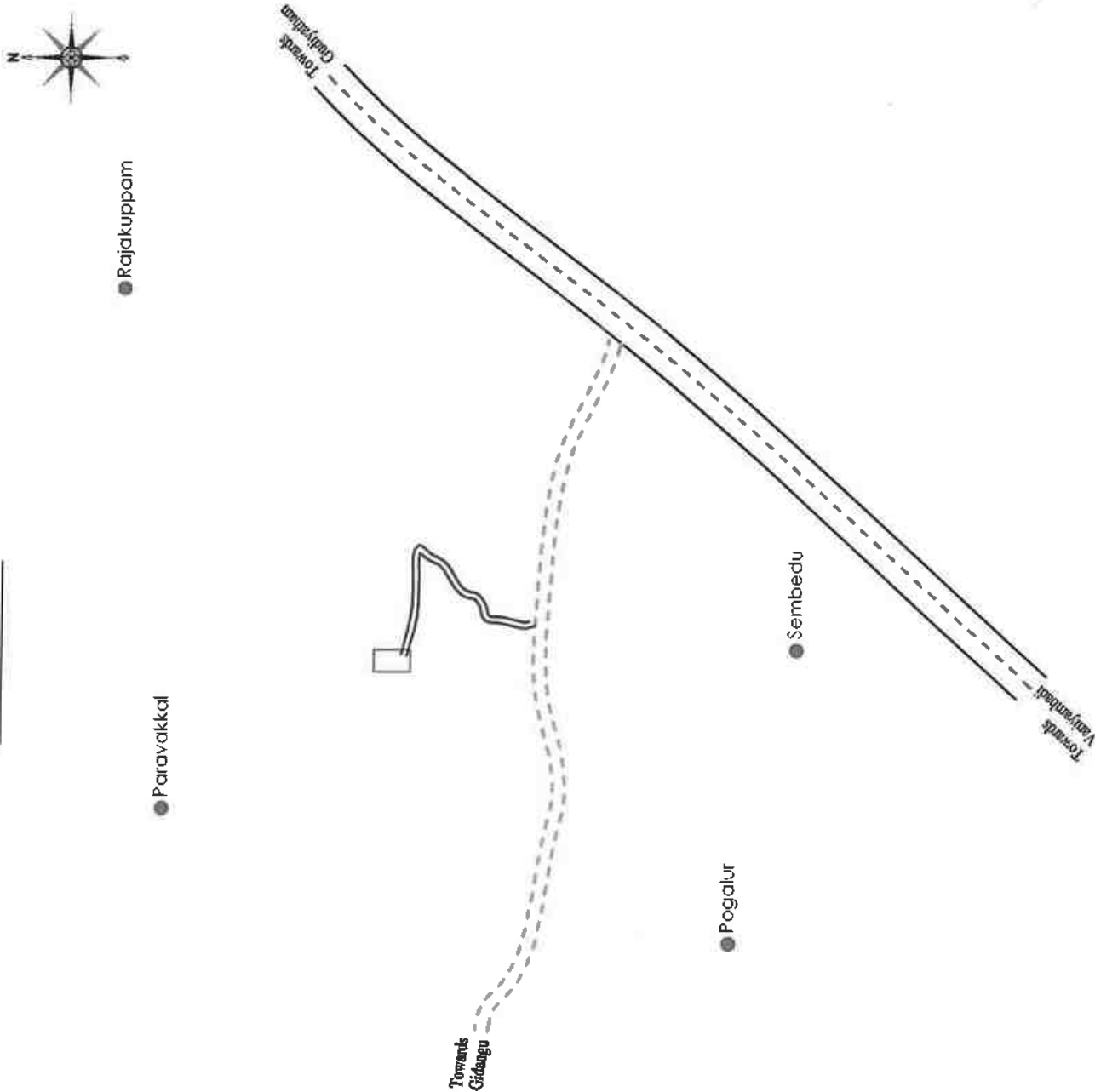
C.NATARAJAN, M.Sc., M.Phil.,  
QUALIFIED PERSON



| CONVERSION: SYMBOLS                         |                                                                                            |
|---------------------------------------------|--------------------------------------------------------------------------------------------|
| How many miles will you drive with the car? |  1000 |
| How much money will you need to travel?     |  1000 |
| How many miles will you drive with the car? |  1000 |
| How many miles will you drive with the car? |  1000 |
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| How many miles will you drive with the car? |  1000 |
| How many miles will you drive with the car? |  1000 |
| How many miles will you drive with the car? |  1000 |

C. NATARAJAN, M.Sc., M.Phil.,  
QUALIFIED PERSON

## KEY PLAN



### PLATE NO-ID

#### APPLICANT:

THIRU.SATHISH,  
S/o. RAMMOORTHY,  
NO.236, KIDANGU RAMAPURAM VILLAGE,  
POGALUR POST,  
PERANAMPATTU TALUK,  
VELLORE DISTRICT.

#### QUARRY LEASE APPLIED AREA:

S.F.NO : 208 (Part-8),  
EXTENT : 2.02.4 Ha,  
VILLAGE: PARAVAKKAL,  
TALUK : PERANAMPATTU,  
DISTRICT : VELLORE.

#### INDEX

#### Q.L. APPLIED AREA



#### APPROACH ROAD



#### VILLAGE ROAD



#### STATE HIGHWAY



#### HABITATIONS



### KEY PLAN

Not To Scale

#### PREPARED BY:

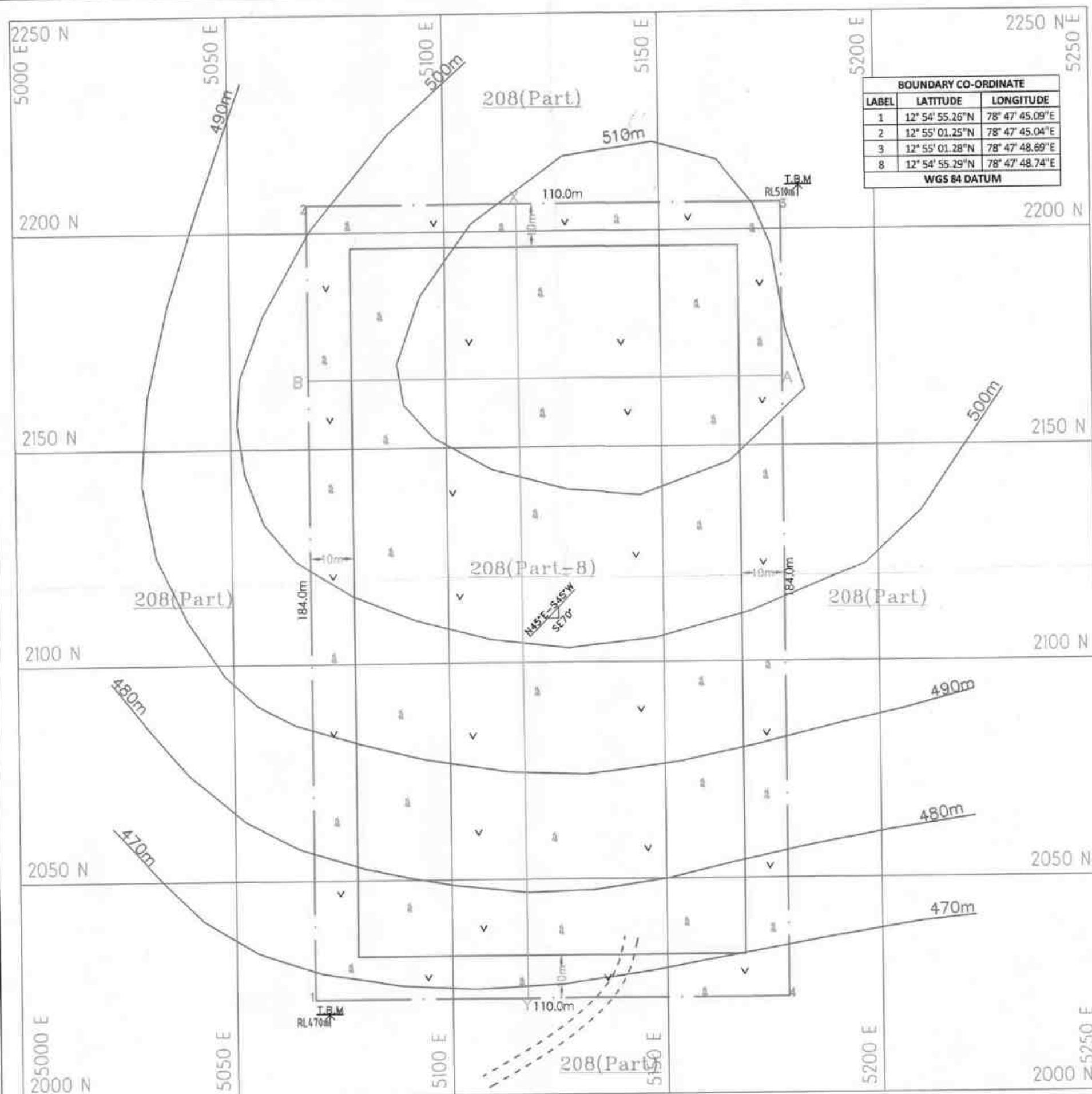
THIS IS TO CERTIFY THAT THE INFORMATION  
IN THIS PLATE IS TRUE AND CORRECT TO  
THE BEST OF MY KNOWLEDGE AND  
THE LEASE MAP AUTHENTICATED BY  
THE GOVERNMENT



  
C. NATARAJAN, M.Sc., M.Phil.,  
QUALIFIED PERSON







### PLATE NO-III

#### APPLICANT:

THIRU SATHISH,  
S/o. RAMMOORTHY,  
NO. 236, KIDANGU RAMAPURAM VILLAGE,  
POGALUR POST,  
PERANAMPATTU TALUK,  
VELLORE DISTRICT.

#### QUARRY LEASE APPLIED AREA:

S.F. NO : 208 (Part-8),  
EXTENT : 2.02.4 Ha,  
VILLAGE : PARAVAKKAL,  
TALUK : PERANAMPATTU,  
DISTRICT : VELLORE.

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| APPROACH ROAD         |  |
| CONTOUR               |  |
| SCRUB                 |  |
| TOP SOIL              |  |
| ROUGH STONE           |  |
| STRIKE & DIP          |  |

#### TOPOGRAPHY, GEOLOGICAL PLAN & SECTIONS

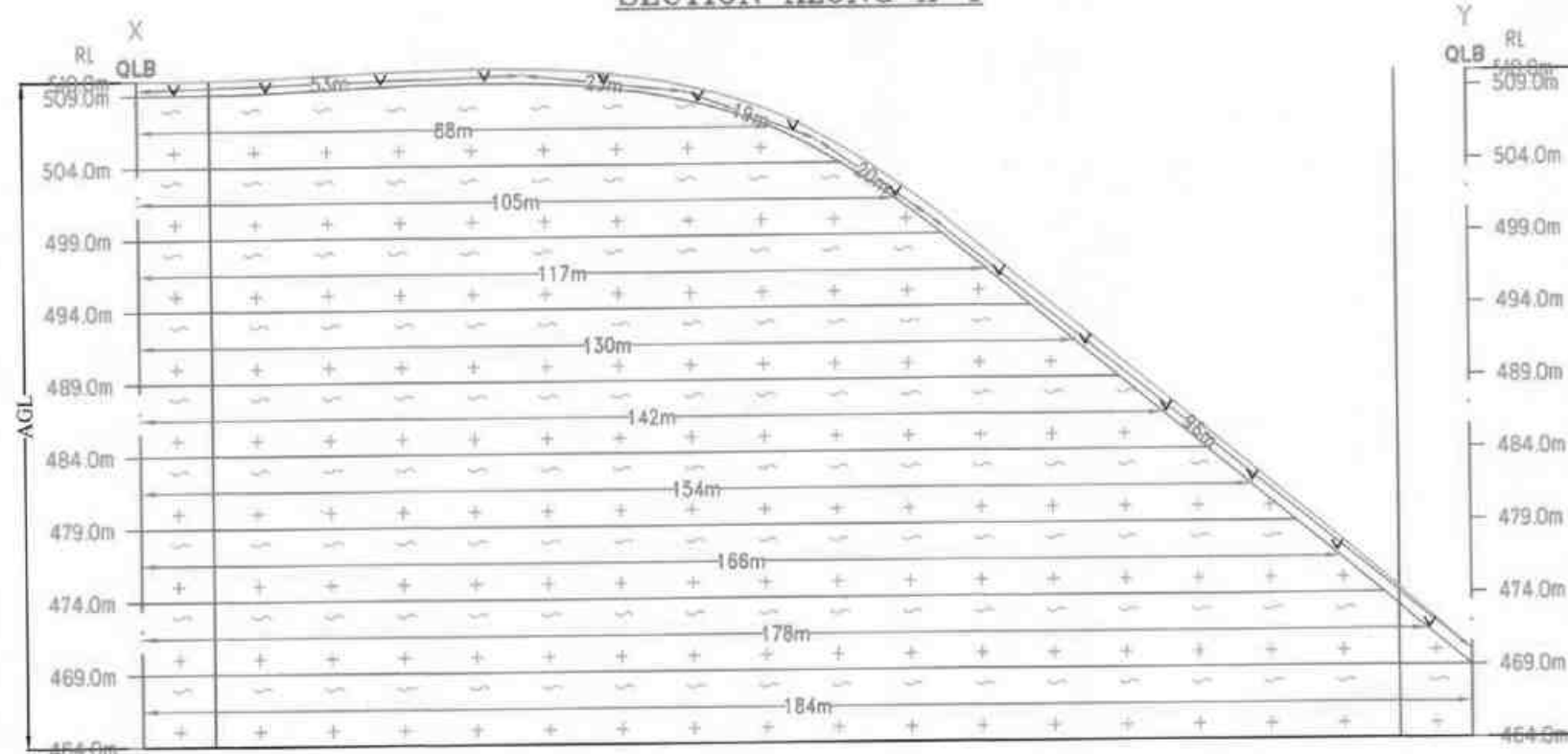
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SECTION HOR 1 : 1000, VER 1 : 500

#### PREPARED BY :

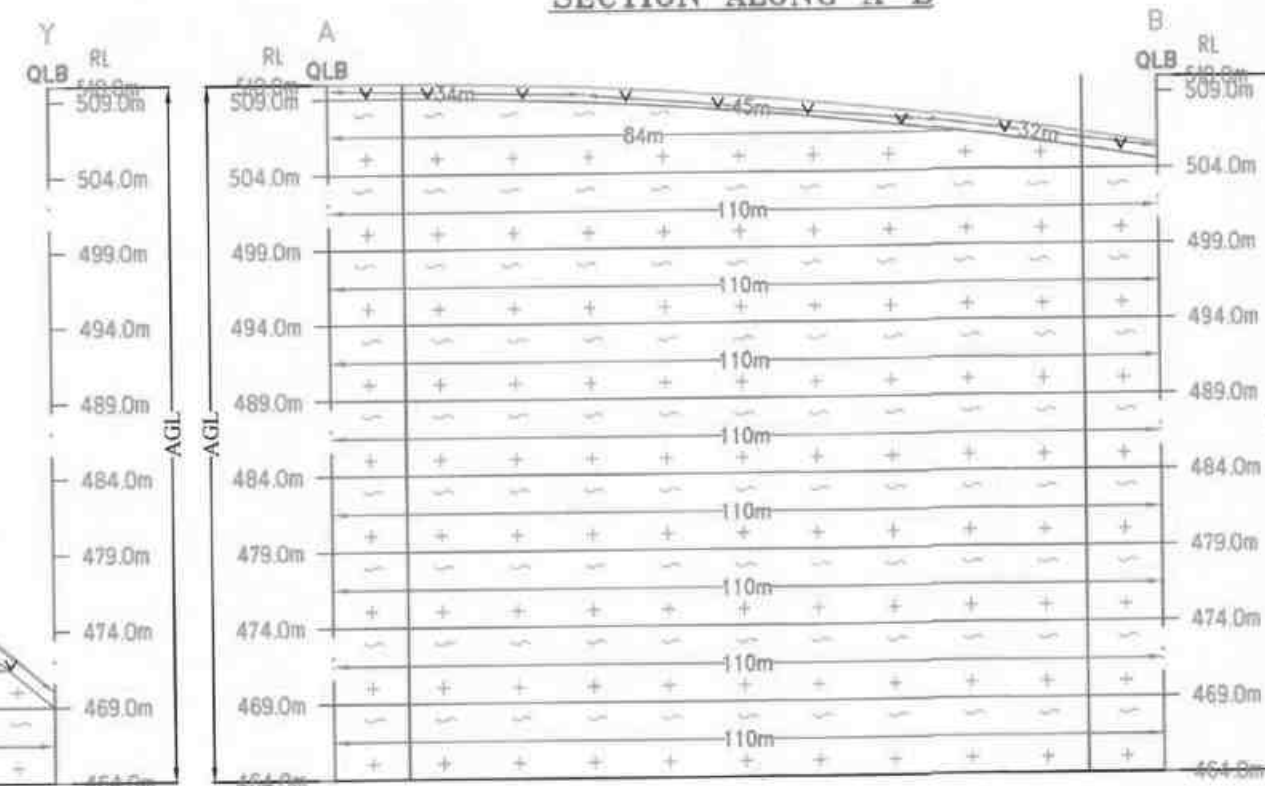
HIS IS TO CERTIFY THAT THE INFORMATION  
IN THIS PLATE IS TRUE AND CORRECT TO  
THE BEST OF MY KNOWLEDGE BASED UPON  
THE LEASE MAP AUTHENTICATED BY STATE  
GOVERNMENT

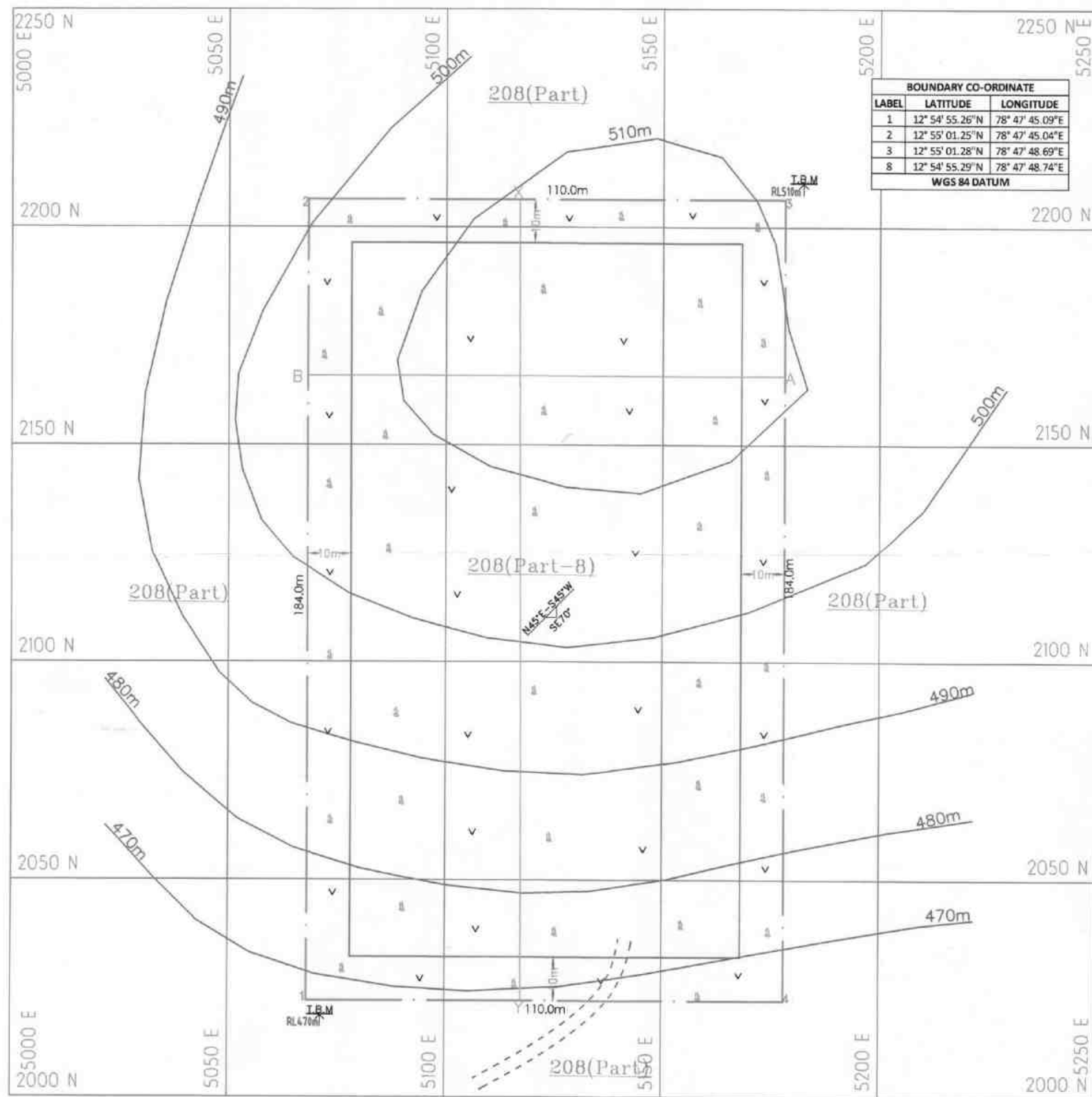
C. NATARAMAN, M. Phil.  
QUALIFIED PERSON

#### SECTION ALONG X-Y



#### SECTION ALONG A-B





#### PLATE NO-IV

##### APPLICANT:

THIRU.SATHISH,  
S/o.RAMOORTHY,  
NO.236, KIDANGU RAMAPURAM VILLAGE,  
POGALUR POST,  
PERANAMPATTU TALUK,  
VELLORE DISTRICT.

##### QUARRY LEASE APPLIED AREA:

S.F.NO : 208 (Part-8),  
EXTENT : 2.02.4 Ha,  
VILLAGE : PARAVAKKAL,  
TALUK : PERANAMPATTU,  
DISTRICT : VELLORE.

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| APPROACH ROAD        |  |
| CONTOUR              |  |
| SCRUB                |  |
| TOP SOIL             |  |
| ROUGH STONE          |  |
| STRIKE & DIP         |  |

##### MINEABLE PLAN & SECTIONS

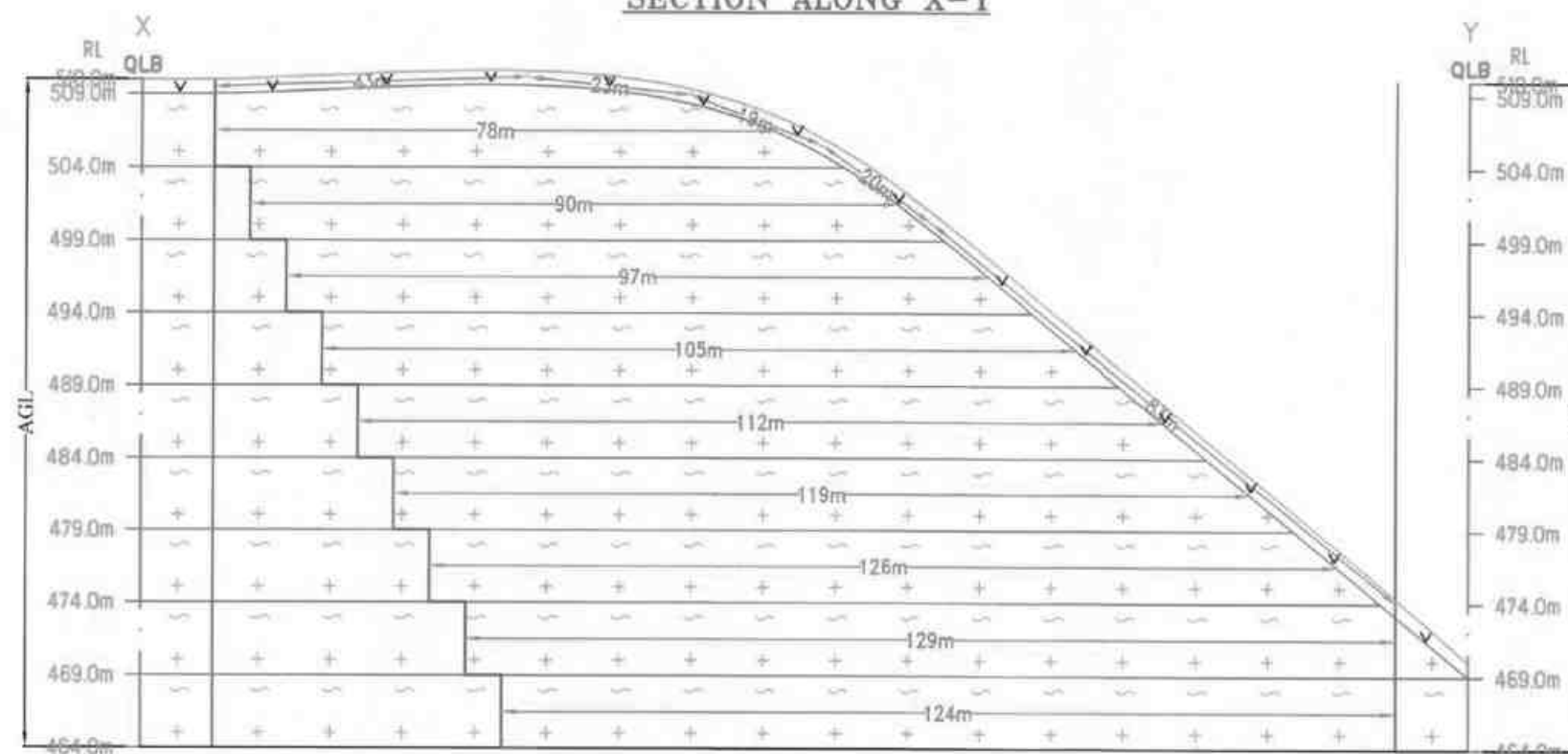
SCALE 1 : 1000  
SECTION HOR 1 : 1000, VER 1 : 500

##### PREPARED BY :

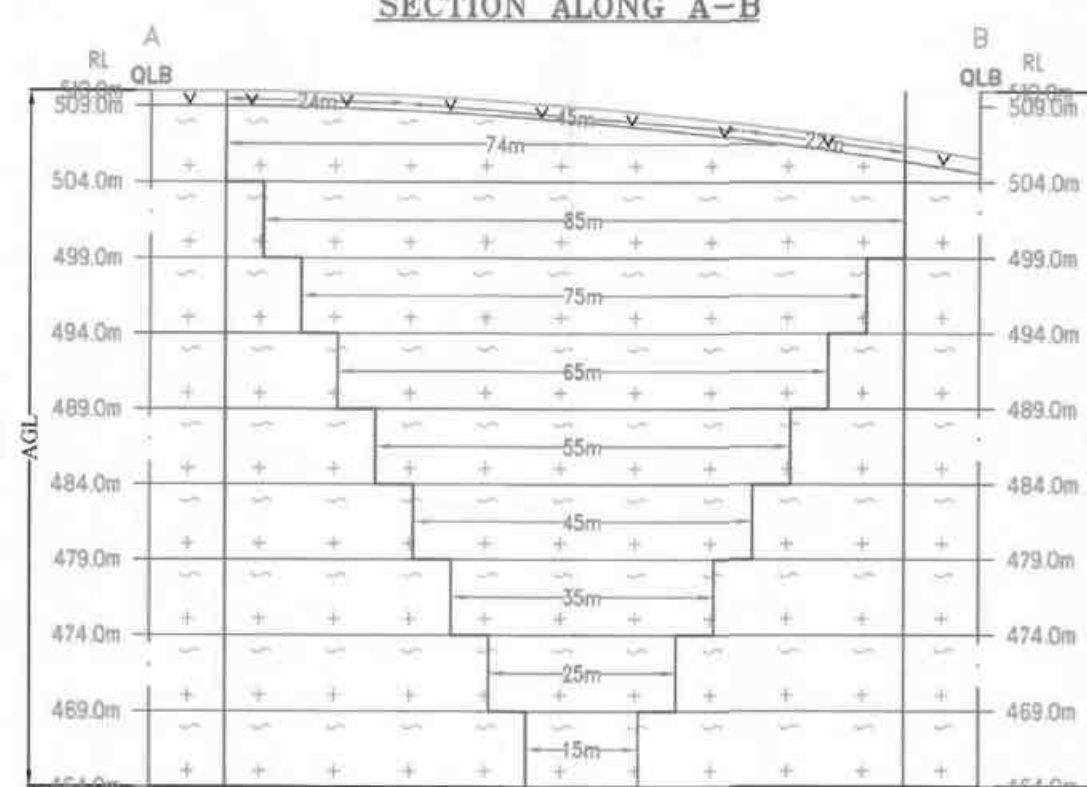
HIS IS TO CERTIFY THAT THE INFORMATION  
IN THIS PLATE IS TRUE AND CORRECT TO  
THE BEST OF MY KNOWLEDGE BASED UPON  
THE LEASE MAP AUTHENTICATED BY STATE  
GOVERNMENT

*C. NATARAJAN*  
C.NATARAJAN, M.Sc., M.Phil.  
QUALIFIED PERSON

##### SECTION ALONG X-Y

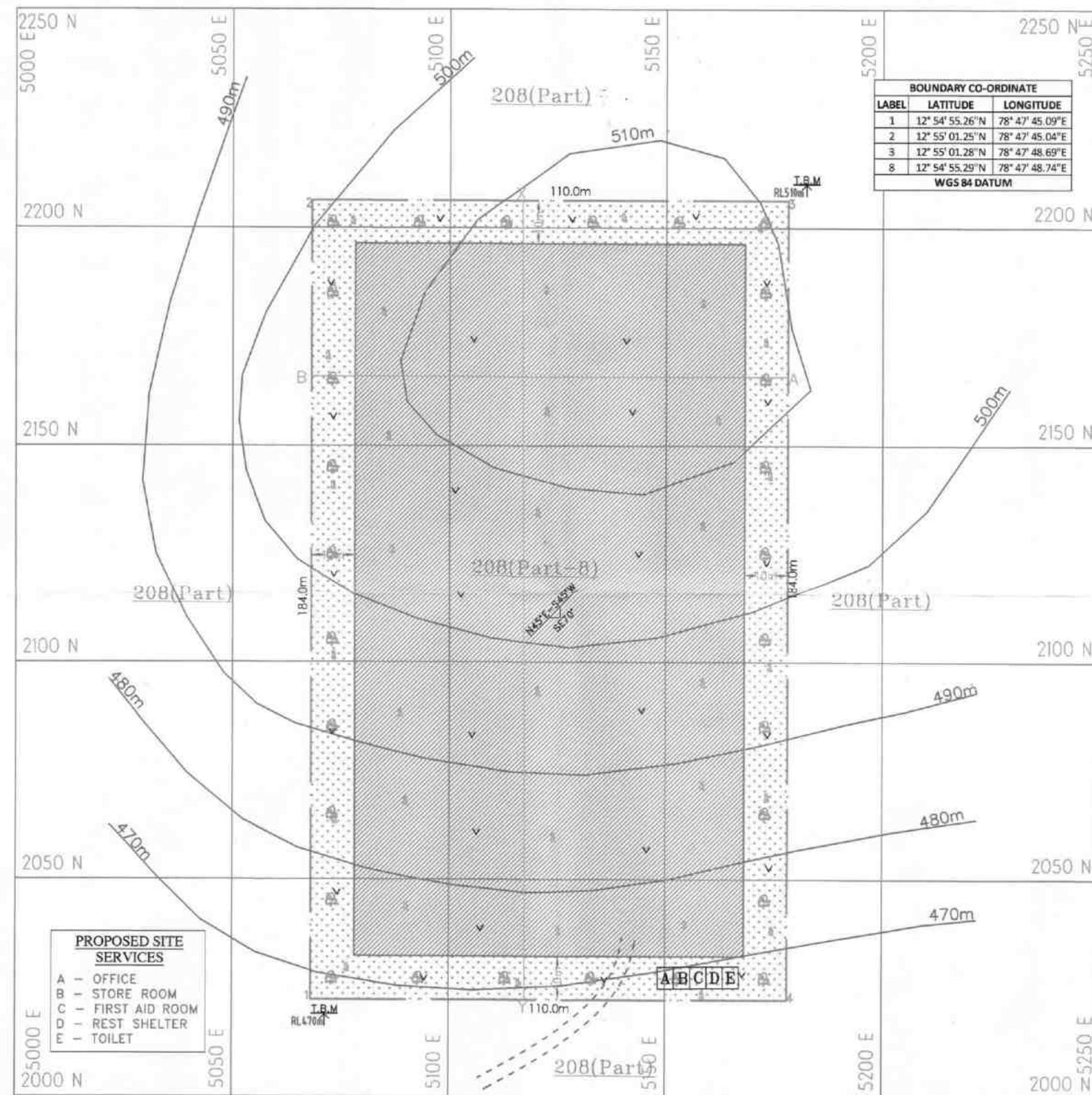


##### SECTION ALONG A-B



AGL-Above Ground Level



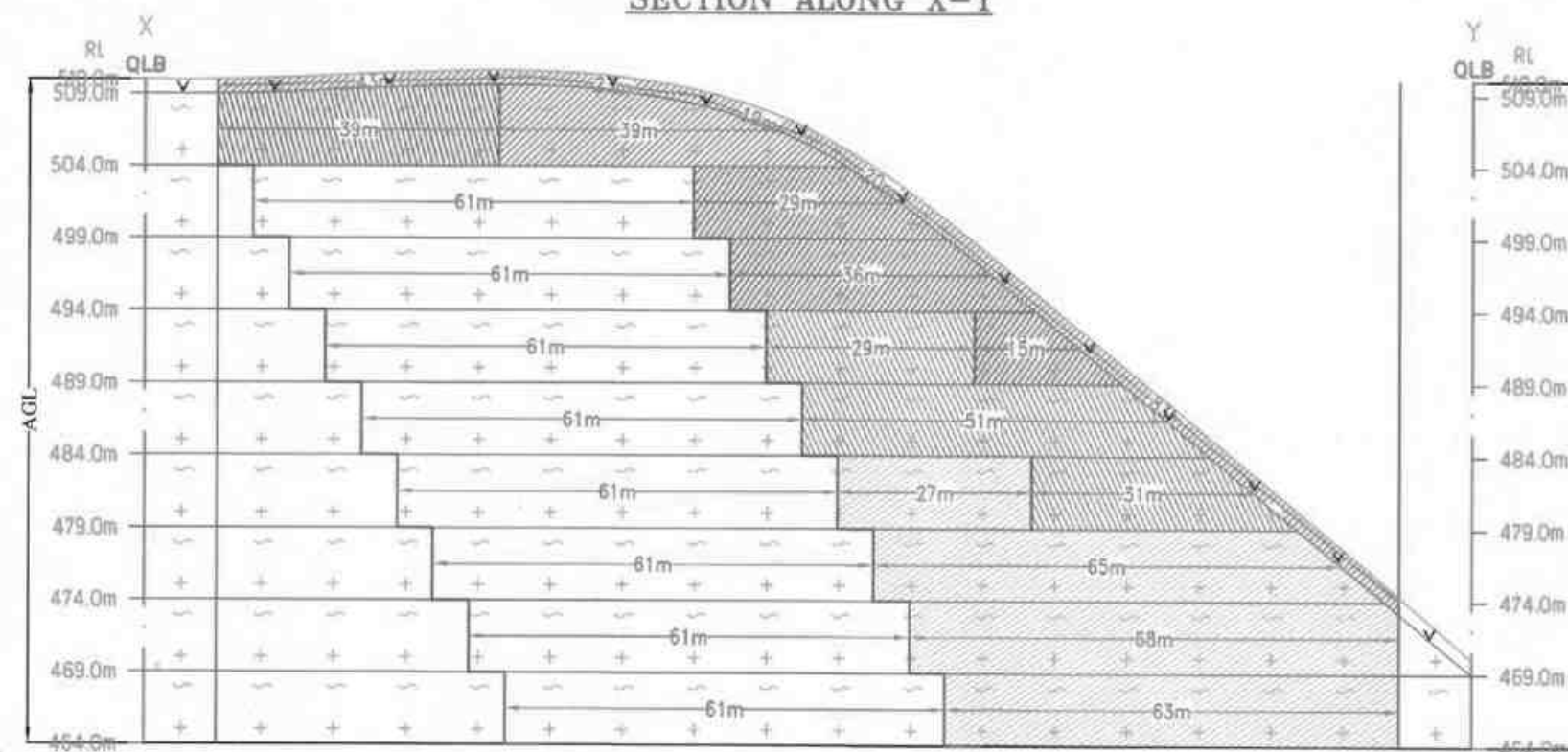


- 1st yr Proposed area to be Quarried
- 2nd yr Proposed area to be Quarried
- 3rd yr Proposed area to be Quarried
- 4th yr Proposed area to be Quarried
- 5th yr Proposed area to be Quarried

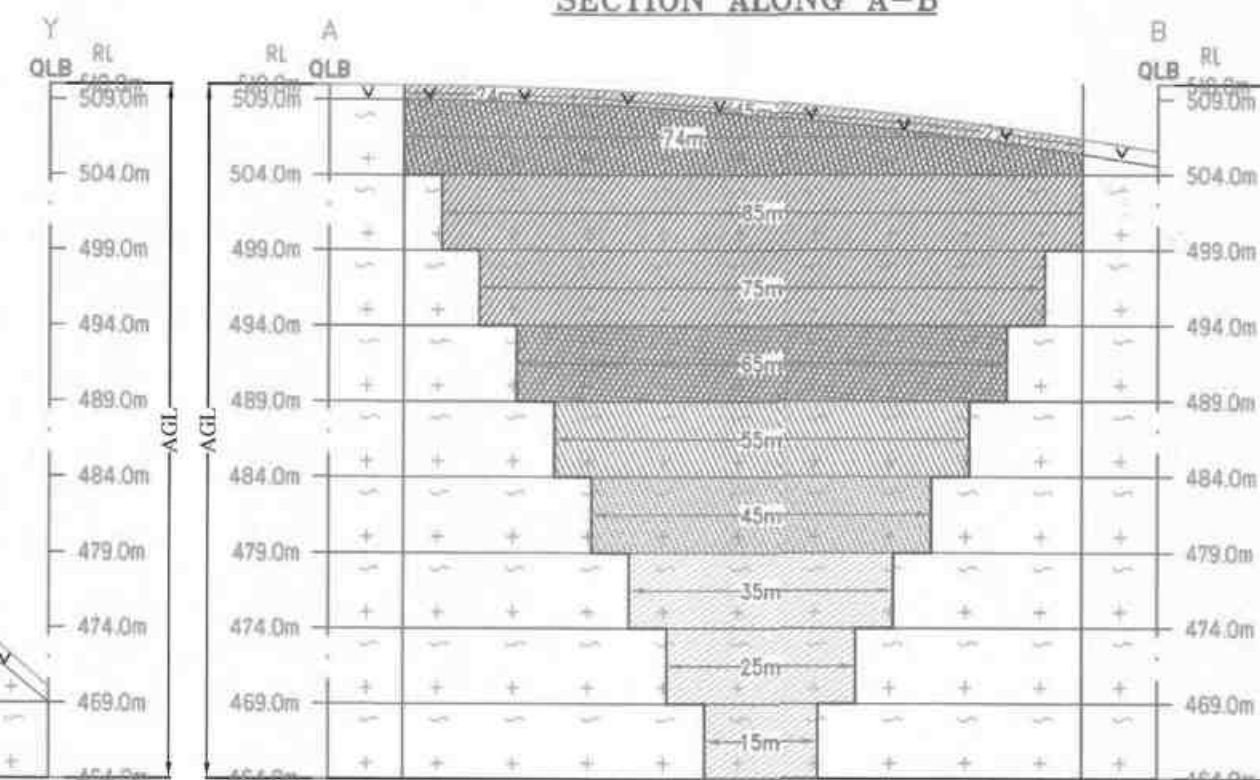
Proposed area to be Planted

AGL-Above Ground Level

SECTION ALONG X-Y



SECTION ALONG A-B



# PLATE NO-V

## APPLICANT:

THIRU.SATHISH,  
S/o.RAMOORTHY,  
NO.236, KIDANGU RAMAPURAM VILLAGE,  
POGALUR POST,  
PERANAMPATTU TALUK,  
VELLORE DISTRICT.

## QUARRY LEASE APPLIED AREA:

S.F.NO : 208 (Part-8),  
EXTENT : 2.02.4 Ha,  
VILLAGE : PARAVAKKAL,  
TALUK : PERANAMPATTU,  
DISTRICT : VELLORE.

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- Q.L.APPLIED BOUNDARY
- 10m SAFETY DISTANCE
- TEMPORARY BENCH MARK
- APPROACH ROAD
- CONTOUR
- SCRUB
- TOP SOIL
- ROUGH STONE
- STRIKE & DIP

## YEARWISE DEVELOPMENT & PRODUCTION PLAN & SECTIONS

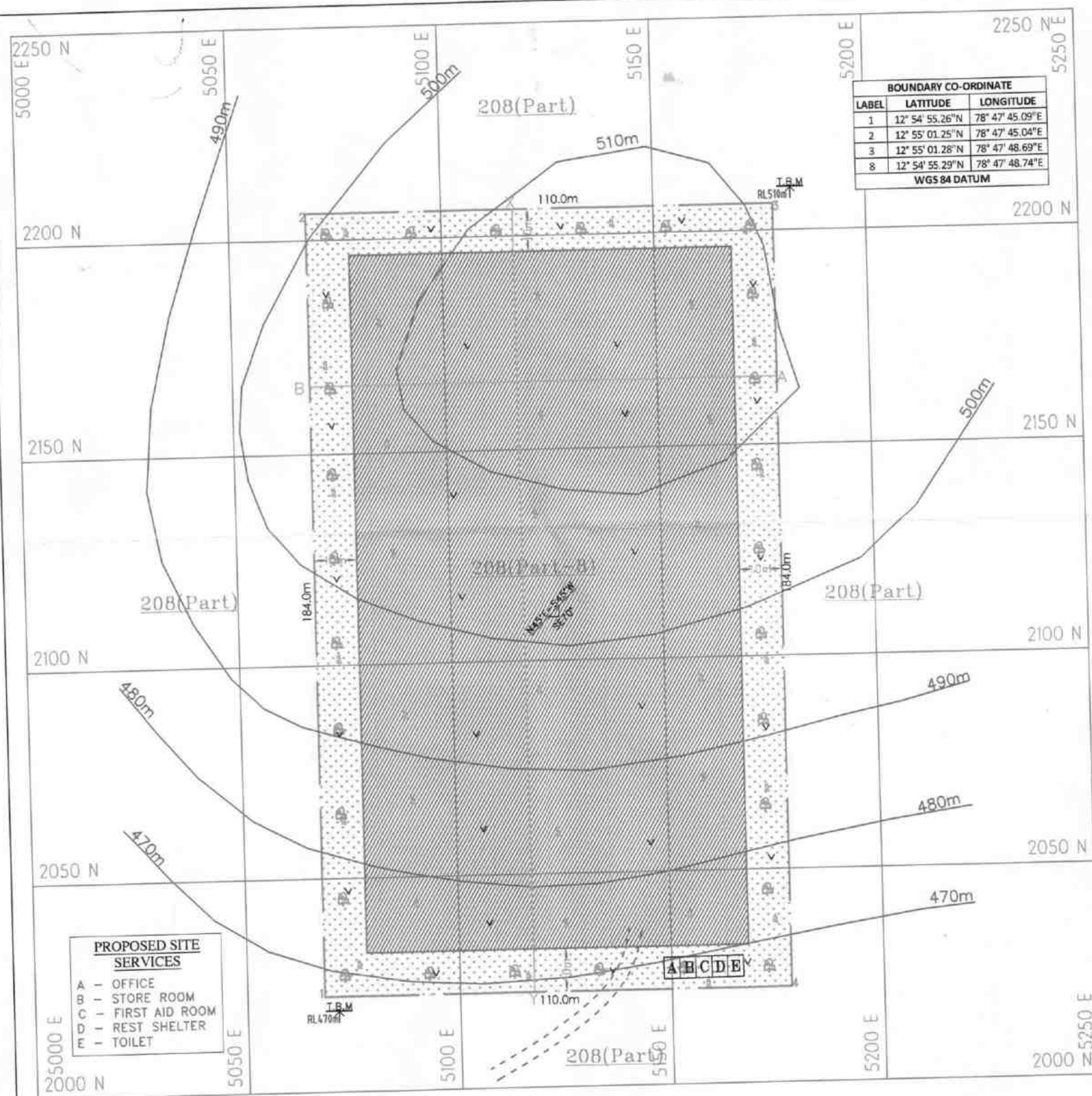
SCALE 1 : 1000  
SECTION HOR 1 : 1000, VER 1: 500

## PREPARED BY :

HIS IS TO CERTIFY THAT THE INFORMATION  
IN THIS PLATE IS TRUE AND CORRECT TO  
THE BEST OF MY KNOWLEDGE BASED UPON  
THE LEASE MAP AUTHENTICATED BY STATE  
GOVERNMENT

*C. Natarajan*  
C.NATARAJAN, M.Sc., M.Phil.,  
QUALIFIED PERSON





| BOUNDARY CO-ORDINATE |                 |                 |
|----------------------|-----------------|-----------------|
| LABEL                | LATITUDE        | LONGITUDE       |
| 1                    | 12° 54' 55.26"N | 78° 47' 45.09"E |
| 2                    | 12° 55' 01.25"N | 78° 47' 45.04"E |
| 3                    | 12° 55' 01.28"N | 78° 47' 48.69"E |
| 8                    | 12° 54' 55.29"N | 78° 47' 48.74"E |
| WGS 84 DATUM         |                 |                 |

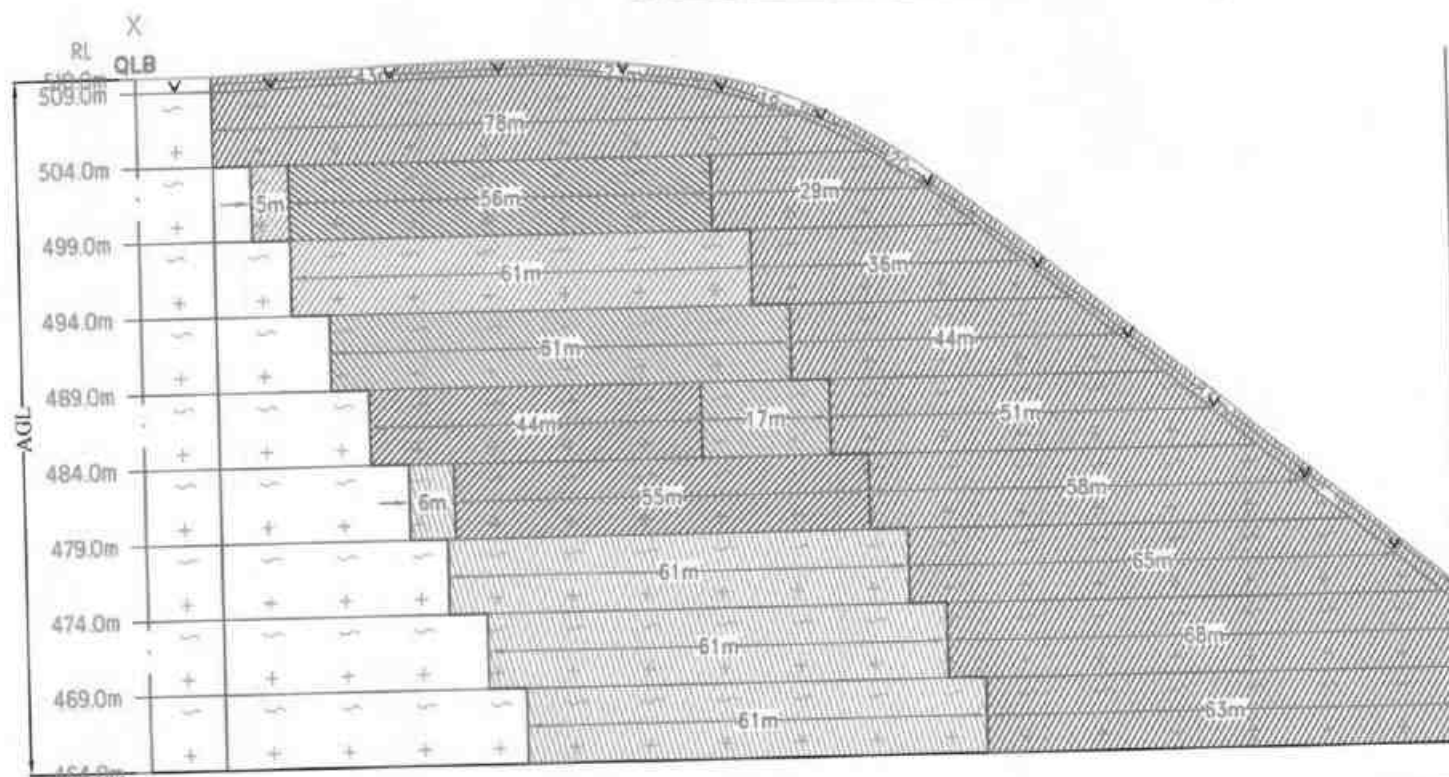
1st 5 Year Proposed area to be Quarried

6th yr Proposed area to be Quarried  
7th yr Proposed area to be Quarried  
8th yr Proposed area to be Quarried  
9th yr Proposed area to be Quarried  
10th yr Proposed area to be Quarried

Proposed area to be Planted

AGL-Above Ground Level

SECTION ALONG X-Y



SECTION ALONG A-B

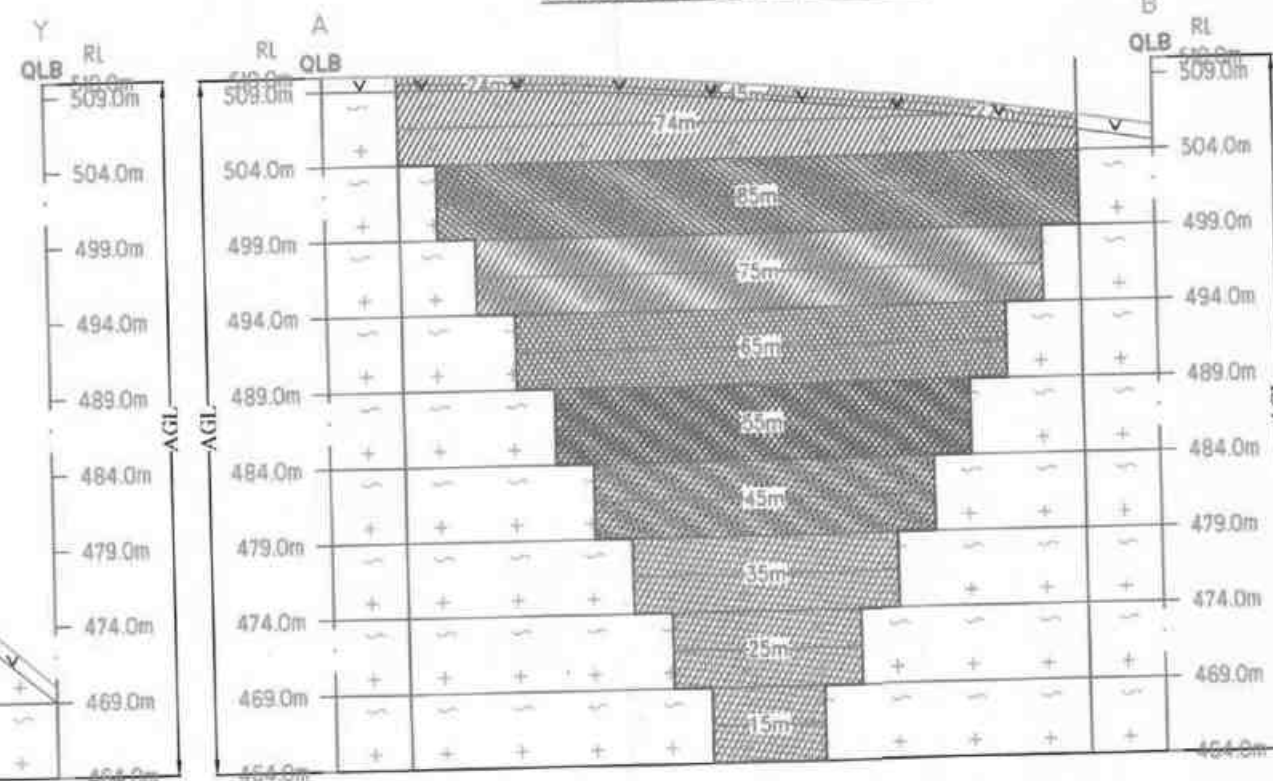


PLATE NO-VA

**APPLICANT:**

THIRU.SATHISH,  
S/o.RAMOORTHY,  
NO.236, KIDANGU RAMAPURAM VILLAGE,  
POGALUR POST,  
PERANAMPATTU TALUK,  
VELLORE DISTRICT.

**QUARRY LEASE APPLIED AREA:**

S.F.NO : 208 (Part-8),  
EXTENT : 2.02.4 Ha,  
VILLAGE : PARAVAKKAL,  
TALUK : PERANAMPATTU,  
DISTRICT : VELLORE.

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| APPROACH ROAD        |  |
| CONTOUR              |  |
| SCRUB                |  |
| TOP SOIL             |  |
| ROUGH STONE          |  |
| STRIKE & DIP         |  |

**SECOND FIVE YEARWISE  
DEVELOPMENT & PRODUCTION  
PLAN & SECTIONS**

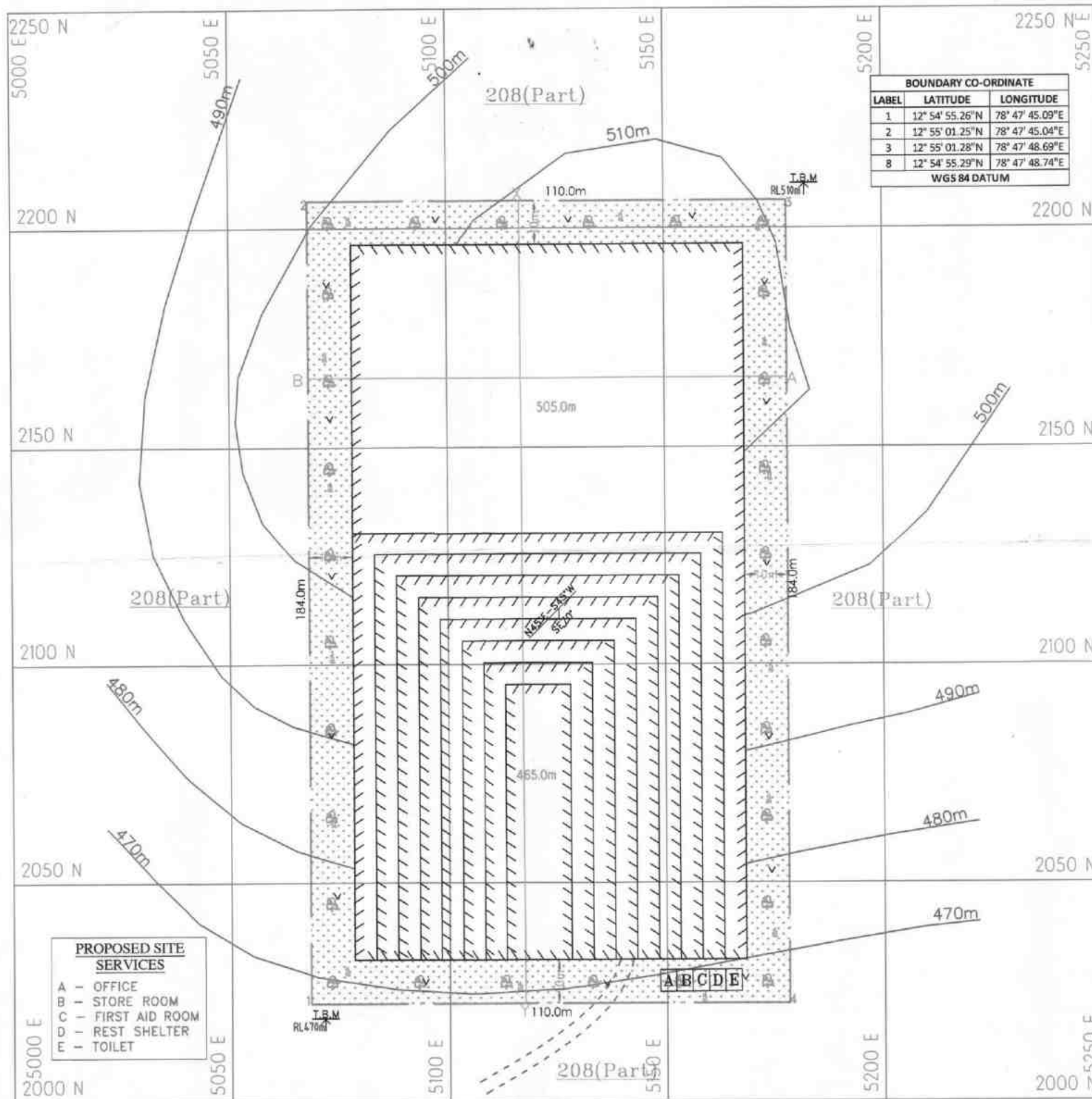
SCALE 1 : 1000  
SECTION HOR 1 : 1000, VER 1 : 500

**PREPARED BY :**

HIS IS TO CERTIFY THAT THE INFORMATION  
IN THIS PLATE IS TRUE AND CORRECT TO  
THE BEST OF MY KNOWLEDGE BASED UPON  
THE LEASE MAP AUTHENTICATED BY STATE  
GOVERNMENT

C.NATARAJAN, M.Sc., M.Phil.  
QUALIFIED PERSON





#### PRESENT & POST LAND USE PATTERN

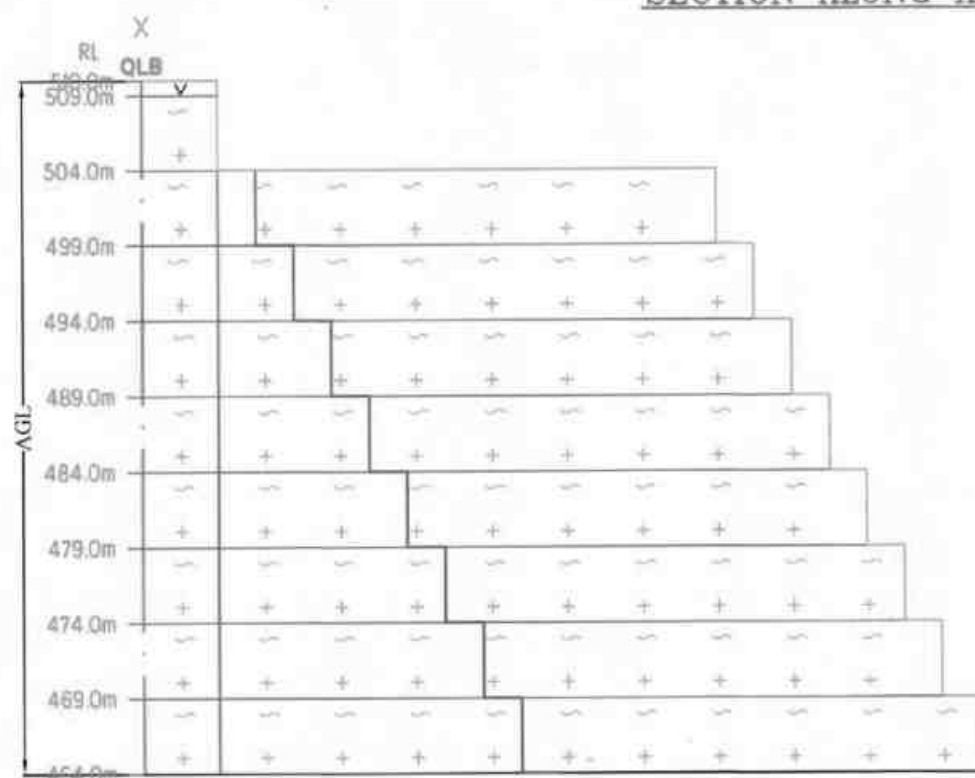
| DESCRIPTION          | PRESENT AREA (Ha) | AREA AT THE END OF THIS QUARRYING PERIOD (Ha) |
|----------------------|-------------------|-----------------------------------------------|
| AREA UNDER QUARRYING | NII               | 1.47.6                                        |
| INFRASTRUCTURE       | NII               | 0.01.0                                        |
| ROADS                | NII               | 0.01.0                                        |
| GREEN BELT           | NII               | 0.52.8                                        |
| UN-UTILIZED AREA     | 2.02.4            | NII                                           |
| GRAND TOTAL          | 2.02.4            | 2.02.4                                        |

Ultimate Pit Dimension of End of the Mining Plan Period  
 L164mX90(Avg)mXD46m(Max)  
 (Above Ground Level)

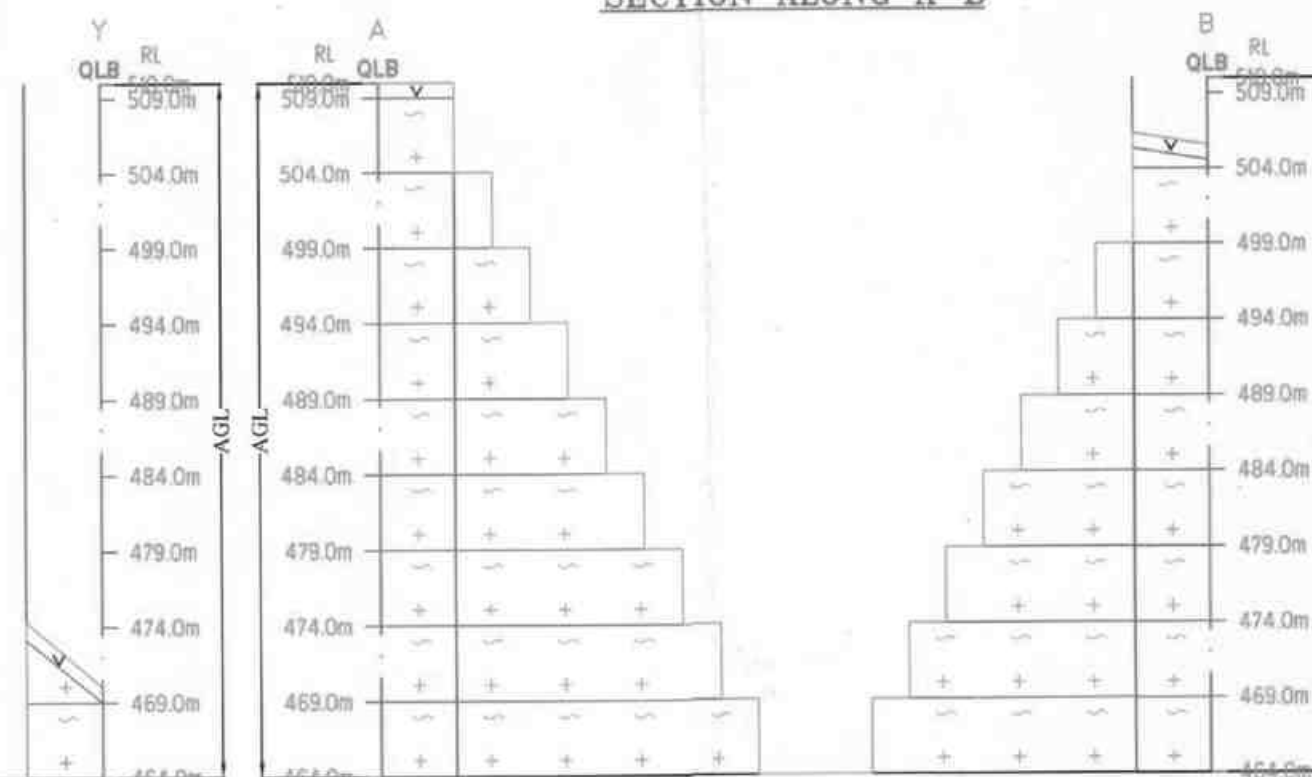
Proposed area to be Planted

AGL-Above Ground Level

#### SECTION ALONG X-Y



#### SECTION ALONG A-B



#### PLATE NO-VI

##### APPLICANT:

THIRU.SATHISH,  
 S/o.RAMOORTHY,  
 NO.236, KIDANGU RAMAPURAM VILLAGE,  
 POGALUR POST,  
 PERANAMPATTU TALUK,  
 VELLORE DISTRICT.

##### QUARRY LEASE APPLIED AREA:

S.F.NO : 208 (Part-8),  
 EXTENT : 2.02.4 Ha,  
 VILLAGE : PARAVAKKAL,  
 TALUK : PERANAMPATTU,  
 DISTRICT : VELLORE.

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| Q.L.APPLIED BOUNDARY |  |
| 10m SAFETY DISTANCE  |  |
| TEMPORARY BENCH MARK |  |
| APPROACH ROAD        |  |
| CONTOUR              |  |
| SCRUB                |  |
| TOP SOIL             |  |
| ROUGH STONE          |  |
| STRIKE & DIP         |  |
| PROPOSED QUARRY PIT  |  |

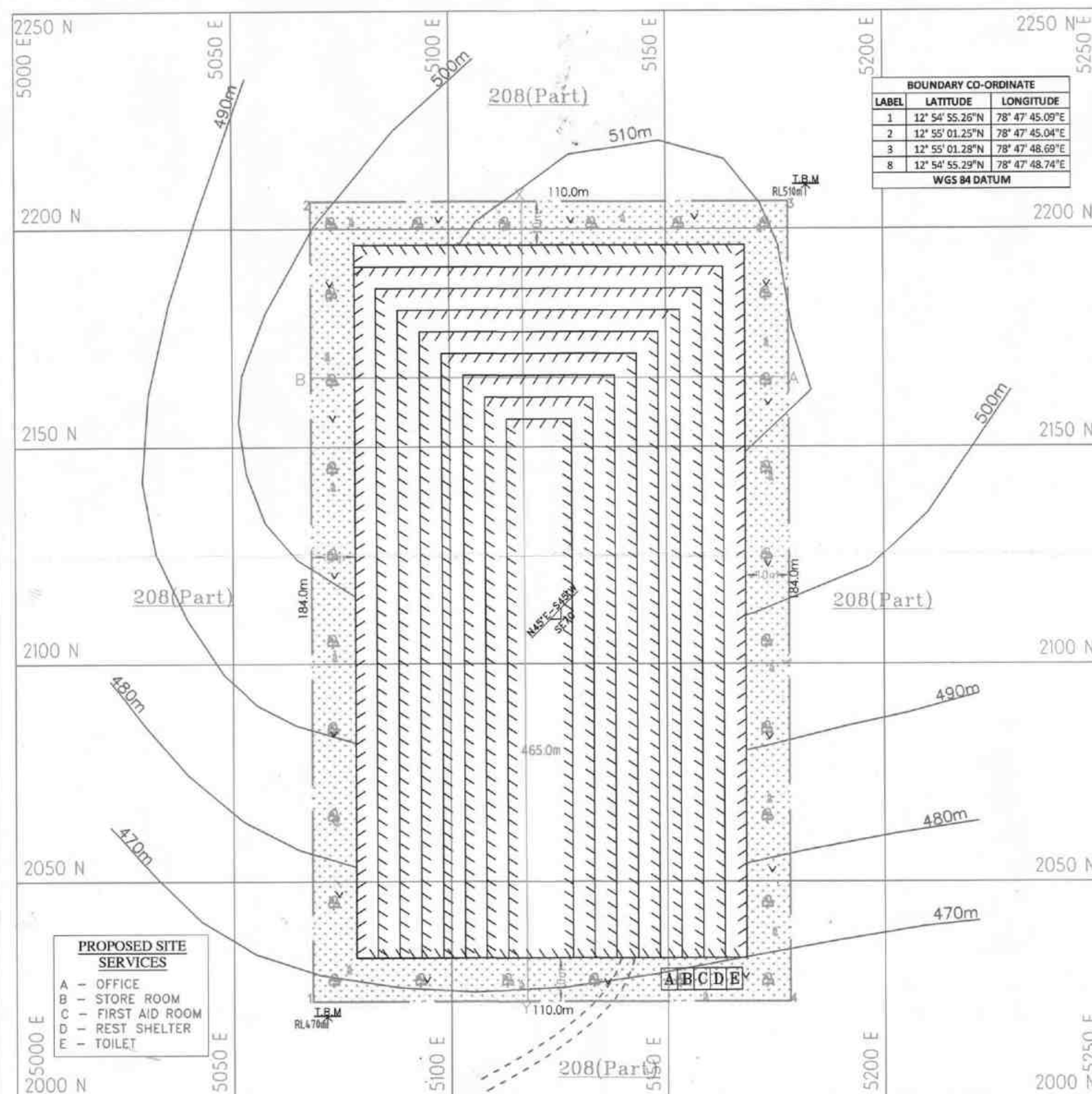
#### PROGRESSIVE QUARRY CLOSER PLAN & SECTIONS

SCALE 1 : 1000  
 SECTION HOR 1 : 1000, VER 1: 500

##### PREPARED BY :

HIS IS TO CERTIFY THAT THE INFORMATION  
 IN THIS PLATE IS TRUE AND CORRECT TO  
 THE BEST OF MY KNOWLEDGE BASED UPON  
 THE LEASE MAP AUTHENTICATED BY STATE  
 GOVERNMENT

C.NATARAJAN,M.Sc,M.Phil.  
 QUALIFIED PERSON



# PLATE NO-VII

## APPLICANT:

THIRU.SATHISH,  
S/o.RAMOORTHY,  
NO.236, KIDANGU RAMAPURAM VILLAGE,  
POGALUR POST,  
PERANAMPATTU TALUK,  
VELLORE DISTRICT.

## QUARRY LEASE APPLIED AREA:

S.F.NO : 208 (Part-8),  
EXTENT : 2.02.4 Ha,  
VILLAGE : PARAVAKKAL,  
TALUK : PERANAMPATTU,  
DISTRICT : VELLORE.

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| APPROACH ROAD        |  |
| CONTOUR              |  |
| SCRUB                |  |
| TOP SOIL             |  |
| ROUGH STONE          |  |
| STRIKE & DIP         |  |
| PROPOSED QUARRY PIT  |  |

## CONCEPTUAL PLAN & SECTIONS

SCALE 1 : 1000

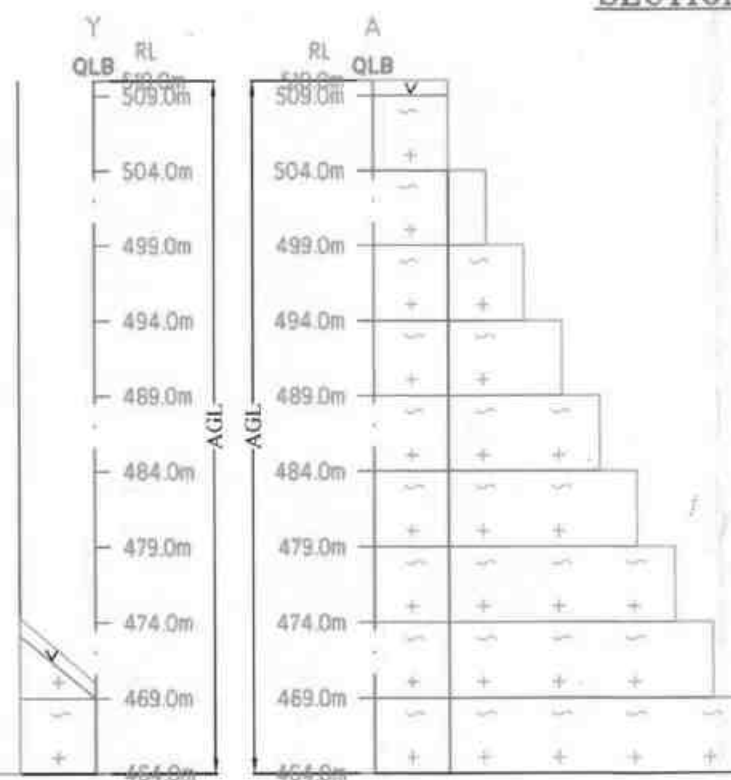
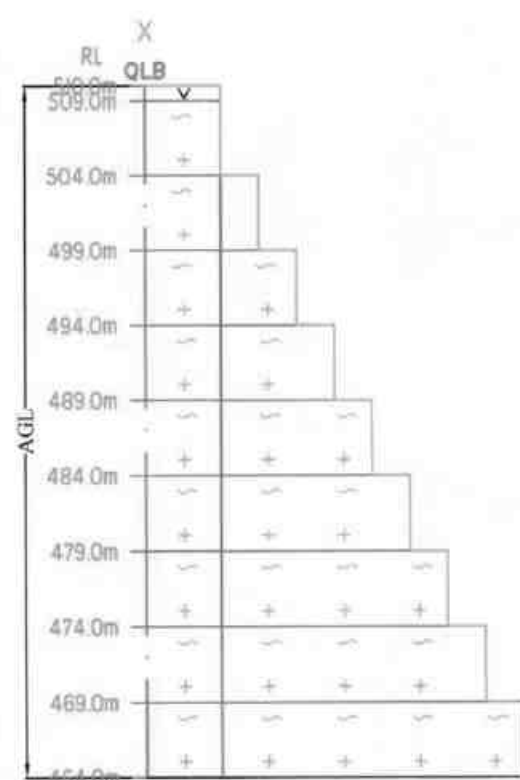
SECTION HOR 1 : 1000, VER 1: 500

## PREPARED BY :

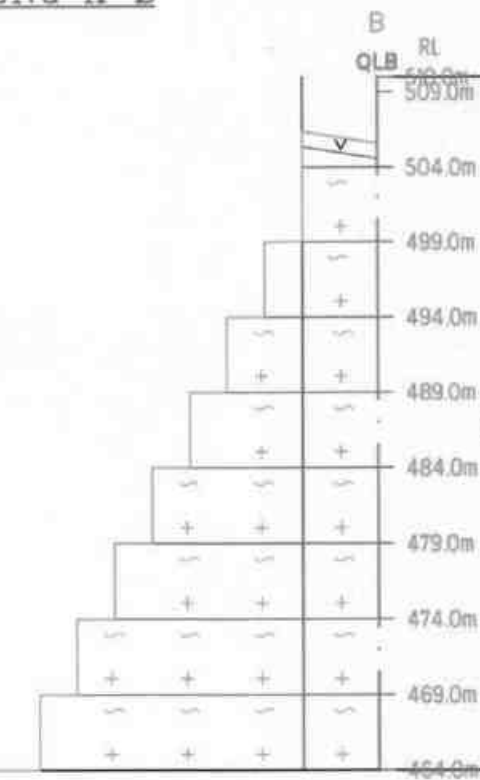
HIS IS TO CERTIFY THAT THE INFORMATION  
IN THIS PLATE IS TRUE AND CORRECT TO  
THE BEST OF MY KNOWLEDGE BASED UPON  
THE LEASE MAP AUTHENTICATED BY STATE  
GOVERNMENT

*C. Nataraajan*  
C.NATARAJAN M.Sc.M.Phil.  
QUALIFIED PERSON

## SECTION ALONG X-Y



## SECTION ALONG A-B



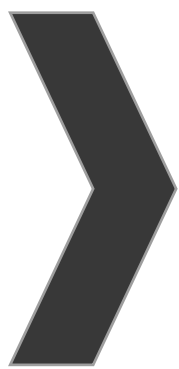
Ultimate Pit Dimension of End of the  
Quarry Lease Period

L164mX90(Avg)mXD46m(Max)  
(Above Ground Level)



Proposed area to be Planted

AGL-Above Ground Level



# ANNEXURE-4

From

Tmt.G.Shanmugavalli, M.Sc., M.Tech.,  
Assistant Director,  
Geology and Mining,  
Vellore District.

To

Thiru.R.Sathish  
S/o.Ramoorthy  
236, Kidangu Ramapuram Vill,  
Pogalur Post, Pernambut T.k,  
Vellore District.

Rc.No.441/2024 (Mines), dated. 30.04.2025

Sir,

Sub: Mines and Minerals – Minor Mineral – Rough Stone – Vellore District – Pernambut Taluk – Paravakkal Village – Government land – S.F.No.208(Part.8) – Over an extent of 2.02.4 hectares – Application preferred by Thiru.R.Sathish was declared as successful bidder – Precise Area Communicated – Details of quarry situated around 500m radius requested - Regarding.

- Ref: .
1. G.O. Ms. No.21, Natural Resources (MMC.1) Department dated. 31.07.2024.
  2. Vellore District Gazette Notification No.04, dt.04.12.2024.
  3. Thiru.R.Sathish S/o.Ramamoorthy e-application dated 20.12.2024.
  4. This office Precise Area Communication letter Rc.No. 441/2024 (Mines), Dated.24.04.2025.
  5. Mining Plan submitted by applicant Thiru.R.Sathish on 28.04.2025.
  6. This office letter even Rc.No.441/2024(Mines) dated. 30.04.2025. (Mining Plan Approved)
  7. Letter received from Thiru.R.Sathish date.28.04.2025.

\*\*\*\*\*

Thiru.R.Sathish S/o.Ramoorthy has preferred an application for the grant of quarrying lease to quarry rough stone over an extent of 2.02.4 hectares of Government land in SF.No.208(Part.8) of Paravakkal Village, Pernambut Taluk, Vellore District for a period of 10 (ten) years under Rule 8 of Tamil Nadu Minor Mineral Concession Rules 1959 vide reference 3<sup>rd</sup> cited.

In this connection, vide reference 4<sup>th</sup> cited, precise area has been communicated to the applicant Thiru.R.Sathish S/o.Ramoorthy in order to submit the Mining Plan and Environment Clearance as per Tamil Nadu Minor Mineral Concession Rule 1959, rule 41 & 42.

Accordingly, the applicant has submitted draft mining plan for approval and the same has been approved vide reference 6<sup>th</sup> cited.

In the reference 7<sup>th</sup> cited, the applicant has requested to provide the details of existing, expired, abandoned and proposed quarries falling within 500m radius distance from his quarry lease boundary.

In this regard, the details of existing quarries situated with 500mts radial distance from the subject mines are furnished as follows:

(i) Details of Existing Quarries:

| Sl. No. | Name of the owner (Tvl)                         | Taluk & Village        | SF.Nos. & Extent in Hectares | Lease period             | Remarks  |
|---------|-------------------------------------------------|------------------------|------------------------------|--------------------------|----------|
| 1       | JPJ Stone Crusher Partner of Thiru.Janarthanan, | Pernampattu Paravakkal | 208(P-4) 1.21.5              | 24.02.2021 to 23.02.2031 | Existing |
| 2.      | Thiru.D.Baskaran                                | Pernambut Pogalur      | 208(P.3) 1.00.0              | 27.06.2023 to 26.11.2033 | Existing |

ii) Details of Lease period Expired Quarries:

| Sl. No. | Name of the Applicant / lessee | Taluk & Village &     | S.F.No. & Extent in hectares | Lease period             | Remarks |
|---------|--------------------------------|-----------------------|------------------------------|--------------------------|---------|
| 1.      | Tmt.G.Amutha                   | Gudiyatham Paravakkal | 197/10A 0.82.0               | 03.12.2013 To 02.12.2018 | -       |
| 2.      | Thiru.N.Govindarajan           | Gudiyatham Paravakkal | 197/8c 0.48.5                | 18.01.2019 To 17.01.2024 | -       |

iii) Details of Lease period Abandoned Quarries:

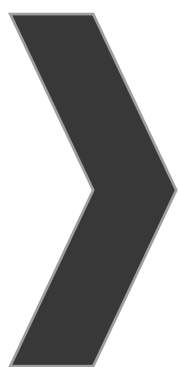
| Sl. No. | Name of the Applicant / lessee | Taluk & Village & | S.F.No. & Extent in hectares | Lease period | Remarks |
|---------|--------------------------------|-------------------|------------------------------|--------------|---------|
| NIL     |                                |                   |                              |              |         |

iv) Details of present Proposed Quarries:

| Sl. No. | Name of the Applicant / lessee        | Taluk & Village &    | S.F.No. & Extent in Hectares | Lease period |
|---------|---------------------------------------|----------------------|------------------------------|--------------|
| 1.      | Tvl.Sri.Sai Constructions             | Pernambut Paravakkal | 208(Part.5) 2.03.0           | Proposed     |
| 2.      | Thiru.J.Nareshkrishna S/o.Janarthanan | Pernambut Paravakkal | 208(Part.6) 2.03.0           | Proposed     |
| 3.      | Thiru.R.Sathish                       | Pernambut Paravakkal | 208(Part.8) 2.02.4           | Proposed     |

*Gen. J. J. J. J. J.*  
Assistant Director, 30/1/25  
Geology and Mining,  
Vellore District.

*10/1/25*



# **ANNEXURE-5**

## சான்று

வேலூர் மாவட்டம், பேர்ணாம்பட்டு வட்டம், பரவக்கல் கிராமம், புல எண் (208 பகுதி 8) மலை புறம்போக்கில் 2.02.4 ஹெக்டேர் இல் திரு. சதீஷ் த/பெ. ராமூர்த்தி என்பவர் பெயரில் கல் குவாரி ஏலம் எடுத்துள்ளது. மேற்படி புலத்தை ஒட்டி ஓடை ஏதுவும் இல்லை. மேற்படி புல எண்ணில் உயர்மின் அழுத்த கம்பிகள் ஏதுவும் இல்லை. மேற்படி புல எண்ணில் 300 மீட்டர் சுற்றளவில் எந்தவிதமான குடியிருப்புகள், வரலாற்று சிறப்புமிக்க பிரதான சின்னங்கள், கோவில்கள் ஏதுவும் இல்லை. மேற்படி இடத்தில் கருங்கல் மற்றும் சரள் வெட்டி எடுக்க கிராமத்தில் நாளது தேதியில் ஆட்சேபனை ஏதுமில்லை என்று சான்றளிக்கப்படுகிறது.p

  
15/5/25  
ராம நாராயண அலுவலர்  
பொகளுர் (கருப்)  
பேர்ணாம்பட்டு வட்டம் (வேலூர்)



**TOPOGRAPHICAL VIEW OF  
PARAVAKKAL VILLAGE R.SATHISH  
ROUGHSTONE/GRAVEL QUARRY LEASE APPLIED AREA**



**LOCATION DETAILS**

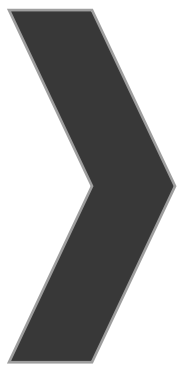
**Name and Address of the Applicant** : R.Sathish,  
S/O. Ramoorthy,  
No. 236, Gidangu Rama Puram,  
Pogaloor post, Pernambut taluk,  
Vellore District - 635813

**S.F. No** : 208 (P-8)  
**Extent** : 2.02.4  
**Village** : Paravakkal  
**Taluk** : Pernambut  
**District** : Vellore  
**State** : Tamilnadu

சிறீராம் தர்ஷிக் அலுவலர்  
பொதுவார் (குடி)  
பெர்ணாம்பட்டு வட்டம் (வேலூர்)

R-sathish  
Signature of the Applicant





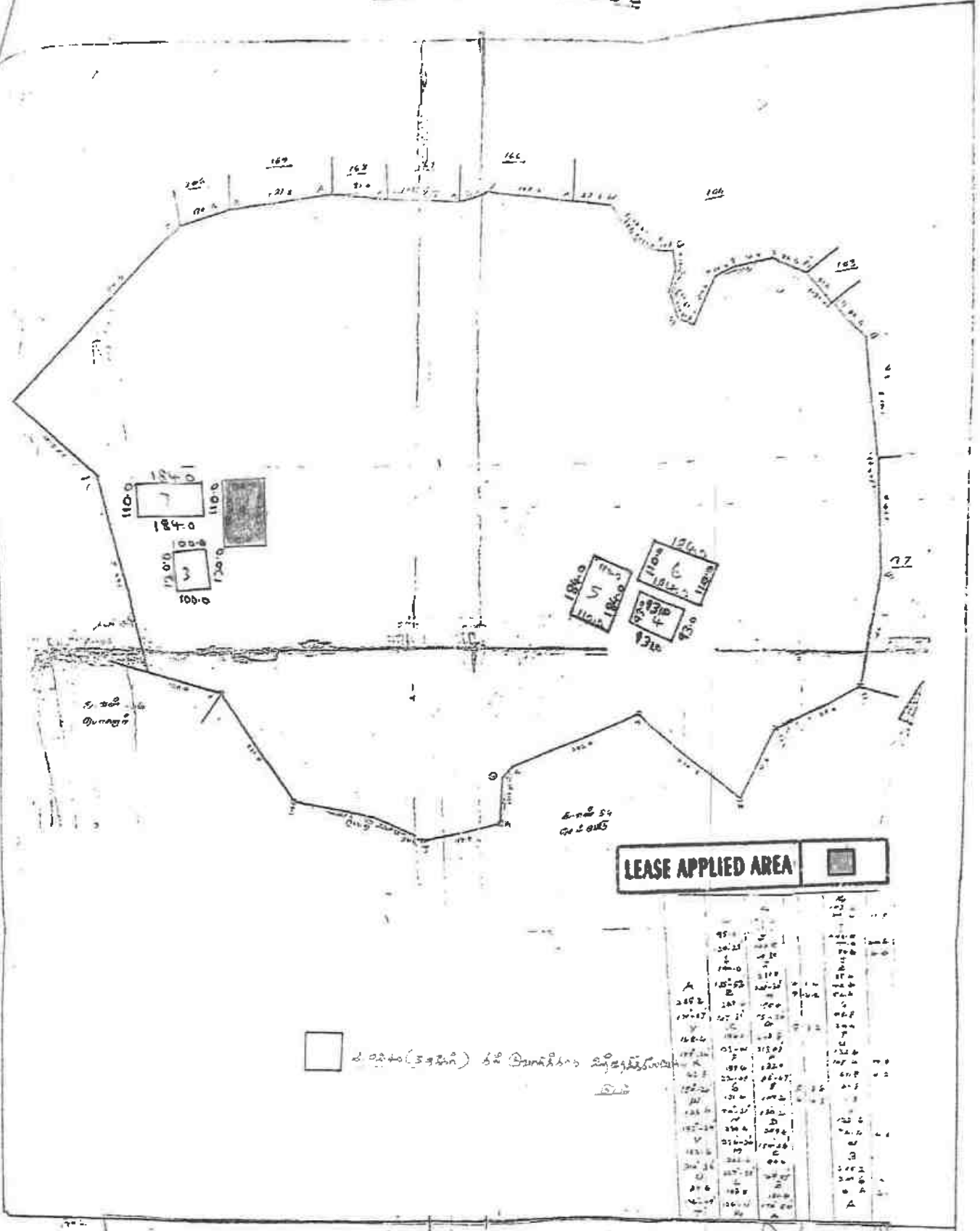
# **ANNEXURE-6**



பெயர்: பரமசிவ  
பெயர்: பரமசிவ

பெயர்: பரமசிவ  
பெயர்: பரமசிவ

பெயர்: பரமசிவ  
பெயர்: பரமசிவ



பெயர்: பரமசிவ

|    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 | 160 | 165 | 170 | 175 | 180 | 185 | 190 | 195 | 200 | 205 | 210 | 215 | 220 | 225 | 230 | 235 | 240 | 245 | 250 | 255 | 260 | 265 | 270 | 275 | 280 | 285 | 290 | 295 | 300 | 305 | 310 | 315 | 320 | 325 | 330 | 335 | 340 | 345 | 350 | 355 | 360 | 365 | 370 | 375 | 380 | 385 | 390 | 395 | 400 | 405 | 410 | 415 | 420 | 425 | 430 | 435 | 440 | 445 | 450 | 455 | 460 | 465 | 470 | 475 | 480 | 485 | 490 | 495 | 500 | 505 | 510 | 515 | 520 | 525 | 530 | 535 | 540 | 545 | 550 | 555 | 560 | 565 | 570 | 575 | 580 | 585 | 590 | 595 | 600 | 605 | 610 | 615 | 620 | 625 | 630 | 635 | 640 | 645 | 650 | 655 | 660 | 665 | 670 | 675 | 680 | 685 | 690 | 695 | 700 | 705 | 710 | 715 | 720 | 725 | 730 | 735 | 740 | 745 | 750 | 755 | 760 | 765 | 770 | 775 | 780 | 785 | 790 | 795 | 800 | 805 | 810 | 815 | 820 | 825 | 830 | 835 | 840 | 845 | 850 | 855 | 860 | 865 | 870 | 875 | 880 | 885 | 890 | 895 | 900 | 905 | 910 | 915 | 920 | 925 | 930 | 935 | 940 | 945 | 950 | 955 | 960 | 965 | 970 | 975 | 980 | 985 | 990 | 995 | 1000 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|

பெயர்: பரமசிவ

INSPECTOR OF SURVEY  
TAKSILDAR  
PERNAMBUT  
10/09/24



| ക്രിമിനൽ നോട്ട്. | പ്രൊസക്യൂട്ടർ ജനറൽ സെക്ഷൻ |             | പ്രൊസക്യൂട്ടർ ജനറൽ സെക്ഷൻ |             |
|------------------|---------------------------|-------------|---------------------------|-------------|
|                  | ക്രൈം നമ്പർ               | ക്രൈം നമ്പർ | ക്രൈം നമ്പർ               | ക്രൈം നമ്പർ |
|                  | 1                         | 2           | 3                         | 4           |
|                  | 5                         | 6           | 7                         | 8           |
|                  | 9                         | 10          | 11                        | 12          |
|                  | 13                        | 14          | 15                        | 16          |
|                  | 17                        | 18          | 19                        | 20          |
|                  | 21                        | 22          | 23                        | 24          |
|                  | 25                        | 26          | 27                        | 28          |
|                  | 29                        | 30          | 31                        | 32          |
|                  | 33                        | 34          | 35                        | 36          |
|                  | 37                        | 38          | 39                        | 40          |
|                  | 41                        | 42          | 43                        | 44          |
|                  | 45                        | 46          | 47                        | 48          |
|                  | 49                        | 50          | 51                        | 52          |
|                  | 53                        | 54          | 55                        | 56          |
|                  | 57                        | 58          | 59                        | 60          |
|                  | 61                        | 62          | 63                        | 64          |
|                  | 65                        | 66          | 67                        | 68          |
|                  | 69                        | 70          | 71                        | 72          |
|                  | 73                        | 74          | 75                        | 76          |
|                  | 77                        | 78          | 79                        | 80          |
|                  | 81                        | 82          | 83                        | 84          |
|                  | 85                        | 86          | 87                        | 88          |
|                  | 89                        | 90          | 91                        | 92          |
|                  | 93                        | 94          | 95                        | 96          |
|                  | 97                        | 98          | 99                        | 100         |

$$\frac{d}{dt} \left( \frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$$

380/3-RF III 'A-10-10,00,000 Cps., GUP, MDW-7-2020.

பெரிய - ஆம் பாலியல்  
காண்பதில் கிடைக்கவில்லை

[illegible]



| 1   | 2       | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11 | 12   | 13 | 14 | 15  | 16                                                  | 17 | 18 | 19 | 20 |
|-----|---------|-----|-----|-----|-----|-----|-----|-----|-----|----|------|----|----|-----|-----------------------------------------------------|----|----|----|----|
| 2A  | 206-207 | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 10 | 0    | 0  | 09 | 397 | கு. முனி<br>ரத்தினம்(1).<br>கு. கண்ணி<br>யப்பன்(2). |    |    |    |    |
| 2B  | -207    | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 10 | 0    | 0  | 37 | 397 | கு. முனி<br>ரத்தினம்(1).<br>கு. கண்ணி<br>யப்பன்(2). |    |    |    |    |
| 3A  | -307    | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 04 | 0    | 0  | 06 | 397 | கு. முனி<br>ரத்தினம்(1).<br>கு. கண்ணி<br>யப்பன்(2). |    |    |    |    |
| 3B  | -307    | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 03 | 5    | 0  | 83 | 397 | கு. முனி<br>ரத்தினம்(1).<br>கு. கண்ணி<br>யப்பன்(2). |    |    |    |    |
|     |         |     |     |     |     |     |     |     |     | 4  | 29.5 | 3  | 93 |     |                                                     |    |    |    |    |
| 1   | 207-பா  | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 60 | 0    | 0  | 62 | 44  | மு. கிருஷ்ணன்.                                      |    |    |    |    |
| 2   | -பா     | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 53 | 5    | 0  | 06 | 398 | மு. கோவிந்த<br>மத்திரி(1).<br>மு. கிருஷ்<br>ணன்(2). |    |    |    |    |
| 3   | -பா     | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 59 | 0    | 0  | 54 | 66  | மு. கோவிந்த<br>மத்திரி.                             |    |    |    |    |
|     |         |     |     |     |     |     |     |     |     | 1  | 31.5 | 1  | 22 |     |                                                     |    |    |    |    |
| 208 | அ       | புற | ... | ... | ... | ... | ... | ... | ... | 19 | 38   | 5  |    |     |                                                     |    |    |    |    |
| 209 | அ       | 3.ஏ | ... | ... | ... | ... | ... | ... | ... | 0  | 12   | 5  |    |     |                                                     |    |    |    |    |
| 1A  | 210-1பா | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 13 | 5    | 0  | 08 | 450 | வி. கண்ணம்<br>மாள்.<br>மற்றும் மூன்று<br>பேர்களும். |    |    |    |    |
| 1B  | -1பா    | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 1   | 36 | 0    | 1  | 24 | 450 | வி. கண்ணம்<br>மாள்.<br>மற்றும் மூன்று<br>பேர்களும். |    |    |    |    |
| 1C  | -1பா    | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 6   | 09 | 0    | 0  | 08 | 310 | வி. ராஜ<br>கோபால்.                                  |    |    |    |    |
| 1D  | -1பா    | ர   | 4   | ... | 8-5 | 8   | 0   | 91  | 0   | 12 | 5    | 0  | 12 | 466 | வி. கண்ணம்<br>மாள்.<br>மற்றும் மூன்று<br>பேர்களும். |    |    |    |    |

கிடைத்த

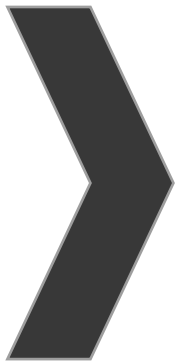
D.C. தலைவர்

S = D.C. தாழ்த்தப்பட்ட எழுத்துகள்

கிடைத்த பட்டி: கண்ணம்மாள் (1) &amp; (2)

Dr. S. KATUPPANNAN, M.Sc. Ph.D.  
RGP/MAS/263/2014A

பேர்ணாம்பட்டு வட்டம் (வே.மா)



# **ANNEXURE-7**



# Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045  
Phone Number +91 82208 36377 Email: -[info@shrientanalytical.com](mailto:info@shrientanalytical.com)  
[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1903 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

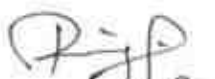
|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A1- Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1903  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 04.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 25%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results        | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.2           | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.0           | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.5            | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.5            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL(D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

Please Contact:

For any Technical Issues&Complaints: [technical@shrientanalytical.com](mailto:technical@shrientanalytical.com)

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1904 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1904  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 04.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 25%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 51.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.8            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

**Verified**



\*\*\*END OF THE REPORT\*\*\*

**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

Please Contact:

For any Technical Issues&Complaints: [technical@shrientanalytical.com](mailto:technical@shrientanalytical.com)

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1905 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A1- Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1905  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 05.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 59.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 27.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.1             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

Please Contact:

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1906 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1906  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 05.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 34°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 48.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 3.6             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.1             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1907 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - west |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1907  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 06.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 34°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 46.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.9            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.5             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1908 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

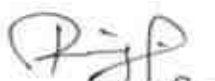
|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1908  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 06.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.8            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.0             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 11.1            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1909 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - west |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1909  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 07.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 43.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 20.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.6             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.5             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1910 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1910  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 07.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 51.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1911 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1911  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 08.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 26%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 49.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.3             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1912 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1912  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 08.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 49.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.1             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

Please Contact:

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1913 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1913  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 08.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 47.8            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.4             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1914 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1914  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 09.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 52.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.3            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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**S. BALAMURUGAN**  
Asst. Technical Manager

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**LAB SERVICES FOR:-** Food, Water, Milk, Environment, Academic & Industrial Segment.

**CIN :** U74999TN2017PTC116807 / **GST No :** 33AAYCS7325R1ZA / **PAN No:** AAYCS7325R

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1915 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1915  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 09.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.5            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 12.0            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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Authorized Signatory  
S. BALAMURUGAN  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1916 | Report Date. | 17.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1916  | Sample Received on | 10.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 10.03.2025 |
| Sample Collected on | 09.03.2025       | Test Completed on  | 17.03.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.1            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1957 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1957  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 11.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1958 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1958  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 11.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 58.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 6.0             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 13.6            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1959 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1959  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 11.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.3            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1960 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1960  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 12.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 49.8            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.  
CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1961 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1961  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 12.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 37°C             | Relative Humidity  | 21%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.6             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 12.2            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1962 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1962  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 11.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 48.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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\*\*\*END OF THE REPORT\*\*\*

  
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S. BALAMURUGAN  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1963 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - west |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1963  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 13.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 37°C             | Relative Humidity  | 23%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 43.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 20.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.0             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1964 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1964  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 13.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 37°C             | Relative Humidity  | 23%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 61.4            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 28.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 15.7            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1965 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - west |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1965  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 14.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 47.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1966 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1966  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 14.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 57.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 27.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 12.1            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1967 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1967  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 15.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 58.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.0             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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\*\*\*END OF THE REPORT\*\*\*

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1968 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1968  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 15.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 49.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 3.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.4             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1969 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

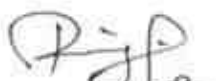
|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1969  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 16.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 62.0            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 28.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/1970 | Report Date. | 24.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-1970  | Sample Received on | 17.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 17.03.2025 |
| Sample Collected on | 16.03.2025       | Test Completed on  | 24.03.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 52.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.8             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2011 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

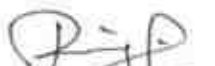
|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2011  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 18.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 25%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results        | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 49.2           | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.5           | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.1            | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.2            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL(D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2012 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2012  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 18.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 25%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.9            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

**Verified**



\*\*\*END OF THE REPORT\*\*\*

**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

Please Contact:

For any Technical Issues&Complaints: [technical@shrientanalytical.com](mailto:technical@shrientanalytical.com)

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2013 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2013  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 19.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2014 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2014  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 19.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 34°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 3.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2015 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - west |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2015  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 20.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 34°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 44.4            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 20.8            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.9            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

Verified



\*\*\*END OF THE REPORT\*\*\*

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2016 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2016  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 20.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 58.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 27.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 12.2            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

**Verified**



**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2017 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - west |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2017  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 21.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 48.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 6.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.3            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2018 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2018  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 21.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 54.4            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.7            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2019 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2019  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 22.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 26%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 54.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.7            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

Please Contact:

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2020 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2020  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 22.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 51.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.8            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.4            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2021 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2021  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 22.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.5            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.9            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2022 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2022  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 23.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 51.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.  
CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2023 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2023  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 23.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 54.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 12.8            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2024 | Report Date. | 31.03.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2024  | Sample Received on | 24.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 24.03.2025 |
| Sample Collected on | 23.03.2025       | Test Completed on  | 31.03.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 46.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.1             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



\*\*\*END OF THE REPORT\*\*\*

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2065 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2065  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 25.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.4             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2066 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2066  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 25.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 52.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.8            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2067 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2067  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 25.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 45.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2068 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2068  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 26.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 12.1            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2069 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2069  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 26.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 37°C             | Relative Humidity  | 21%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.5            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2070 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2070  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 26.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 37°C             | Relative Humidity  | 21%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 49.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2071 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

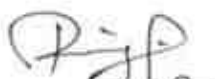
|                              |                             |
|------------------------------|-----------------------------|
| Sample Location              | A3- Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level    |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2071  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 27.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 37°C             | Relative Humidity  | 23%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 48.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.6             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2072 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2072  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 27.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 37°C             | Relative Humidity  | 23%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 60.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 28.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 13.3            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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**Authorized Signatory**  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2073 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

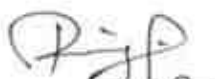
|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2073  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 28.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 45.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.0             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2074 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2074  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 28.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 56.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 11.6            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2075 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A1- Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2075  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 29.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.3             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2076 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2076  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 29.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.0             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.4             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2077 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A1- Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2077  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 30.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.1             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2078 | Report Date. | 07.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2078  | Sample Received on | 31.03.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 31.03.2025 |
| Sample Collected on | 30.03.2025       | Test Completed on  | 07.04.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2119 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2119  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 01.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 25%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results        | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 66.0           | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 30.3           | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.8            | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.6           | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL(D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

Please Contact:

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2120 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2120  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 01.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 25%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 52.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.8             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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**Authorized Signatory**  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2121 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2121  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 02.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 63.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 29.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.5             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2122 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

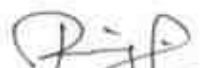
|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2122  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 02.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 34°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 49.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.9            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 3.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2123 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2123  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 03.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 34°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 45.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.6            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2124 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

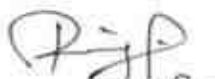
|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2124  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 03.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 52.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.6             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2125 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

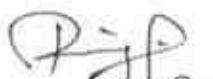
|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2125  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 04.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 49.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.1            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2126 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2126  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 04.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.8            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.9            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

Please Contact:

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2127 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2127  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 05.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 26%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 44.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.3             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2128 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2128  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 05.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 48.8            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.4             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2129 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2129  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 05.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 44.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 20.9            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2130 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2130  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 06.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 45.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2131 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2131  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 06.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 46.4            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 3.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
**S. BALAMURUGAN**  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2132 | Report Date. | 14.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2132  | Sample Received on | 07.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 07.04.2025 |
| Sample Collected on | 06.04.2025       | Test Completed on  | 14.04.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 47.4            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.3             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 14 of 14



# Shrient Analytical and Research Labs Pvt. Ltd

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2173 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2173  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 08.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 46.0            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.1             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2174 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2174  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 08.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 48.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 3.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2175 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2175  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 08.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.0            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2176 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2176  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 09.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 45.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2177 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2177  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 09.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 37°C             | Relative Humidity  | 21%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.6             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2178 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2178  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 09.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 37°C             | Relative Humidity  | 21%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 46.0            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.8            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.4             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2179 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

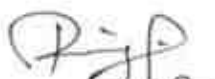
|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2179  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 10.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 37°C             | Relative Humidity  | 23%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 56.5            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 31.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.5            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

Please Contact:

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2180 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2180  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 10.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 37°C             | Relative Humidity  | 23%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.4            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2181 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2181  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 11.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 52.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.9            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 6.0             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2182 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2182  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 11.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 57.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 27.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 11.7            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2183 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2183  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 12.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 66.4            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 31.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 6.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 12.3            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2184 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2184  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 12.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 62.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 27.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.2            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2185 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2185  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 13.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 67.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 30.8            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 11.1            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2186 | Report Date. | 21.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2186  | Sample Received on | 14.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 14.04.2025 |
| Sample Collected on | 13.04.2025       | Test Completed on  | 21.04.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 59.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.5             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

**Verified**



\*\*\*END OF THE REPORT\*\*\*

**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

Please Contact:

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2227 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

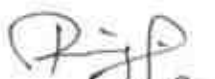
|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2227  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 15.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 25%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results        | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 65.2           | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 29.4           | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.6            | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.1           | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL(D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2228 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2228  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 15.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 25%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 59.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.4             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2229 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

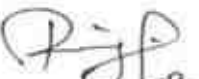
|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2229  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 16.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 61.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 28.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.5             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2230 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

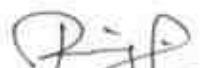
|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2230  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 16.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 34°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 61.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 27.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2231 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2231  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 17.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 34°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 52.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.3             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

Verified



\*\*\*END OF THE REPORT\*\*\*

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2232 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

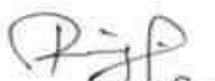
|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2232  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 17.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.0             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

Please Contact:

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2233 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2233  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 18.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 27.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2234 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2234  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 18.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 46.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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\*\*\*END OF THE REPORT\*\*\*

  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2235 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2235  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 19.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 26%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 47.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.6             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.6            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2236 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2236  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 19.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 13.1            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2237 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2237  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 19.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 44.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.6             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2238 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2238  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 20.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 45.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.5             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
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Asst. Technical Manager

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2239 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2239  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 20.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 52.8            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 11.3            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

Please Contact:

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2240 | Report Date. | 28.04.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2240  | Sample Received on | 21.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 21.04.2025 |
| Sample Collected on | 20.04.2025       | Test Completed on  | 28.04.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 46.5            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.3             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2281 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2281  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 22.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 58.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 27.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2282 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2282  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 22.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 47.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 3.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.0            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2283 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2283  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 22.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 48.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.8            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.5             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2284 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2284  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 23.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 56.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.3            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2285 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2285  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 23.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 37°C             | Relative Humidity  | 21%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.5            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.3             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

**Verified**



**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2286 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2286  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 23.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 37°C             | Relative Humidity  | 21%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 52.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.2            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2287 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2287  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 24.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 37°C             | Relative Humidity  | 23%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2288 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2288  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 24.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 37°C             | Relative Humidity  | 23%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.3            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2289 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2289  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 25.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 51.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2290 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2290  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 25.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 48.8            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.5             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2291 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2291  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 26.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 52.4            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.8            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.5             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2292 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2292  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 26.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 56.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.0             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.4             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2293 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2293  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 27.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 47.0            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 3.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.4             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

Please Contact:

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2294 | Report Date. | 05.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2294  | Sample Received on | 29.04.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 29.04.2025 |
| Sample Collected on | 27.04.2025       | Test Completed on  | 05.05.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.1             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2335 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2335  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 29.04.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 25%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results        | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 56.4           | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.0           | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.7            | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.3            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL(D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2336 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2336  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 29.04.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 25%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 56.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2337 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2337  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 30.04.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2338 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

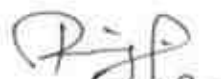
|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2338  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 30.04.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 34°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 52.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2339 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2339  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 01.05.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 34°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.5            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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**S. BALAMURUGAN**  
Asst. Technical Manager

Please Contact:

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2340 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

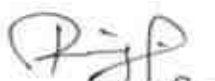
|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2340  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 01.05.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 47.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.8            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2341 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2341  | Sample Received on | 05.05.2025 |
| Sample Collected by | 02.05.2025       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 18.04.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 49.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 6.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2342 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2342  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 02.05.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 48.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2343 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2343  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 03.05.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 26%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 54.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 6.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.9            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2344 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2344  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 03.05.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 46.8            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.8            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 3.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2345 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2345  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 03.05.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.4            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 6.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.7            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2346 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2346  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 04.05.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.5            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

Please Contact:

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2347 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2347  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 04.05.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 49.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2348 | Report Date. | 12.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2348  | Sample Received on | 05.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 05.05.2025 |
| Sample Collected on | 04.05.2025       | Test Completed on  | 12.05.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 45.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2389 | Report Date. | 19.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2389  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 06.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 11.2            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2390 | Report Date. | 19.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2390  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 06.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 47.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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\*\*\*END OF THE REPORT\*\*\*

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2391 | Report Date. | 19.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2391  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 06.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 57.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 27.0            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 6.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.9            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2392 | Report Date. | 19.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2392  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 07.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.5            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2393 | Report Date. | 19.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2393  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 07.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 37°C             | Relative Humidity  | 21%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 51.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.3            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

**Verified**



**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2394 | Report Date. | 19.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2394  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 07.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 37°C             | Relative Humidity  | 21%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.4            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2395 | Report Date. | 19.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2395  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 08.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 37°C             | Relative Humidity  | 23%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 54.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.1            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2396 | Report Date. | 19.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2396  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 08.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 37°C             | Relative Humidity  | 23%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 46.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.1            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2397 | Report Date. | 19.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2397  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 09.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 51.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.8             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2398 | Report Date. | 19.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2398  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 09.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.9            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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**S. BALAMURUGAN**  
Asst. Technical Manager

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**CIN :** U74999TN2017PTC116807 / **GST No :** 33AAYCS7325R1ZA / **PAN No:** AAYCS7325R

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2399 | Report Date. | 19.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

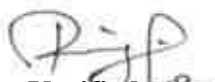
|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2399  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 10.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 60.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 27.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2400 | Report Date. | 19.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2400  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 10.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.1             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

|            |               |              |            |
|------------|---------------|--------------|------------|
| Report No. | SARL/25/ 2401 | Report Date. | 19.05.2025 |
|------------|---------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2401  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 11.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 63.9            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 29.4            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
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## TEST REPORT

|            |               |              |            |
|------------|---------------|--------------|------------|
| Report No. | SARL/25/ 2402 | Report Date. | 19.05.2025 |
|------------|---------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2402  | Sample Received on | 12.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 12.05.2025 |
| Sample Collected on | 11.05.2025       | Test Completed on  | 19.05.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 58.4            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2443 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2443  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 13.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 25%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results        | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 48.4           | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.9           | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.0            | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.1            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL(D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2444 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2444  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 13.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 25%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 61.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 27.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.1            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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Authorized Signatory  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2445 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2445  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 14.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 54.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.6             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2446 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

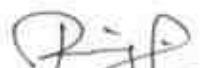
|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2446  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 14.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 34°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 58.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.3             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

Please Contact:

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2447 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2447  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 15.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 34°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 54.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2448 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

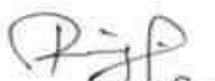
|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2448  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 15.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 47.4            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.8            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 3.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 7.5             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2449 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2449  | Sample Received on | 19.05.2025 |
| Sample Collected by | 02.05.2025       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 16.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 27%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2450 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2450  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 16.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 49.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2451 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2451  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 17.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 26%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 52.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 11.7            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2452 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2452  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 17.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 50.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.5             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2453 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

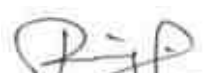
|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2453  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 17.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 36°C             | Relative Humidity  | 28%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 49.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.5            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.8             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

Please Contact:

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2454 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2454  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 18.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 56.8            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2455 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2455  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 18.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 48.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.3             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2456 | Report Date. | 26.05.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2456  | Sample Received on | 19.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 19.05.2025 |
| Sample Collected on | 18.05.2025       | Test Completed on  | 26.05.2025 |
| Temperature         | 35°C             | Relative Humidity  | 32%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 54.5            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.8            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 6.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.6            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2512 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2512  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 20.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 12.5            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2513 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2513  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 20.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 53.2            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.3             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 11.6            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2514 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2514  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 20.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 54.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.5            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2515 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A5-Gudiyatham            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2515  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 21.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 51.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.9            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2516 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A6-Pogalur               |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2516  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 21.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 37°C             | Relative Humidity  | 21%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 48.4            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 22.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.0             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.2             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2517 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A7-Morasapalli           |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2517  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 21.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 37°C             | Relative Humidity  | 21%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 56.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 6.2             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.8            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2518 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2518  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 22.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 37°C             | Relative Humidity  | 23%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 46.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 21.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.1             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.2            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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**LAB SERVICES FOR:-** Food, Water, Milk, Environment, Academic & Industrial Segment.

**CIN :** U74999TN2017PTC116807 / **GST No :** 33AAYCS7325R1ZA / **PAN No:** AAYCS7325R



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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2519 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2519  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 22.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 37°C             | Relative Humidity  | 23%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 55.0            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 25.6            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.9             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 10.9            | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2520 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                            |
|------------------------------|----------------------------|
| Sample Location              | A3-Mel- Alangkuppam - West |
| Positioned height of Sampler | 1.5 M above Ground Level   |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2520  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 23.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 42.7            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 20.1            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.7             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.6             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2521 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A4-Chettikuppam          |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2521  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 23.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 51.8            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 24.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.5             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

Please Contact:

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2522 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

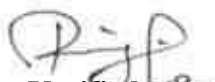
|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2522  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 24.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 36°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 57.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.2            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.8             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.1             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2523 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2523  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 24.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 60.3            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.9            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.6             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.7             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2524 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                           |
|------------------------------|---------------------------|
| Sample Location              | A1-Within Mine Lease area |
| Positioned height of Sampler | 1.5 M above Ground Level  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2524  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 25.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 51.6            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 23.7            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 4.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 8.4             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2525 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | AMBIENT AIR QUALITY                                                                                                                                                                     |
| Sampling Procedure      | IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines                                                                                                             |

|                              |                          |
|------------------------------|--------------------------|
| Sample Location              | A2-Paravakkal            |
| Positioned height of Sampler | 1.5 M above Ground Level |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Duration  | 24 hrs     |
| Sample Reference No | SARL/A/CHE-2525  | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 25.05.2025       | Test Completed on  | 02.06.2025 |
| Temperature         | 35°C             | Relative Humidity  | 30%        |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                                                       | Protocol                                               | Unit              | Results         | *Limits |
|--------|------------------------------------------------------------------|--------------------------------------------------------|-------------------|-----------------|---------|
| 1      | Particulate Matter less than 10micron size (PM <sub>10</sub> )   | IS:5182: Part 23:2006                                  | µg/m <sup>3</sup> | 58.1            | 100     |
| 2      | Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> ) | IS 5182 (Part 24):2019                                 | µg/m <sup>3</sup> | 26.3            | 60      |
| 3      | Sulphur dioxide (SO <sub>2</sub> )                               | IS:5182: Part 02:2001                                  | µg/m <sup>3</sup> | 5.4             | 80      |
| 4      | Nitrogen Dioxide (NO <sub>2</sub> )                              | IS:5182: Part 06:2006                                  | µg/m <sup>3</sup> | 9.9             | 80      |
| 5      | Carbon monoxide (CO)                                             | SARL/IOP/013 (Issue No:01,<br>Issue Date – 01.03.2023) | mg/m <sup>3</sup> | BDL (D.L – 1.1) | -       |

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2526 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | WATER                                                                                                                                                                                   |
| Sample Mark             | W1-Within Mine Lease area                                                                                                                                                               |

|                     |                  |                    |                         |
|---------------------|------------------|--------------------|-------------------------|
| Customer Reference  | By Mail          | Sampling Procedure | IS 17614: Part 14: 2021 |
| Sample Reference No | SARL/W/CHE-2526  | Sample Received on | 26.05.2025              |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025              |
| Sample Collected on | 25.05.2025       | Test Completed on  | 02.06.2025              |
| Sample Condition    | Fit for Analysis |                    |                         |

| Sl. No. | Parameters                    | Protocol                                        | Unit    | Result    | *Limits     |
|---------|-------------------------------|-------------------------------------------------|---------|-----------|-------------|
|         |                               |                                                 |         |           | Permissible |
| A.      | Physical parameters           |                                                 |         |           |             |
| 1       | Odour                         | IS 3025 (Part 5): 2018                          | -       | Agreeable | Agreeable   |
| 2       | Turbidity                     | APHA 24 <sup>th</sup> Edition 2130 B: 2023      | NTU     | <1.0      | 5.0         |
| 3       | pH at 25 °C                   | APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023 | -       | 7.28      | 6.50-8.50   |
| 4       | Electrical Conductivity       | APHA 24 <sup>th</sup> Edition 2510 B: 2023      | (µS/cm) | 278.1     | -           |
| B.      | Chemical parameters           |                                                 |         |           |             |
| 5       | Total Dissolved Solids        | APHA 24th Edition 2540-C: 2023                  | mg/L    | 170       | 2000        |
| 6       | Total hardness (as CaCO3)     | APHA 24th Edition 2340 C: 2023                  | mg/L    | 81.0      | 600         |
| 7       | Calcium (as Ca)               | IS 3025 (Part 40): 1991                         | mg/L    | 26.0      | 200         |
| 8       | Magnesium (as Mg)             | IS 3025 (Part 46): 1994                         | mg/L    | 3.84      | 100         |
| 9       | Calcium Hardness (as CaCO3)   | APHA 24th Edition 3500 Ca B: 2023               | mg/L    | 65.0      | -           |
| 10      | Magnesium Hardness (as CaCO3) | APHA 24th Edition 3500 Mg B: 2023               | mg/L    | 16.0      | -           |
| 11      | Total alkalinity (as CaCO3)   | APHA 24th Edition 2320 B: 2023                  | mg/L    | 72.2      | 600         |
| 12      | Chloride (as Cl)              | APHA 24th Edition 4500 Cl- B: 2023              | mg/L    | 45.6      | 1000        |



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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2526 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

| Sl. No | Parameters                       | Protocol                                          | Unit | Result           | *Limits     |
|--------|----------------------------------|---------------------------------------------------|------|------------------|-------------|
|        |                                  |                                                   |      |                  | Permissible |
| 13     | Free Residual chlorine           | APHA 24th Edition 4500 Cl- B: 2023                | mg/L | BDL (D.L - 0.2)  | 1.0         |
| 14     | Sulphate as (SO <sub>4</sub> 2-) | APHA 24th Edition 4500 SO <sub>4</sub> 2- E: 2023 | mg/L | 44.5             | 400         |
| 15     | Iron (as Fe)                     | APHA 24th Edition 3500 Fe B: 2023                 | mg/L | 0.03             | 0.3         |
| 16     | Nitrate (as NO <sub>3</sub> )    | IS 3025 (Part 34): 1988                           | mg/L | 1.22             | 45          |
| 17     | Fluoride (as F)                  | APHA 24th Edition 4500 F- D: 2023                 | mg/L | 0.12             | 1.5         |
| 18     | Manganese (as Mn)                | APHA 24th Edition 3500 Mn B: 2023                 | mg/L | BDL (D.L - 0.05) | 0.3         |

Remarks: \*Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 2 of 2



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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2527 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | WATER                                                                                                                                                                                   |
| Sample Mark             | W2-Paravakkal                                                                                                                                                                           |

|                     |                  |                    |                         |
|---------------------|------------------|--------------------|-------------------------|
| Customer Reference  | By Mail          | Sampling Procedure | IS 17614: Part 14: 2021 |
| Sample Reference No | SARL/W/CHE-2527  | Sample Received on | 26.05.2025              |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025              |
| Sample Collected on | 25.05.2025       | Test Completed on  | 02.06.2025              |
| Sample Condition    | Fit for Analysis |                    |                         |

| Sl. No. | Parameters                    | Protocol                                        | Unit    | Result    | *Limits     |
|---------|-------------------------------|-------------------------------------------------|---------|-----------|-------------|
|         |                               |                                                 |         |           | Permissible |
| A.      | Physical parameters           |                                                 |         |           |             |
| 1       | Odour                         | IS 3025 (Part 5): 2018                          | -       | Agreeable | Agreeable   |
| 2       | Turbidity                     | APHA 24 <sup>th</sup> Edition 2130 B: 2023      | NTU     | <1.0      | 5.0         |
| 3       | pH at 25 °C                   | APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023 | -       | 7.39      | 6.50-8.50   |
| 4       | Electrical Conductivity       | APHA 24 <sup>th</sup> Edition 2510 B: 2023      | (µS/cm) | 873.5     | -           |
| B.      | Chemical parameters           |                                                 |         |           |             |
| 5       | Total Dissolved Solids        | APHA 24th Edition 2540-C: 2023                  | mg/L    | 530       | 2000        |
| 6       | Total hardness (as CaCO3)     | APHA 24th Edition 2340 C: 2023                  | mg/L    | 329       | 600         |
| 7       | Calcium (as Ca)               | IS 3025 (Part 40): 1991                         | mg/L    | 87.6      | 200         |
| 8       | Magnesium (as Mg)             | IS 3025 (Part 46): 1994                         | mg/L    | 26.4      | 100         |
| 9       | Calcium Hardness (as CaCO3)   | APHA 24th Edition 3500 Ca B: 2023               | mg/L    | 219       | -           |
| 10      | Magnesium Hardness (as CaCO3) | APHA 24th Edition 3500 Mg B: 2023               | mg/L    | 110       | -           |
| 11      | Total alkalinity (as CaCO3)   | APHA 24th Edition 2320 B: 2023                  | mg/L    | 275       | 600         |
| 12      | Chloride (as Cl)              | APHA 24th Edition 4500 Cl- B: 2023              | mg/L    | 174.0     | 1000        |

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R





# Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2527 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

| Sl. No | Parameters                       | Protocol                                          | Unit | Result           | *Limits     |
|--------|----------------------------------|---------------------------------------------------|------|------------------|-------------|
|        |                                  |                                                   |      |                  | Permissible |
| 13     | Free Residual chlorine           | APHA 24th Edition 4500 Cl- B: 2023                | mg/L | BDL (D.L - 0.2)  | 1.0         |
| 14     | Sulphate as (SO <sub>4</sub> 2-) | APHA 24th Edition 4500 SO <sub>4</sub> 2- E: 2023 | mg/L | 62.5             | 400         |
| 15     | Iron (as Fe)                     | APHA 24th Edition 3500 Fe B: 2023                 | mg/L | BDL(DL-0.01)     | 0.3         |
| 16     | Nitrate (as NO <sub>3</sub> )    | IS 3025 (Part 34): 1988                           | mg/L | 2.64             | 45          |
| 17     | Fluoride (as F)                  | APHA 24th Edition 4500 F- D: 2023                 | mg/L | 0.21             | 1.5         |
| 18     | Manganese (as Mn)                | APHA 24th Edition 3500 Mn B: 2023                 | mg/L | BDL (D.L - 0.05) | 0.3         |

Remarks: \*Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: [technical@shrientanalytical.com](mailto:technical@shrientanalytical.com)

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2528 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | WATER                                                                                                                                                                                   |
| Sample Mark             | W3- Mel- Alangkuppam - West                                                                                                                                                             |

|                     |                  |                    |                         |
|---------------------|------------------|--------------------|-------------------------|
| Customer Reference  | By Mail          | Sampling Procedure | IS 17614: Part 14: 2021 |
| Sample Reference No | SARL/W/CHE-2528  | Sample Received on | 26.05.2025              |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025              |
| Sample Collected on | 25.05.2025       | Test Completed on  | 02.06.2025              |
| Sample Condition    | Fit for Analysis |                    |                         |

| Sl. No. | Parameters                    | Protocol                                        | Unit    | Result    | *Limits     |
|---------|-------------------------------|-------------------------------------------------|---------|-----------|-------------|
|         |                               |                                                 |         |           | Permissible |
| A.      | Physical parameters           |                                                 |         |           |             |
| 1       | Odour                         | IS 3025 (Part 5): 2018                          | -       | Agreeable | Agreeable   |
| 2       | Turbidity                     | APHA 24 <sup>th</sup> Edition 2130 B: 2023      | NTU     | <1.0      | 5.0         |
| 3       | pH at 25 °C                   | APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023 | -       | 8.01      | 6.50-8.50   |
| 4       | Electrical Conductivity       | APHA 24 <sup>th</sup> Edition 2510 B: 2023      | (µS/cm) | 1087      | -           |
| B.      | Chemical parameters           |                                                 |         |           |             |
| 5       | Total Dissolved Solids        | APHA 24th Edition 2540-C: 2023                  | mg/L    | 652       | 2000        |
| 6       | Total hardness (as CaCO3)     | APHA 24th Edition 2340 C: 2023                  | mg/L    | 341       | 600         |
| 7       | Calcium (as Ca)               | IS 3025 (Part 40): 1991                         | mg/L    | 73.2      | 200         |
| 8       | Magnesium (as Mg)             | IS 3025 (Part 46): 1994                         | mg/L    | 37.9      | 100         |
| 9       | Calcium Hardness (as CaCO3)   | APHA 24th Edition 3500 Ca B: 2023               | mg/L    | 183       | -           |
| 10      | Magnesium Hardness (as CaCO3) | APHA 24th Edition 3500 Mg B: 2023               | mg/L    | 158       | -           |
| 11      | Total alkalinity (as CaCO3)   | APHA 24th Edition 2320 B: 2023                  | mg/L    | 249       | 600         |
| 12      | Chloride (as Cl)              | APHA 24th Edition 4500 Cl- B: 2023              | mg/L    | 234       | 1000        |



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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2528 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

| Sl. No | Parameters                       | Protocol                                          | Unit | Result           | *Limits     |
|--------|----------------------------------|---------------------------------------------------|------|------------------|-------------|
|        |                                  |                                                   |      |                  | Permissible |
| 13     | Free Residual chlorine           | APHA 24th Edition 4500 Cl- B: 2023                | mg/L | BDL (D.L - 0.2)  | 1.0         |
| 14     | Sulphate as (SO <sub>4</sub> 2-) | APHA 24th Edition 4500 SO <sub>4</sub> 2- E: 2023 | mg/L | 131              | 400         |
| 15     | Iron (as Fe)                     | APHA 24th Edition 3500 Fe B: 2023                 | mg/L | BDL(DL-0.01)     | 0.3         |
| 16     | Nitrate (as NO <sub>3</sub> )    | IS 3025 (Part 34): 1988                           | mg/L | 3.73             | 45          |
| 17     | Fluoride (as F)                  | APHA 24th Edition 4500 F- D: 2023                 | mg/L | 0.46             | 1.5         |
| 18     | Manganese (as Mn)                | APHA 24th Edition 3500 Mn B: 2023                 | mg/L | BDL (D.L - 0.05) | 0.3         |

Remarks: \*Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2529 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | WATER                                                                                                                                                                                   |
| Sample Mark             | W4- Chettikuppam                                                                                                                                                                        |

|                     |                  |                    |                         |
|---------------------|------------------|--------------------|-------------------------|
| Customer Reference  | By Mail          | Sampling Procedure | IS 17614: Part 14: 2021 |
| Sample Reference No | SARL/W/CHE-2529  | Sample Received on | 26.05.2025              |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025              |
| Sample Collected on | 25.05.2025       | Test Completed on  | 02.06.2025              |
| Sample Condition    | Fit for Analysis |                    |                         |

| Sl. No. | Parameters                    | Protocol                                        | Unit    | Result    | *Limits     |
|---------|-------------------------------|-------------------------------------------------|---------|-----------|-------------|
|         |                               |                                                 |         |           | Permissible |
| A.      | Physical parameters           |                                                 |         |           |             |
| 1       | Odour                         | IS 3025 (Part 5): 2018                          | -       | Agreeable | Agreeable   |
| 2       | Turbidity                     | APHA 24 <sup>th</sup> Edition 2130 B: 2023      | NTU     | <1.0      | 5.0         |
| 3       | pH at 25 °C                   | APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023 | -       | 7.51      | 6.50-8.50   |
| 4       | Electrical Conductivity       | APHA 24 <sup>th</sup> Edition 2510 B: 2023      | (µS/cm) | 1837      | -           |
| B.      | Chemical parameters           |                                                 |         |           |             |
| 5       | Total Dissolved Solids        | APHA 24th Edition 2540-C: 2023                  | mg/L    | 1105      | 2000        |
| 6       | Total hardness (as CaCO3)     | APHA 24th Edition 2340 C: 2023                  | mg/L    | 496       | 600         |
| 7       | Calcium (as Ca)               | IS 3025 (Part 40): 1991                         | mg/L    | 105       | 200         |
| 8       | Magnesium (as Mg)             | IS 3025 (Part 46): 1994                         | mg/L    | 56.2      | 100         |
| 9       | Calcium Hardness (as CaCO3)   | APHA 24th Edition 3500 Ca B: 2023               | mg/L    | 262       | -           |
| 10      | Magnesium Hardness (as CaCO3) | APHA 24th Edition 3500 Mg B: 2023               | mg/L    | 234       | -           |
| 11      | Total alkalinity (as CaCO3)   | APHA 24th Edition 2320 B: 2023                  | mg/L    | 356       | 600         |
| 12      | Chloride (as Cl)              | APHA 24th Edition 4500 Cl- B: 2023              | mg/L    | 324       | 1000        |



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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2529 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

| Sl. No | Parameters                       | Protocol                                          | Unit | Result           | *Limits     |
|--------|----------------------------------|---------------------------------------------------|------|------------------|-------------|
|        |                                  |                                                   |      |                  | Permissible |
| 13     | Free Residual chlorine           | APHA 24th Edition 4500 Cl- B: 2023                | mg/L | BDL (D.L - 0.2)  | 1.0         |
| 14     | Sulphate as (SO <sub>4</sub> 2-) | APHA 24th Edition 4500 SO <sub>4</sub> 2- E: 2023 | mg/L | 276              | 400         |
| 15     | Iron (as Fe)                     | APHA 24th Edition 3500 Fe B: 2023                 | mg/L | 0.05             | 0.3         |
| 16     | Nitrate (as NO <sub>3</sub> )    | IS 3025 (Part 34): 1988                           | mg/L | 5.69             | 45          |
| 17     | Fluoride (as F)                  | APHA 24th Edition 4500 F- D: 2023                 | mg/L | 0.56             | 1.5         |
| 18     | Manganese (as Mn)                | APHA 24th Edition 3500 Mn B: 2023                 | mg/L | BDL (D.L - 0.05) | 0.3         |

Remarks: \*Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2530 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | WATER                                                                                                                                                                                   |
| Sample Mark             | W5- Gudiyatham                                                                                                                                                                          |

|                     |                  |                    |                         |
|---------------------|------------------|--------------------|-------------------------|
| Customer Reference  | By Mail          | Sampling Procedure | IS 17614: Part 14: 2021 |
| Sample Reference No | SARL/W/CHE-2530  | Sample Received on | 26.05.2025              |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025              |
| Sample Collected on | 25.05.2025       | Test Completed on  | 02.06.2025              |
| Sample Condition    | Fit for Analysis |                    |                         |

| Sl. No. | Parameters                    | Protocol                                        | Unit    | Result    | *Limits     |
|---------|-------------------------------|-------------------------------------------------|---------|-----------|-------------|
|         |                               |                                                 |         |           | Permissible |
| A.      | Physical parameters           |                                                 |         |           |             |
| 1       | Odour                         | IS 3025 (Part 5): 2018                          | -       | Agreeable | Agreeable   |
| 2       | Turbidity                     | APHA 24 <sup>th</sup> Edition 2130 B: 2023      | NTU     | <1.0      | 5.0         |
| 3       | pH at 25 °C                   | APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023 | -       | 7.69      | 6.50-8.50   |
| 4       | Electrical Conductivity       | APHA 24 <sup>th</sup> Edition 2510 B: 2023      | (µS/cm) | 530.1     | -           |
| B.      | Chemical parameters           |                                                 |         |           |             |
| 5       | Total Dissolved Solids        | APHA 24th Edition 2540-C: 2023                  | mg/L    | 320       | 2000        |
| 6       | Total hardness (as CaCO3)     | APHA 24th Edition 2340 C: 2023                  | mg/L    | 275       | 600         |
| 7       | Calcium (as Ca)               | IS 3025 (Part 40): 1991                         | mg/L    | 69.6      | 200         |
| 8       | Magnesium (as Mg)             | IS 3025 (Part 46): 1994                         | mg/L    | 24.2      | 100         |
| 9       | Calcium Hardness (as CaCO3)   | APHA 24th Edition 3500 Ca B: 2023               | mg/L    | 174       | -           |
| 10      | Magnesium Hardness (as CaCO3) | APHA 24th Edition 3500 Mg B: 2023               | mg/L    | 101       | -           |
| 11      | Total alkalinity (as CaCO3)   | APHA 24th Edition 2320 B: 2023                  | mg/L    | 130       | 600         |
| 12      | Chloride (as Cl)              | APHA 24th Edition 4500 Cl- B: 2023              | mg/L    | 92.2      | 1000        |

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2530 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

| Sl. No | Parameters                       | Protocol                                          | Unit | Result           | *Limits     |
|--------|----------------------------------|---------------------------------------------------|------|------------------|-------------|
|        |                                  |                                                   |      |                  | Permissible |
| 13     | Free Residual chlorine           | APHA 24th Edition 4500 Cl- B: 2023                | mg/L | BDL (D.L - 0.2)  | 1.0         |
| 14     | Sulphate as (SO <sub>4</sub> 2-) | APHA 24th Edition 4500 SO <sub>4</sub> 2- E: 2023 | mg/L | 45.3             | 400         |
| 15     | Iron (as Fe)                     | APHA 24th Edition 3500 Fe B: 2023                 | mg/L | BDL(DL-0.01)     | 0.3         |
| 16     | Nitrate (as NO <sub>3</sub> )    | IS 3025 (Part 34): 1988                           | mg/L | 2.31             | 45          |
| 17     | Fluoride (as F)                  | APHA 24th Edition 4500 F- D: 2023                 | mg/L | 0.25             | 1.5         |
| 18     | Manganese (as Mn)                | APHA 24th Edition 3500 Mn B: 2023                 | mg/L | BDL (D.L - 0.05) | 0.3         |

Remarks: \*Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2531 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | WATER                                                                                                                                                                                   |
| Sample Mark             | SW1-Palar River - Up Stream                                                                                                                                                             |

|                     |                  |                    |                         |
|---------------------|------------------|--------------------|-------------------------|
| Customer Reference  | By Mail          | Sampling Procedure | IS 17614: Part 14: 2021 |
| Sample Reference No | SARL/W/CHE-2531  | Sample Received on | 26.05.2025              |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025              |
| Sample Collected on | 25.06.2025       | Test Completed on  | 02.06.2025              |
| Sample Condition    | Fit for Analysis |                    |                         |

| Sl. No.   | Parameters                                    | Protocol                                        | Unit    | Result    |
|-----------|-----------------------------------------------|-------------------------------------------------|---------|-----------|
| <b>A.</b> | <b>Physical parameters</b>                    |                                                 |         |           |
| 1         | Odour                                         | IS 3025 (Part 5): 2018                          | -       | Agreeable |
| 2         | Turbidity                                     | APHA 24 <sup>th</sup> Edition 2130 B: 2023      | NTU     | <1.0      |
| 3         | pH at 25 °C                                   | APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023 | -       | 7.32      |
| 4         | Electrical Conductivity                       | APHA 24 <sup>th</sup> Edition 2510 B: 2023      | (µS/cm) | 262       |
| <b>B.</b> | <b>Chemical parameters</b>                    |                                                 |         |           |
| 5         | Total Dissolved Solids                        | APHA 24th Edition 2540-C: 2023                  | mg/L    | 160       |
| 6         | Total hardness<br>(as CaCO <sub>3</sub> )     | APHA 24th Edition 2340 C: 2023                  | mg/L    | 73.6      |
| 7         | Calcium (as Ca)                               | IS 3025 (Part 40): 1991                         | mg/L    | 13.6      |
| 8         | Magnesium (as Mg)                             | IS 3025 (Part 46): 1994                         | mg/L    | 9.53      |
| 9         | Calcium Hardness<br>(as CaCO <sub>3</sub> )   | APHA 24th Edition 3500 Ca B: 2023               | mg/L    | 33.9      |
| 10        | Magnesium Hardness<br>(as CaCO <sub>3</sub> ) | APHA 24th Edition 3500 Mg B: 2023               | mg/L    | 39.7      |
| 11        | Total alkalinity<br>(as CaCO <sub>3</sub> )   | APHA 24th Edition 2320 B: 2023                  | mg/L    | 95.5      |
| 12        | Chloride (as Cl)                              | APHA 24th Edition 4500 Cl- B: 2023              | mg/L    | 43.3      |





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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2531 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

| Sl. No | Parameters                                | Protocol                             | Unit | Result           |
|--------|-------------------------------------------|--------------------------------------|------|------------------|
| 13     | Free Residual chlorine                    | APHA 24th Edition 4500 Cl- B: 2023   | mg/L | BDL (D.L - 0.2)  |
| 14     | Sulphate as (SO42-)                       | APHA 24th Edition 4500 SO42- E: 2023 | mg/L | 21.2             |
| 15     | Iron (as Fe)                              | APHA 24th Edition 3500 Fe B: 2023    | mg/L | 0.09             |
| 16     | Nitrate (as NO3)                          | IS 3025 (Part 34): 1988              | mg/L | 1.97             |
| 17     | Fluoride (as F)                           | APHA 24th Edition 4500 F- D: 2023    | mg/L | 0.21             |
| 18     | Manganese (as Mn)                         | APHA 24th Edition 3500 Mn B: 2023    | mg/L | BDL (D.L - 0.05) |
| 19     | Chemical Oxygen Demand                    | APHA 24th Edition 5220 B: 2023       | mg/L | BDL (D.L - 4.0)  |
| 20     | Bio Chemical Oxygen Demand 3 Days at 27°C | IS 3025 (Part 44): 1993              | mg/L | BDL (D.L - 2.0)  |
| 21     | Total Suspended Solids                    | APHA 24th Edition 2540 D: 2023       | mg/L | BDL (D.L - 5.0)  |
| 22     | Dissolved Oxygen                          | IS 3025 (Part 38): 1989              | mg/L | 6.3              |

Remarks: \*Drinking Water Specifications as per IS - 10500:2012. BDL - Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2532 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | WATER                                                                                                                                                                                   |
| Sample Mark             | SW2-Palar River - Down Stream                                                                                                                                                           |

|                     |                  |                    |                         |
|---------------------|------------------|--------------------|-------------------------|
| Customer Reference  | By Mail          | Sampling Procedure | IS 17614: Part 14: 2021 |
| Sample Reference No | SARL/W/CHE-2532  | Sample Received on | 26.05.2025              |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025              |
| Sample Collected on | 25.06.2025       | Test Completed on  | 02.06.2025              |
| Sample Condition    | Fit for Analysis |                    |                         |

| Sl. No.   | Parameters                                    | Protocol                                        | Unit    | Result    |
|-----------|-----------------------------------------------|-------------------------------------------------|---------|-----------|
| <b>A.</b> | <b>Physical parameters</b>                    |                                                 |         |           |
| 1         | Odour                                         | IS 3025 (Part 5): 2018                          | -       | Agreeable |
| 2         | Turbidity                                     | APHA 24 <sup>th</sup> Edition 2130 B: 2023      | NTU     | <1.0      |
| 3         | pH at 25 °C                                   | APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023 | -       | 7.41      |
| 4         | Electrical Conductivity                       | APHA 24 <sup>th</sup> Edition 2510 B: 2023      | (µS/cm) | 370.4     |
| <b>B.</b> | <b>Chemical parameters</b>                    |                                                 |         |           |
| 5         | Total Dissolved Solids                        | APHA 24th Edition 2540-C: 2023                  | mg/L    | 224       |
| 6         | Total hardness<br>(as CaCO <sub>3</sub> )     | APHA 24th Edition 2340 C: 2023                  | mg/L    | 96.5      |
| 7         | Calcium (as Ca)                               | IS 3025 (Part 40): 1991                         | mg/L    | 18.9      |
| 8         | Magnesium (as Mg)                             | IS 3025 (Part 46): 1994                         | mg/L    | 11.8      |
| 9         | Calcium Hardness<br>(as CaCO <sub>3</sub> )   | APHA 24th Edition 3500 Ca B: 2023               | mg/L    | 47.2      |
| 10        | Magnesium Hardness<br>(as CaCO <sub>3</sub> ) | APHA 24th Edition 3500 Mg B: 2023               | mg/L    | 49.3      |
| 11        | Total alkalinity<br>(as CaCO <sub>3</sub> )   | APHA 24th Edition 2320 B: 2023                  | mg/L    | 138       |
| 12        | Chloride (as Cl)                              | APHA 24th Edition 4500 Cl- B: 2023              | mg/L    | 49.5      |



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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2532 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

| Sl. No | Parameters                                | Protocol                             | Unit | Result           |
|--------|-------------------------------------------|--------------------------------------|------|------------------|
| 13     | Free Residual chlorine                    | APHA 24th Edition 4500 Cl- B: 2023   | mg/L | BDL (D.L - 0.2)  |
| 14     | Sulphate as (SO42-)                       | APHA 24th Edition 4500 SO42- E: 2023 | mg/L | 33.8             |
| 15     | Iron (as Fe)                              | APHA 24th Edition 3500 Fe B: 2023    | mg/L | 0.12             |
| 16     | Nitrate (as NO3)                          | IS 3025 (Part 34): 1988              | mg/L | 3.45             |
| 17     | Fluoride (as F)                           | APHA 24th Edition 4500 F- D: 2023    | mg/L | 0.32             |
| 18     | Manganese (as Mn)                         | APHA 24th Edition 3500 Mn B: 2023    | mg/L | BDL (D.L - 0.05) |
| 19     | Chemical Oxygen Demand                    | APHA 24th Edition 5220 B: 2023       | mg/L | BDL (D.L - 4.0)  |
| 20     | Bio Chemical Oxygen Demand 3 Days at 27°C | IS 3025 (Part 44): 1993              | mg/L | BDL (D.L - 2.0)  |
| 21     | Total Suspended Solids                    | APHA 24th Edition 2540 D: 2023       | mg/L | BDL (D.L - 5.0)  |
| 22     | Dissolved Oxygen                          | IS 3025 (Part 38): 1989              | mg/L | 6.2              |

Remarks: \*Drinking Water Specifications as per IS - 10500:2012. BDL - Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2535 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | SOIL                                                                                                                                                                                    |
| Sample Mark             | S1-Within Mine Lease area                                                                                                                                                               |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Procedure | -          |
| Sample Reference No | SARL/SO/CHE-2535 | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 25.05.2025       | Test Completed on  | 02.06.2025 |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                         | Protocol                                                     | Unit        | Results        |
|--------|------------------------------------|--------------------------------------------------------------|-------------|----------------|
| 1      | pH at 25 °C                        | IS 2720: Part 26: 1987                                       | -           | 6.91           |
| 2      | Electrical Conductivity            | IS 14767: 2000                                               | µmhos/cm    | 44.68          |
| 3      | Dry matter content                 | IS 15106: 2002                                               | %           | 98.83          |
| 4      | Water Content                      | IS 15106: 2002                                               | %           | 1.17           |
| 5      | Organic Matter                     | IS 2720: Part 22: 1972                                       | %           | 0.42           |
| 6      | Nitrogen and Nitrogenous compounds | IS 14684: 1999                                               | mg/kg       | 236            |
| 7      | Soil Texture                       | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | Silty loam     |
| 8      | <u>Grain Size Distribution</u>     | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 30.78          |
|        | i. Sand                            | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 51.23          |
|        | ii. Silt                           | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 17.99          |
|        | iii. Clay                          | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | BDL (D.L.0.02) |
| 9      | Phosphorus as P                    | IS 10158: 1982                                               | mg/kg       | 1.02           |
| 10     | Sodium as Na                       | USEPA 3050 B: 1996                                           | mg/kg       | 712            |
| 11     | Potassium as K                     | USEPA 3050 B: 1996                                           | mg/kg       | 236            |
| 12     | Total soluble sulphates            | IS 2720: Part 27: 1977                                       | %           | BDL (D.L.0.02) |
| 13     | Porosity                           | SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023 | %           | 42             |
| 14     | Water holding capacity             | Methods Manual - Soil testing in India - P. No-76: 2011      | Inches/foot | 13.1           |

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2536 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | SOIL                                                                                                                                                                                    |
| Sample Mark             | S2- Paravakkal                                                                                                                                                                          |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Procedure | -          |
| Sample Reference No | SARL/SO/CHE-2536 | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 25.05.2025       | Test Completed on  | 02.06.2025 |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                         | Protocol                                                     | Unit        | Results        |
|--------|------------------------------------|--------------------------------------------------------------|-------------|----------------|
| 1      | pH at 25 °C                        | IS 2720: Part 26: 1987                                       | -           | 7.89           |
| 2      | Electrical Conductivity            | IS 14767: 2000                                               | µmhos/cm    | 286.7          |
| 3      | Dry matter content                 | IS 15106: 2002                                               | %           | 98.73          |
| 4      | Water Content                      | IS 15106: 2002                                               | %           | 1.27           |
| 5      | Organic Matter                     | IS 2720: Part 22: 1972                                       | %           | 0.54           |
| 6      | Nitrogen and Nitrogenous compounds | IS 14684: 1999                                               | mg/kg       | 345            |
| 7      | Soil Texture                       | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | Silt Clay      |
| 8      | <u>Grain Size Distribution</u>     | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 27.15          |
|        | i. Sand                            | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 61.58          |
|        | ii. Silt                           | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 11.27          |
|        | iii. Clay                          | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | BDL (D.L.0.02) |
| 9      | Phosphorus as P                    | IS 10158: 1982                                               | mg/kg       | 1.52           |
| 10     | Sodium as Na                       | USEPA 3050 B: 1996                                           | mg/kg       | 682            |
| 11     | Potassium as K                     | USEPA 3050 B: 1996                                           | mg/kg       | 786            |
| 12     | Total soluble sulphates            | IS 2720: Part 27: 1977                                       | %           | BDL (D.L.0.02) |
| 13     | Porosity                           | SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023 | %           | 45             |
| 14     | Water holding capacity             | Methods Manual - Soil testing in India - P. No-76: 2011      | Inches/foot | 14.2           |

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

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Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2537 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |  |  |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |  |  |
| Sample Description      | SOIL                                                                                                                                                                                    |  |  |
| Sample Mark             | S3-Mel- Alangkuppam - West                                                                                                                                                              |  |  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Procedure | -          |
| Sample Reference No | SARL/SO/CHE-2537 | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 25.05.2025       | Test Completed on  | 02.06.2025 |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                         | Protocol                                                     | Unit        | Results        |
|--------|------------------------------------|--------------------------------------------------------------|-------------|----------------|
| 1      | pH at 25 °C                        | IS 2720: Part 26: 1987                                       | -           | 8.24           |
| 2      | Electrical Conductivity            | IS 14767: 2000                                               | µmhos/cm    | 136.2          |
| 3      | Dry matter content                 | IS 15106: 2002                                               | %           | 96.83          |
| 4      | Water Content                      | IS 15106: 2002                                               | %           | 3.17           |
| 5      | Organic Matter                     | IS 2720: Part 22: 1972                                       | %           | 0.25           |
| 6      | Nitrogen and Nitrogenous compounds | IS 14684: 1999                                               | mg/kg       | 265            |
| 7      | Soil Texture                       | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | Loam           |
| 8      | <u>Grain Size Distribution</u>     | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 44.39          |
|        | i. Sand                            | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 45.47          |
|        | ii. Silt                           | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 10.14          |
|        | iii. Clay                          | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | BDL (D.L.0.02) |
| 9      | Phosphorus as P                    | IS 10158: 1982                                               | mg/kg       | 1.34           |
| 10     | Sodium as Na                       | USEPA 3050 B: 1996                                           | mg/kg       | 810            |
| 11     | Potassium as K                     | USEPA 3050 B: 1996                                           | mg/kg       | 914            |
| 12     | Total soluble sulphates            | IS 2720: Part 27: 1977                                       | %           | BDL (D.L.0.02) |
| 13     | Porosity                           | SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023 | %           | 48             |
| 14     | Water holding capacity             | Methods Manual - Soil testing in India - P. No-76: 2011      | Inches/foot | 14.5           |

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2538 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |  |  |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |  |  |
| Sample Description      | SOIL                                                                                                                                                                                    |  |  |
| Sample Mark             | S4-Chettikuppam                                                                                                                                                                         |  |  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Procedure | -          |
| Sample Reference No | SARL/SO/CHE-2538 | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 25.05.2025       | Test Completed on  | 02.06.2025 |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                         | Protocol                                                     | Unit        | Results        |
|--------|------------------------------------|--------------------------------------------------------------|-------------|----------------|
| 1      | pH at 25 °C                        | IS 2720: Part 26: 1987                                       | -           | 7.78           |
| 2      | Electrical Conductivity            | IS 14767: 2000                                               | µmhos/cm    | 155.4          |
| 3      | Dry matter content                 | IS 15106: 2002                                               | %           | 97.12          |
| 4      | Water Content                      | IS 15106: 2002                                               | %           | 2.73           |
| 5      | Organic Matter                     | IS 2720: Part 22: 1972                                       | %           | 0.72           |
| 6      | Nitrogen and Nitrogenous compounds | IS 14684: 1999                                               | mg/kg       | 242            |
| 7      | Soil Texture                       | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | Loam           |
| 8      | <u>Grain Size Distribution</u>     | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 40.64          |
|        | i. Sand                            | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 47.63          |
|        | ii. Silt                           | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 11.73          |
|        | iii. Clay                          | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | BDL (D.L.0.02) |
| 9      | Phosphorus as P                    | IS 10158: 1982                                               | mg/kg       | 2.19           |
| 10     | Sodium as Na                       | USEPA 3050 B: 1996                                           | mg/kg       | 645            |
| 11     | Potassium as K                     | USEPA 3050 B: 1996                                           | mg/kg       | 986            |
| 12     | Total soluble sulphates            | IS 2720: Part 27: 1977                                       | %           | BDL (D.L.0.02) |
| 13     | Porosity                           | SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023 | %           | 42             |
| 14     | Water holding capacity             | Methods Manual - Soil testing in India - P. No-76: 2011      | Inches/foot | 15.9           |

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: [technical@shrientanalytical.com](mailto:technical@shrientanalytical.com)

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

|            |              |              |            |
|------------|--------------|--------------|------------|
| Report No. | SARL/25/2539 | Report Date. | 02.06.2025 |
|------------|--------------|--------------|------------|

|                         |                                                                                                                                                                                         |  |  |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |  |  |
| Sample Description      | SOIL                                                                                                                                                                                    |  |  |
| Sample Mark             | S5-Gudiyatham                                                                                                                                                                           |  |  |

|                     |                  |                    |            |
|---------------------|------------------|--------------------|------------|
| Customer Reference  | By Mail          | Sampling Procedure | -          |
| Sample Reference No | SARL/SO/CHE-2539 | Sample Received on | 26.05.2025 |
| Sample Collected by | LABORATORY       | Test Commenced on  | 26.05.2025 |
| Sample Collected on | 25.05.2025       | Test Completed on  | 02.06.2025 |
| Sample Condition    | Fit for Analysis |                    |            |

| S. No. | Parameters                         | Protocol                                                     | Unit        | Results        |
|--------|------------------------------------|--------------------------------------------------------------|-------------|----------------|
| 1      | pH at 25 °C                        | IS 2720: Part 26: 1987                                       | -           | 8.12           |
| 2      | Electrical Conductivity            | IS 14767: 2000                                               | µmhos/cm    | 122.1          |
| 3      | Dry matter content                 | IS 15106: 2002                                               | %           | 95.55          |
| 4      | Water Content                      | IS 15106: 2002                                               | %           | 4.34           |
| 5      | Organic Matter                     | IS 2720: Part 22: 1972                                       | %           | 0.47           |
| 6      | Nitrogen and Nitrogenous compounds | IS 14684: 1999                                               | mg/kg       | 310            |
| 7      | Soil Texture                       | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | Silty Loam     |
| 8      | <u>Grain Size Distribution</u>     | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 24.02          |
|        | i. Sand                            | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 58.36          |
|        | ii. Silt                           | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | 17.62          |
|        | iii. Clay                          | Methods Manual - Soil testing in India - P. No-67: 2011      | %           | BDL (D.L.0.02) |
| 9      | Phosphorus as P                    | IS 10158: 1982                                               | mg/kg       | 1.22           |
| 10     | Sodium as Na                       | USEPA 3050 B: 1996                                           | mg/kg       | 836            |
| 11     | Potassium as K                     | USEPA 3050 B: 1996                                           | mg/kg       | 1020           |
| 12     | Total soluble sulphates            | IS 2720: Part 27: 1977                                       | %           | BDL (D.L.0.02) |
| 13     | Porosity                           | SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023 | %           | 39             |
| 14     | Water holding capacity             | Methods Manual - Soil testing in India - P. No-76: 2011      | Inches/foot | 13.8           |

BDL – Below Detectable limit (DL - Detectable limit).

**For Shrient Analytical and Research Labs Pvt. Ltd**

**Verified**



**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2542 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Name & Address | Rough Stone Quarry of Thiru.R.Sathish,<br>at S.F.Nos. 208 (Part-8) over an extent of 2.02.40 Hectares at Paravakkal Village,<br>Peranampattu Taluk, Vellore District, Tamil Nadu State. |
| Sample Description      | NOISE LEVEL DATA                                                                                                                                                                        |

|                     |                   |                    |                        |
|---------------------|-------------------|--------------------|------------------------|
| Customer Reference  | As per work order | Sampling Method    | SARL/IOP/023           |
| Sample Reference No | SARL/NO/CHE-2542  | Date of Monitoring | 24.03.2025/ 25.03.2025 |
| Sample Collected by | LABORATORY        |                    |                        |

| Time in hrs | N1   | N2   | N3   | N4   | N5   |
|-------------|------|------|------|------|------|
| 06.00       | 39.6 | 39.0 | 39.6 | 39.0 | 38.0 |
| 07.00       | 42.0 | 41.7 | 40.5 | 41.7 | 40.6 |
| 08.00       | 44.6 | 43.6 | 42.6 | 45.6 | 43.6 |
| 09.00       | 47.6 | 45.5 | 41.0 | 44.7 | 45.5 |
| 10.00       | 51.0 | 49.6 | 43.6 | 47.6 | 44.6 |
| 11.00       | 53.6 | 48.8 | 41.5 | 46.0 | 47.6 |
| 12.00       | 52.5 | 45.8 | 40.0 | 42.5 | 46.5 |
| 13.00       | 50.8 | 48.6 | 41.6 | 45.6 | 45.6 |
| 14.00       | 52.6 | 46.6 | 43.6 | 43.6 | 43.7 |
| 15.00       | 49.6 | 45.7 | 45.5 | 42.5 | 46.8 |
| 16.00       | 50.5 | 45.0 | 42.6 | 44.5 | 44.6 |
| 17.00       | 47.6 | 43.6 | 45.0 | 43.6 | 48.6 |
| 18.00       | 45.5 | 42.5 | 43.7 | 45.5 | 47.7 |
| 19.00       | 41.0 | 41.0 | 42.6 | 44.6 | 42.8 |
| 20.00       | 39.6 | 44.1 | 41.0 | 41.6 | 45.8 |
| 21.00       | 45.6 | 41.0 | 39.6 | 42.5 | 43.6 |
| 22.00       | 44.6 | 41.7 | 37.6 | 41.0 | 41.7 |
| 23.00       | 41.0 | 40.8 | 39.5 | 42.6 | 38.6 |
| 24.00       | 41.6 | 41.6 | 38.6 | 39.6 | 39.6 |
| 01.00       | 38.6 | 38.6 | 36.6 | 36.6 | 38.5 |
| 02.00       | 39.5 | 37.5 | 38.7 | 37.6 | 36.6 |
| 03.00       | 36.6 | 36.8 | 35.6 | 38.6 | 35.6 |
| 04.00       | 37.9 | 38.6 | 37.6 | 36.5 | 36.7 |
| 05.00       | 38.8 | 36.9 | 38.5 | 37.6 | 38.5 |

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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## TEST REPORT

|            |              |
|------------|--------------|
| Report No. | SARL/25/2542 |
|------------|--------------|

|              |            |
|--------------|------------|
| Report Date. | 02.06.2025 |
|--------------|------------|

|                        | N1   | N2   | N3   | N4   | N5   |
|------------------------|------|------|------|------|------|
| DAY EQUIVALENT         | 49.1 | 45.5 | 42.5 | 44.3 | 45.4 |
| NIGHT EQUIVALENT       | 40.5 | 39.5 | 38.0 | 39.3 | 38.6 |
| DAY & NIGHT EQUIVALENT | 47.6 | 44.2 | 41.4 | 43.2 | 44.1 |

Remarks:

### LOCATIONS:

N1-Within Mine Lease area

N2-Paravakkal

N3-Mel- Alangkuppam - West

N4-Chettikuppam

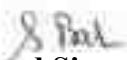
N5-Gudiyatham

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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For any Technical Issues & Complaints: [technical@shrientanalytical.com](mailto:technical@shrientanalytical.com)

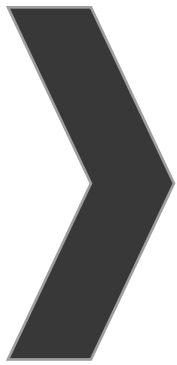
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Page 2 of 2



# **ANNEXURE-8**



National Accreditation Board for  
Testing and Calibration Laboratories

**CERTIFICATE OF ACCREDITATION**

**SHRIENT ANALYTICAL & RESEARCH LABS PRIVATE  
LIMITED**

has been assessed and accredited in accordance with the standard

**ISO/IEC 17025:2017**

**"General Requirements for the Competence of Testing &  
Calibration Laboratories"**

for its facilities at

416/15, DHARGAS ROAD, PERUNGALATHUR, WEST TAMBARAM, CHENNAI, KANCHIPURAM, TAMIL  
NADU, INDIA

in the field of

**TESTING**

Certificate Number: TC-12339

Issue Date: 30/09/2023

Valid Until: 29/09/2025

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued  
satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website [www.nabl-india.org](http://www.nabl-india.org))

Name of Legal Entity: SHRIENT ANALYTICAL AND RESEARCH LABS PRIVATE LIMITED

Signed for and on behalf of NABL



N. Venkateswaran  
Chief Executive Officer