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. TO25B0108TN5357464N (F.No. 12396), dated 13.08.2025

PROPOSED QUARRY LEASE DETAILS	
SURVEY NO	3/1
VILLAGE	KODANGIPATTI
TALUK	BODINAICKANUR
DISTRICT	THENI
EXTENT	1.69.00Ha
CLUSTER EXTENT	6.41.00 Ha
PROPOSED PRODUCTION OF ROUGH STONE (5 YEARS)	ROUGH STONE : 1,62,825 m^3 PEAK PRODUCTION : 32,750 m^3 (5TH YEAR)
LAND	GOVERNMENT PORAMBOKE LAND

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

Category of the Project: B1 Cluster Mining, Total Cluster Area – 6.41.00 Ha

Baseline Monitoring Period – March 2025 to May 2025

APPLICANT

THIRU.M.SURIYACHELVAN, S/o.MURUGESAN,

NO.5-3-79-1, 3RD STREET, DURAIRAJAPURAM, ANAIKARAIPATTI, BODINAICKANUR TALUK, THENI DISTRICT

PINCODE-625582.

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

SEPTEMBER - 2025

AMENDMENT PAGE

SL	Page No.	Section / Clause / Para / Line (as Applicable)	Date of Amendment	Amendment Made	Reasons of amendment	Signature of Person Authorizing Amendment
1						
2						
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8						
9						
10						

ACKNOWLEDGEMENT

M/s. Global Mining Solutions, Salem is very much thankful Thiru.M.Suriyachelvan, 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 1.69.00 Ha., & Cluster extent of 6.41.00 Ha., located at Kodangipatti Village, Bodinaickanur Taluk, Theni 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 Kodangipatti 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

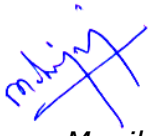
(M. Prabu)

Managing Director

UNDERTAKING

In line with MoEF OM No. J – 11013/41/2006-IA.II (I) dated 5th 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 1.69.00 Ha., & Cluster extent of 6.41.00 Ha located at Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.

For: M/s. Global Mining Solutions



Name: Manikandan Manickam

EIA Coordinator – Mining

UNDERTAKING

In Line with OM no. J-11013/41/2006-IA.II (1) dated 4th 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. TO25B0108TN5357464N (F.No. 12396), dated 13.08.2025 of Draft EIA/EMP report for the proposed Rough Stone Quarry over a lease extent of 1.69.00 Ha., & Cluster extent of 6.41.00 Ha., located at Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State for the production of 1,62,825 m^3 (5 years) of Rough Stone from the proposed lease area and the details has been complied in the 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: Manikandan Manickam
EIA Coordinator – Mining

भारतीय गुणवत्ता परिषद्
QUALITY COUNCIL OF INDIA
QCI Creating an Ecosystem for Quality

NABET

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

Issue Date
May 30, 2025

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

Varinder Kanwar

Prof (Dr) Varinder S Kanwar
CEO - NABET

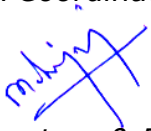
For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to QCI-NABET website.

DECLARATION BY EXPERTS

Declaration by Experts contributing to the proposed Rough Stone Quarry over a lease extent of 1.69.00 Ha. & Cluster extent of 6.41.00 Ha located at Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.

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

EIA Coordinator Name: Manikandan Manickam

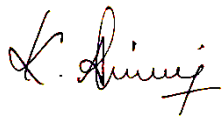
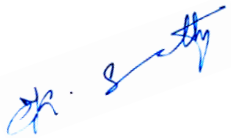
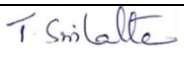


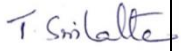
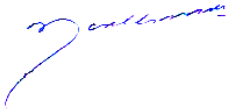
Signature & Date

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

S. No.	Functional areas	Name of the expert/s	Involvement (period and task**)	Signature and Date
1	AP	Dhanalakshmi Ramanathan	Assessment of existing air quality, Impact of the project on ambient air and suggested mitigation measures for air pollution. Period: March 2025 to May 2025.	
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. Period: March 2025 to May 2025.	
3	SHW	Ramadoss N	Assessment of waste generated from the project, suggested waste management practices. Period: March 2025 to May 2025.	
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. Period: March 2025 to May 2025.	
5	EB	Saravanan S	Baseline data collection of related to ecology of the area. Period: March 2025 to May 2025.	
6	HG	Ravinthiran N	Hydrogeological feature of the area. Ground water depth and impact of project on ground water of the area. Period: March 2025 to May 2025.	
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. *Period: March 2025 to May 2025.*	
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.* *Period: March 2025 to May 2025.*	
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.* *Period: March 2025 to May 2025.*	
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.* *Period: March 2025 to May 2025.*	
11	*SC*	*Shisupal Sing*	*Soil monitoring, secondary data collection on soil type, soil management practices, utilization of topsoil.* *Period: March 2025 to May 2025.*	
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.* *Period: March 2025 to May 2025.*	

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COMPLIANCE TO TERMS OF REFERENCE

S.No	ToR Points	Reply	Pg. No
1. SEAC Conditions - Site Specific			
1.	**Major Condition** 1. The PP shall submit the details of Existing Pit from the Competent Authority.	Not applicable. The lease applied area is fresh Quarry. There is no existing pit in applied area.	-
	General Site Specific Condition: 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: (ii) Copy of the agreement forming CMC. (iii) The Organisation chart of the Committee with defining the role of the members (iv) The 'Standard Operating Procedures' (SoP) executing the planned activities.	A cluster management committee including all the proponents of the rough stone quarrying projects within the cluster of 500 m radius will be constituted for the effective implementation of appropriate environmental management plan. Affidavit in this regard will be submitted during final EIA/EMP Report.	-
2	The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report.	Agreed. Proof photographs for erected pillars will be submitted in the Final EIA / EMP Report.	-
3	Since water bodies are situated nearby, the PP shall carry out the scientific studies to assess the hydrogeological condition of the quarry to determine impacts of the mining operation on the ground water conditions in the waterbodies.	The hydrogeological study from a reputed institute is in progress and it will be incorporated in the final EIA report.	-

4	The details of enumeration of structures including schools, colleges, primary health centres should be submitted along with the EIA report.	There are no School, College and health centers within 500 m radius from the proposed project site. Veerachinammal kovil, Boothipuram is situated at 415m (E).	-
5	The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m & upto 1km 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. and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations.	A Site survey has been conducted to identify and list structures located within a 300 m radius from the proposed Quarry and structures located within 300 m radius are given in section 3.3 of Chapter 3.	
6	The proponent shall furnish photographs of adequate fencing, garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	The green belt, fencing, garland drain work are in process and the proof photographs of the same will be submitted in the Final EIA/EMP Report. There are no permanent structures within a 50-meter radius of the proposed project site, and a safety distance of 7.5 meters along the boundary has been provided. There is seasonal odai passing on west side of the area and is 140 m away from the area, another two seasonal odai passing on east side of the area and is 250 m, 380 m away from the area.	-
7	The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report.	The bio diversity study has been carried out by our FAE is given in section 3.3.6 of Chapter 3.	117
8	The PP shall prepare the EMP for the entire project life of mine, i.e, 10 years and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	A detailed Environmental Management Plan has been prepared and are detailed in chapter 10. Affidavit stating to abide the EMP for the entire life of mine will be incorporated in the Final EIA / EMP Report.	-

9	The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding village and structures.	cumulative impact study due to mining operations in cluster are given in Section 7.4 of Chapter 7. Anticipated impacts and its mitigation measures for various attributes are detailed in Chapter 4.	-
10	The PP shall prepare a conceptual action plan accommodating the inclusion of haul road accessibility keeping the benches intact, by ensuring the slope stability of the working benches to be constructed and existing quarry wall.	The conceptual action plan are detailed in chapter 2.	-
11	The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic/ videographic evidence along with the EIA report.	Agreed, The PP will install CCTV at the proposed mine lease area and submit proof in the Final EIA/EMP report.	-
2	**SEAC Standard Condition**		
1	In the case of existing/operation mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following: (i) Original pit dimension (ii) Quantity achieved Vs EC Approved Quantity (iii) Balance Quantity as per Mineable Reserve calculated (iv) Mined out Depth as on date Vs EC Permitted depth (v) Details of illegal/illicit mining (vi) Violation in the quarry during the past working (vii) Quantity of material mined out outside the lining lease area (viii) Condition of Safety zone/benches (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6m height and ultimate depth of not exceeding 50m.	The applied lease is fresh project. No mining has been carried out in this lease area so far.	-

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.	The VAO certificate is enclosed as Annexure – 4.	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, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.	A Site survey has been conducted to identify and list structures located within a 300 m radius from the proposed Quarry and structures located within 300 m radius are given in section 3.3 of Chapter 3.	Enclosed as Annexure 10.
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.	The bio diversity study has been carried out by our FAE is given in section 3.3.6 of Chapter 3.	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	Not Applicable It is fresh quarry lease applied area.	-

	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 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.	The ultimate depth for this proposal (five years) is 25 m BGL only.	-
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	Controlled blasting techniques using delay detonators and optimum charge per delay will be implemented in this quarry. The details on blasting parameters are given in section 2.8.2 of Chapter 2.	-
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 PP has not carried out any quarrying operation before this project.	-

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.	-
14	Quantity of minerals mined out. • Highest production achieved in any one year. • Detail of approved depth of mining. • Actual depth of the mining achieved earlier. • Name of the person already mined in that leases area. • If EC and CTO already obtained, the copy of the same shall be submitted. • Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches	The applied lease is fresh project.	-
15	All comer 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).	Project coordinates superimposed in satellite imagery and given as Figure No – 2.2 in Chapter – 3. The geology and geomorphology map are provided in Figure No.3.23, 3.24 Chapter 3. The Soil map is provided under Figure No. 3.25, Chapter-3. The 10km Radius Index plan showing buffer zone is given in Figure No.3.1 & Figure 3.5 in Chapter – 3.	64 135 & 136 137 93 97
16	The PP shall carry out Drone video survey covering the cluster, green belt, fencing etc.,	The applied lease is fresh project. It will be complied after commencement of the mining operation	-

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	There are no trees within ML area. Fencing and plantations are under process and photo proof of the same will be incorporated in the Final EIA report. There are no permanent structures within a 50-meter radius of the proposed project site, and a safety distance of 7.5 meters along the boundary has been provided. There is seasonal odai passing on west side of the area and is 140 m away from the area, another two seasonal odai passing on east side of the area and is 250 m, 380 m away from the area.	-
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.	The total geological reserves of Rough stone - 3,94,750 m^3. The mineable reserves of rough stone - 1,62,825 m^3. The need and justification of the project is given in chapter 2. The anticipated impact and its mitigation measures are detailed in chapter 4.	
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,	The hydrogeological study from a reputed institute is in progress and it will be incorporated in the final EIA report.	-

	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.		
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 were collected (March 2025 to May 2025) for the environmental components including land, soil, water, air, noise, biology, socio-economy, and the results have been discussed in Chapter 3. Traffic density survey is detailed in section 2.10.6 of Chapter 2.	95
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 & 7. 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	Satellite imagery has been used to study the lease area and the details of land use is given in Chapter 3.	119

	post operational phases and submitted. Impact, if any, of change of land use should be given.		
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. 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 and famishedto the effect that the proposed mining activities could be considered.	No proximity to Critically polluted areas.	-
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 rain water falling in the quarry will be harvested in the sump at the lowest level of the quarry. This sump will act as a settling pond to prevent solids escaping along with discharge, before outlet. etc. Towards surface runoff management, a garland drain will be constructed around the quarry and will be connected to a settling pond with silt traps. The supernatant clear water from the settling pond will be flow to the downstream users. Rain water harvesting plan is given in section 4.2.3 of Chapter 4.	-
28	Impact on local transport infrastructure due to the Project should be indicated	A traffic density study was carried out and are detailed in section 2.10.6 of Chapter 2.	-

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		-
30	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific	The mine closure plan details are given in section 2.9 of Chapter 2 and section 7.6 of 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 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.	Green belt is proposed in an area of 0.40.00 ha. A detailed green belt development plan has been provided in Table 4.2.3 of Chapter 4.	143
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	The FAE of ecology and biodiversity has advised the project proponent that saplings of one year old raised in the ecofriendly bags should be purchased and planted with the spacing of 3 m between each plant around the proposed project area as per the advice of local forest authorities/botanist.	-

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 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. Details of CER and CSR are 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. 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/TNPCB.	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.	The EMP is planned for the entire life of the mine. The affidavit for the same will be included in the Final EIA/EMP Report.	-
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	-
SEIAA Standard Conditions			
4.0 Cluster Management Committee			
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 two proposed quarries including this proposal 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 cluster and evacuation plan.	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 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	Agreed. It will be complied as mentioned in the Point No.4.	-

	the health of the public in the vicinity.		
Agriculture & Agro-Biodiversity			
9	Impact on surrounding agricultural fields around the proposed mining Area.	There are no Agriculture, forest area and traditional practices within the project area. However, there are some agricultural land around the project site. It may be affected due to the quarry operation as such dust particles sedimentation in the agricultural land. It will be controlled at the source level by proper dust suppression as such wet drilling, controlled blasting and water sprinkling on the project roads and project surrounding roads. As per Air Quality Modelling, the impact of the air quality limited to 400m radius. So, there is no impact for the Agriculture, Forestry & Traditional practices located within 10km radius.	-
10	Impact on soil flora & vegetation around the project site.	The chemical and physical characteristics of the soil is given in Table 3.11 of Chapter 3. The anticipated impact and its mitigation measures for soil environment and biological environment are detailed in section 4.2.2 & 4.2.4 of Chapter 4 respectively.	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.	There is no standing trees or vegetation within the mine lease area.	117
12	The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and	The ecological details have been provided in Section 3.3.6 under Chapter 3 and measures have been provided in Section 4.2.4 under Chapter 4.	117

	suggest measures to maintain the natural Ecosystem.		
13	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	All the essential environmental protective measures will be followed by the proponent to manage the surrounding environment and restore the ecosystem, as discussed in Chapter 4.	117
14	The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.	The impact of project on the land environment has been discussed in Section 4.2.1 under Chapter 4.	117
Forests			
15	The project proponent shall detailed study on impact of mining on Reserve Forests free ranging wildlife.	Agamalai R.F – 180 m (N) Perumalkovil karadu R.F. – 8.0 km (E) Bodi Hill West Forest-9.20 km-West. The anticipated impact on ecological environment is given in section 4.2.4 of Chapter 4.	91
16	The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.	Agamalai R.F – 180 m (N) Perumalkovil karadu R.F. – 8.0 km (E) Bodi Hill West Forest-9.20 km-West. The anticipated impact on ecological environment is given in section 4.2.4 of Chapter 4.	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.	-
18	The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.	Agamalai R.F – 180 m (N) Perumalkovil karadu R.F. – 8.0 km (E) Bodi Hill West Forest-9.20 km-West. The anticipated impact on ecological environment is given in section 4.2.4 of Chapter 4.	-

		There is no, National Parks, Corridors and Wildlife pathways.	
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 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 study details are incorporated in Chapter 3. Anticipated impacts and its mitigation measures are detailed 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.	There is no wastewater generation from this Quarry, so this is 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	The Flora and Fauna study covering 10 km radius are detailed in section 3.3.6 of chapter 3. The impacts anticipated with respect to the environment of the project area is very	117

	form changes visual and aesthetic impacts.	negligible and it will be minimized within the project area. Greenbelt / Plantation will be carried out to enhance the vegetative growth and aesthetic in the safety zone area.	
25	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	The impact of mining on soil environment has been discussed in Section 4.2.2 under Chapter 4.	-
26	The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.	The anticipated impact and its mitigation measures for Water Environment are detailed in section 4.2.3 of Chapter 4.	92
27	The EIA shall include the impact of mining activity on the following: a) Hydrothermal/Geothermal effect due to destruction in the Environment. b) Bio-geochemical processes and its foot prints including Environmental stress. c) Sediment geochemistry in the surface streams.	The proposed quarry operation is Opencast Mechanized operation with drilling, blasting, excavation, loading and transportation. So, the effect of Hydrothermal/Geothermal is not envisaged. This is a simple mining operation, so bio-geochemical processes are not envisaged. Kottagudi River is located at 1.15 km (S). Due to mining operation, there may be minimum impact to the nearby water bodies due to dust sedimentation. It will be controlled by wet drilling, water sprinkling and plantation.	92
Energy			
28	The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilize the Energy shall be furnished.	The measures taken to control noise, air, water, and dust have been given under Chapter 4.	141
Climate Change			

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.	The carbon emission and the measures to mitigate carbon emission have been discussed in Section 4.2.4 under Chapter. Only the best equipment will be used, and it will be properly and regularly maintained. Regular vehicular emission tests will be conducted on the transport vehicles to ensure minimal carbon emissions. To further reduce carbon emissions, a good greenbelt plan has been planned. 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 physical, chemical & Biological soil features.		141
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
Mine Closure Plan			
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 2.	179
EMP			
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.	Total EMP Cost for 5 years is 19.93 lakhs i.e., Rs.9.05 Lakhs of Capital + Recurring cost Rs. 10.88 lakhs for five year, which is including the cost of Rs. 0.40 Lakhs (capital) and Rs. 0.08 (Recurring) for Greenbelt development.	190
Risk Assessment			
35	To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.	The risk assessment and management plan for this project has been provided in Section 7.2 under Chapter 7.	174
Disaster Management Plan			

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.	Disaster Management plan are detailed in section 7.3, Chapter 7.	177
Others			
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.	There are no historical places, schools, cemeteries, temples, bird sanctuaries, and wildlife sanctuaries within 300 meters of the proposed project area. In this regard, the project proponent has received an official letter from the Village Administrative Officer, The letter copy enclosed as Annexure – 4.	-
38	As per the MoEF& CC office memorandum F.N0.22-65/2017-1A.11I dated: 30.09.2020 and20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.	The concerns raised during the public consultation and all the activities proposed will be updated in the final EIA 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.	Complied. The PP has framed detail solid waste management system for the project are and the same will be executed by proper awareness and sign boards. The sign boards will be in two language i.e., Vernacular language (Tamil) and common language (English). 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.	-

SEIAA Specific Condition			
4.1	The authority noted that the subject was appraised in the 593rd Meeting of SEAC-II held on 17.07.2025. After detailed discussions, the Authority accepts the recommendation of SEAC-II and decided to grant Terms of Reference (ToR) along with Public Hearing for the quantity of 1,62,825m 3 of Rough Stone upto the depth of 25m BGL 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-II & normal conditions & the conditions mentioned below.	Agreed	
Standard Terms of Reference for (Mining of minerals)			
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	It is Government land the applicant has obtained tender from the Government	-
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	Noted & agreed. All documents including approved mine plan, EIA and Public Hearing are compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and is 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 – 2.2 in Chapter – 3. The geology and geomorphology map are provided in Figure No.3.23, 3.24 Chapter 3. The Soil map is provided under Figure No. 3.25, Chapter-3. The 10km Radius Index plan showing buffer zone is given in Figure No.3.1 & Figure 3.5 in Chapter – 3.	64 135 & 136 137 93 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	The following map in 1:50,000 Scale: Geology map of the project area covering 10km radius – Figure No. 3.23. Geomorphology Map of the Study Area covering 10 km radius – Figure No. 3.24. Drainage map – 3.22	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	a.) Precise Area Communication: The Project Proponent has obtained Precise area communication letter received from the Assistant Director, Department of Geology and Mining, Theni, vide Rc.No.60/Kanimam/2025, dated 03.03.2025. The letter copy enclosed as Annexure – 1. b.) Mining Plan approval: The project proponent has prepared a 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, Department of Geology and Mining, Theni vide Rc.No.60/Mines/2025, Dated: 09.06.2025. The approval letter along with approved plan is enclosed as Annexure – 2.	-
1.7	It should be clearly stated whether the proponent Company has a well laid down Environment Policy	Environmental policy for the cluster will be framed by the cluster management committee	-

	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 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.	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.	
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 plan 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.	Noted & Agreed The study area considered for this study is 10 km radius and all data contained in the EIA report such as waste generation etc., is for the Life of the Mine / lease period.	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	The land use of the study area was studied to demarcate various LULC categories and its details are provided under section 3.3.7 of Chapter-3. The land use pattern at present and at the end of the quarrying period has been provided in Table 2.4, Chapter-2. The Conceptual plan of mine lease area is shown in Figure No- 2.12.	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.	-
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 no Forest Land involved in the proposed project area. The proposed project area is a Government land, applicant has obtained tender from government. Approved Mining Plan is enclosed in Annexure – 2.	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	Not Applicable. The proposed project area does not involve any Forest Land.	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. The project doesn't attract Recognition of Forest Rights Act, 2006.	-
1.15	The vegetation in the RF / PF areas in the study area, with necessary details, should be given	The following Reserve Forest are located within 10 km radius. Agamalai R.F – 180 m (N) Perumalkovil karadu R.F. – 8.0 km (E) Bodi Hill West Forest-9.20 km-West	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	The mining lease area and the 10 km buffer zone from the periphery of the core zone is devoid of declared ecologically sensitive features like national parks, biospheres, sanctuaries, etc.	-
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.	Not Applicable. There are No National Parks, Biosphere Reserves, Wildlife Corridors, and Tiger/Elephant Reserves within 10 km Radius from the periphery of the project area.	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 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	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

	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 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	Not applicable. No habitation within 300 meter of the radius.	

	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 were collected for One Season (March 2025 to May 2025) as per CPCB Notification and MoEF & CC Guidelines 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 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.	Air Quality Modelling for prediction of incremental GLC's of pollutant was carried out using AERMOD view and Detailed in Section 4.3. Air Quality Modelling For Cluster are detailed in section 7.4 of Chapter 7.	160

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 total water requirement for the project is 7.0 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. Water Balance diagram is presented in Figure No – 4.1.	146
1.25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided	Not Applicable Water for dust suppression, greenbelt development and domestic use will be sourced from accumulated rainwater/seepage water in mine pits and purchased from local water vendors through water tankers on daily requirement basis.	-
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	Rain water will be diverted into working area by constructing drains to store and use for dust suppression and greenbelt development. Details are presented in section 4.2.3 The total water requirement for the project will be 7.0 KLD comprising Drinking and domestic 1.5 KLD, Dust suppression 3.0 KLD, Greenbelt 2.5 KLD. The water will be sourced initially from outside agencies. Later the rainwater collected in the mine pit sump will be used for this purpose. The water balance diagram for the same is shown in Figure No 4.1.	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	Impact Studies and Mitigation Measures of Water Environment including Surface Water and Ground Water are discussed in Section 4.2.3 of Chapter 4.	140

<table>
<tr><td>1.28</td><td>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</td><td>The quarrying activity will not intersect ground water table as quarrying is proposed upto a depth of 25 m bgl and water table is found at a depth of 70 m BGL.</td><td>-</td></tr>
<tr><td>1.29</td><td>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</td><td>Not applicable.

There is no stream, seasonal or otherwise, passing through the lease area.</td><td>-</td></tr>
<tr><td>1.30</td><td>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</td><td><table><tr><td>Site Elevation above MSL</td><td>376 m from MSL</td></tr><tr><td>Ultimate Depth</td><td>25 m bgl</td></tr><tr><td>Ground water</td><td>67 - 70 m BGL.</td></tr></table></td><td>-</td></tr>
<tr><td>1.31</td><td>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</td><td>Greenbelt Development Plan & Recommended Species proposed for Greenbelt Development are detailed in Section 4.2.4.
0.40.00 hectares (7.5 m safety zone) of land are allotted for greenbelt development.</td><td>-</td></tr>
</table>

	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	The traffic density study was carried out and the same is given in section 2.10.6 of Chapter 2.	-
1.33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report	Temporary Infrastructure & other facilities will be provided to the Mine Workers after the grant of quarry lease and the same has been discussed in Section 2.10 of Chapter 2.	-
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	At the conceptual stage the quarried-out land will be fenced and lower benches will be allowed to collect rain water to act as a temporary reservoir and Greenbelt development will be carried out on the top bench, unutilized areas and haul roads. Mine closure plan is detailed in Section 2.9 of 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	Details of occupational health and safety aspects are given under the Section 4.5.4 & Section 10.4.	164

	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	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 24 people directly & indirectly. Local people will be hired for unskilled labour. Through CSR, nearby schools, villages will be benefitted. For CER, INR 300000 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	Project Cost is Rs. 410.43 Lakhs (including EMP & CER cost) CER Cost is Rs.3.0/- lakhs EMP Cost for 5 years is 19.93 Lakhs i.e. Capital Cost of Rs.	190

		9.05 Lakhs and Recurring Cost of Rs. 10.88 Lakhs for five years.	
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 24 people directly. Local people will be hired for unskilled labour. Through CSR, nearby schools, hospitals will be benefitted. For CSR, INR 3.0 Lakhs has been allocated.	-
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.	Yes, Complied.	

	e) The Questionnaire for 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&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. a. The EIA report should also include surface plan of the		

	area indicating contours of main topographic features, drainage and mining area, b. geological maps and sections and sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area		

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.M.Suriyachelvan proposes to operate Rough Stone Quarry over an extent of 1.69.00 Ha Government Poramboke Land in S.F. No. 3/1 of Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State and ToR obtained vide ToR Identification No. TO25B0108TN5357464N, Dated: 13.08.2025.

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

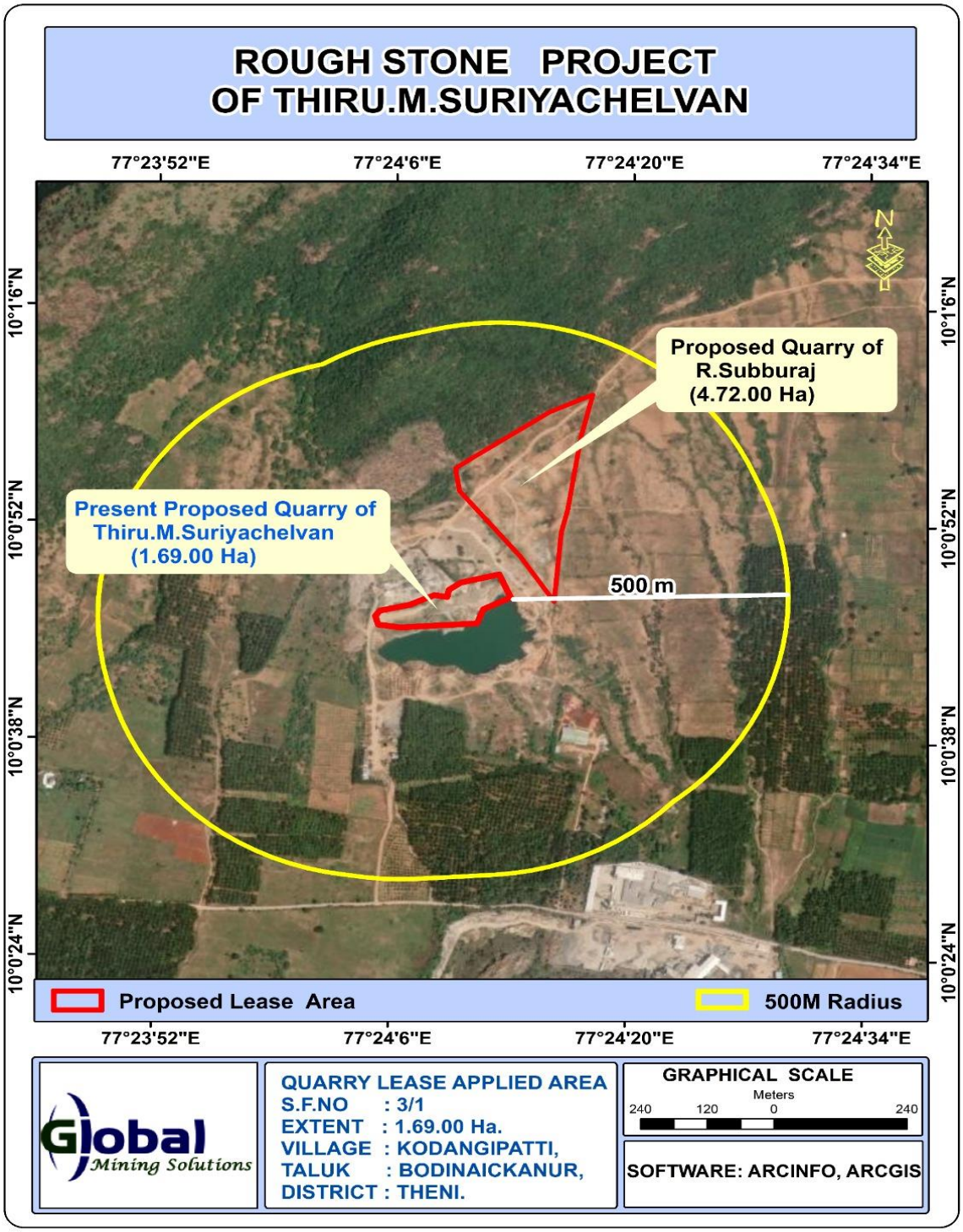
Table 1.1 – Details of Quarries within 500m Radius

Sl. No	Name of the Lessee	Village & S. F. No.	Extent (Ha)	Lease Status
a. Abandoned / Expired Quarries				
1	R.Subburaj,	Kodangipatty Village, S.F.No. 2/2,2/4,2/5,3/2,10/2C	4.36.50	28.09.2017 to 27.09.2022 EC granted by SEIAA-TN on 24.11.2016 (File No. 5888)
b. Existing Quarries				
NIL				
c. Proposed Quarries				
1	Thiru.M. Suriyachelvan	Kodangipatty Village, S.F.No.3/1	1.69.00	Present Proposed
2	R.Subburaj	Kodangipatty Village, S.F.No.10/2A, 17/1,17/3	4.72.00	Proposed Quarry EC granted by SEIAA-TN on 18.06.2025, File No, 10679
Total Area of Cluster				6.41.00 Ha

Cluster area calculated as per MoEF & CC Notification S.O. 2269(E) Dated 1st 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/543359/2025, Dated: 02/07/2025. The ToR proposal was placed in 593rd SEAC meeting, dt 17.07.2025 and 865th SEIAA meeting, dated 05.08.2025. Then ToR has been issued by the SEIAA vide ToR Identification No. TO25B0108TN5357464N, Dated: 13.08.2025 to prepare the draft EIA report as per the recommended ToR for 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.M.Suriyachelvan
S.F No.	3/1
Location of the Project	Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Extent	1.69.00 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.M.Suriyachelvan
Communication address	S/o.Murugesan, No.5-3-79-1, 3rd street, Durairajapuram, Anaikaraipatti, Bodinaickanur Taluk, Theni District Pincode-625582.
e-mail Address	suriyachelvan021@gmail.com
Mobile No.	Cell No.: 87783 47987

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

<table>
<tr><td>Name of the Quarry</td><td colspan="2">Rough Stone Quarry of Thiru.M.Suriyachelvan</td></tr>
<tr><td>Toposheet No</td><td colspan="2">58 G/05</td></tr>
<tr><td>Latitude</td><td colspan="2">10°00'45.29"N to 10°00'48.77"N</td></tr>
<tr><td>Longitude</td><td colspan="2">77°24'05.46"E to 77°24'13.45"E</td></tr>
<tr><td>The altitude of the area</td><td colspan="2">376m (MSL)</td></tr>
<tr><td>Proposed Depth of Mining</td><td colspan="2">25 m BGL</td></tr>
<tr><td>Geological Resources</td><td colspan="2">3,94,750 m^3</td></tr>
<tr><td>Mineable Reserves</td><td colspan="2">1,62,825 m^3</td></tr>
<tr><td>Proposed Production (5 Years)</td><td colspan="2">1,62,825 m^3</td></tr>
<tr><td>Ultimate pit Dimension</td><td colspan="2">215 m (L) X 59 m (W) X 25 m BGL (D)</td></tr>
<tr><td>Water Level in the area</td><td colspan="2">67 m BGL</td></tr>
<tr><td>Method of Mining</td><td colspan="2">Opencast Mechanized Mining Method involving drilling and blasting</td></tr>
<tr><td>Topography</td><td colspan="2">The area applied for quarry lease is exhibits almost plain topography covered by covered by Charnockite formation. The massive Charnockite formation is noticed right from the surface and sloping towards southeast side of the area, the altitude of the area is above 376m (maximum) from MSL.</td></tr>
<tr><td>Machinery Proposed</td><td>Jack Hammer</td><td>3 Nos</td></tr>
<tr><td></td><td>Compressor</td><td>1 Nos</td></tr>
<tr><td></td><td>Excavator with bucket and rock breaker</td><td>1 Nos</td></tr>
<tr><td></td><td>Tipper (5/10 T)</td><td>3 Nos</td></tr>
<tr><td>Environmental Setting within 500m Radius</td><td colspan="2">Water Bodies – Odai 1 – 140 m (W), Odai 2 – 250m (E), Odai 3 – 380 m (E), Odai 4 – 500 m (W)
Nearest Habitation - Nil within 500m Radius
Nearest RF - Agamalai R.F – 180 m (N)</td></tr>
<tr><td>Details of Habitation</td><td colspan="2"><table><tr><th>S. No</th><th>Name of the Village</th><th>Approximate distance & Direction from lease applied area</th><th>Approximate population</th></tr><tr><td>1.</td><td>Valayapatti</td><td>3.0Km – SE</td><td>700</td></tr><tr><td>2.</td><td>Durairajapuram</td><td>1.8Km-SW</td><td>900</td></tr></table></td></tr>
<tr><td>Proposed Manpower Development</td><td colspan="2">24 Nos</td></tr>
<tr><td>Water Requirement</td><td colspan="2">7.0 KLD</td></tr>
<tr><td>Greenbelt Development</td><td colspan="2">The safety zone of 0.40.00 Ha will be developed with about 400 Nos. of plantation.</td></tr>
<tr><td>Fuel Requirement</td><td colspan="2">1,30,260 Litres of HSD
(Entire Project Life)</td></tr>
</table>

Project Cost	Rs.410.43 Lakhs (Including operational + Fixed Asset + EMP cost + CER cost).
EMP Cost	Total EMP Cost for 5 years is 19.93 lakhs (This amount will be subjected to change after public hearing) i.e., 9.05 Lakhs of Capital Cost + 10.88 Lakhs of Recurring cost (For 5 Years)
CER Cost	Rs. 3.0 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

LOCATION OF PROJECT

The proposed Quarry lease area is situated at S. F. No. 3/1 of Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State. The area lies in the north latitude of 10°00'45.29"N to 10°00'48.77"N and eastern longitude of 77°24'05.46"E to 77°24'13.45"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:

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 7 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 Transboundry 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, Theni	Received	Rc.No.60/Kanimam/2025	03.03.2025	Annexure - 2
Mine Plan Approval Letter	Assistant Director, Department of Geology and Mining, Theni	Approved	Rc.No.60/Mines/2025	09.06.2025	Annexure-3
500m radius Cluster Letter	Assistant Director, Department of Geology and Mining, Theni	Obtained	Rc.No.60/Mines/2025	19.06.2025	Annexure-4
VAO NOC for features within 300m radius	VAO, Kodangipatti Village	obtained	-	16.06.2025	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 593rd meeting of SEAC on 17.07.2025. 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 865th meeting dated 05.08.2025.

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. TO25B0108TN5357464N, dated: 13.08.2025. 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.

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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 1,62,825 m^3 of rough stone for 5 years with ultimate depth up to 25 m BGL.

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 Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State. The area lies in the north latitude of 10°00'45.29"N to 10°00'48.77"N and eastern longitude of 77°24'05.46"E to 77°24'13.45"E and toposheet number 58 G/05. 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.

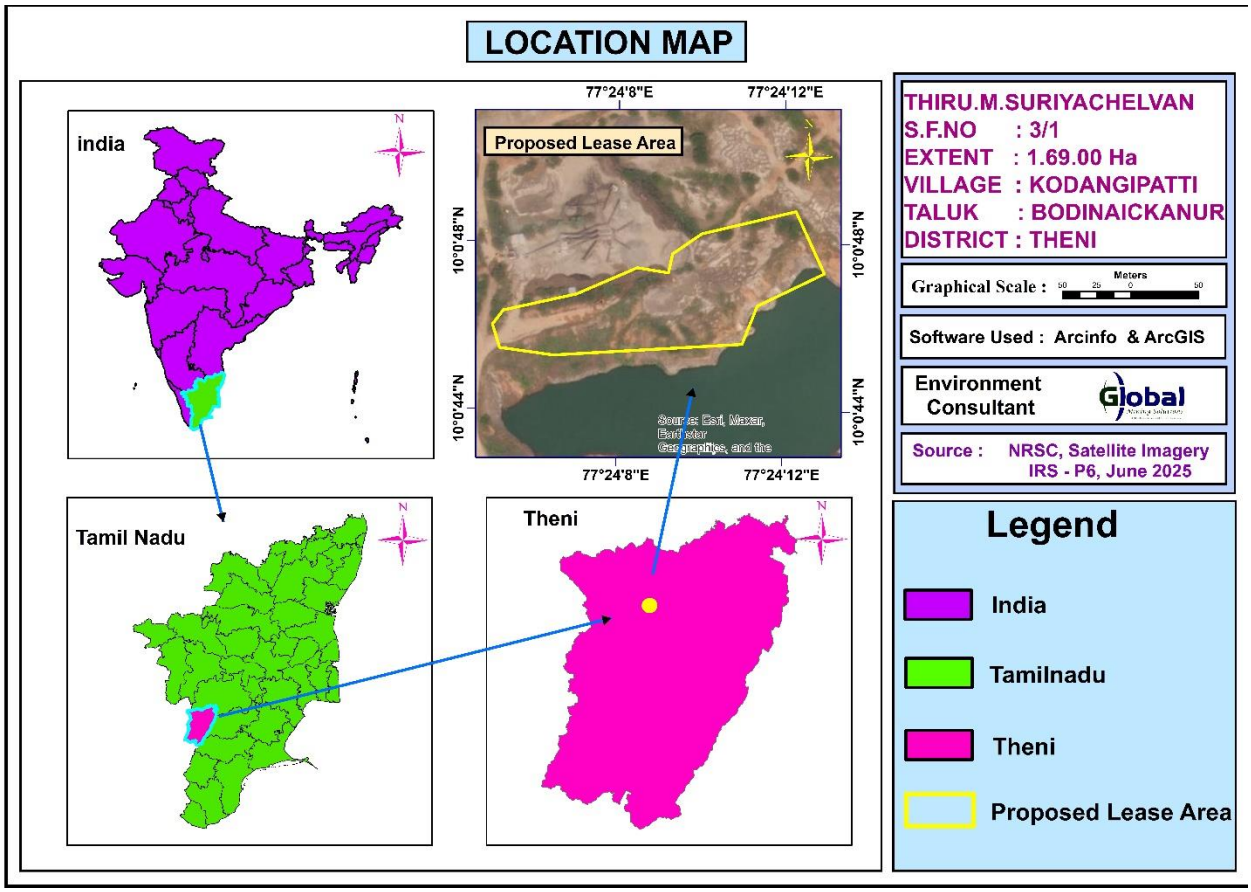

Figure 2.1 Location Map

Table 2.1 Boundary Coordinates of the Project Site

Corners	Co- ordinates	
	Latitude	Longitude
1	10° 00' 45.45"N	77° 24' 05.64"E
2	10° 00' 46.01"N	77° 24' 05.46"E
3	10° 00' 46.35"N	77° 24' 05.72"E
4	10° 00' 46.75"N	77° 24' 07.48"E
5	10° 00' 47.39"N	77° 24' 08.94"E
6	10° 00' 47.28"N	77° 24' 09.69"E
7	10° 00' 47.73"N	77° 24' 09.79"E
8	10° 00' 48.22"N	77° 24' 10.49"E
9	10° 00' 48.77"N	77° 24' 12.75"E
10	10° 00' 47.29"N	77° 24' 13.45"E
11	10° 00' 46.50"N	77° 24' 11.84"E
12	10° 00' 45.59"N	77° 24' 11.48"E
13	10° 00' 45.29"N	77° 24' 06.94"E

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	Remarks
Kodangipatti Village, Bodinaickanur Taluk, Theni District	3/1	1.69.00	It is Government land the applicant has obtained tender from the Government.

Table 2.3 Site Connectivity

S.No	Description	Details	Distance & Direction
1	Village	Durairajapuram	1.8 km (SW)
2	Highway	(NH-85) Madurai – Bodinaickanur (SH-100) Uthamapalayam - Bodinaickanur	1.4 km (S) 6.0 km (SW)
3	Railway Station	Bothipuram Railway Station	5.23 km – E
4	Airport	Madurai Airport	78.00 Km (E)

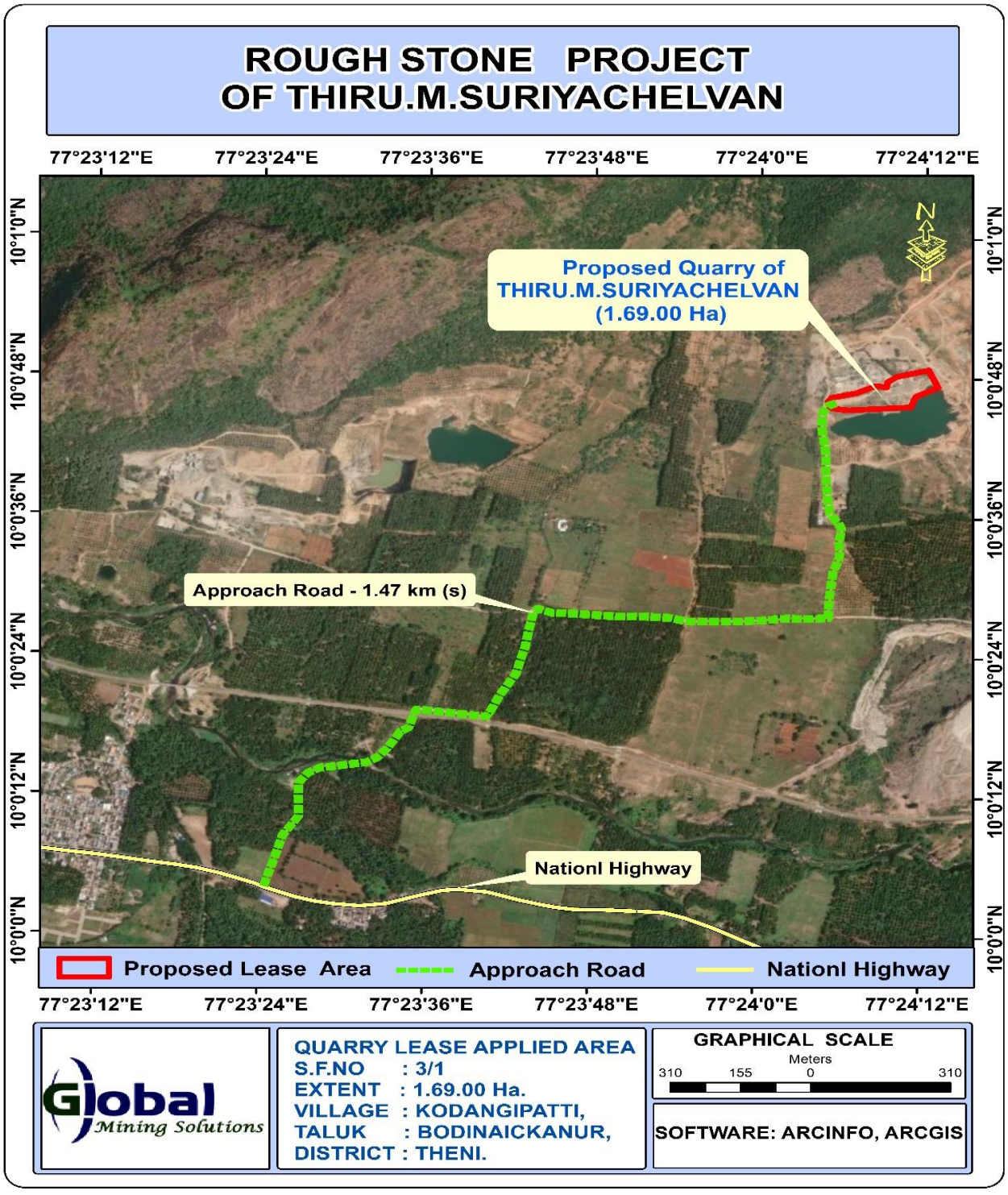

Figure 2.3 Site Connectivity Map

Table 2.4 Salient features of the Project

S. No.	Particulars	Details
1.	Proponent Name	Thiru.M.Suriyachelvan
2.	Proposed project	Rough Stone Quarry of Thiru.M.Suriyachelvan
3.	Extent	1.69.00 Ha and the cluster area within 500 m radius including this proposed mine is 6.41.00 Ha > 5 Ha
4.	Location	S.F.No. 3/1 in Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
5.	Co-ordinates of the project site	Latitude: 10°00'45.29"N to 10°00'48.77"N Longitude: 77°24'05.46"E to 77°24'13.45"E
6.	Topography	Plain topography
7.	Site Elevation above MSL	376 m from MSL
8.	Topo Sheet No.	58 G/05
9.	Minerals of Mine	Rough Stone
10.	Proposed production in m^3	1,62,825 m^3 of rough stone for 5 years
11.	Ultimate Depth of mining	25 m BGL
12.	Method of Mining	Opencast Mining with a bench height of 5m and bench width of 5 m is proposed
13.	Drilling/Blasting	Drilling and controlled Blasting is proposed
14.	No. of Working days	300 Days
15.	Water requirement & Source	7.0 kLD and will be sourced from local vendors
16.	Manpower	24 Nos.
17.	Project Cost	Rs. 410.43 lakhs
18.	Mining Plan Approval	Assistant Director, Department of Geology and Mining, Theni vide Rc.No.60/Mines/2025, Dated: 09.06.2025.

19.	Safety Zone	0.40.00 Ha will be maintained as safety zone and 400 tree saplings will be planted in this area
20.	Ground water level	70 m in summer and 67 m in rainy seasons
21.	Distance of Stone Crusher	Adjacent
22.	Previous History & CCR	This is a Fresh Lease. Hence CCR is not applicable

Table 2.5 Environmental Settings of the project site

S. No.	Particulars	Details
1.	Nearest Highway	The State Highway (SH-100) Uthamapalayam - Bodinaickanur - 6.0 Km SW. The National Highway (NH-85) Madurai – Bodinaickanur - 1.4Km – S
2.	Interstate Boundary	Not Applicable
3.	Nearest Railway Station	Bothipuram Railway Station - 5.23 km – E
4.	Nearest Airport	Madurai Airport - 78.00 Km (E)
5.	Nearest Village	Durairajapuram – 1.8 km (SW)
6.	Water bodies	Odai 1 - 140 m (W), Odai 2 - 250 m (E), Odai 3 - 380 m (E), Odai 4 - 500 m (W), Kottagudi River - 1.15 km (S), Tank - 2.21 km (SW), Meenakshipuram Tank - 3.64 km (W), Bodipuram Lake - 5.55 km (E), Veerapandi River – 5.80 km (SE)
7.	Reserved Forest	Agamalai R.F – 180 m (N), Perumalkovil karadu R.F. - km (E) & Bodi Hill West Forest-9.20 km-West
8.	Eco Sensitive Zone and Wildlife	Nil within 10km radius Kodaikanal Wildlife Sanctuary -14 km - N

	Sanctuary (Notified)	
9.	Archaeological important places	Nil within 10 km radius
10.	Defense Installations	Nil within 10 km radius
11.	Nearest Port	Nil within 10 km radius
12.	Seismic Zone	Zone – II (Least Active)

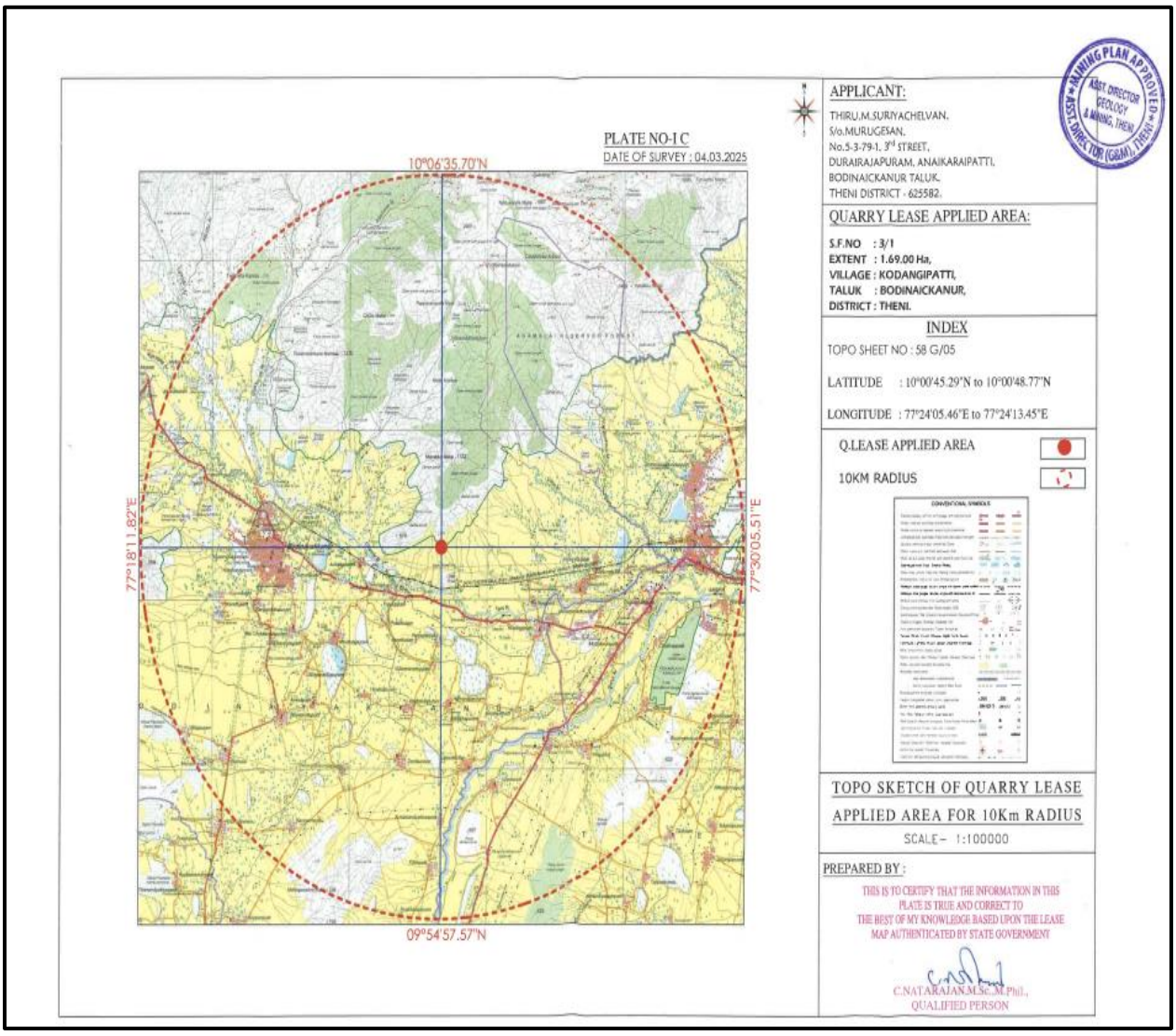

Figure 2.4 10km Radius TOPO Map

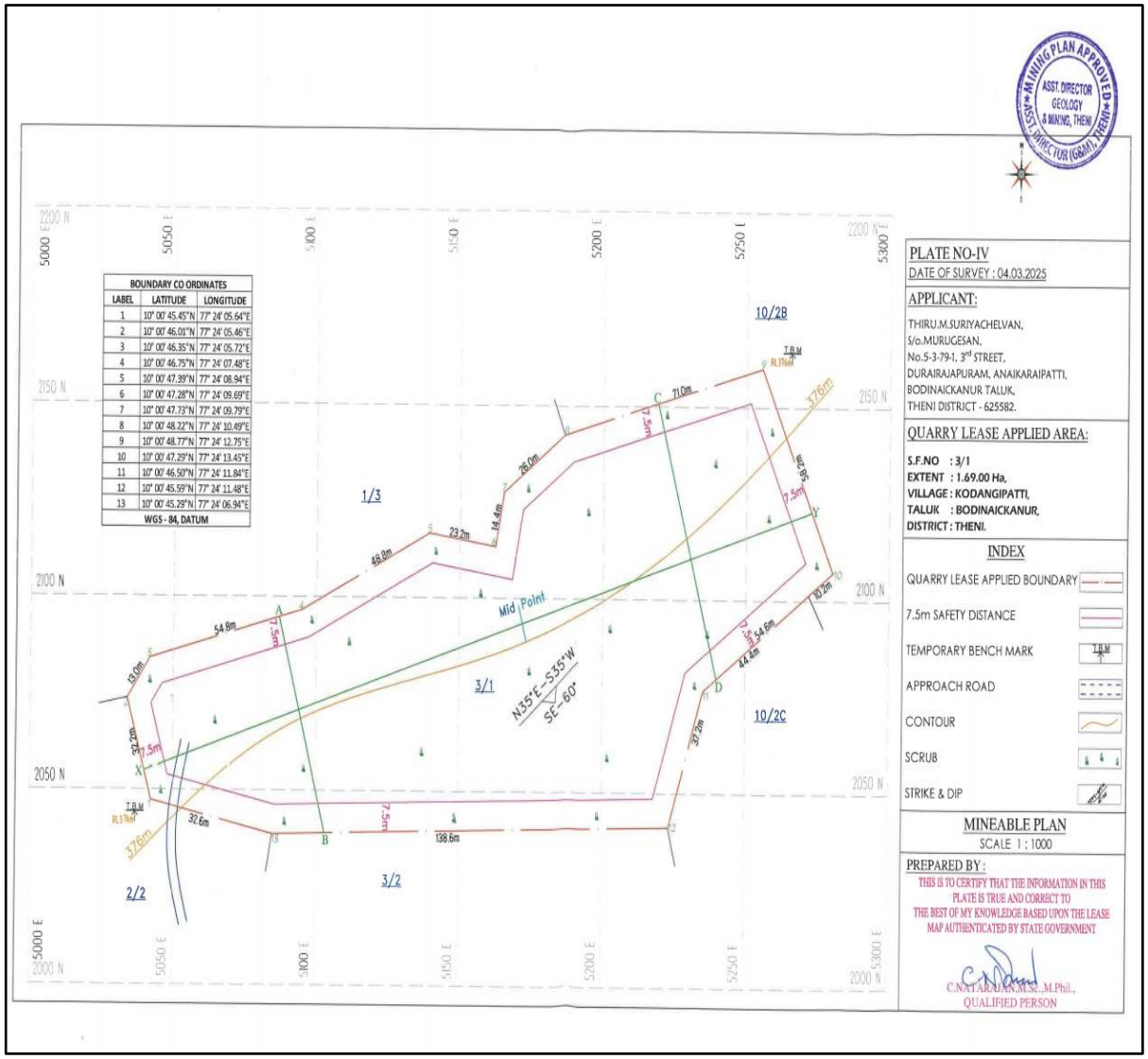

Figure 2.5 Lease Plan

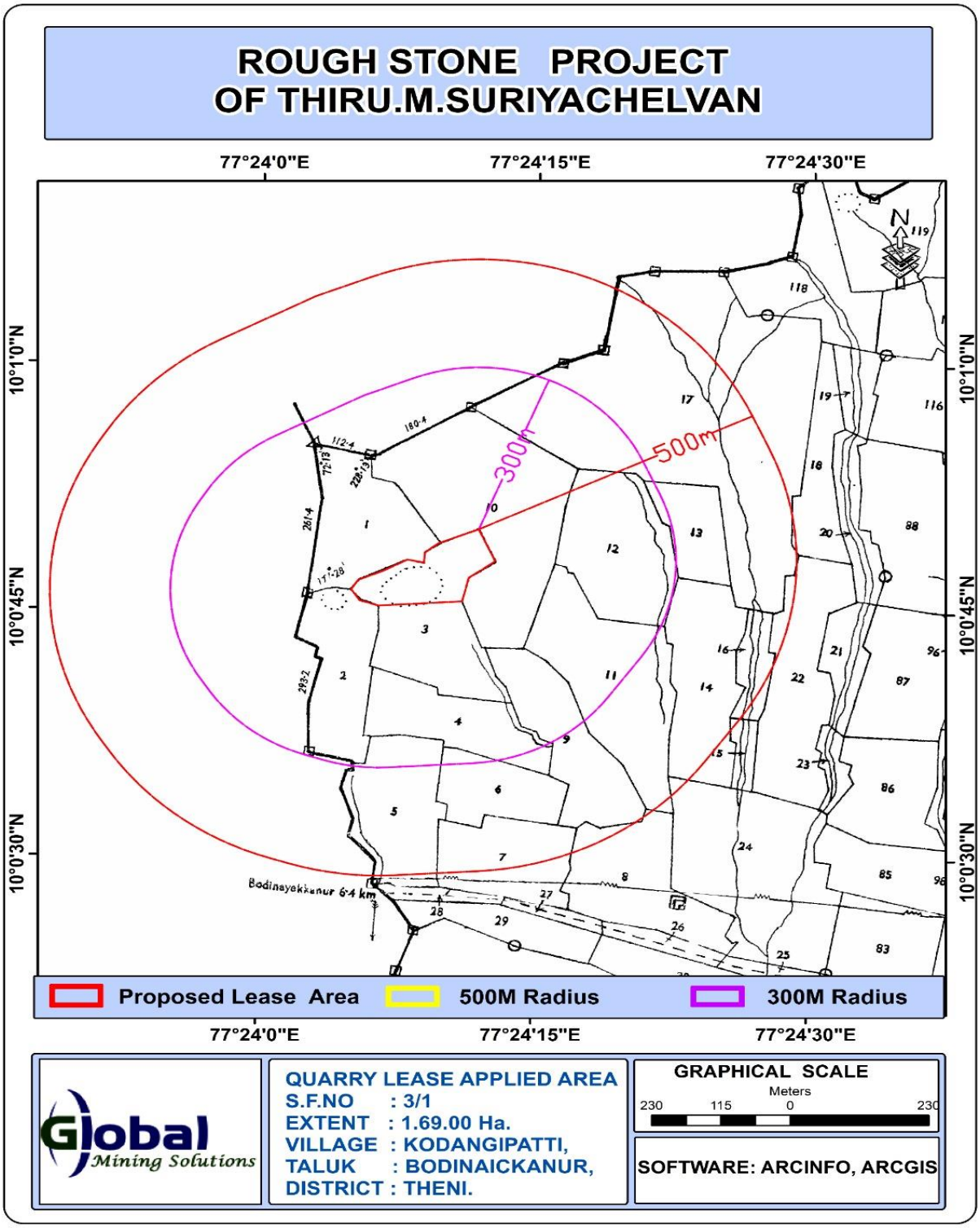

Figure 2.6 Village Map

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

Description	Present Area in Ha.	Area at the end of life of Quarry in Ha.
Quarrying Pit	Nil	1.27.00
Infrastructure	Nil	0.01.00
Roads	Nil	0.01.00
Safety Zone / Green Belt	Nil	0.40.00
Unutilized	1.69.00	Nil
Total	**1.69.00**	**1.69.00**

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 1.69.00 Ha and to produce 1,62,825 m^3 of rough stone for 5 years with ultimate depth up to 25 m BGL

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 exhibits almost plain topography covered by Charnockite formation. The massive Charnockite formation is noticed right from the surface and sloping towards southeast side of the area, the altitude of the area is above 376m (maximum) from MSL.

2.6 GEOLOGY

2.6.1 REGIONAL GEOLOGY

Geologically, Theni District mainly comprises of rocks of the Archaean age. The types of rocks found in the district are Charnockite, Granitic gneiss, Amphibolite, Pyroxenite, Dunite, Migmatite, Banded Magnetite Quartzite, Shale and Clay. Dolerite Dykes (Black Granite) are also noticed cutting across the country rocks.

The Western Ghats comprises Charnockite Group of rocks while the plains are underlain by hornblende – biotite gneiss, silimanite- garnet-biotite gneiss. Alluvium quaternary sediments are spread almost in central part of the district. Around 70% of the total area is covered with charnockite followed by migmatite and khondalite. The Regional Geology map for the 10 Km radius of the proposed project site is given as Figure 2.8.

2.6.2 GEOLOGY OF THE PROJECT AREA:

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 $N35^0E-S35^0W$ with dipping towards $SE60^0$.

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

AGE		ROCK TYPE
Recent	-	Topsoil
Un-conformity		
Archaean	-	Dolerite dyke
		Charnockite.
		Peninsular Gneissic complex and Calc Gneiss

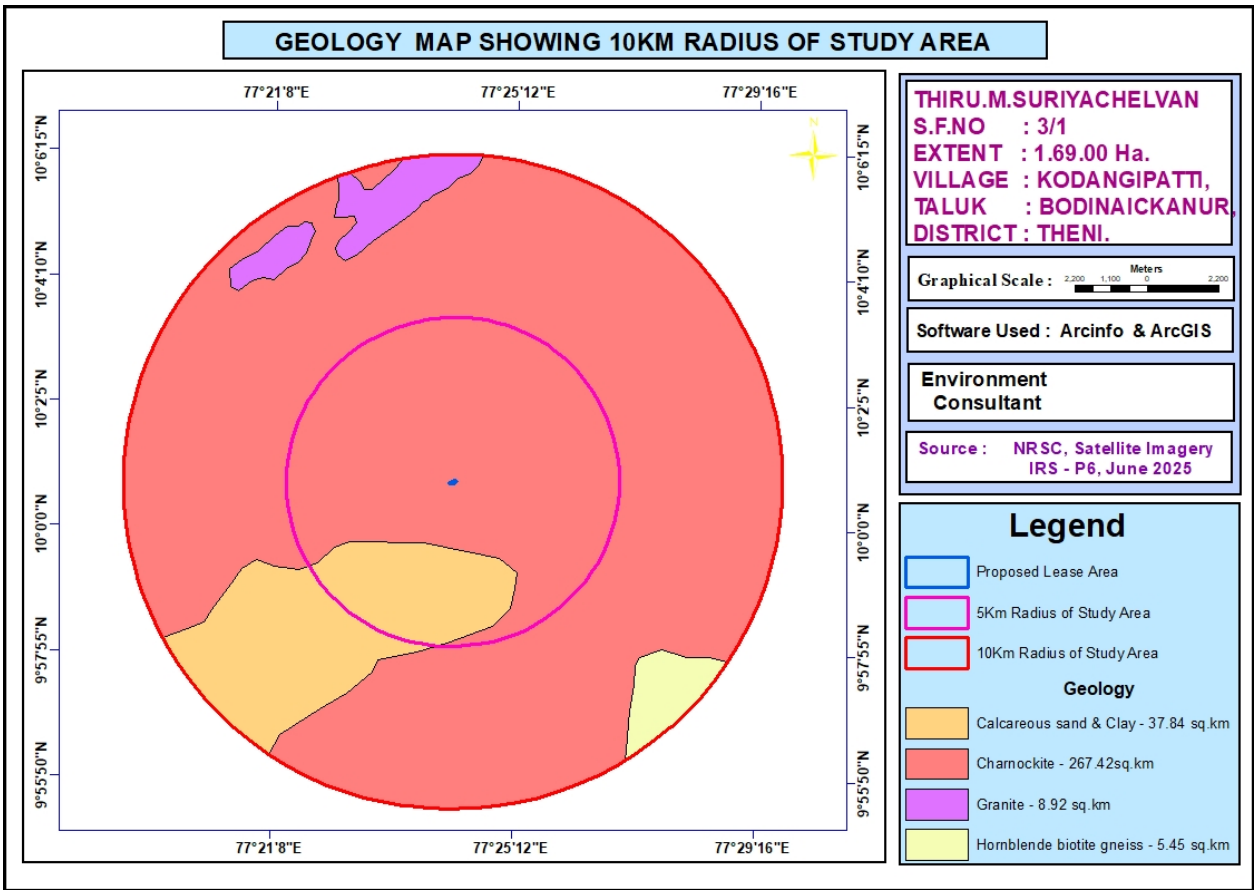

Figure 2.8 Geology Map – 10km Radius from the Project Site

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	Bench	Length in (m)	Width in (m)	Depth in (m)	Geological Resources of Rough stone in m^3	Bulk Density	Geological Resources of Rough stone in Ts
XY-AB	I	137	58	5	39730	2.75	109257.50
	II	137	58	5	39730	2.75	109257.50
	III	137	58	5	39730	2.75	109257.50
	IV	137	58	5	39730	2.75	109257.50
	V	137	58	5	39730	2.75	109257.50
Total					**198650**	**-**	**546287.50**
XY-CD	I	106	74	5	39220	2.75	107855.00
	II	106	74	5	39220	2.75	107855.00
	III	106	74	5	39220	2.75	107855.00
	IV	106	74	5	39220	2.75	107855.00
	V	106	74	5	39220	2.75	107855.00
Total					**196100**	**-**	**539275.00**
Grand Total					**394750**	**-**	**1085562.50**

The Geological Resource of Rough Stone : 3,94,750 m^3

2.7.1 MINEABLE RESERVES

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

Table 2.8 – Available Mineable Reserves

section	Bench	Length in (m)	Width in (m)	Depth in (m)	Mineable Reserves of Rough stone in m^3	Bulk Density	Mineable Reserves of Rough stone in Ts
XY-AB	I	129	45	5	29025	2.75	79818.75
	II	125	35	5	21875	2.75	60156.25
	III	120	25	5	15000	2.75	41250.00
	IV	115	15	5	8625	2.75	23718.75
Total					**74525**	**-**	**204943.75**
XY-CD	I	98	59	5	28910	2.75	79502.50
	II	93	49	5	22785	2.75	62658.75
	III	88	39	5	17160	2.75	47190.00
	IV	83	29	5	12035	2.75	33096.25
	V	78	19	5	7410	2.75	20377.50
Total					**88300**	**-**	**242825.00**
Grand Total					**162825**	**-**	**447768.75**

The mineable reserve is computed as 1,62,825 m^3 of rough stone formation up to a depth 25 m BGL 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.
- 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 - Figure No. 2.12.

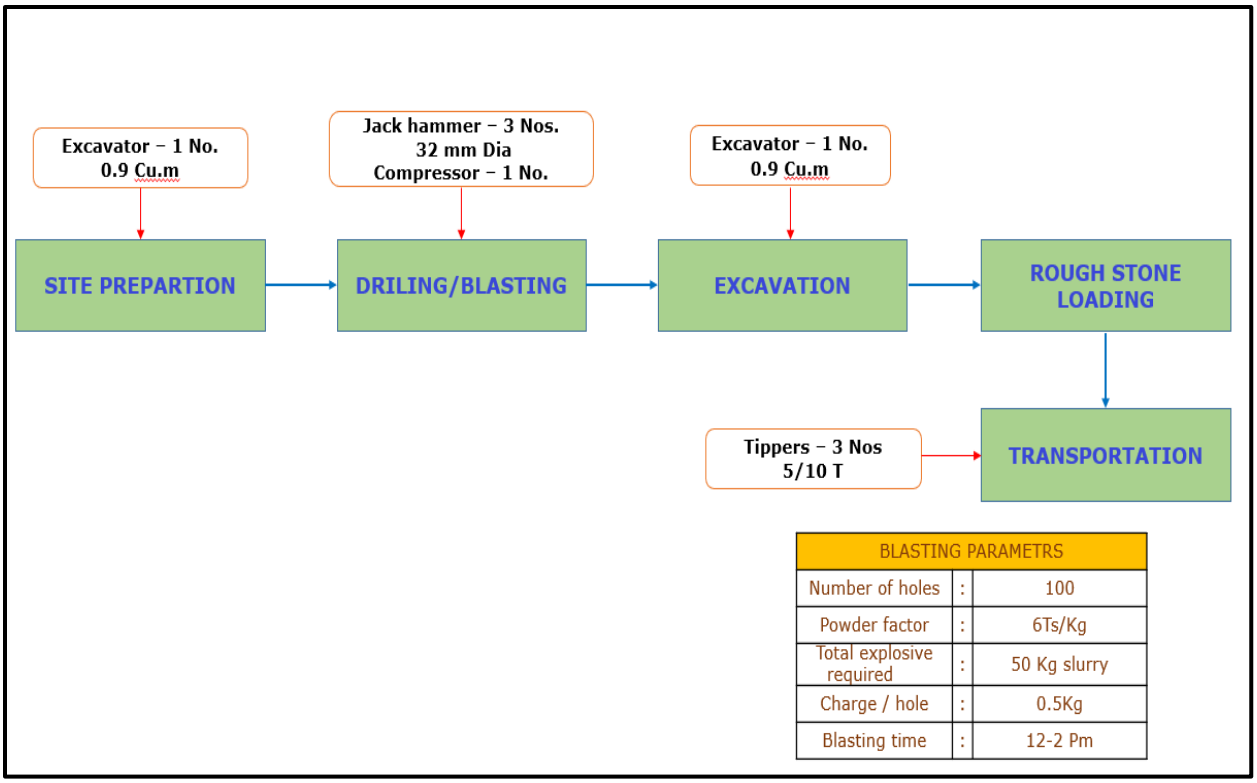

Figure 2.9 Process Flow Diagram

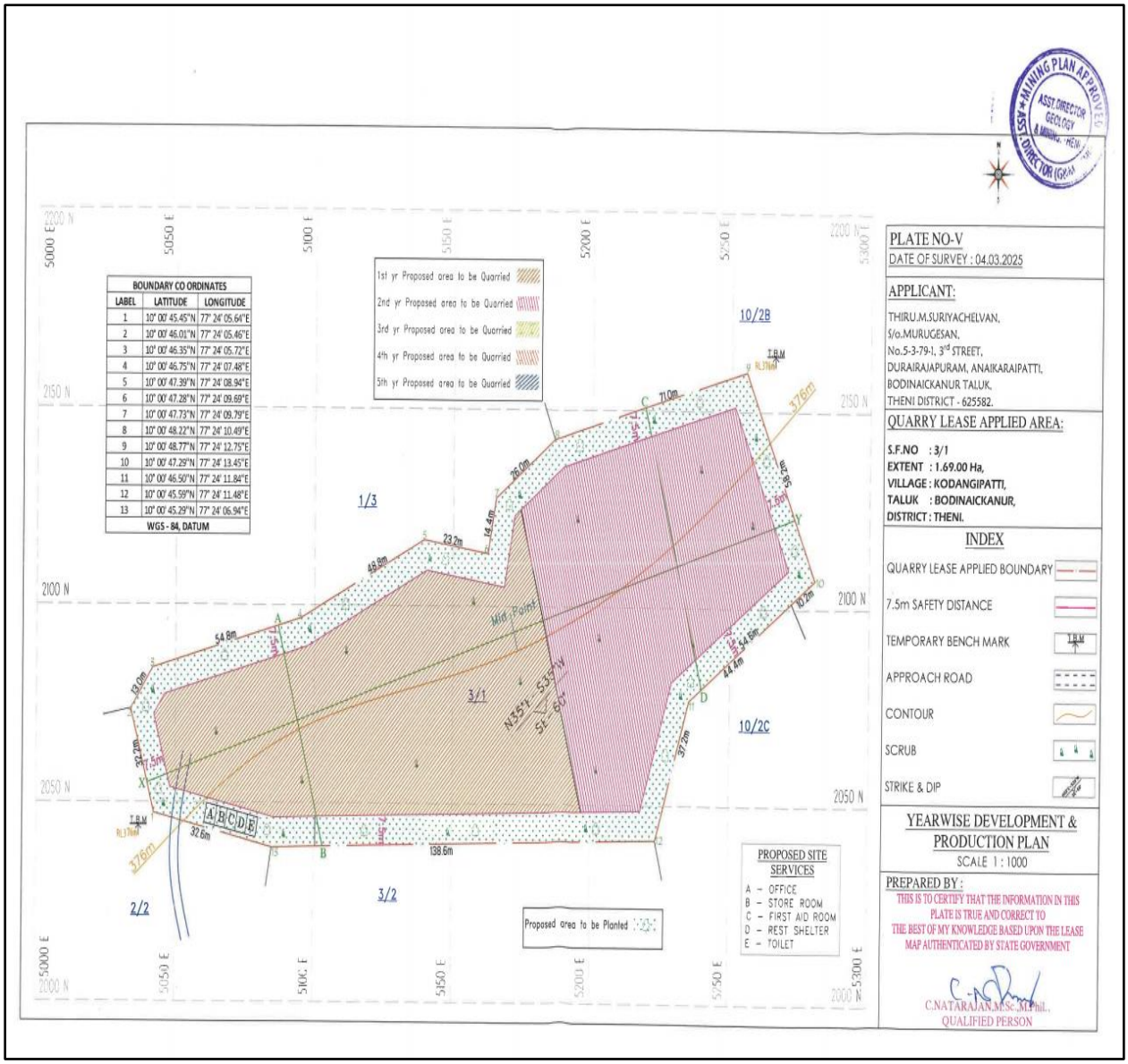

Figure 2.10 Year wise Development & Production Plan

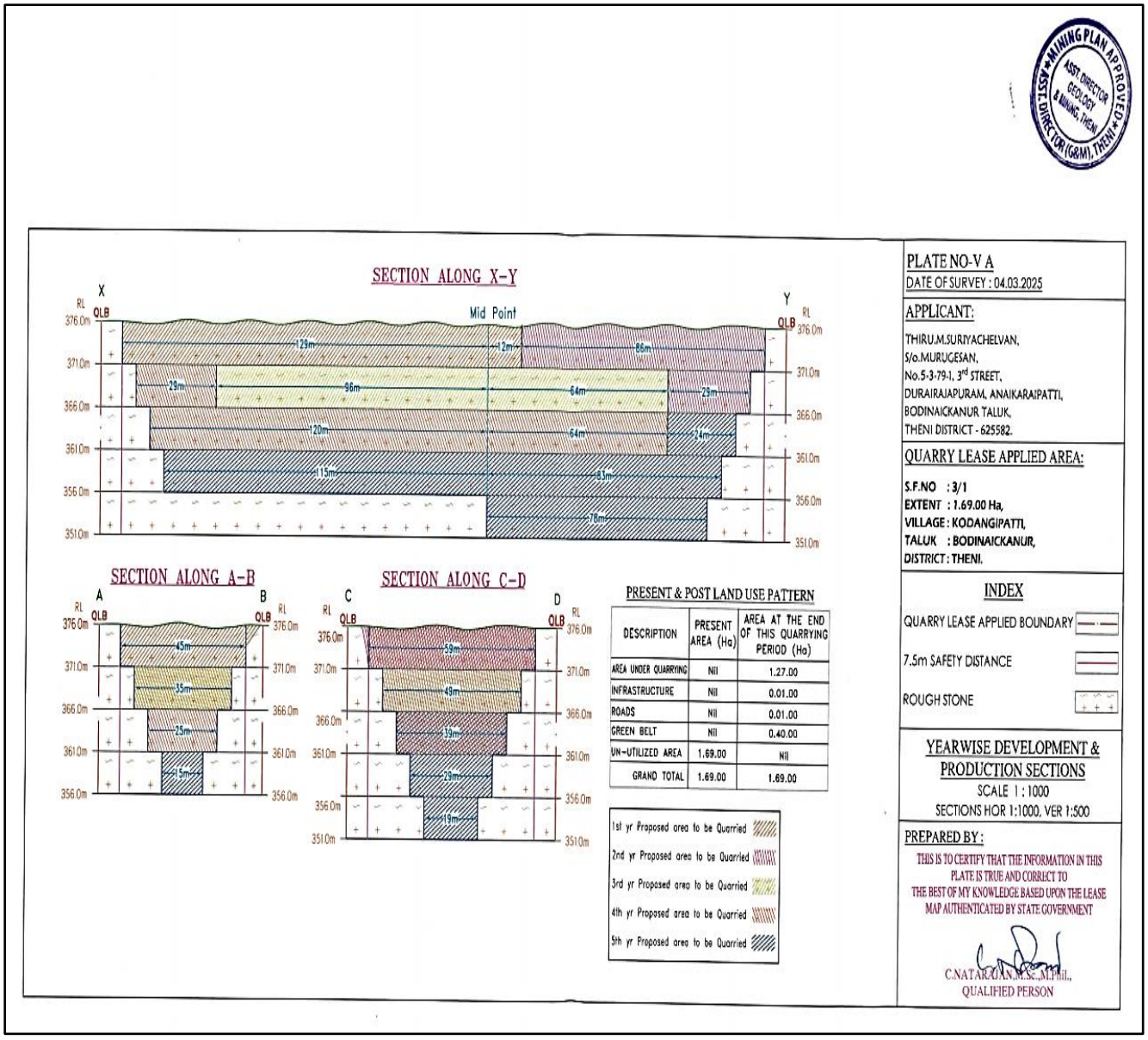

Figure 2.11 Year wise Development & Production Sections

Table 2.9 – Machinery Details

S.No.	Name of the Equipment	Capacity	Requirement
1	Excavator with Rock breaker attachment	0.90 m^3	1
2	Compressor	400 psi	1
3	Jack hammer	32 mm Dia	3
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	70^0 from horizontal
Number of holes	100
Powder factor	6Ts/Kg of Explosives
Total explosive required	50 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. Sri Thirupathy Explosives to carry out the blasting

operation for the proposed quarry. The Blasting Agreement is enclosed as Annexure – 6.

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 5 years is given below, the year wise production plan is given in Figure 2.10.

Table 2.11 Year wise Production Plan for five years

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Mineable Reserves of Rough stone in m^3	Bulk Density	Mineable Reserves of Rough stone in (Ts)
I	XY-AB	I	129	45	5	29025	2.75	79818.75
	XY-CD	I	12	59	5	3540	2.75	9735.00
	Total					**32565**	**-**	**89553.75**
II	XY-CD	I	86	59	5	25370	2.75	69767.50
		II	29	49	5	7105	2.75	19538.75
	Total					**32475**	**-**	**89306.25**
III	XY-CD	II	64	49	5	15680	2.75	43120.00
	XY-AB	II	96	35	5	16800	2.75	46200.00
	Total					**32480**	**-**	**89320.00**
IV	XY-AB	II	29	35	5	5075	2.75	13956.25
		III	120	25	5	15000	2.75	41250.00

	XY-CD	III	64	39	5	12480	2.75	34320.00
	Total					**32555**	**-**	**89526.25**
V	XY-CD	III	24	39	5	4680	2.75	12870.00
		IV	83	29	5	12035	2.75	33096.25
		V	78	19	5	7410	2.75	20377.50
	XY-AB	IV	115	15	5	8625	2.75	23718.75
	Total					**32750**	**-**	**90062.50**
Grand Total						**162825**	**-**	**447768.75**

The Annual Peak production quantity of Rough Stone – 32,750 m3 (5th year)

Total production for five years – 1,62,825 m^3 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. 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 five 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 conceptual plan is given in Figure 2.12.

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

Pit	Length in m (Max)	Width in m (Max.)	Depth in m (Max.), bgl
I	215	59	25 m BGL

Table 2.13 - Land use pattern of the Project site

Description	Present Area in Ha.	Area at the end of life of Quarry in Ha.
Quarrying pit	Nil	1.27.00
Infrastructure	Nil	0.01.00
Roads	Nil	0.01.00
Greenbelt	Nil	0.40.00
Unutilized	1.69.00	Nil
Total	**1.69.00**	**1.69.00**

- At the end of life of mine, the excavated mine pit / void of 1.27.00 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 (0.40.00 Ha.) will be developed along the safety barrier and top benches and 0.02 Ha are approach road and Infrastructure.

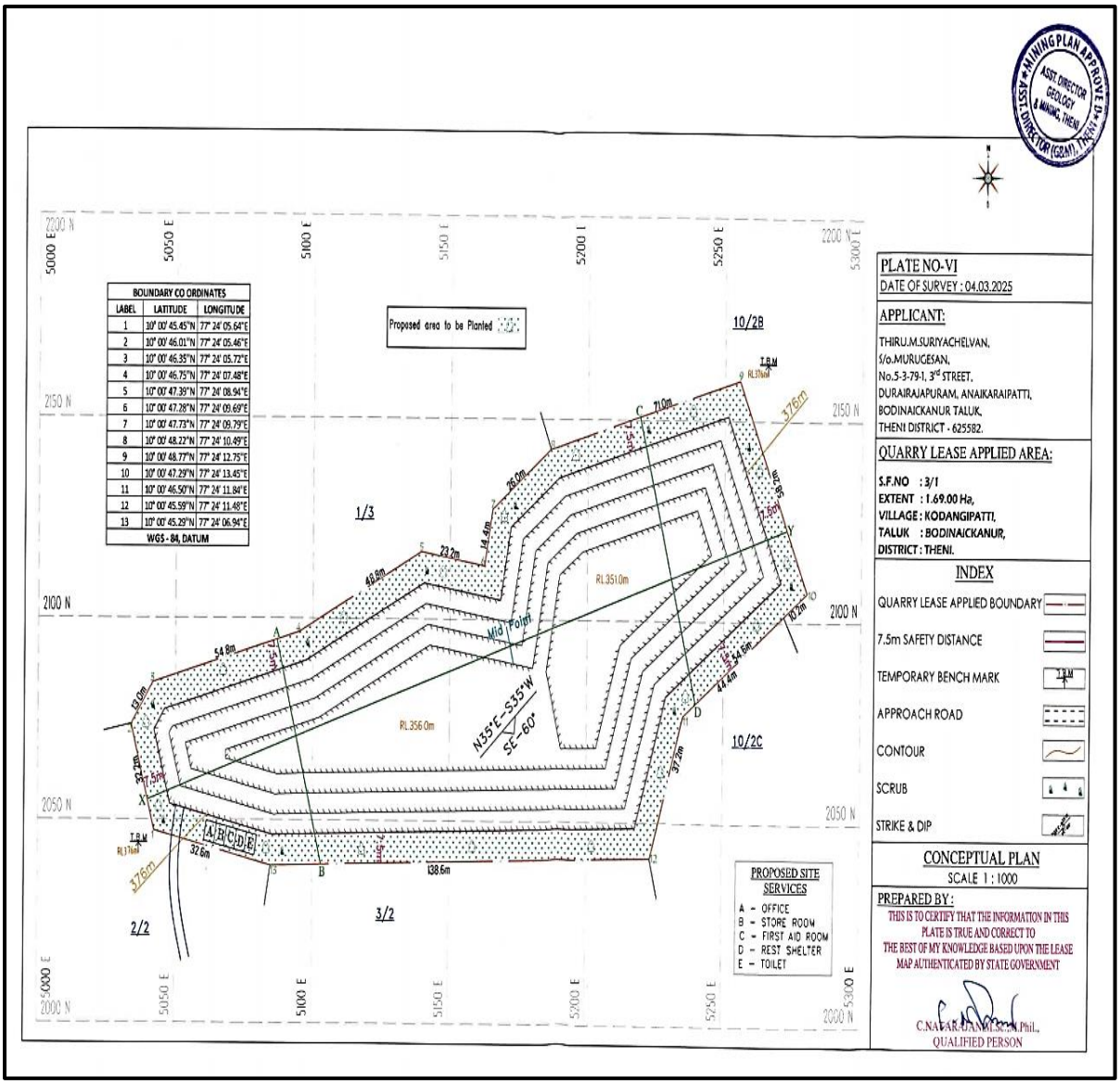

Figure 2.12 Conceptual Plan

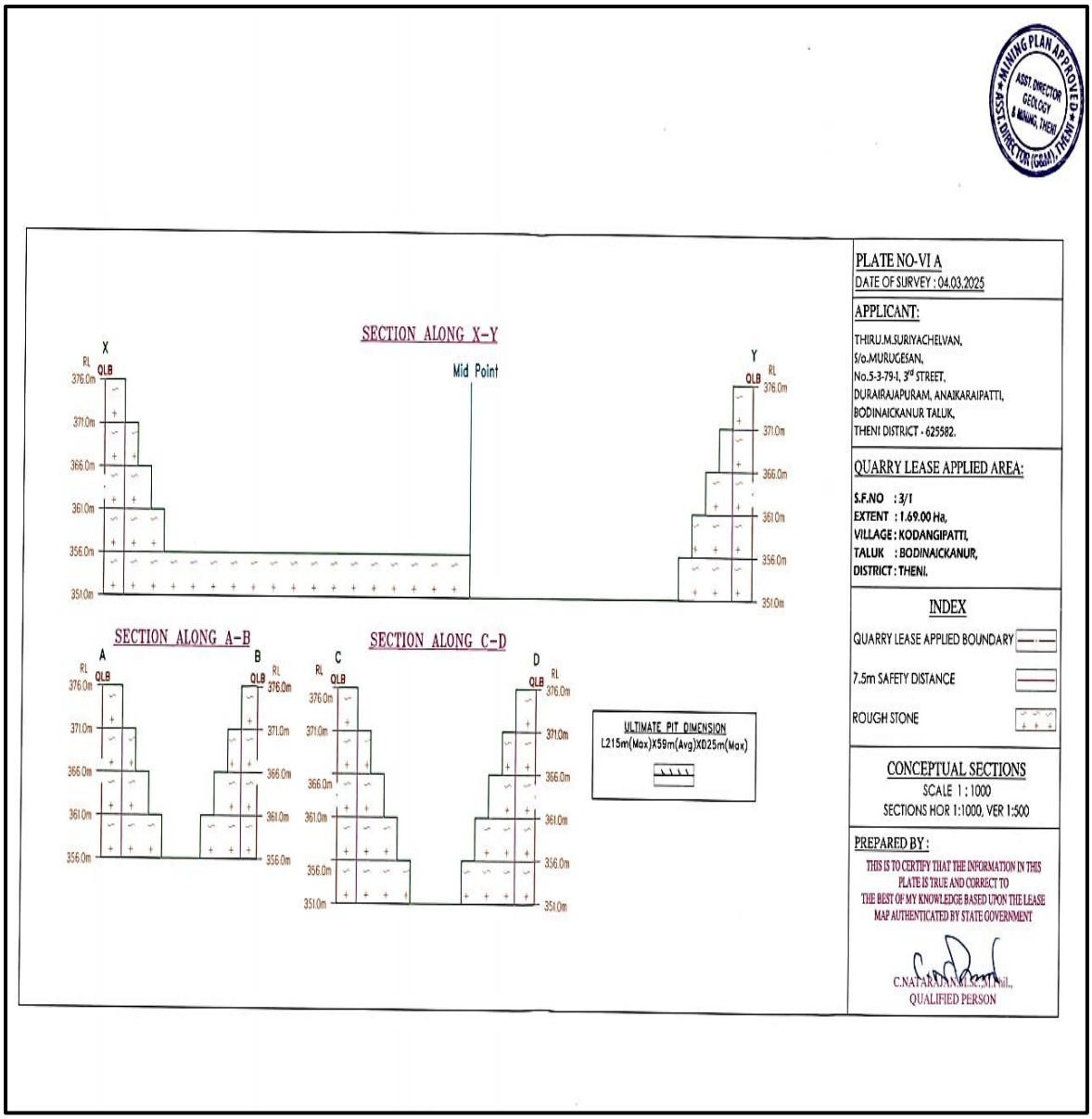

Figure 2.13 Conceptual Cross Section

2.10 PROJECT REQUIREMENT

2.10.1 WATER REQUIREMENT AND SOURCE

The total water requirement estimated for the quarry is 7.0 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

Activity	Water Requirement in KLD
Drinking & Domestic	1.5
Dust Suppression	3.0
Greenbelt Development	2.5
Total	**7.0**

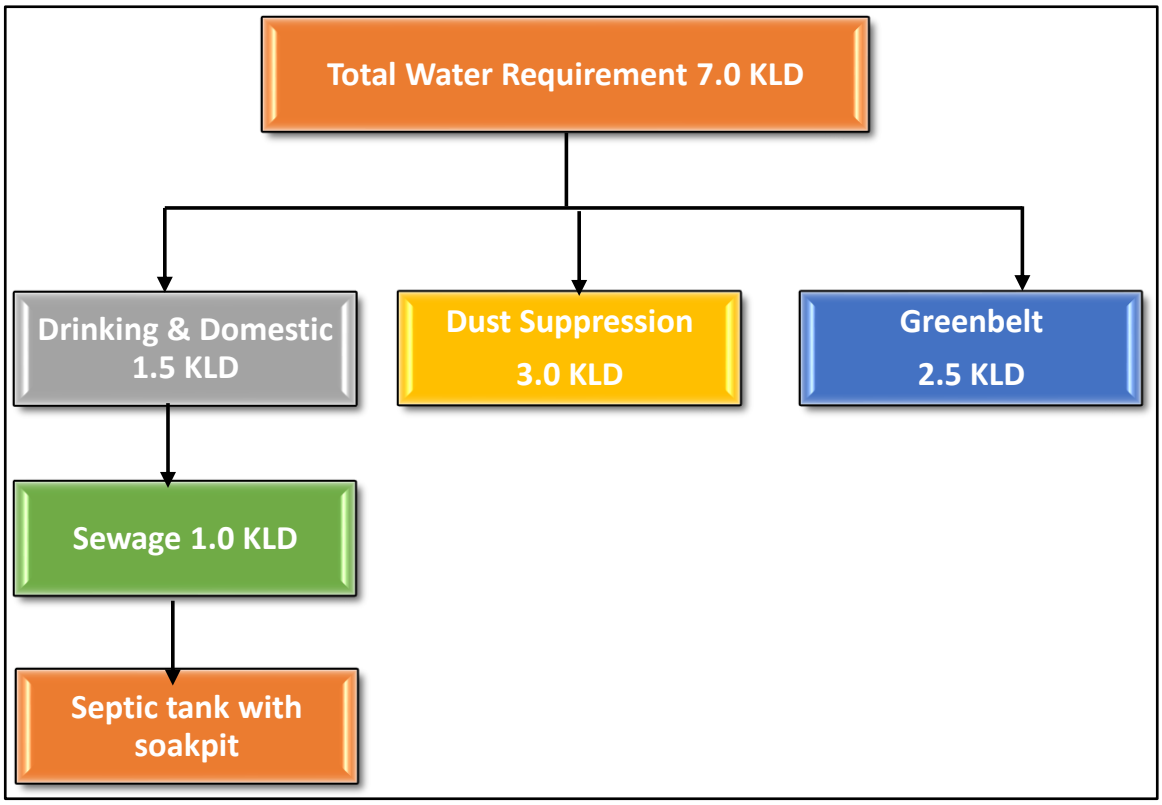

Figure 2.14 Water Balance Chart

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	20 m^3 of Rough Stone
For 1,62,825 m^3	1,62,825 /20 = 8141.25
So, Diesel consumption	= 8141.25 x 16 litres
	=1,30,260 litres of HSD

The Total fuel consumption is around 130.260 KL of HSD for the entire period of life (5 years).

2.10.4 EMPLOYMENT GENERATION

The project will provide employment opportunities totally to 8 persons directly and 16 indirectly.

Table 2.16 Details of Manpower requirement

1.	Skilled	Mines Manager	1 No.
		Foreman / Mate	2 No.
		Operator	4 No.
		Mechanic	1 No.
2.	Semi–skilled	Driver	3 No.
3.	Unskilled	Labours	13 Nos
		Total =	24 Nos

2.10.5 GREEN BELT REQUIREMENT

The safety zone, covering an area of 0.40.00 Hectares, will be maintained as a green belt and planted with 400 Nos. of local species.

2.10.6 VEHICULAR TRAFFIC DENSITY

The proposed quarry is located in Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State. The details of transport route from the quarry shown below:

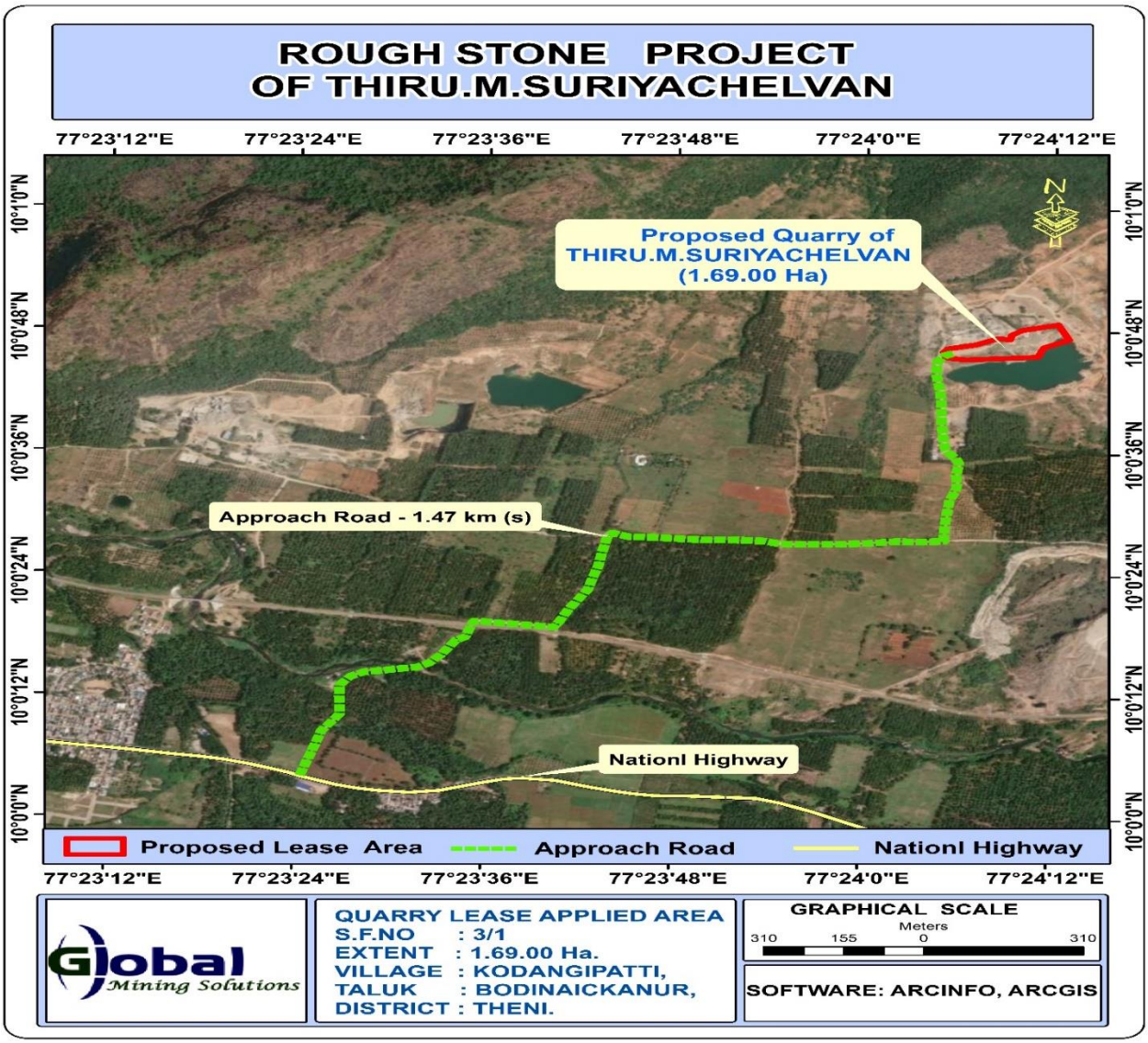

Figure 2.15 Mineral Transportation Map

The vehicular traffic survey will be carried out in the route through which mined out minerals are transported. Within 500 m radius, there are two proposed quarries including this proposal. The final product from this quarry will be transported through NH 85 Madurai – Bodinaickanur is about 1.4Km on south side of the area.

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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
NH 85 Madurai – Bodinaickanur	282	63	345	1500

Table 2.18 Modified Level of Service

Route	Existing Volume PCU/hr	Existing V/C Ratio	Additional Volume PCU/hr	Modified Volume PCU/hr	Modified V/C ratio	Modified LOS
NH 85 Madurai – Bodinaickanur	282	0.18	63	0.04	0.22	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. 410.43 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.

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CHAPTER 3
DESCRIPTION OF THE ENVIRONMENT

3.1. STUDY AREA, PERIOD COMPONENTS AND METHODALOGY

The project area is located in Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State over an extent of 1.69.00 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

Table 3.1 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,	• Odai 1 - 140 m (W) • Odai 2 - 250 m (E) • Odai 3 - 380 m (E) • Odai 4 - 550 m (W) • Kottagudi River - 1.15 km (S) • Tank - 2.21 km (SW) • Meenakshipuram Tank - 3.64 km (W) • Valai Ar - 3.0 km (NE) • Bodipuram Lake - 5.55 km (E) • Karupasamy Temple Dam - 7.25 km (SE) • Veerapandi River - 6.85 km (SE) • Veerapandi Check Dam - 6.00 km (SE)
B	Coastal zone, biospheres,	Nil within 10km radius
C	Mountains, forests	Agamalai R.F – 180 m (N) Perumalkovil karadu R.F. – 8.0 km (E) Bodi Hill West Forest-9.20 km-West
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, overwintering, migration	Nil within 10 km radius
4	Inland, coastal, marine or underground waters	Nil within 10 km radius
5	State, National boundaries	Nil within 10 km radius

6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Nil within 10 km radius
7	Defense installations	Nil within 10 km radius
8	Densely populated or built-up area	Theni – 7.3 km E
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Theni – 7.3 km E
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.

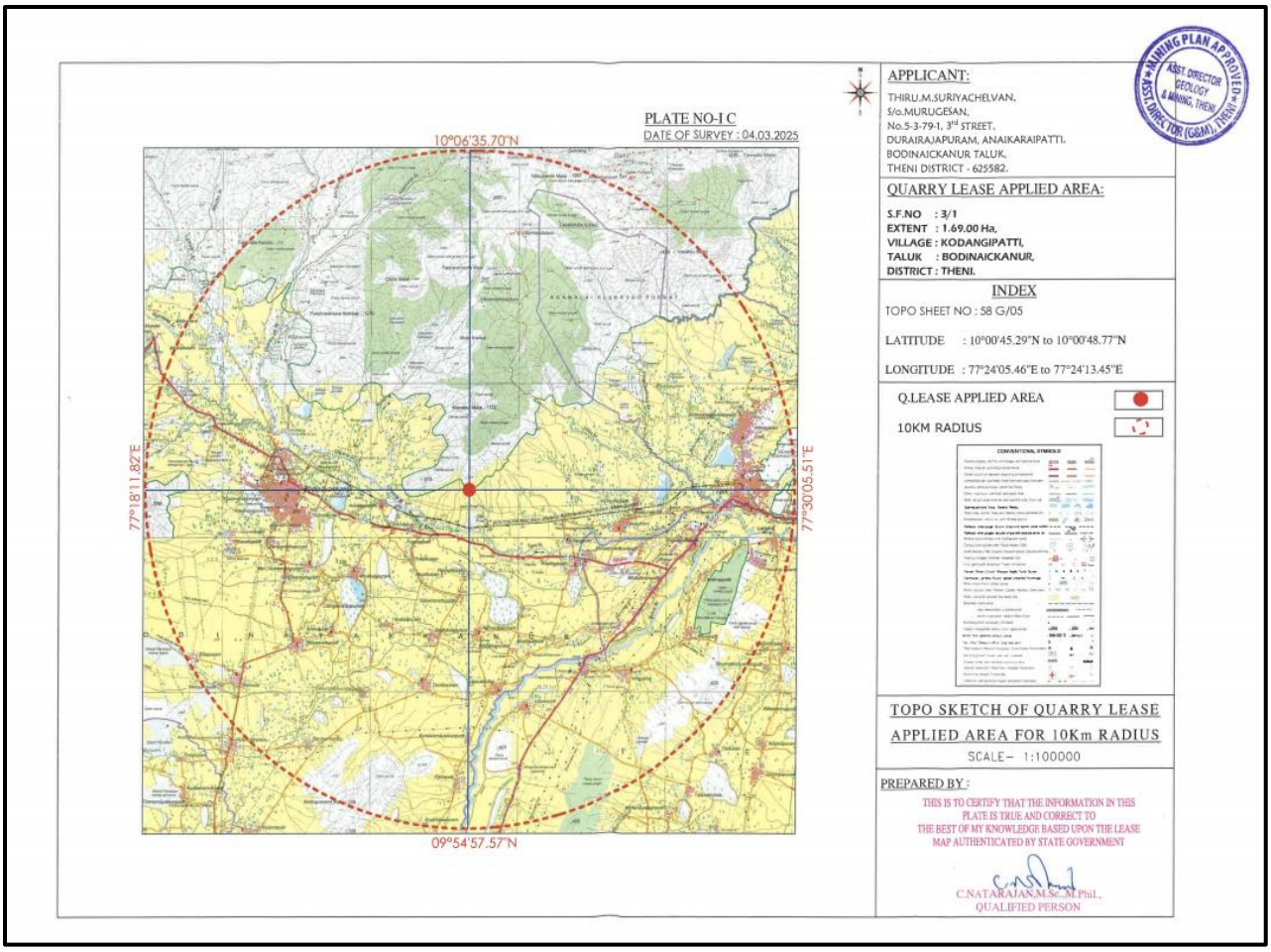


FIG 3.1 ENVIRONMENTAL SETTING OF THE STUDY AREA

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/ Sampling 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 & night time)	7
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.

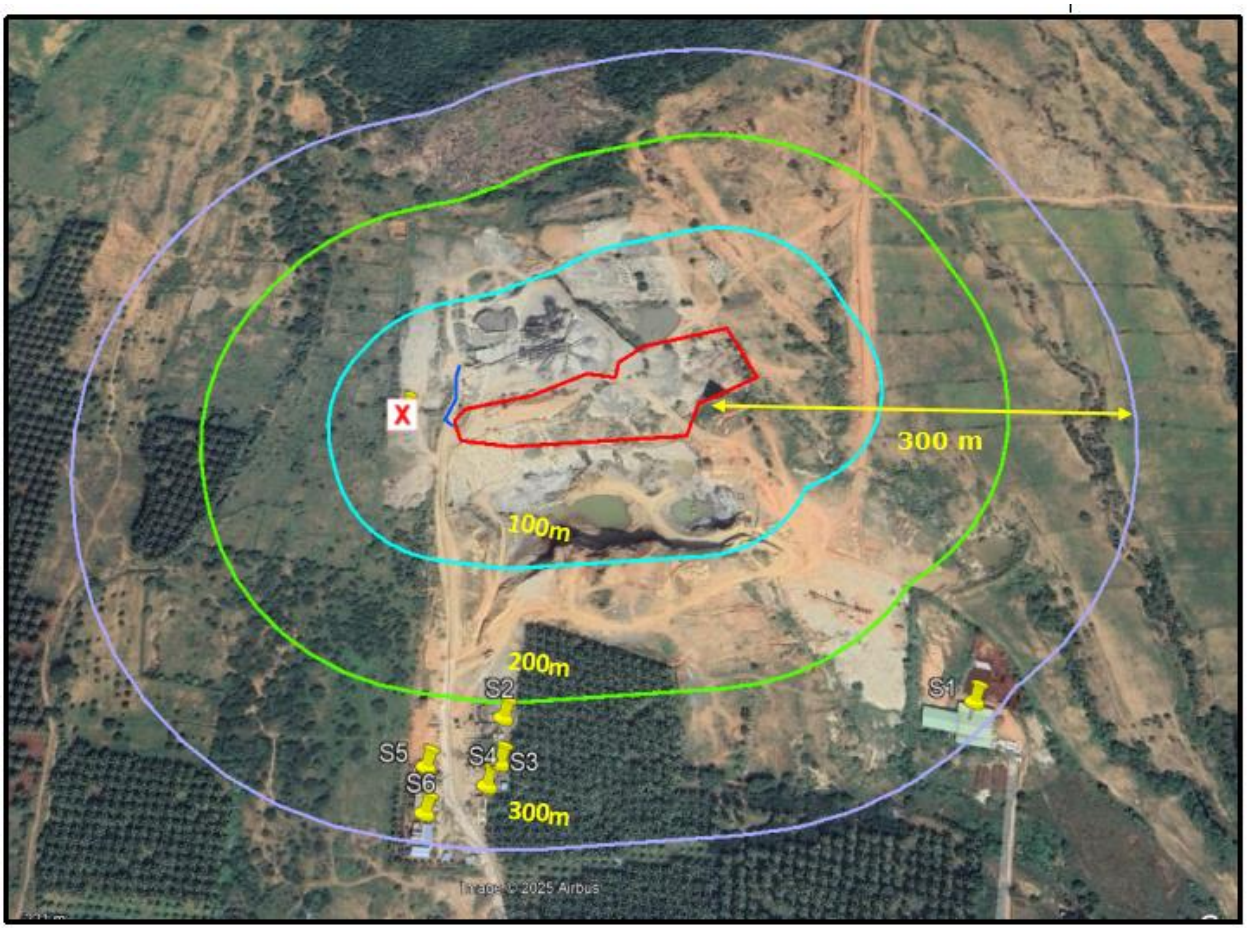
3.3. BASE MAP OF ALL ENVIRONMENTAL COMPONENTS

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

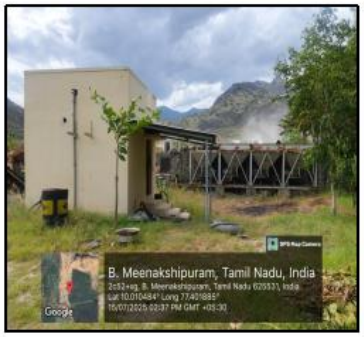
A site survey has been conducted to identify and list structures located within a 300 m radius from the proposed Quarry and are detailed below. There are permanent approved structures within a 300 m radius from the project site. The PP has obtained a letter from Village Administrative Office (VAO), Kodangipatti stating that there are no structures situated within 300 m radius. As per field study within 300m radius, only 6 structures observed, in which 1 structure is shed and remaining 5 structures are thar plant and its structures. Hence there are no habitations within 300m radius of the project site.

Code	Radius	No. of Structure	Structure Details
-	0 - 100	0	-
-	100 - 200	0	-
S1 – S6	200 - 300	1	S1 – Shed - 268 m (SE) S2 – Thar Plant – 230 m (S) S3 – Thar Plant Office - 256 m (S) S4 – Power Room - 273 m (S) S5 – Thar Plant Office– 260 m (S) S6 – Thar Plant Office – 285 m (S)

FIG 3.2 GOOGLE MAP SHOWING 100M INTERVAL FOR 300 M RADIUS FROM THE LEASE AREA



S1 – Shed - 268 m (SE)



S2 – Thar Plant – 230 m (S)

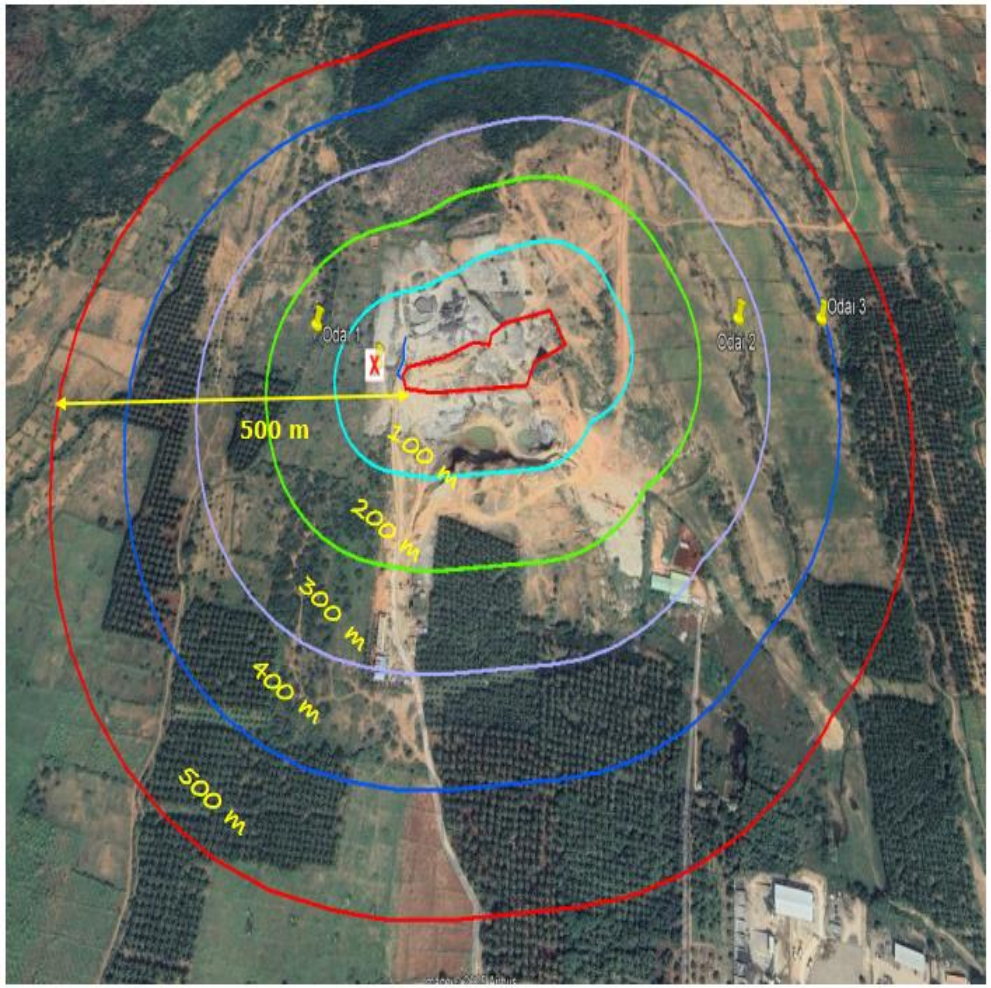
S3 – Thar Plant Office - 256 m (S)

S4 – Power Room - 273 m (S)

S5 – Thar Plant office– 260 m (S)

S6 – Thar Plant Office – 285 m (S)

FIGURE 3.3 - ENUMERATION OF THE STRUCTURES LOCATED WITHIN 300m RADIUS FROM THE PROPOSED PROJECT SITE



S. No.	Name of the Feature	Distance and Direction
Odai 1	Seasonal Odai	140 m (W)
Odai 2	Seasonal Odai	250 m (E)
Odai 3	Seasonal Odai	380 m (E)

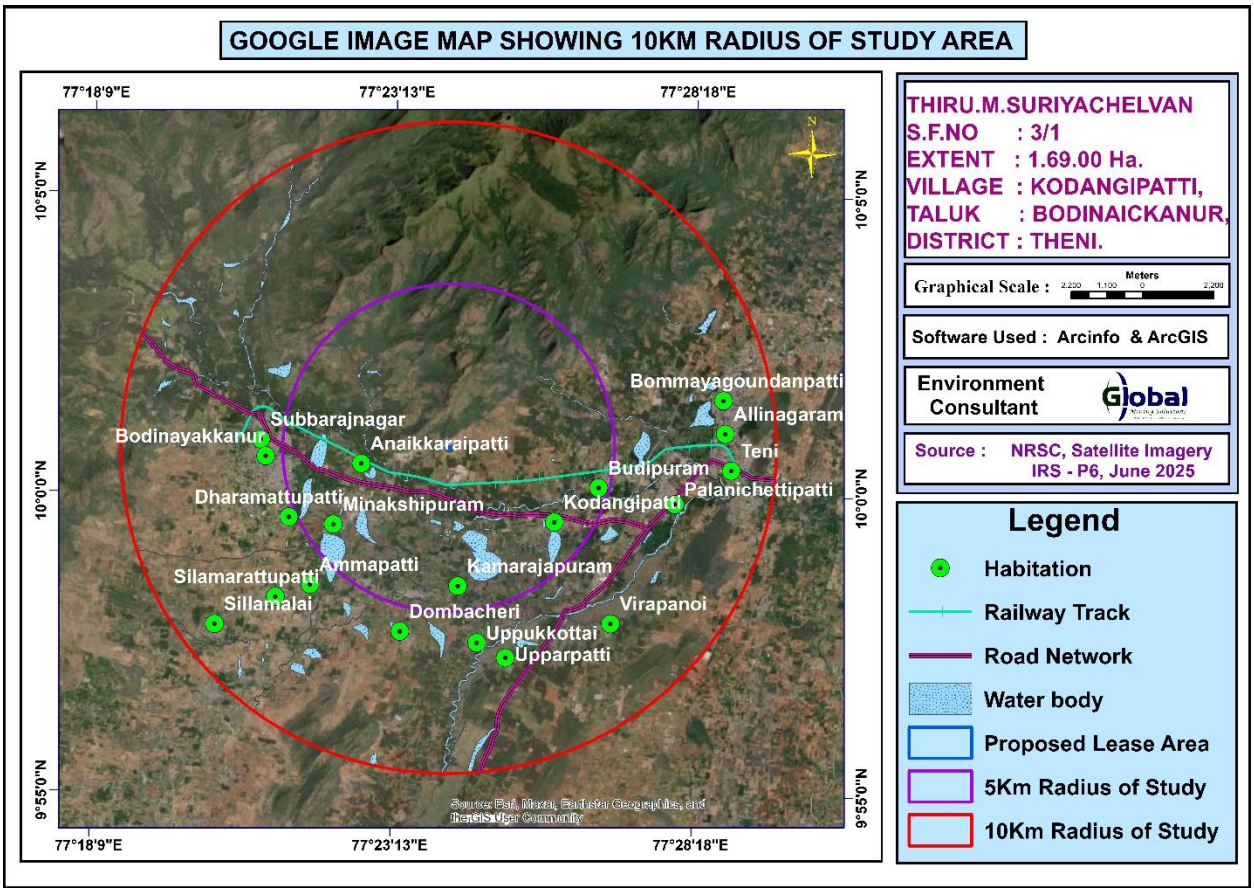
Odai 1 – 140 m (W)

Odai 2 – 250 m (E)

Odai 3 – 380 m (E)

FIGURE 3.4 - ENVIRONMENTAL FEATURES LOCATED WITHIN 500m RADIUS FROM THE PROPOSED QUARRY SITE

FIGURE - 3.5 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

In the plains, the temperatures ranges from a minimum of 19.9 °C to a maximum of 39.5 °C. In the hills the temperatures can range from as low as 4-5 °C to 25°C. The mean daily minimum temperature varies from 20.9°C (January) to 26.3°C (May) and mean daily maximum temperature varies from 29.7°C (December) to 37.5°C (May). The district is known for its salubrious climate. Theni District comes under the Western Agro climatic Zone. In general, the humidity is high and during the month of November, it is highest. The relative humidity ranges from 37 to 75 percent.

Rainfall

The district receives rainfall under the influence of both southwest and northeast monsoon. The rainfall data from 3 stations viz. Periyakulam, Bodinaikanur and Uthanapalayam for the period 99 years (1901-1999) have been considered for the analysis. Normal annual rainfall is of the order of 791.2 mm out of which 47% (375.5) received during NE Monsoon and 22% (172.7) is received during SW monsoon. Rainfall received from 2014 to 2023 is given below.

Table 3.2 - Annual Rainfall Variation

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Rainfall in mm	612.1	850.3	938.8	1022.7	1103	991.0215	783.488	1050.22	1100.1	833.5

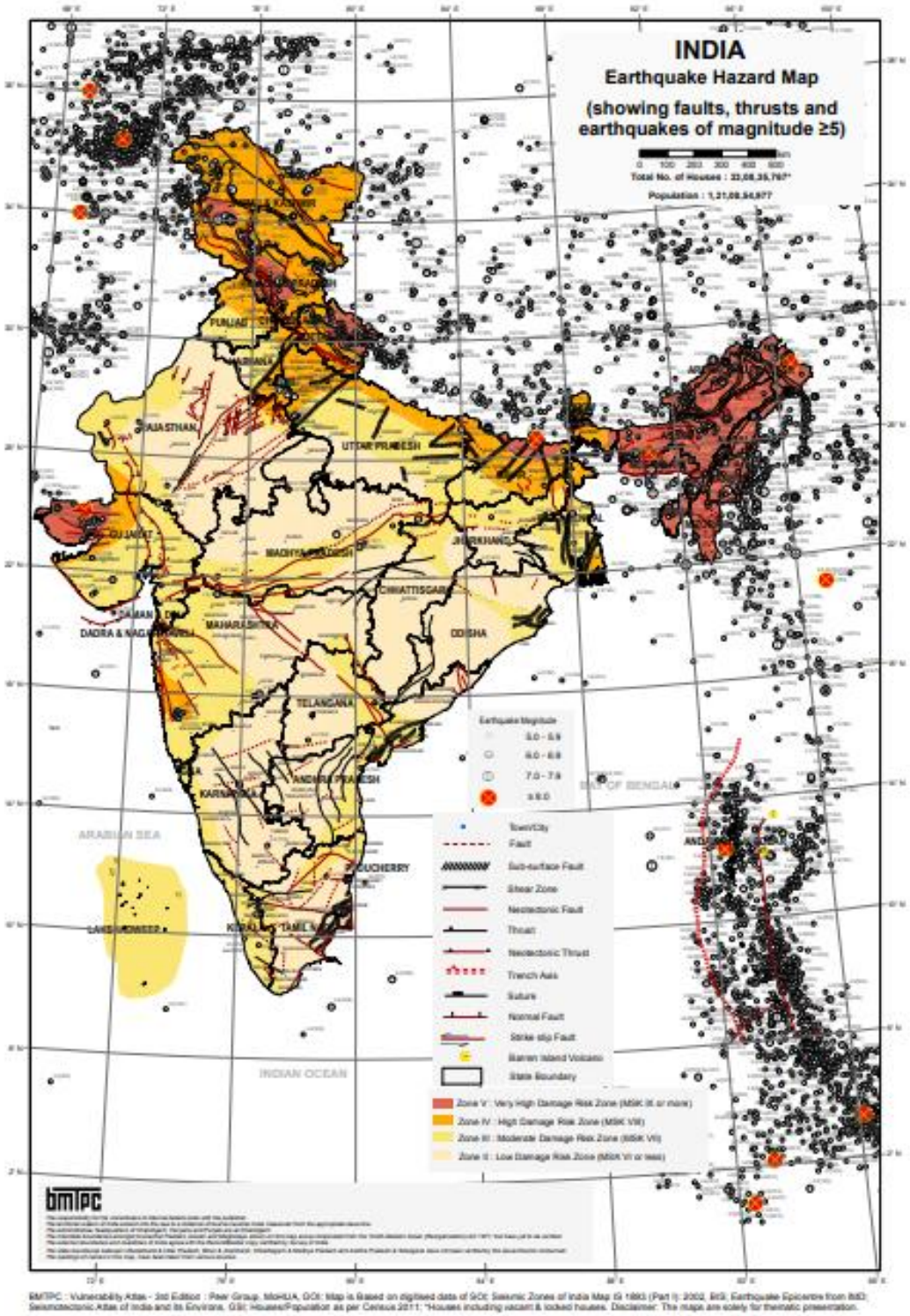
Relative Humidity

The month with the most relative humidity is November (76.77). The month with the least relative humidity is March (48.05). The wettest month is October (19.97 days), while the driest is February.

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 3.6.

FIG 3.6 SEISMIC MAP OF INDIA



BMTPC : Vulnerability Atlas - 3rd Edition ; Peer Group, MoHUA, GOI; Map is Based on digitised data of GOI; Seismic Zones of India Map GI-1893 (Part I): 2002, IMD; Earthquake Epicentre from IMD; Seismotectonic Atlas of India and its Environs, GSI; Houses/Population as per Census 2011; *Houses including vacant & locked houses. Disclaimer: The maps are solely for thematic presentation.

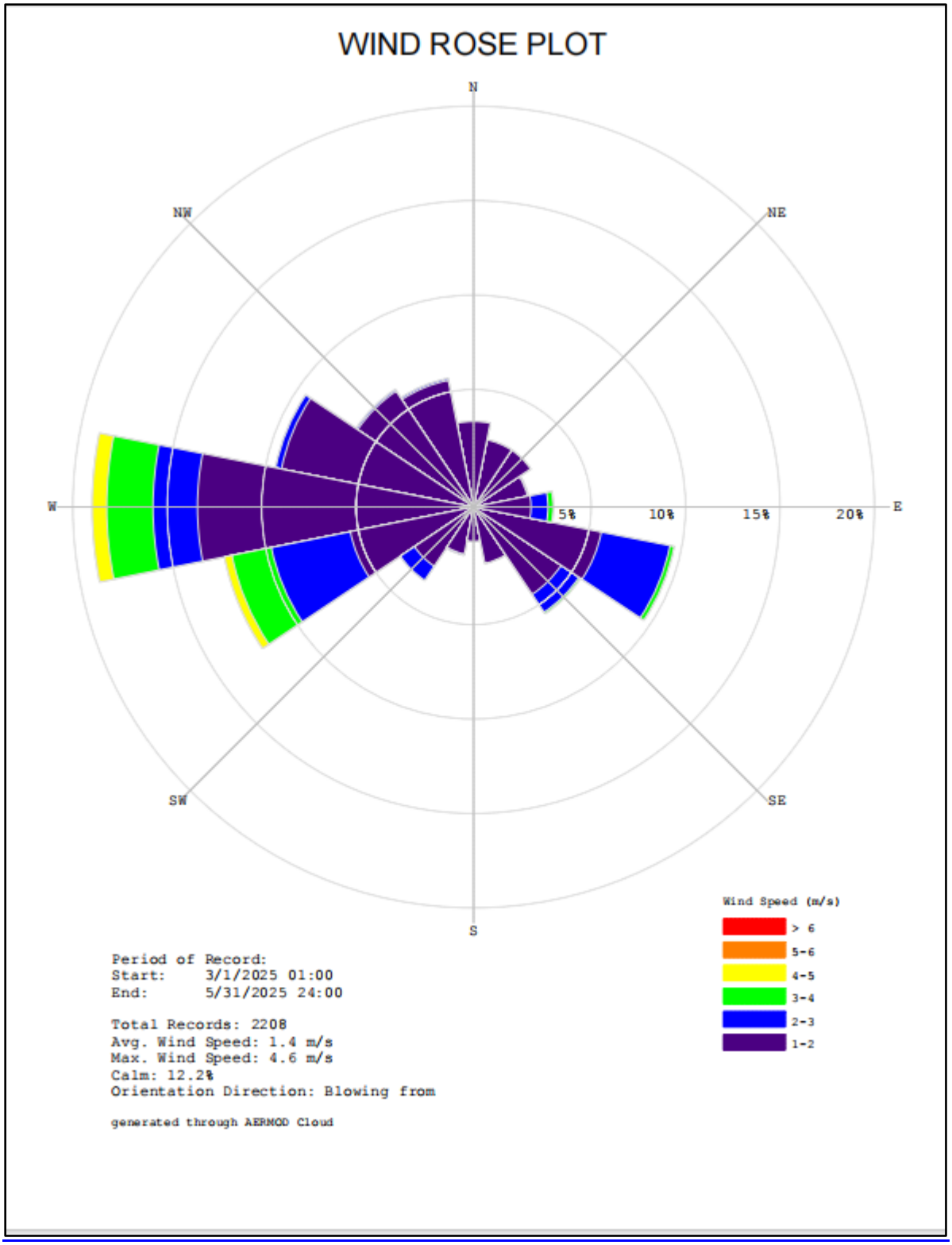


FIG 3.7 WIND ROSE PLOT DURING MARCH TO MAY 2025

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.

Table 3.3 Meteorological Data Recorded at Site

S.NO	Parameters		March to May 2025
1.	Temperature (^{0}C)	Min	15
		Max.	35
		Avg	26
2.	Relative Humidity (%)	Min	16
		Max	96
		Avg	66
3.	Wind Speed (m/s)	Min	0
		Max	4.6
		Avg	1.4
4.	Wind Direction	Blowing From – W	

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.

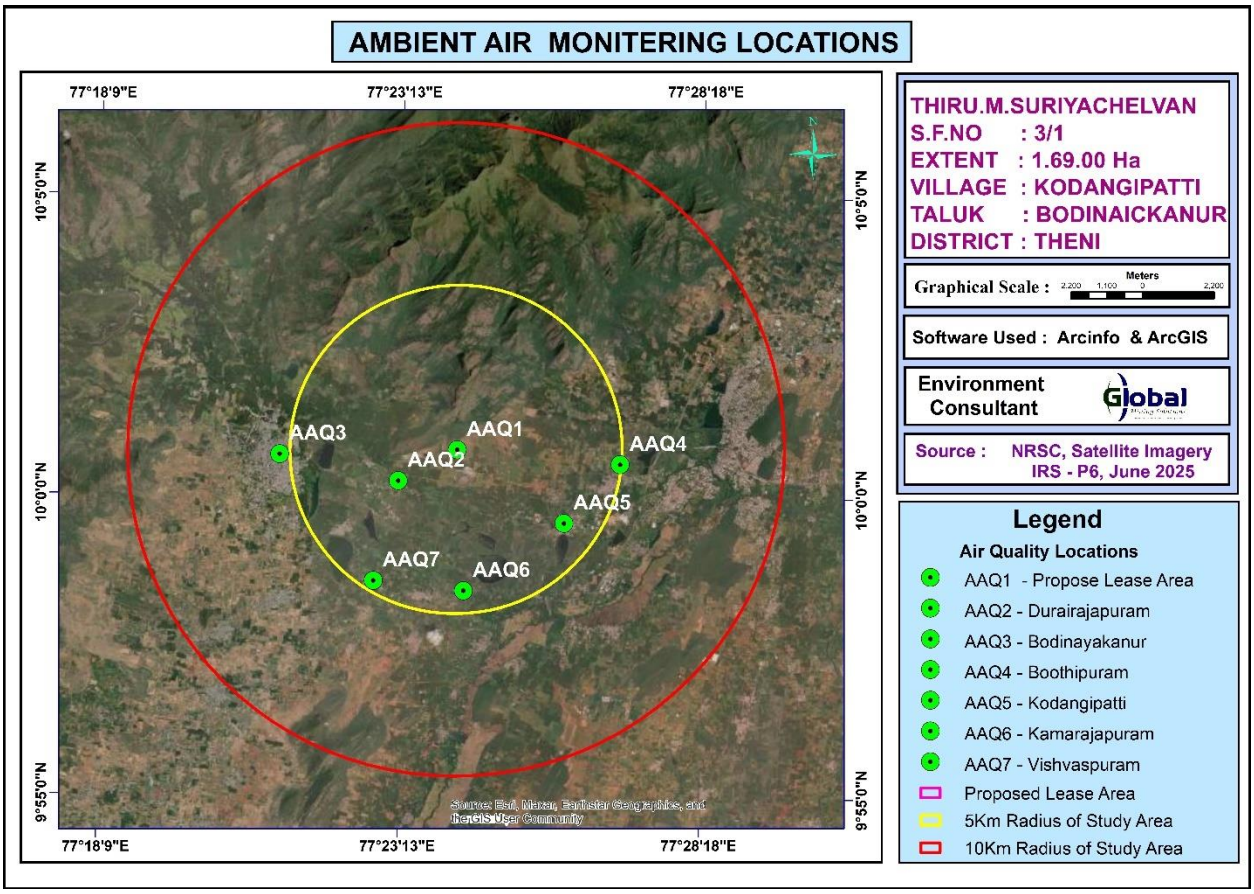
The regional climatologically data, was used as a guideline to know the predominant wind direction during study period. The locations were identified keeping in view predominant wind directions prevailing during study period, sensitive receptors, human settlements, and mining activities around.

The levels of Respirable Particulate Matter (PM10), Fine Particulates (PM2.5), Sulphur Dioxide (SO2) and Oxides of Nitrogen (NOx) were monitored for establishing the baseline status. PM10 were sampled with the help of Respirable Dust Samplers on filter papers and SO2 & NOx were absorbed in the respective absorption media in the impingers attached to RD samplers and analyzed Spectro-photometrically. PM2.5 was monitored with the help of Fine Particulate Samplers. The monitoring locations for ambient air study are given in Table – 3.4 and Figure 3.8 below.

Table 3.4: Details Of Ambient Air Quality Monitoring Locations

S. No.	Station Code	Locations	Distance & Direction	Coordinates
1	AAQ 1	Within Mine Lease area	Core Zone	10° 0'46.73"N & 77°24'10.07"E
2	AAQ 2	Durairajapuram	2.09 km, SW	10° 0'12.78"N & 77°23'12.01"E
3	AAQ 3	Bodinayakanur	5.53 km, W	10° 0'42.10"N & 77°21'8.11"E
4	AAQ 4	Boothipuram	5.0, E	10° 0'34.85"N & 77°26'56.06"E
5	AAQ 5	Kodangipatti	3.97 Km, SE	9°59'33.04"N & 77°25'59.91"E
6	AAQ6	Kamarajapuram	4.17 Km, S	9°58'25.93"N & 77°24'17.74"E
7	AAQ7	Vishvaspuram	4.67 Km, SW	9°58'32.82"N & 77°22'45.33"E

FIG 3.8 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 µg/m^3.

Table.3.5 Results of Air sampling Analysis in 7 locations

Station ID	Min	Max	Avg.
Particulate matter PM-$_{2.5}$ (µg/m^3)			
AAQ-1	23.60	34.90	29.80
AAQ-2	21.90	31.10	25.90
AAQ-3	20.60	29.30	24.20
AAQ-4	18.26	26.80	22.20
AAQ-5	21.71	29.60	25.10
AAQ-6	19.12	24.48	21.82
AAQ-7	23.92	28.24	26.08
CPCB NAAQS 2009 for PM $_{2.5}$ - 60 µg/m^3			
Particulate matter PM-$_{10}$ (µg/m^3)			

AAQ-1	51.70	72.80	64.24
AAQ-2	49.20	69.70	56.90
AAQ-3	44.80	63.80	52.60
AAQ-4	39.70	55.60	48.0
AAQ-5	47.20	64.40	54.60
AAQ-6	40.70	52.10	46.44
AAQ-7	50.90	60.10	55.50
CPCB NAAQS 2009 for PM_{10} - 100 µg/m^3			
Sulphur Di-oxide as SO_2 (µg/m^3)			
AAQ-1	5.70	8.60	6.80
AAQ-2	5.20	7.50	6.40
AAQ-3	4.80	6.90	5.90
AAQ-4	4.60	6.90	5.80
AAQ-5	5.10	7.20	6.20
AAQ-6	4.10	5.80	5.02
AAQ-7	4.50	6.80	5.65
CPCB NAAQS 2009 for SO_2 – 80 µg/m^3			
Oxide of Nitrogen as NO_2 (µg/m^3)			
AAQ-1	7.80	12.50	9.83
AAQ-2	7.50	10.60	9.10
AAQ-3	7.20	10.20	8.60
AAQ-4	6.40	8.70	7.60
AAQ-5	6.70	8.80	7.90
AAQ-6	5.70	9.20	7.04
AAQ-7	7.60	11.20	8.92
CPCB NAAQS 2009 for NO_2 – 80 µg/m^3			

The results are summarized in graph and given as below Figures.

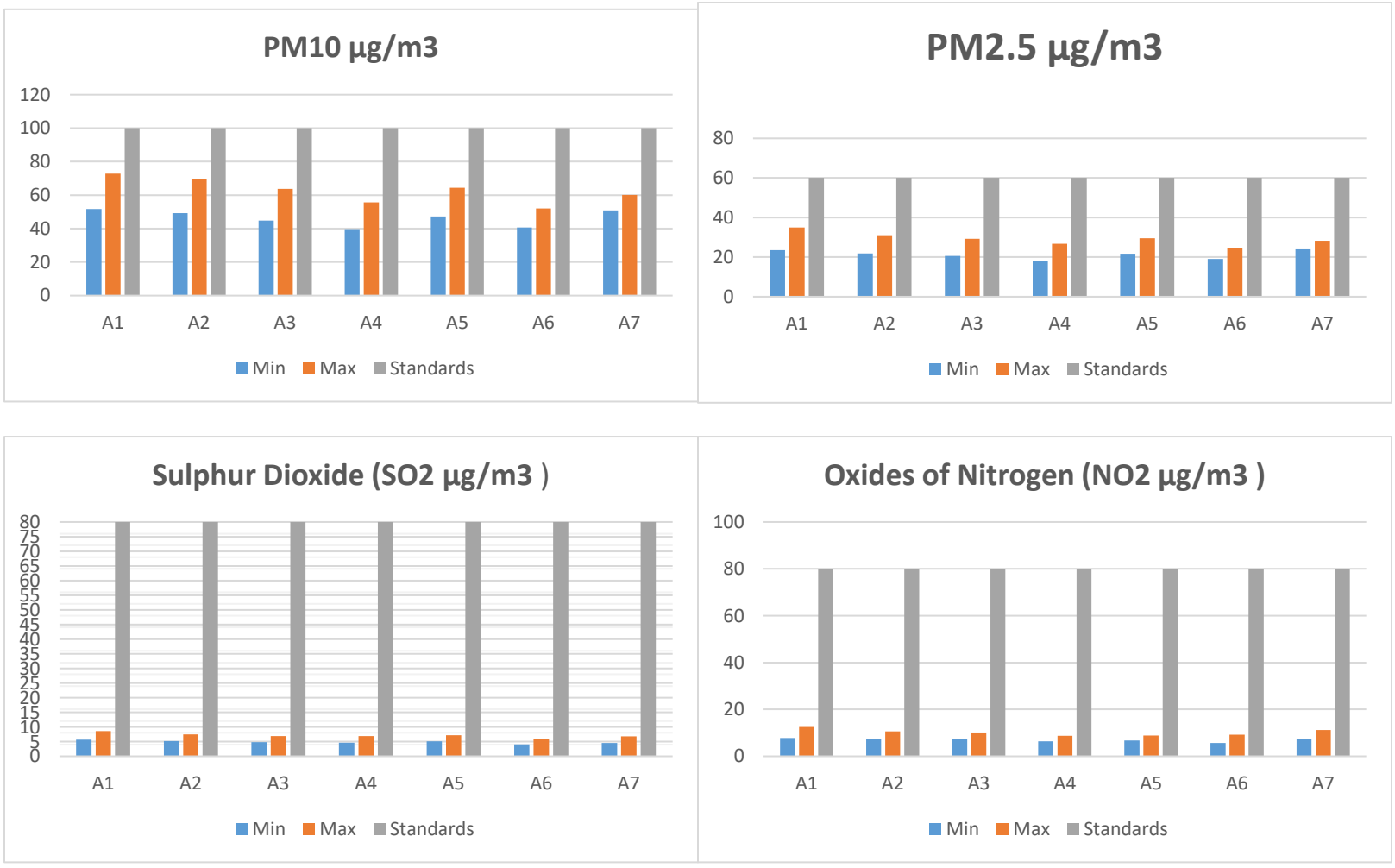


FIG 3.9 GRAPHICAL REPRESENTATION OF AIR QUALITY DATA

Discussion

From the table it is seen that, in core zone, the PM10 values were in the range of 51.70 – 72.80 µg/m3. PM2.5 values in the range of 23.60 – 34.90 µg/m3. SO2 levels were ranging from 5.70 – 8.60 µg/m3 and NO2 levels were ranging from 7.80 – 12.50 µg/m3. In buffer zone, the PM10 values were in the range of 39.70 – 69.70 µg/m3. PM2.5 values were in the range of 18.26 – 31.10 µg/m3. SO2 levels were ranging from 4.10 – 7.50 µg/m3. NO2 levels were ranging from 5.70 – 11.20 µg/m3. While comparing with the NAAQ Norms laid by MoEF, all monitored values of PM10, PM2.5, SO2, NO2 & CO were found to be well within the prescribed standards. The CO values in the all locations found to be below detectable limit (DL – 1144 µg/m3). The maximum value of all four parameters is observed in the mine lease area. The main contributing factor is the presence of another existing crusher unit located adjacent to the project site.

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 are four tanks within 1 km radius and Kottagudi River is located at 1.15 km (S). The other major water bodies in buffer are given below.

- Tank - 2.21 km (SW)
- Meenakshipuram Tank - 3.64 km (W)
- Valai Ar - 3.0 km (NE)
- Bodipuram Lake - 5.55 km (E)
- Karupasamy Temple Dam - 7.25 km (SE)
- Veerapandi River - 6.85 km (SE)
- Veerapandi Check Dam - 6.00 km (SE)

Ground Water

In Theni District, during the pre monsoon, the water level generally in declining trend ranges from G.L. to 15m. The depth of well below Ground Level 12.0m are become dry during hot season like May, June, July. In the post monsoon, the water level generally in upward trend due to rainfall and it may reach the Ground Level also.

The scenario of ground water in Bodinaickanur Taluk, Theni District, is given below.

Ground Water Level Status in Bodinaickanur Taluk							
S. No.	Firka	Net Annual Ground water availability	Existing gross Draft for irrigation	Existing gross Draft for domestic and industrial water supply	Existing gross draft for all uses	Stage of ground water development	Category
1	Bodinaickanur	1,952.78	1,091.60	3.89	1,095.49	56	Safe

Source:nwm.gov.in

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 Sevan (07) 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 3.6 and Figure 3.10.

Sampling Locations

Two (2) surface water samples and Sevan (7) 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 3.6 and shown as Figure 3.11.

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

Table 3.6 Water Sampling Locations

S.NO	Location Code	Monitoring Locations	Latitude and longitude
Surface Water			
1	SW1	Kottagudi River (Up Stream)	10° 0'11.23"N & 77°23'41.80"E
2	SW2	Kottagudi River (Down Stream)	10° 0'3.84"N & 77°24'26.67"E
Ground Water			
1	GW1	Within Mine Lease area	10° 0'46.73"N & 77°24'10.07"E
2	GW2	Durairajapuram	10° 0'12.78"N & 77°23'12.01"E
3	GW3	Bodinayakanur	10° 0'42.10"N & 77°21'8.11"E
4	GW4	Boothipuram	10° 0'34.85"N & 77°26'56.06"E
5	GW5	Kodangipatti	9°59'33.04"N & 77°25'59.91"E
6	GW6	Kamarajapuram	9°58'25.93"N & 77°24'17.74"E
7	GW7	Vishvaspuram	9°58'32.82"N & 77°22'45.33"E

FIG 3.10 BASE MAP OF GROUND WATER SAMPLING LOCATIONS

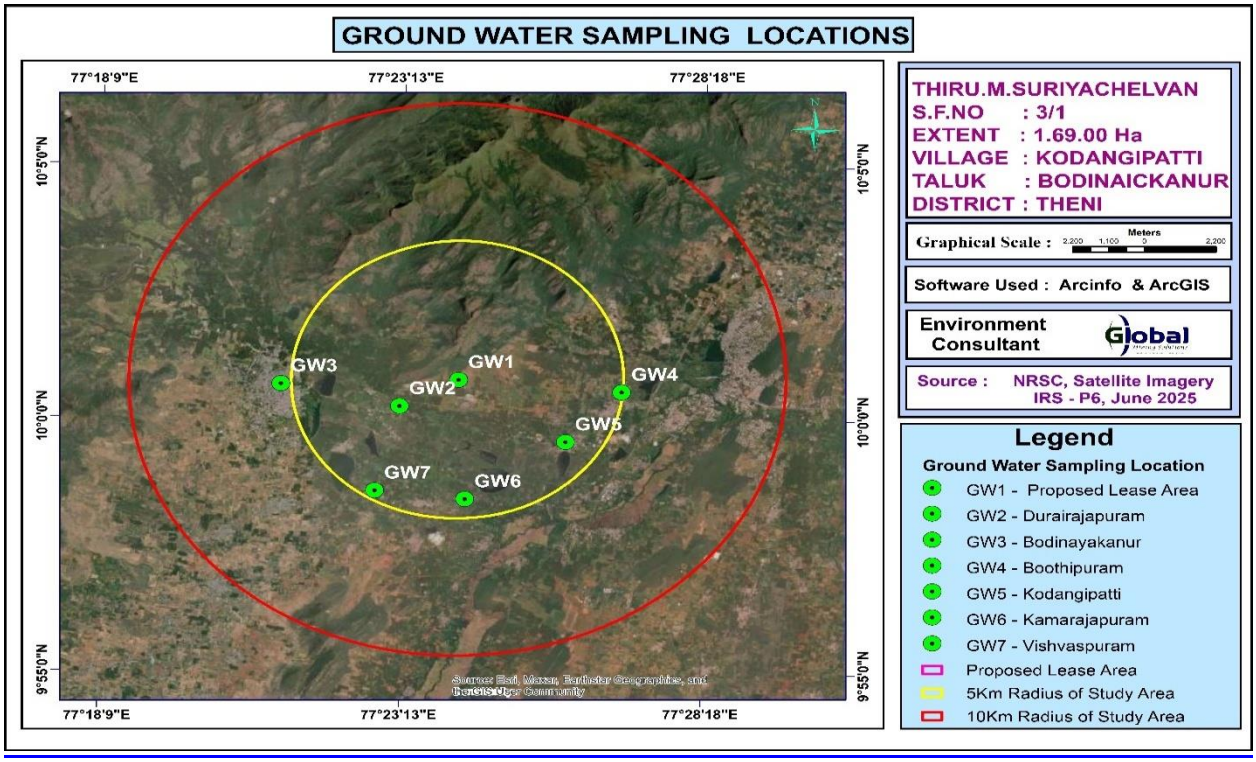


FIG 3.11 BASE MAP OF SURFACE WATER SAMPLING LOCATIONS

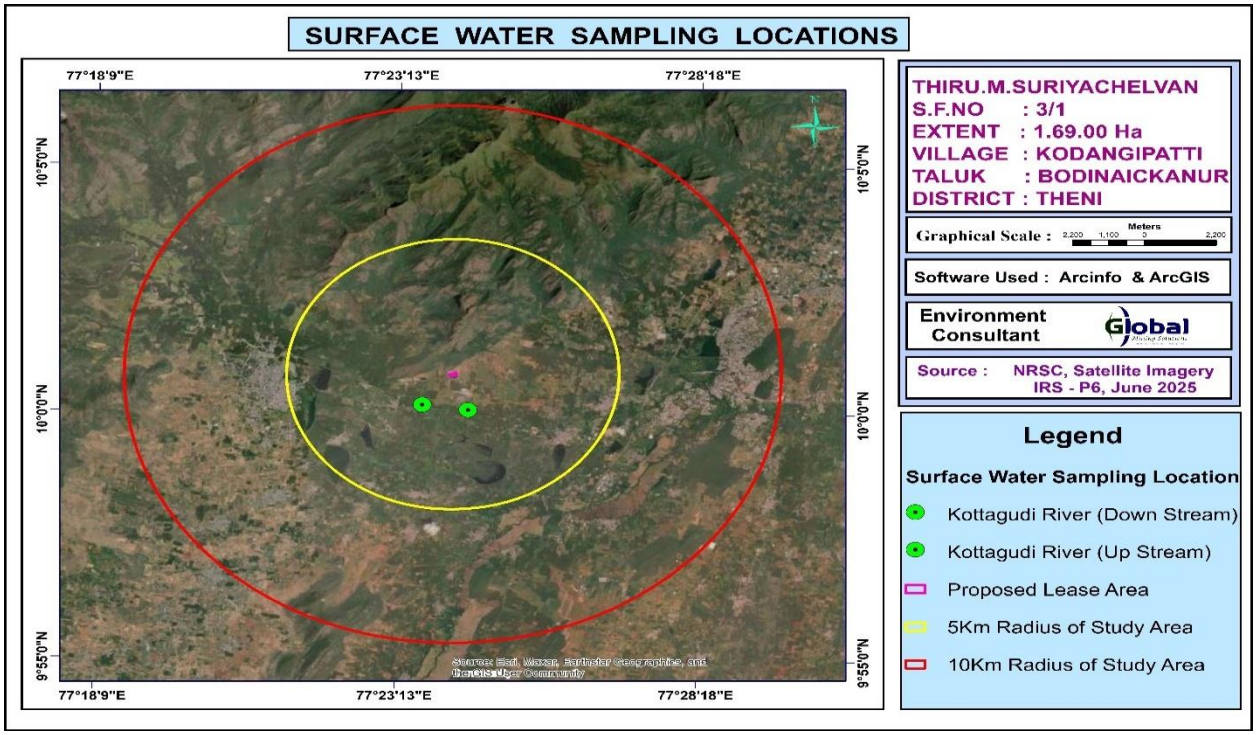


Table 3.7 Surface Water Analysis Results

Sr.No	Parameter	Unit	SW1	SW2	Surface water standard s (IS 2296 Class-A)
1	Odour	-	Agreeable	Agreeable	-
2	Turbidity	NTU	<1.0	<1.0	1
3	pH at 25 ˚C	-	7.92	7.85	6.5-8.5
4	Electrical Conductivity	µs/cm	145.6	120.2	-
5	Total Dissolved Solids	mg/l	90	72	500
6	Total hardness as CaCO3	mg/l	28.2	21.1	-
7	Calcium as Ca	mg/l	7.56	4.68	300
8	Magnesium as Mg	mg/l	2.23	2.26	-
9	Calcium as CaCO3	mg/l	18.9	11.7	-
10	Magnesium as CaCO3	mg/l	9.3	9.4	-
11	Total alkalinity as CaCO3	mg/l	35.6	26.3	-
12	Chloride as Cl-	mg/l	23.5	25.1	-
13	Free Residual chlorine as Cl-	mg/l	BDL (D.L - 0.2)	BDL (D.L - 0.2)	250
14	Sulphates as SO42-	mg/l	21.3	12.6	400
15	Iron as Fe	mg/l	BDL (D.L - 0.01)	0.04	1.0
16	Nitrate as NO3	mg/l	2.14	1.84	20
17	Fluoride as F	mg/l	0.45	0.41	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)	-
22	DO	Mg/l	6.2	6.4	-

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

Table 3.8 Results of Ground Water sampling Analysis in 7 locations								**Standards as Per IS 10500: 2012**	
	W1	W2	W3	W4	W5	W6	W7	**Acceptable Limits**	**Permissible Limits**
Odour	AGREEABLE	AGREEABLE	Agreeable	AGREEABLE	AGREEABLE	AGREEABLE	AGREEABLE	Agreeable	Agreeable
Turbidity	<1	<1	<1	<1	<1	<1	<1	1	5
pH at 25 °C	6.92	7.22	7.27	7.74	7.49	7.66	7.88	6.5- 8.5	No Relaxation
Electrical Conductivity	788.2	1456	1124	686.4	1048	972.2	1132	-	-
Total Dissolved Solids	472	908	696	420	639	583	691	500	2000
Total hardness as CaCO3	283	516	393	204	268	232	282	200	600
Calcium as Ca	60.8	105	96.8	47.2	67.6	72.4	69.6	75	200
Magnesium as Mg	31.9	61.5	36.2	20.6	23.8	12.2	25.9	30.0	100
Calcium as CaCO3	152	263	242	118	169	181	174	-	-
Magnesium as CaCO3	131	253	151	86.0	99.0	51.0	108	-	-
Total alkalinity as CaCO3	194	259	259	172	218	192	204	200	600
Chloride as Cl-	97.5	272	214	168	185	178	198	250	1000
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)	BDL (D.L - 0.2)	BDL (D.L - 0.2)	0.2	1

Sulphates as SO42-	71.8	169	91.3	56.9	123	96.3	129	200	400
Iron as Fe	BDL (D.L - 0.01)	0.04	0.06	0.03	0.05	0.04	0.07	0.3	No Relaxation
Nitrate as NO3	2.79	3.84	3.04	2.67	3.67	3.41	3.78	45	No Relaxation
Fluoride as F	0.47	0.52	0.49	0.35	0.54	0.49	0.55	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)	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 3.12 GRAPHICAL REPRESENTATION OF GROUND WATER ANALYSIS

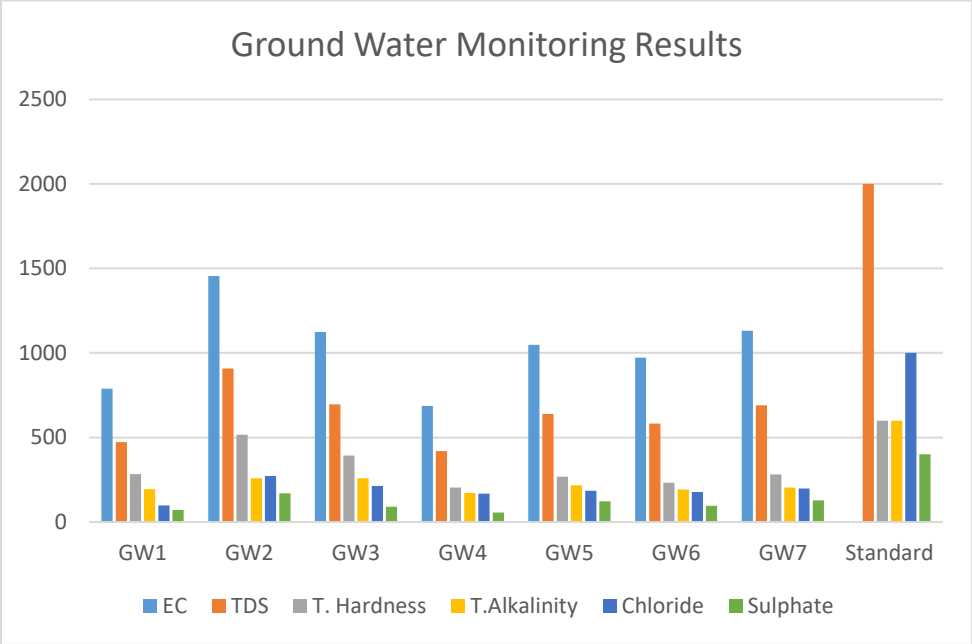
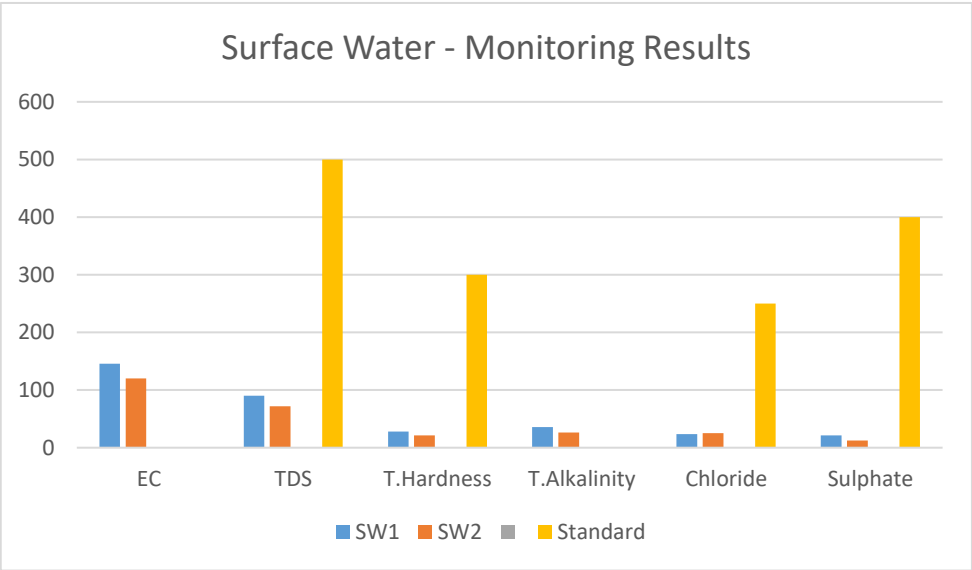


FIG 3.13 GRAPHICAL REPRESENTATION OF SURFACE WATER ANALYSIS



Discussion

Surface Water

The pH varied from 7.85 to 7.92 while turbidity found to be less than 1, which is within the permissible limit of 5.0. Total Dissolved Solids varied from 72 to 90 mg/l. Chloride varied between 23.5 mg/l and 25.1 mg/l. Nitrates varied from 1.84 to 2.14 mg/l, while sulphates varied from 12.6 to 21.30 mg/l.

Ground Water

Suitability of ground water for drinking/irrigation/industrial purposes is determined keeping in view the effects of various chemical constituents present in water as required human use, plant use. Though many ions are very essential for the growth of plants and human body but when present in excess, have an adverse effect on health and growth.

As Per the data it has been observed that the pH value varies from 6.92 – 7.88, Chlorides Ranges From 97.5 - 272 mg/l, Sulphates value found to be between 56.9 – 169 mg/l, Fluoride value varies from 0.35 – 0.55 mg/l, Total Hardness varies from 204 – 516 mg/l, and Total dissolved solid 420 – 908 mg/l. The ground water has been analyzed as per IS10500: 2012 and found to be suitable for drinking purpose. So the results of chemical and bacteriological analysis of water samples are classified under good class for drinking purpose with respect to total dissolved solids. Total hardness of the samples ranged from soft to moderately hard waters and can be fairly used for drinking. Regular ground water monitoring is suggested as the quality of ground water may fluctuate with groundwater consumption and seasonal variations.

3.3.4 NOISE MONITORING

The vehicular movement on road and mining activities is the major sources of noise in study area, the environmental assessment of noise from the mining activity and vehicular traffic can be undertaken by taking into consideration various factors like potential damage to hearing, physiological responses, and annoyance and general community responses.

Sampling Locations

In order to assess the ambient noise levels within the study area, noise monitoring was carried out at Sevan (7) locations. The noise level of monitoring locations were carried out by covering 10 km radius of the project area. A noise monitoring methodology was chosen such that it best suited the purpose and objectives of the study. The noise monitoring locations are given in Figure 3.14 and in below table.

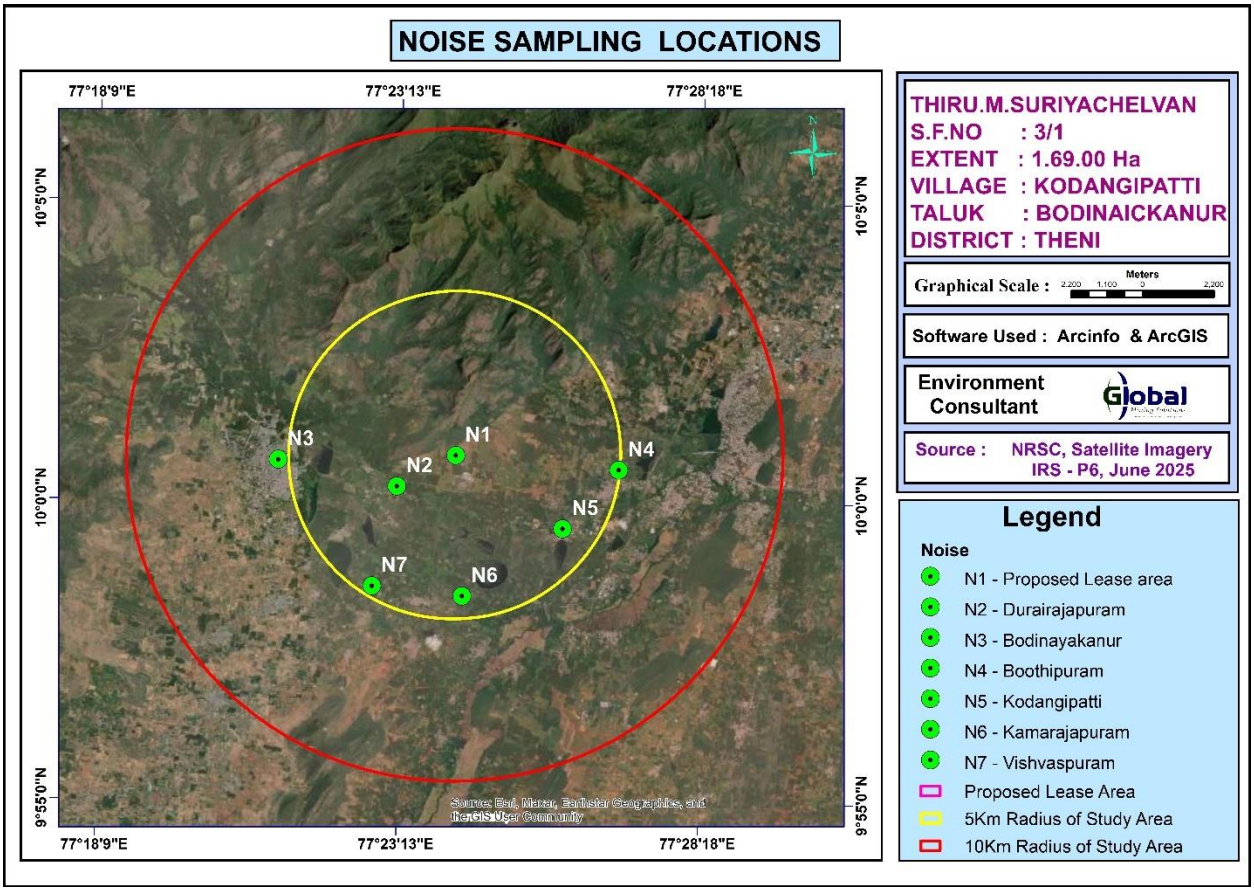
Table 3.9 Noise Monitoring Locations

S.NO	Location Code	Monitoring Locations	Latitude and longitude
1	N1	Within Mine Lease area	10° 0'46.73"N & 77°24'10.07"E
2	N2	Durairajapuram	10° 0'12.78"N & 77°23'12.01"E
3	N3	Bodinayakanur	10° 0'42.10"N & 77°21'8.11"E
4	N4	Boothipuram	10° 0'34.85"N & 77°26'56.06"E
5	N5	Kodangipatti	9°59'33.04"N & 77°25'59.91"E
6	N6	Kamarajapuram	9°58'25.93"N & 77°24'17.74"E
7	N7	Vishvaspuram	9°58'32.82"N & 77°22'45.33"E

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

FIG 3.14 BASE MAP OF NOISE MONITORING LOCATIONS



Method of Monitoring

Noise levels were measured using sound level meter manufactured by (Model No - SL4001, Make - Lutron). Sound Pressure Level (SPL) measurements were measured at all locations where ambient air quality monitored; one reading for every hour was taken for 24 hours.

Noise Monitoring Result

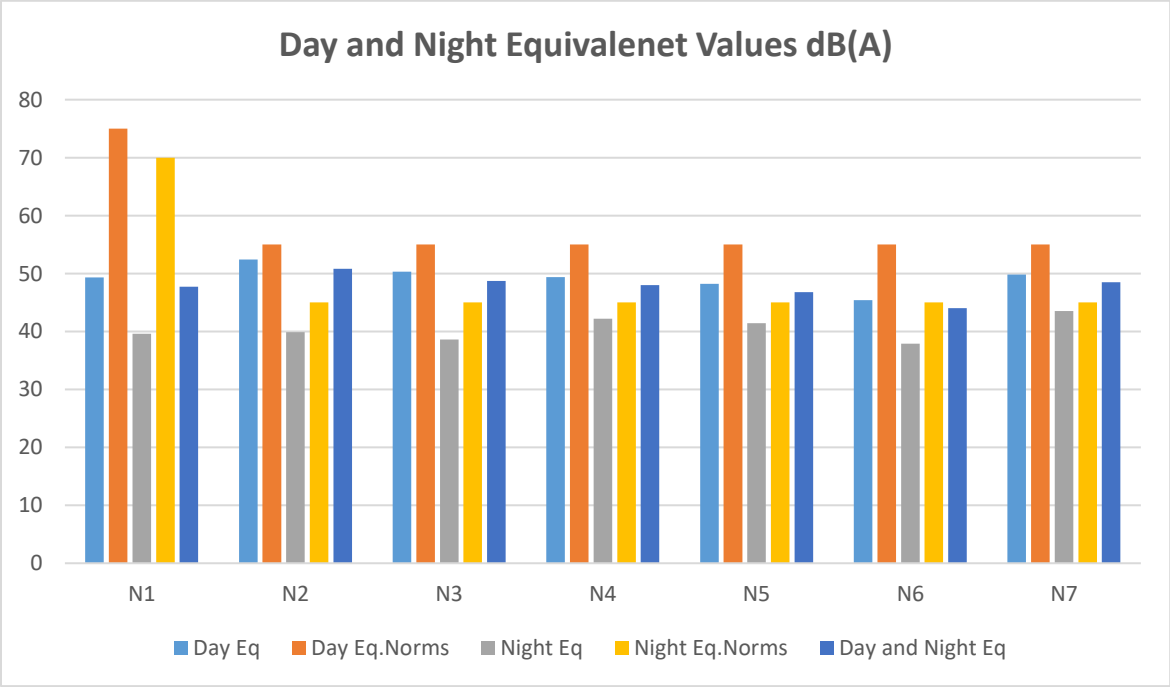
An analysis of the different Leq data obtained during the study period has been made. Variation was noted during the day-time as well as night-time. The results are presented in below Table 3.10.

Table 3.10 Noise Monitoring Result

Monitoring Location	N1	N2	N3	N4	N5	N6	N7
DAY EQUIVALENT	49.3	52.4	50.3	49.4	48.2	45.4	49.8
NIGHT EQUIVALENT	39.6	39.9	38.6	42.2	41.4	37.9	43.5
DAY & NIGHT EQUIVALENT	47.7	50.8	48.7	48.0	46.8	44.0	48.5
Limits as per MoEF&CC							
Day equivalent - 55 dB (A); Night equivalent - 45 dB (A); Work zone Exposure in 8 hr - 90 dB (A)							

The results are plotted as below.

FIG 3.15 DAY AND NIGHT EQUIVALENT VALUES IN 7 LOCATIONS



Discussion

From the table it is observed that the day Equivalent Noise (Leq-d) level were ranging from 45.40 to 52.40 dB(A) and Night Equivalent Noise (Leq-n) level were ranging from 37.90 to 43.50 dB(A). Day and Night Equivalent Noise (Leq-n) level were ranging from 44.00 to 50.80 dB(A). While comparing with the MoEF Norm of 55 dB(A) for day time and 45 dB(A) for night time, the monitored ambient noise levels are within the limit values.

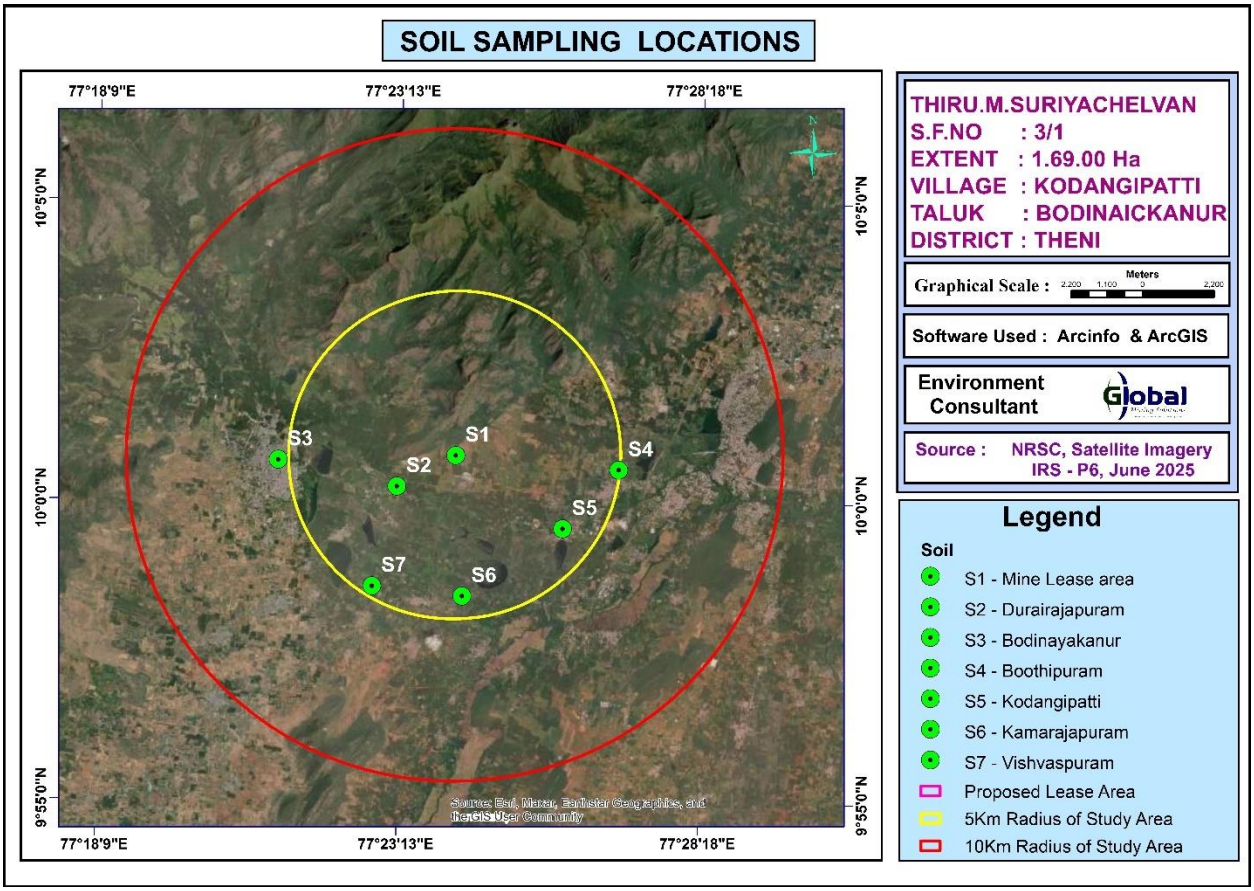
After commencement of mine operation the anticipated noise level will be 52 dB – 65 dB in the N1 location. (Project Site). It is very negligible and within the prescribed standards of MoEF & CC and DGMS.

3.3.5 SOIL SAMPLING ANALYSIS

Soil quality of the study area is one of the important components of the land environment. The composite soil samples were collected from the study area and analyzed for different parameters. The locations of the monitoring sites are detailed in Figure 3.16.

Soil samples have been collected from the mine lease area and 6 other locations from Durairajapuram, Bodinayakanur, Boothipuram, Kodangipatti, Kamarajapuram and Vishvaspuram Villages. The locations are shown in figure below.

FIG 3.16 BASE MAP OF SOIL SAMPLING LOCATIONS



Methodology

For studying soil quality, sampling locations were selected to assess the existing soil conditions in and around the project site representing various land use conditions. The samples were collected by auger boring into the soil up to 90-cm depth. Seven locations were selected for soil sampling on the basis of soil types, vegetative cover, industrial & residential activities including infrastructure facilities, which would accord an overall idea of the soil characteristics.

Composite grab samples of the topsoil were collected by specified depth, and mixed to provide a representative sample for analysis. They were stored in airtight Polythene bags and analyzed at the laboratory.

The results are summarized in the table below.

Table 3.11 - Soil Testing Result

S.No	Parameter	Unit	S1	S2	S3	S4	S5	S6	S7
1	pH at 25 °C	-	6.46	6.82	6.71	7.02	6.83	6.59	7.14
2	Electrical Conductivity	µmhos/ cm	46.92	90.41	69.4	112.3	59.24	87.18	127.5
3	Dry matter content	%	94.18	94.68	96.93	97.18	95.44	96.39	97.36
4	Water Content	%	5.82	5.32	3.07	2.82	4.56	3.61	2.64
5	Organic Matter	%	1.04	1.48	1.29	1.57	1.62	1.89	1.41
6	Soil texture	-	SILT LOAM	SANDY CLAY	SILT LOAM	SILT LOAM	SILT LOAM	SILT LOAM	SILT LOAM
7	Grain Size Distribution i. Sand	%	29.48	53.89	32.58	31.67	32.18	31.82	31.39
8	ii. Silt	%	52.08	26.82	50.34	50.42	50.75	50.38	50.68
9	iii. Clay	%	18.44	19.29	17.08	17.91	17.07	17.80	17.93
10	Phosphorous as P	mg/kg	2.32	1.68	1.89	2.49	1.82	2.08	1.89
11	Sodium as Na	mg/kg	532	466	602	669	704	624	718
12	Potassium as K	mg/kg	389	274	354	378	418	356	419
13	Nitrogen and Nitregenous Compounds	mg/kg	118	96.6	189	139	159	118	152
14	Total Sulphur	%	BDL(D.L.0 .02)	BDL(D.L.0 .02)	BDL(D.L.0 .02)	BDL(D.L.0 .02)	BDL(D.L.0 .02)	BDL(D.L.0 .02)	BDL(D.L.0 .02)
15	Porosity	%	19.6	20.2	19.6	18.9	20.1	19.7	20.6
16	Water Holding Cabacity	Inches/f oot	42	44	40	42	40	42	38

Soil Testing Result

Results of the soil samples show that the pH values were found to be 6.46 to 7.14 and Electrical Conductivity values were ranging between 46.92 – 127.50 µmhos/cm. Soils are generally Silt Loam. Organic matter values were ranging between 1.04 – 1.89 %. Total Nitrogen values were ranging between 96.6 – 189 mg/kg. Phosphorus values were ranging between BDL – 14.5 µg/g. Potassium values were ranging between 1.68 – 2.49 mg/kg. Sodium values were ranging between 466 – 718 mg/kg. The soil quality data for the 7 samples collected and analyzed are provided in Table no – 3.11.

3.3.6 BIOLOGICAL ENVIRONMENT

An ecological survey was conducted to collect the baseline data regarding flora and fauna in the study area of 10 km radius. Data were also collected from different sources, i.e., government departments such as District Forest Office, Government of Tamil Nadu. On the basis of onsite observations as well as forest department records the checklist of flora and fauna was prepared.

Methodology

Sampling locations were selected with reference to topography, land use, vegetation pattern, etc. In this study, quadrats of 25m × 25m were laid down to assess trees and quadrats of 10m × 10m were laid down for shrubs.

Flora

An ecological survey of the study area was conducted with reference to listing of species and assessment of the existing baseline ecological (Terrestrial Ecosystems) conditions. The objective of the survey is as follows:

- Generate existing data from field observations of various terrestrial floristic occurrences.
- Collect secondary data from Government records as well as through discussion with Forest officials, knowledgeable public etc.,

- Compare the data with authentic past records to identify changes, if any.
- Identify the impact of project operations on the biological aspects.

To accomplish the above objectives, a general ecological survey covering an area of 10 km radius was conducted. The locations were identified for phyto-sociological aspects to assess the current status.

Core Zone

The lease area is a non- forest, private land with scrub and thorny bushes. In the core zone, there are no trees.

Flora in 300 m radius zone

There are Agriculture land within 500 m radius. It contains a total of 13 species belonging to 12 families have been recorded from the buffer zone of 300 m radius. Trees 4 (30%), Shrubs 4 (30 %) Herbs 5 (40%) were identified.

Table 3. 12 - Flora in 300 m radius

S.No	Local Name	Scientific Name	Family Name	IUCN Conservation Status
Trees				
1	Kondrai	*Cassia fistula*	Caesalpiniaceae	Not Listed
2	Seetha	*Annona squamosa*	Annonaceae	Not Listed
3	Vembu	*Azadirachta Indica*	Meliaceae	Not Listed
4	Karuvelam	*Vachellia Nilotica*	Fabaceae	Not Listed
Shrubs				
1	Erukku	*Calotropis Gigantea*	Apocynaceae	Not Listed
2	Chundai	*Solanum torvum*	Solanaceae	Not Listed
3	Thuthi	*Abutilon Indicum*	Meliaceae	Not Listed
4	Unnichedi	*Lantana camara*	Verbenaceae	Not Listed
Herbs				
1	Kuppaimeni	*Acalypha indica*	Euphorbiaceae	Not Listed
2	Nelavembu	*Andrographis paniculata*	Acanthaceae	Not Listed
3	Kovakkai	*Trichosanthes Dioica*	Cucurbitaceae	Not Listed

4	Perandai	*Cissus Quadrangularis*	Vitaceae	Not Listed
5	Thumbai	*Leucas Aspera*	Lamiaceae	Not Listed

FLORISTIC SCENARIO IN BUFFER ZONE AREA

Taxonomically a total of 60 species distributed among 46 families have been recorded from the buffer area. Based on habitat classification of the enumerated plants the majority of species were Trees 27 and Shrubs 12 followed by herbs (13), climbers 6. Details of flora with the scientific name were mentioned in Table No. 3.13.

Table 3.13 – List of Flora in Buffer Zone

S.No	Local Name	Scientific Name	Family Name
	Trees		
1	Lemon	*Citrus limon*	Rutaceae
2	Krishna Fig	*Ficus benghalensis*	Moraceae
3	Karuvelam	*Acacia nilotica*	Fabaceae
4	chokla	*Agalaia elaeagnoidea*	Meliaceae
5	Vagai	*Albizia lebbeck*	Caesalpiniaceae
6	Seetha maram	*Annona Squamosa*	Annonaceae
7	kattu elumichai	*Atalantia monophyla*	Rutaceae
8	Vaeppa maram	*Azadirachta indica*	Meliaceae
9	vazhai	*Musa paradisiaca*	Musaceae
10	Guava	*Psidium gujava*	Myrtaceae
11	Karuvali	*Cassine glauca*	Celastraceae
12	Naruvizhi maram	*Cordia monoica*	Boraginaceae
13	Kattunochchi	*Debregaesia velutina*	Urticaceae
14	Neruppu Kondrai	*Delonix regia*	Minosaceae
15	Nagai	*Syzygium cumini*	Myrtaceae
16	mull kalyanamurungai	*Erythrina stricta*	Fabaceae
17	Kallichi	*Ficus microcarpa*	Moraceae
18	atti	*Ficus racemosa*	Moraceae

19	Kattarasu	*Ficus tomentosa*	Moraceae
20	Kambimaram	*Gardenia resinifera*	Rubiaceae
21	Kumalaa maram	*Gmelina arborea*	Verbenaceae
22	Tambachi	*Holoptelea integrifolia*	Ulmaceae
23	Kunnancholai	*Mallotus Philippensis*	Euphorbiaceae
24	Peyimurungai	*Moringa concanensis*	Moringaceae
25	Malaithekku	*Premna tomentosa*	Verbenaceae
26	Peymiratti	*Schefflera stellata*	Araliaceae
27	Thaan-dri kaai	*Terminalia bellirica*	
	Shrubs		
1	Seethaatthazhai	*Acalypha fruiticosa*	Euphorbiaceae
2	peyimarutti	*Anisomeles malabarica*	Lamiaceae
3	Barleria paniculata	*Barleria tomentosa*	Acanthaceae
4	Turatti	*Capparis divaricate*	Capparidaceae
5	Sirukilaa	*Carissa spinarum*	Apocynaceae
6	Kodikalai	*Carmona retusa*	Boraginaceae
7	Virali	*Dodonaea viscosa*	Sapindaceae
8	Manjal Thutthi	*Hibiscus vitifolia*	Malvaceae
9	Karuppu avuri	*Indigofera longiracemosa*	Fabaceae
10	Velimungil	*Justicia betonica*	Acanthaceae
11	Sirunelli	*Phyllanthus polyphyllus*	Euphorbiaceae
12	Ottu Pullu	*Triumfetta pentandra*	Tiliaceae
	Herbes		
1	Kuppaimeni	*Acalypha indica*	Euphorbiaceae
2	perumpeelai	*Aerva persica*	Amaranthaceae

3	Katthaalai	*Aloe vera*	Agavaceae
4	Nilaccurunki	*Biophytum sensitivum*	Oxalidaceae
5	Nattai-churi	*Borreria pusilla*	Rubiaceae
6	Malaiyavarai	*Cassia hirsute*	Caesalpiniaceae
7	Cuvarnaciri Taivelai	*Cleome felina*	Caryophyllaceae
8	korai kizhangu	*Cyperus rotundus*	Cyperaceae
9	Karungurundhu	*Dicliptera cuneata*	Acanthaceae
10	Chinnammanpacharisi	*Euphorbia thymifolia*	Euphorbiaceae
11	Narina	*Indigofera cassioides*	Fabaceae
12	Nai Tulasi	*Ocimum canum*	Lamiaceae
13	Water peper	*Polygonum hydropiper*	Polygonaceae
	Climbers		
1	Mudakathan	*Cardiospermum halicacabum*	Sapin
2	Kattuppirantai	*Cayratia trifoliata*	Vitaceae
3	Pirantai	*Cissus bicolr*	Vitaceae
4	Kovai	*Coccinia indica*	Cucurbitaceae
5	Iviralkovai	*Diplocyclos palmatus*	Cucurbitaceae
6	Adambu	*Ipomoea pescarpae*	Convolvulaceae
	Grasses		
1	bread grass	*Brachiaria remota*	Poaceae
2	feather fingergrass	*Chloris dolichostachya*	Poaceae
3	spear grass	*Heteropogon contortus*	Poaceae

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.

Table 3.14 – Fauna in Study Area

S.No	Common name	Scientific name	Family	IUCN / WPA schedule
MAMMALS				
1	Indian Palm squirrel	Funambulus palmarum	Squirrel	IV
2	Hare	Lepus nigricollis	Leporids	IV
3	House rat	Rattus rattus	Murids	IV
4	Mannuli paambu	Eryxjohni	Boidae	-
5	Indian Grey Mongoose	Herpestes edwardsii	Mongoose	IV
6	Field mouse	Rattus norvegicus	Murids	IV
7	Rusty spotted Cat	Felis rubiginosa	Felidae	IV
REPTILES				
1	Common Garden lizard	Calotes versicolor	Agamid lizards	IV
2	Rough tailed Sand boa	Gongylophis conicus	Boidae	IV

3	Indian Cobra	Naja naja	elapid snakes	II
4	Indian mud turtle	Lissemys punctate	Softshell turtles	IV
5	Common Green Snake	Passerita mycterizaris	Colubrid Snakes	IV
6	Common rat snake	Ptyas mucosus	Colubrid Snakes	II
BIRDS				
1	Grey Partridge	Francolinus pondicerianus	Phasianidae	IV
2	Indian Ring Dove	Streptopelia decaocto	Pigeons and doves	IV
3	Red collared dove	Streptopelia tranquebarica	Pigeons and doves	IV
4	Astur badius	Shikra	Accipitridae	IV
5	Black Drongo	Dicrurus macrocerus	Drongos	IV
6	House Sparrow	Passer domesticus	Sparrow	IV
7	Weaver bird	Ploceus Philippines	Ploceidae	IV
8	Rose Ringed Parakeet	Psittacula krameria	Parrots	IV
9	Little egret	Egretta garzetta	Heron	IV
10	Redvented BulBul	Pycnonotus cafer	Bulbul	IV

FISH				
1	Common carp	Cyprirus earpio	Minnows and Carps	IV
2	Tilapia	Oreochromis mossambicus	Cichlid	IV
3	Carplet	Amblypharyngodon Sp	Cyprinidae	IV
4	Trout	Chela sp	-	IV
5	Punctatus	Ophiocephalus	Snakehead	IV

3.3.7 LAND ENVIRONMENT

The main objective of this section is to provide a baseline status of the study area covering 10km radius around the project periphery; so that temporal changes due to the mining activities on the surroundings can be assessed in future.

Land use Pattern of the Project Area

The present and the post mining land use pattern is shown below.

Table 3.15 Land use pattern of the project site

Description	Present Area in Ha.	Area at the end of life of Quarry in Ha.
Quarrying pit	Nil	1.27.00
Infrastructure	Nil	0.01.00
Roads	Nil	0.01.00
Greenbelt	Nil	0.40.00
Unutilized	1.69.00	Nil
Total	**1.69.00**	**1.69.00**

- At the end of life of mine, the excavated mine pit / void of 1.27.00 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 (0.40.00 Ha.) will be developed along the

safety barrier and top benches and 0.02 ha are approach road and Infrastructure.

LAND USE PATTERN OF THE STUDY AREA

A visual interpretation technique has been adopted for land use classification based on the keys suggested in the chapter – V of the guidelines issued by NNRMS Bangalore & Level III classification with 1:50,000 scale for the preparation of land use mapping. Land use pattern of the area was studied through LISS III imagery of Bhuvan (ISRO). The 10 km radius map of study area was taken for analysis of Land use cover. The land use map of the study area is given in Figure 3.17.

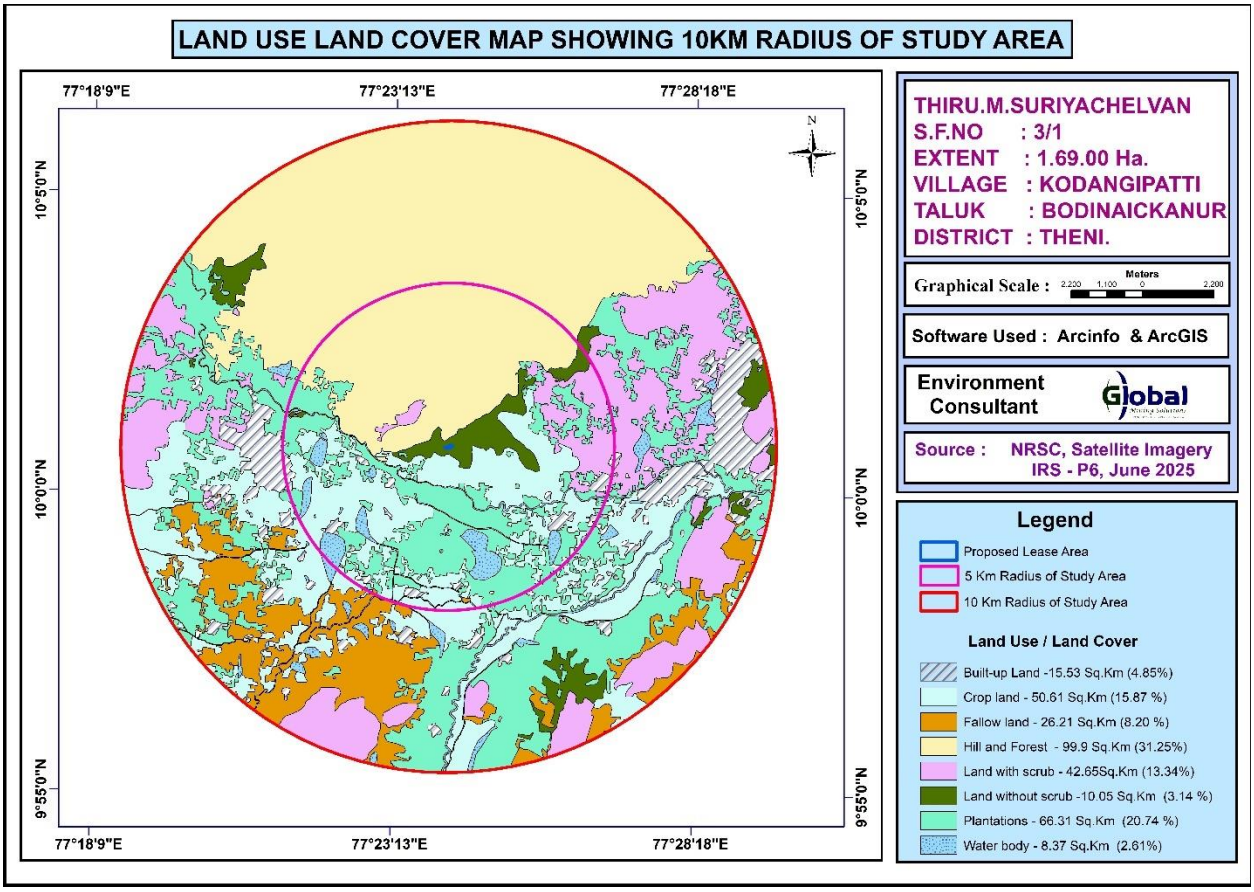
Table 3.16 Land use pattern of the Study area of 10 km radius

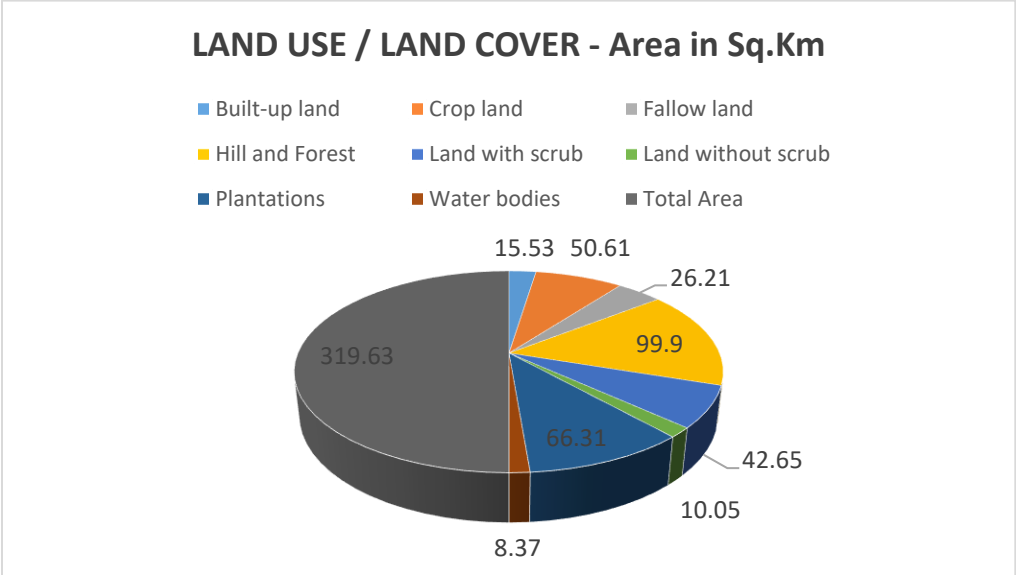
Sl.No.	LAND USE / LAND COVER	Area in Sq.Km	Area in Percentage
1	Built-up land	15.53	4.85
2	Crop land	50.61	15.87
3	Fallow land	26.21	8.20
4	Hill and Forest	99.9	31.25
5	Land with scrub	42.65	13.34
6	Land without scrub	10.05	3.14
7	Plantations	66.31	20.74
8	Water bodies	8.37	2.61
	Total Area	**319.63**	**100.00**

Source : Survey of India Toposheet and Landsat Satellite Imagery

From above table it is inferred that the majority of the land in the study area is hill and forest land (31.25%) followed by Plantations (20.74 %).

Figure 3.17 Land use map of the study area





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.

Objectives of the Study

The objectives of the socio-economic study are as follows:

- To study the socio-economic status of the people living in the study area of the proposed mining project
- To assess the impact of the project on Quality of life of the people in the study area
- To recommend Community Development measures needs to be taken up in the study Area.

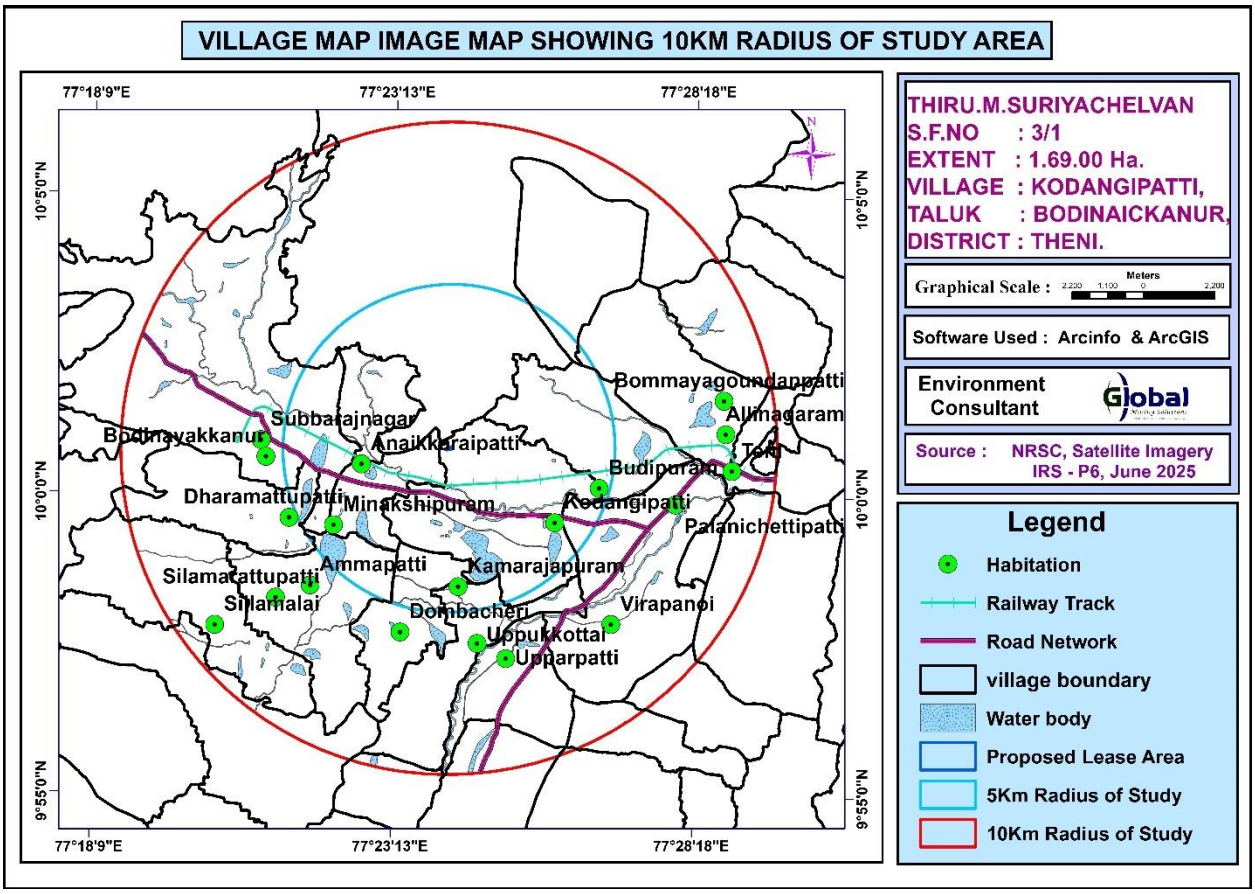
Scope of Work

- To study the Socio-economic Environment of the area from the secondary sources;
- Data Collection & Analysis
- Prediction of project impact
- Mitigation Measures

3.11.1 DETAILS OF VILLAGES

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

FIG 3.18 VILLAGE MAP OF THE STUDY AREA



DETAILS OF VILLAGES

The project is located in Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State. According to 2011 census, Theni district had a population of 1,245,899 with a sex-ratio of 991 females for every 1,000 males, much above the national average of 929. 53.81% of the population lived in urban areas. A total of 119,661 were under the age of six, constituting 61,873 males and 57,788 females. There are 19 villages in the study area. (10 km radius)

Basic Amenities

A better network of physical infrastructure facilities (well-built roads, rail links, irrigation, power and telecommunication, information technology, market-network and social infrastructure support, viz. health and education, water and sanitation, veterinary services and co-operative) is essential for development of the rural economy. All basic amenities

Education (higher education, colleges, universities, Medical college, Transport facilities, Railway station, Bus station area available.

Table 3.17 Population profile of the study area

Particulars	No of Population	Percentage (%)
A. Population break-up by Gender		
Male Population	133084	50.23
Female Population	131852	49.77
Total	**264936**	100
B. Population break-up by Caste		
Scheduled Caste	70756	26.71
Scheduled Tribes	1264	0.48
Others	192916	72.81
Total	**264936**	100
C. Literacy Level		
Total Literate Population	177864	67.14
Total illiterate population	87072	32.86
Total	**264936**	100
D. Occupational structure		
Main workers	125502	47.37
Marginal workers	12677	4.78
Total Workers	138179	52.15
Total Non-workers	126757	47.85
Total	**264936**	**100**

The above table shows that the male and female population ratio are almost equal. Among the total population, 0.48 % belong to Scheduled Tribes, 26.71 % are Scheduled Caste and the balance is 72.81 % people belong to other castes. Among the total population, 67.14 % of the people are literate. Among the total population, 37.97 % are literate males and 29.17 % are literate females. This shows that the male literates are higher than the female literates. The results are plotted in the figures below.

FIG 3.19 GENDER-WISE POPULATION DISTRIBUTION

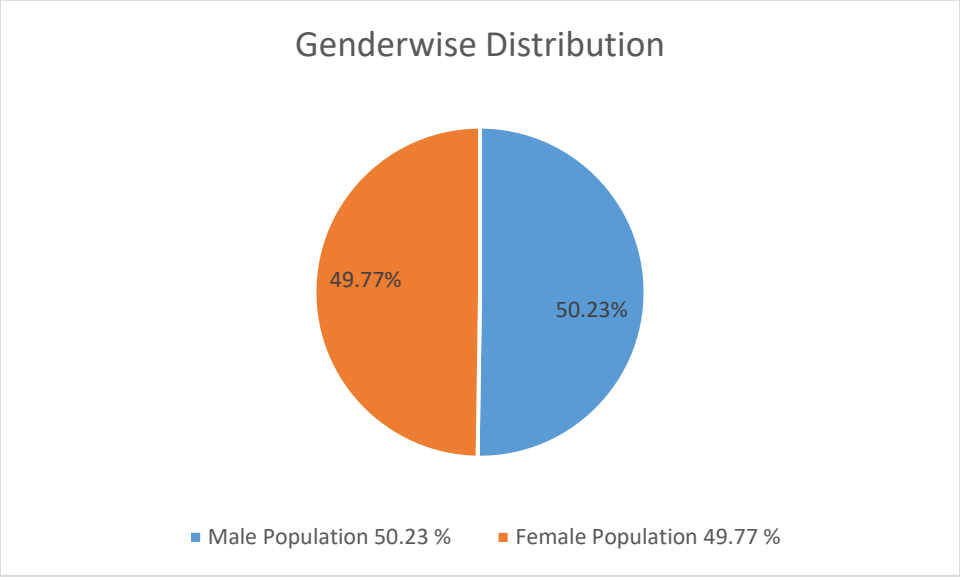


FIG 3.20 GENDER WISE LITERACY DISTRIBUTION

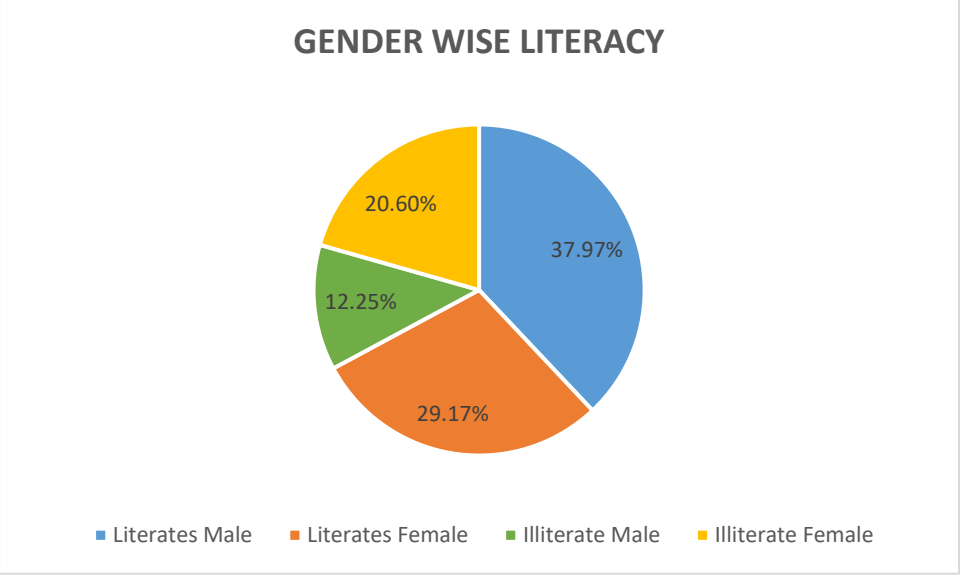


FIG 3.21 OCCUPATIONAL STRUCTURE WITHIN BUFFER ZONE

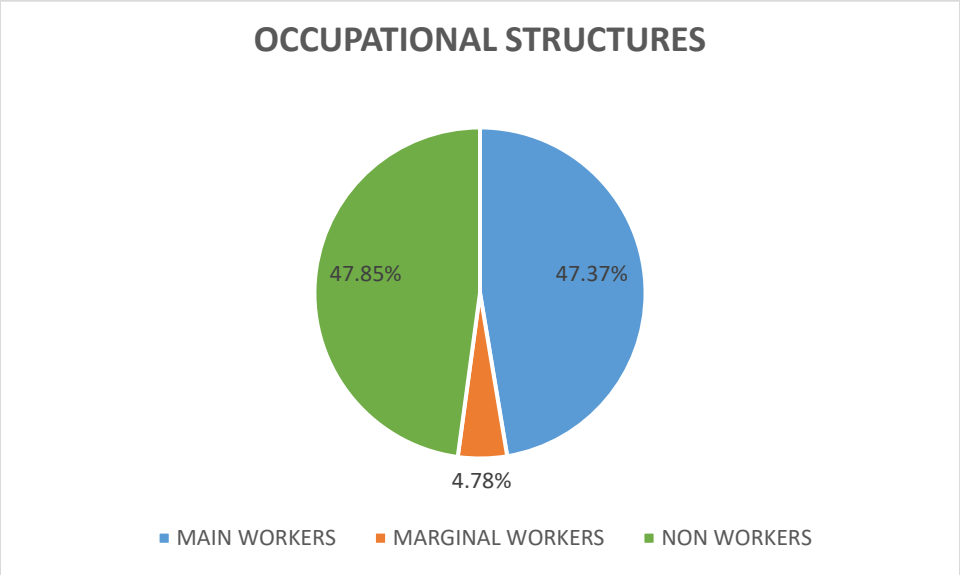


Table 3.18 Population profile – Kodangipatti Village		
Particulars	**No of Population**	**Percentage (%)**
A. Population break-up by Gender		
Male Population	5910	50.94
Female Population	5690	49.06
Total	**11600**	**100**
B. Population break-up by Caste		
Scheduled Caste	1911	16.47
Scheduled Tribes	13	0.11
Others	9676	83.42
Total	**11600**	**100**
C. Literacy Level		
Total Literate Population	7768	66.96
Illiterate	3832	33.04
Total	**11600**	**100**
D. Occupational structure		
Main workers	5447	46.95

Marginal workers	590	5.09
Total Workers	6037	52.04
Total Non-workers	5563	47.96
Total	**11600**	**100**

Infrastructure facilities in the study area

Education

Table 3.19 Educational infrastructure		
S. No.	**Particulars**	**Available in villages (Nos)**
1	Govt. Primary School	84
2	Govt. Middle School	43
3	Govt. Secondary School	12
4	Govt. Senior Secondary School	10
5	Govt. Arts and Science Degree College	2
6	Govt. Engineering College	0
7	Govt. Medicine College	0
8	Govt. Management Institute	1
9	Govt. Polytechnic	2
10	Govt. Vocational Training School/ITI	0

In the study area, there are total 84 primary schools functioning in these 21 rural villages. Among them, 1 village has 1 primary school, 1 village has 2 primary schools & 13 villages have more than 2 primary schools.

Healthcare

In the study area, the following facilities are available.

Table 3.20 Medical Infrastructure		
S.No.	**Particulars**	**Available in villages (Nos)**
1	Community Health Centre	2
2	Primary Health Centre	12
3	Primary Health Sub Centre	24
4	Maternity And Child Welfare Centre	20
5	TB Clinic	12
6	Hospital- Allopathy	0

Other Infrastructure

The other infrastructure facilities available are given below.

Table 3.21 Other Infrastructure		
S.No.	**Particulars**	**Available in village**
1	Tap Water-Treated	21
2	Covered Well	10
3	Hand Pump	3
4	Tube Wells/Borehole	10
5	Post office	1
6	Public bus services	21
7	Commercial& Cooperative Bank	6

Sample Survey

The expert visited 6 villages in the study area Durairajapuram, Bodinayakanur, Boothipuram, Kodangipatti, Kamarajapuram and Vishvaspuram 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 Bodinaickanur/Theni which is within 6 kms from the lease area. Major schools with higher secondary and senior secondary schools are located in Bodinaickanur. The major Panchayat Union located in the area is Bodinaickanur. Facilities like petrol pump stations, ATM facility are available in Bodinaickanur.

3.3.9 HYDROGEOLOGY OF THE STUDY AREA

More than 90 percent of the district is underlain by hard rocks. The Gneissic type of formation is found in the western ghats and its offshoots, Cumbum valley etc., In fact, Granite gneiss is the predominant rock in this district. This is the major formation among the various types of hard rocks.

Charnockite occurs as distinct pockets in part of Periyakulam Taluk. Quartzite which is resistant to weathering are also seen as patched in charnockite and gneissic rock. Garnetiferous mic gneiss occurs as a line batch in the North East-South West direction covering Myladumparai and Southern part of Andipatti Blocks.

Valley fill sediments composed of admixtures of calcareous mud, clay, silt and sand occur in several places in the western portion particularly in Uthamapalayam Taluk.

Good deposits are found in Cumbum Valley, Varshanad Valley and near Palakombai. These are the products of quick transportation of weathering material from the adjacent mountain slopes around the valley.

Alluvial deposits such as sand, silt, stiff clay, gravel etc., which are transported sediments by the river are found on either side of Vaigai near Theni block. These formations are overlying the hard rock as a thin layer which is insignificant in the Ground Water Development.

In Theni District, during the pre monsoon, the water level generally in declining trend ranges from G.L. to 15m. The depth of well below Ground Level 12.0m are become dry during hot season like May, June, July. In the post monsoon, the water level generally in upward trend due to rainfall and it may reach the Ground Level also.

A detailed hydrogeological study will be incorporated in the Final EIA/EMP report. There is seasonal odai passing on west side of the area and is 140m away from the area, another two seasonal odai passing on east side of the area and is 250m, 380m away from the area. There are four tanks within 1 km radius and Kottagudi River is located at 1.15 km (S). The other major water bodies in buffer are given below.

- Tank - 2.21 km (SW)
- Meenakshipuram Tank - 3.64 km (W)
- Valai Ar - 3.0 km (NE)
- Bodipuram Lake - 5.55 km (E)
- Karupasamy Temple Dam - 7.25 km (SE)
- Veerapandi River - 6.85 km (SE)
- Veerapandi Check Dam - 6.00 km (SE)

The quarrying activity will not intersect ground water table as quarrying is proposed upto a depth of 25 m bgl and water table is found at a depth of 70 m BGL.

Topography

The area applied for quarry lease is exhibits almost plain topography covered by Charnockite formation. The massive Charnockite formation is noticed right from the surface and sloping towards southeast side of the area, the altitude of the area is above 376m (maximum) from MSL.

Drainage pattern of the Area

The Drainage pattern study reveals that, there is seasonal odai passing on west side of the area and is 140m away from the area, another two seasonal odai passing on east side of the area and is 250m, 380m away from the area. There are four tanks within 1 km radius and Kottagudi River is located at 1.15 km (S). The drainage map of the study area is given in Figure 3.22.

GEOMORPHOLOGY

Predominantly the buffer zone is dominated by Pediplain (28.74 %) and structural Hills (28.12 %), and the lease area falls under Pediment category. Geomorphology

of the study area is detailed below. The geomorphology of the study area is given in Figure 3.24.

Sl.No.	GEOMORPHOLOGY	Area in Sq.Km	Area in Percentage
1	Moderately weathered Buried Pediplain	47.11	14.74
2	Pediment – Inselberg Complex	43.26	13.53
3	Pediplain	91.85	28.74
4	Piedmont zone	3.08	0.96
5	Residual hills	2.41	0.75
6	Shallow weathered Buried Pediplain	42.05	13.16
7	Structural Hills	89.88	28.12
	Total Area	**319.64**	**100.00**

Geology

The geology of the study area is shown below in Figure 3.23. The majority of the buffer zone is composed of Charnockite (83.67 %). The lease area also falls under the same category. The geology of the study area is detailed below.

Sl.No.	GEOLOGY	Area in Sq.Km	Area in Percentage
1	Calcareous Sand & Clay	37.84	11.84
2	Charnockite	267.42	83.67
3	Granite	8.92	2.79
4	Hornblende biotite gneiss	5.45	1.71
	Total Area	**319.63**	**100**

Soil texure

The major soil texture found in the buffer zone are Sandy Clay (41.06 %), followed by Rock land (40.80 %). The lease area falls under rock land category. The soil texture of the study area is detailed below.

Sl.No.	SOIL TYPE	Area in Sq.Km	Area in Percentage
1	Loamy Sand	40.29	12.61
2	Rock Land	130.4	40.80
3	Sandy Loam	17.71	5.54
4	Sandy Clay	131.23	41.06
	Total	**319.63**	**100**

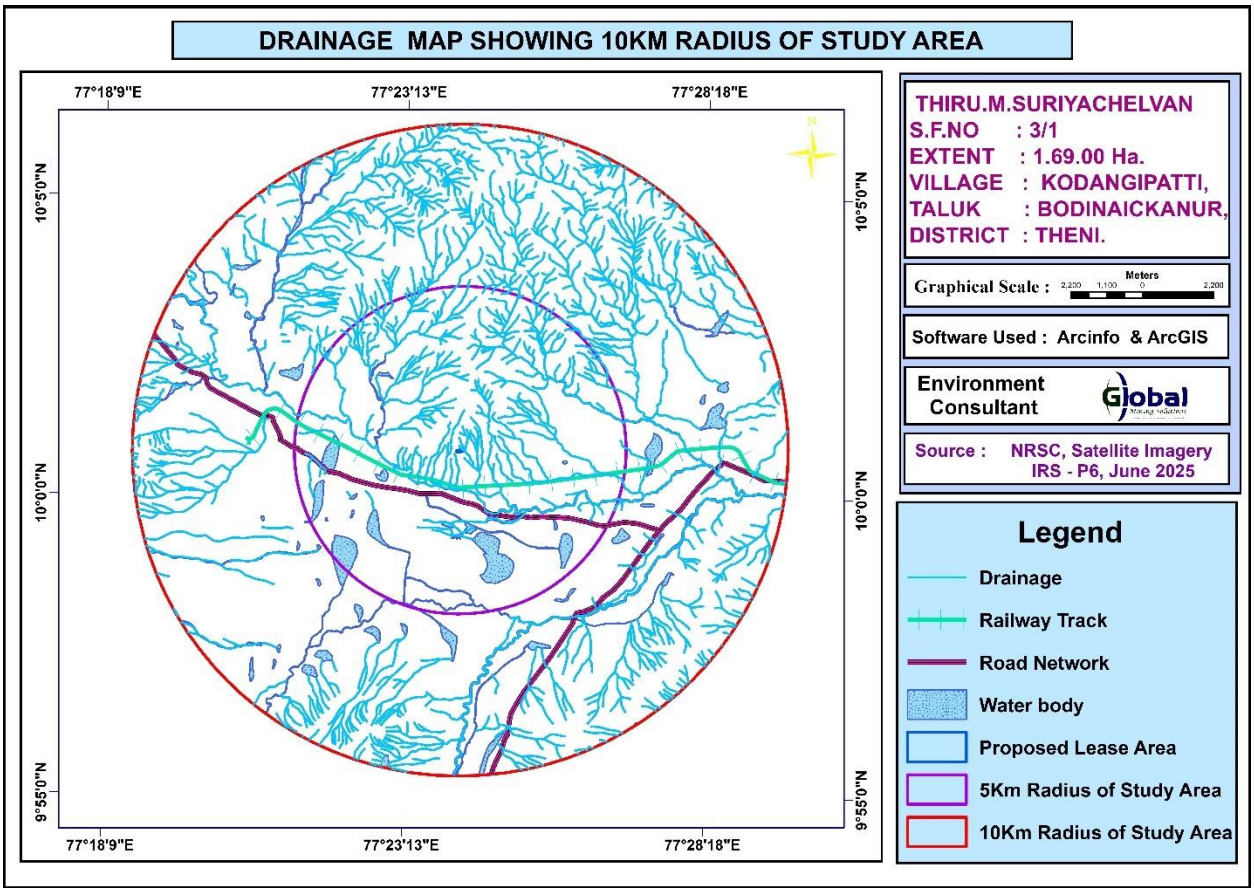


Figure 3.22 Drainage map of the study area

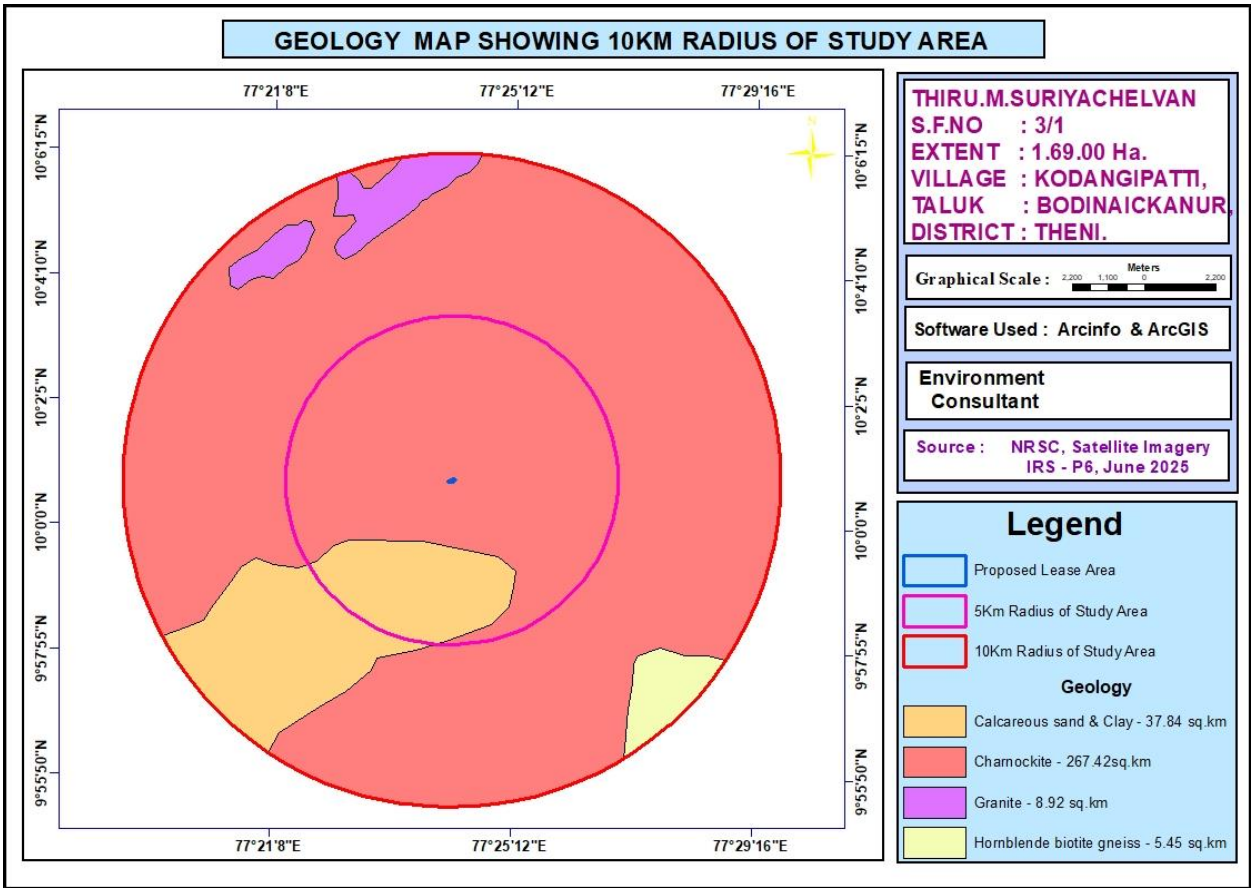


Figure 3.23 Geology map of the study area

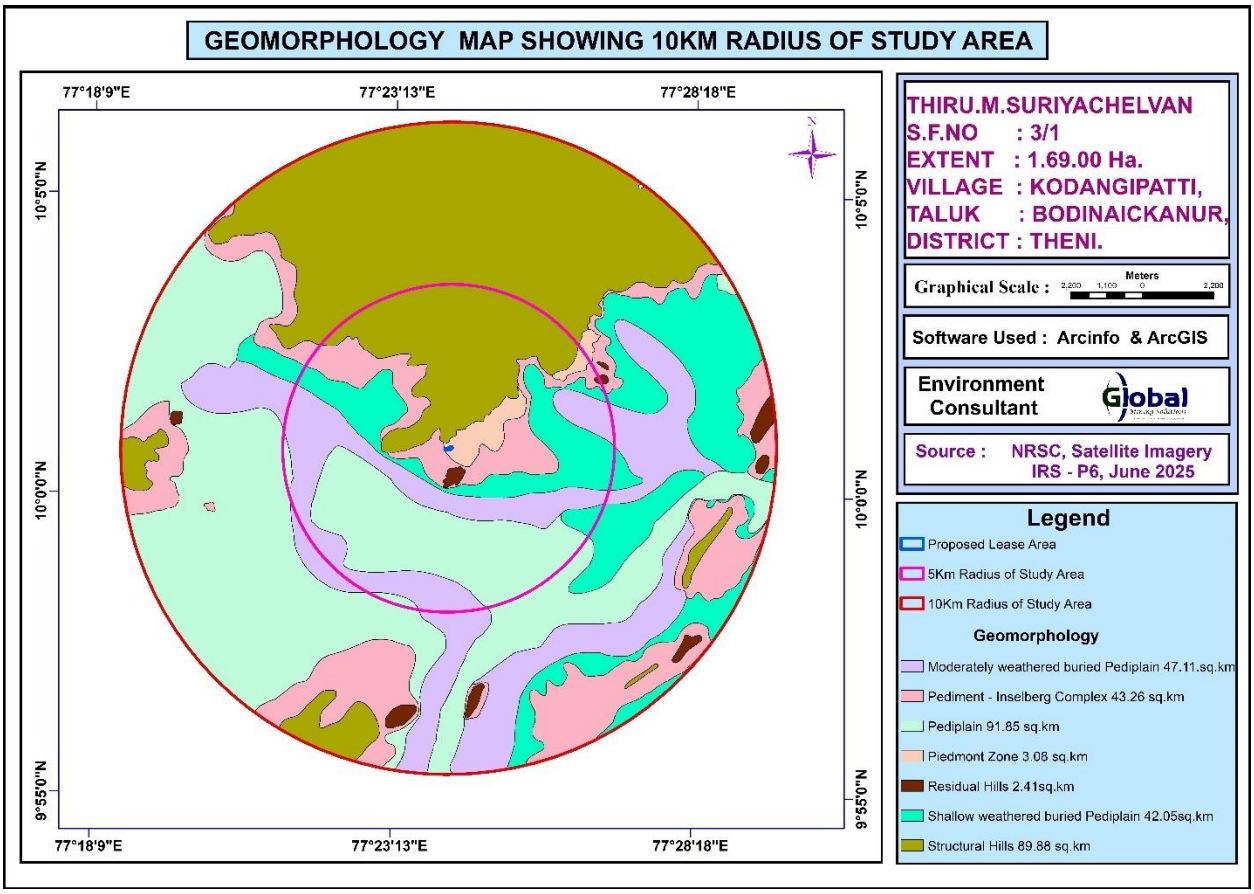


Figure 3.24 Geomorphology map of the study area

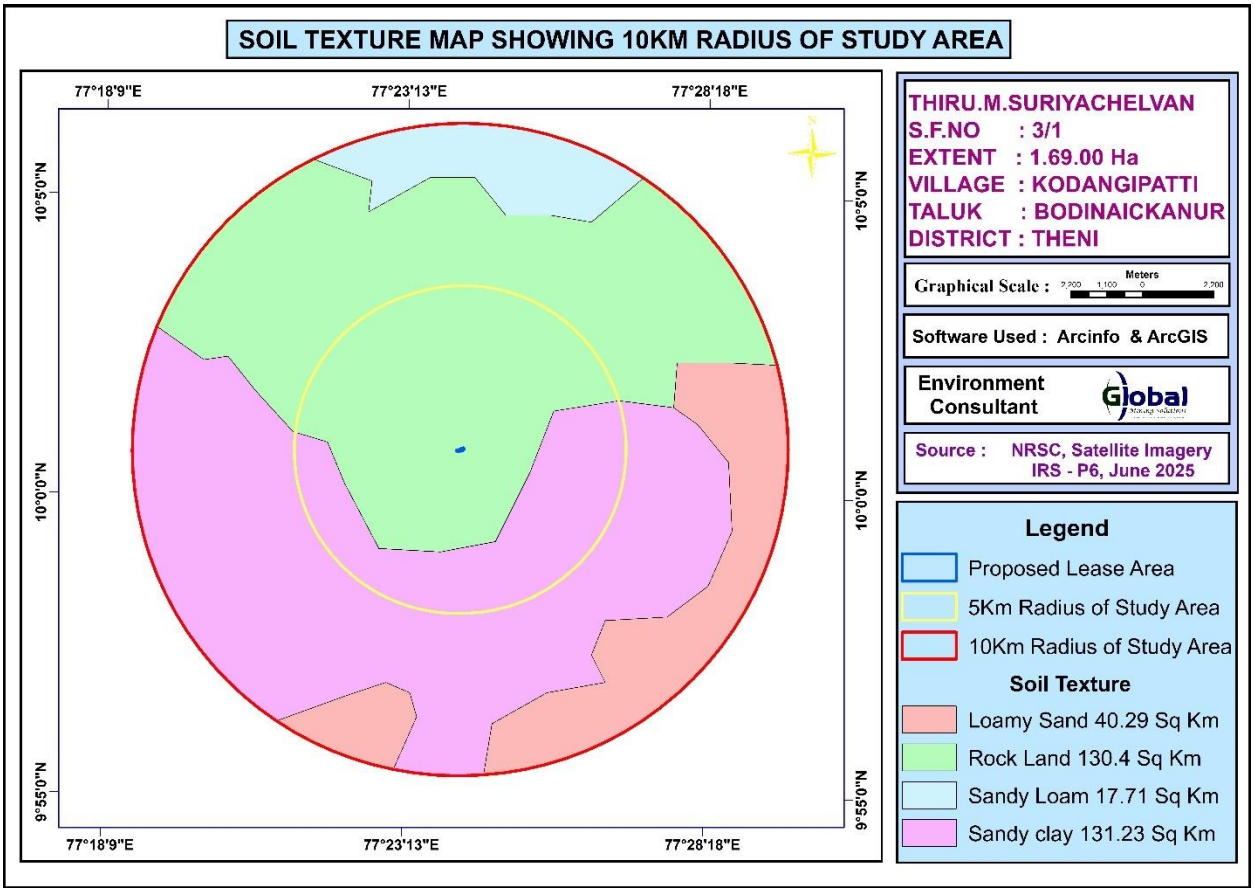


Figure 3.25 – Soil Texture Map of the Study Area

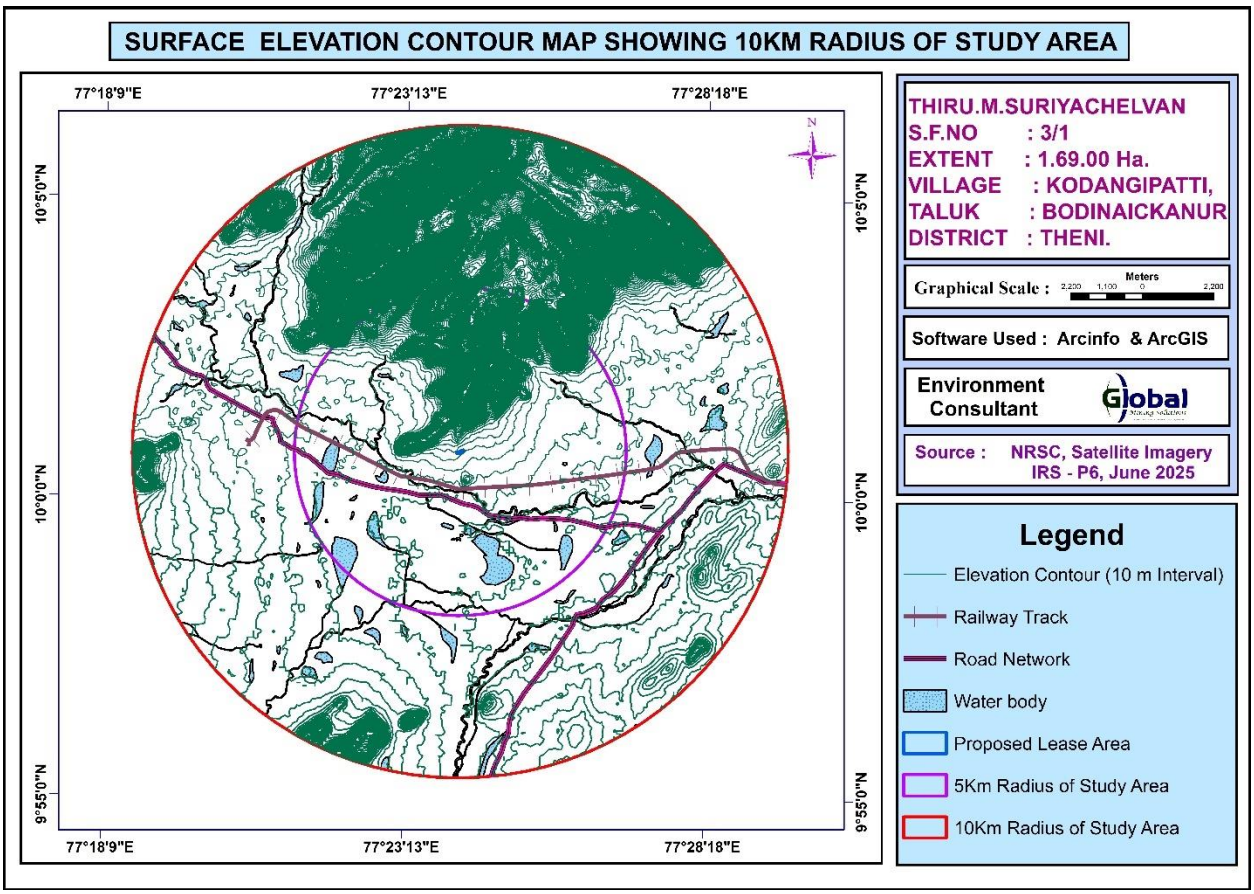


Figure 3.26 – Surface Elevation Contour Map showing 10 km radius of study Area

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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 in S.F.No. 3/1 over an extent of 1.69.00 Hectares at Kodangipatti Village, Bodinaickanur Taluk, Theni 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 1,62,825 m^3 of rough stone for 5 years upto a depth of 25m BGL. 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. It is proposed to be altered by effective quarrying operation such as excavation (1.27.00 Ha), Infrastructure (0.01.0), Road (0.01.0 Ha) and green belt will be developed in the safety zone of 0.40.00 Ha. The ultimate depth of quarrying is proposed with maximum depth of 25 m BGL and will not intersect the ground water table.

4.2 MEASURES FOR MINIMIZING AND /OR OFFSETTING ADVERSE IMPACTS IDENTIFIED

<table>
<tr><th>Aspect</th><th>Impact</th><th>Mitigation measures</th></tr>
<tr><td>Topography</td><td>The area is almost plain topography covered by Charnockite formation. 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_2, NO_x, PM_{10}, $PM_{2.5}$, etc., The existing land use pattern is given as under.
<table>
<tr><th>Land Use</th><th>Present Area (Hect)</th><th>Area in use during the quarrying period (Hect)</th></tr>
<tr><td>Quarrying Pit</td><td>Nil</td><td>1.27.00</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>0.40.00</td></tr>
<tr><td>Unutilized</td><td>1.69.00</td><td>Nil</td></tr>
<tr><td>Total</td><td>1.69.00</td><td>1.69.00</td></tr>
</table></td><td>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 25 m Below 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.
<table>
<tr><th>Land Use</th><th>Area in use during the quarrying period (Hect)</th></tr>
<tr><td>Area left for water body</td><td>1.27.00</td></tr>
<tr><td>Green Belt</td><td>0.40.00</td></tr>
<tr><td>Remaining area</td><td>0.02.00</td></tr>
<tr><td>Total</td><td>1.69.00</td></tr>
</table>
At the mine closure stage 1.27.00 Ha of lease area will be left as rain water harvesting pond 0.40.00 Ha will be developed with green belt.

Greenbelt shall be developed around the mine lease area and the details has been given below.
<table>
<tr><th>Year</th><th>Species</th><th>No. of trees</th><th>Spacing</th><th>Survival</th></tr>
<tr><td>I</td><td rowspan="3">Pungai, Vagai, Vembu,</td><td>400</td><td rowspan="3">3m x 3m</td><td rowspan="3">85%</td></tr>
<tr><td>II</td><td>-</td></tr>
<tr><td>III</td><td>-</td></tr>
</table></td></tr>
</table>

<table>
<tr>
<td></td>
<td>The ultimate pit dimension of the mine lease area is given below.

<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>215</td><td>59</td><td>25 m (BGL)</td></tr>
</table>

If mining is not done systematically it will leads to the dumping failure in the mining area.</td>
<td>
<table>
<tr><td>IV</td><td rowspan="2">Manjal konrai, Naval, Puvarasu, etc</td><td>-</td><td></td><td></td></tr>
<tr><td>V</td><td>-</td><td></td><td></td></tr>
<tr><td colspan="2">Total</td><td>400</td><td></td><td></td></tr>
</table>

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 45^0 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.</td>
</tr>
<tr>
<td>Drainage</td>
<td>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.</td>
<td>As per the approved mining plan the ultimate pit limit is 25 m (BGL). The ground water table is reported as 70 m. In the proposed mining plan only 25 m below 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.</td>
</tr>
<tr>
<td>Soil Quality and Agriculture</td>
<td>In monsoon seasons due to the excavation of minerals soil erosion and sediment deposition will occur in the nearby water bodies.</td>
<td>It is proposed to quarry upto a depth of 25 m below ground level and the nearby water table is 70 m. So, the mining activity will not affect the ground water. To</td>
</tr>
</table>

		prevent the soil erosion during monsoon season, garland drain will be constructed with silt traps.
Visual impact on surrounding environment	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 25 m BGL. 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 SOIL ENVIRONMENT

Anticipated Impact

Mining activities often disrupt the existing environment as they involve disturbing the untouched earth materials. The massive Charnockite formation is noticed right from the surface and slopping towards southeastern side of the area. The altitude of the area is above 376 m (Max) from MSL. There is no top soil formation in the applied lease area. The entire mined out mineral will be transported to the needy buyers through tippers.

Mitigation Measures for Soil Erosion and Soil Conservation

- Runoff water will be collected in bottom of the quarry and used for plantation and dust suppression during dry season.no run off water will be discharged beyond lease area.
- Wet drilling and haul road water sprinkling will be carried out to minimize air born dust at source level, which may cause soil pollution due to sedimentation.
- Garland drains will be constructed around the project area with silt traps to control the soil erosion during rainy seasons.

- Greenbelt development (0.40.00 Ha.) all along the periphery of the project area (i.e., 7.5 m safety barrier) will ensure binding strength and minimizes soil erosion.
- Soil sampling will be carried out in the core zone for every season to ensure the soil quality is not affected due to the quarrying activities.

4.2.3 WATER ENVIRONMENT

Impact on Surface Water Resources

The impact due to quarrying on the water quality is expected to be insignificant because of no use of chemicals or hazardous substances during quarrying process.

There is seasonal odai passing on west side of the area and is 140m away from the area, another two seasonal odai passing on east side of the area and is 250m, 380m away from the area. There are four tanks within 1 km radius and Kottagudi River is located at 1.15 km (S). The other major water bodies in buffer are given below.

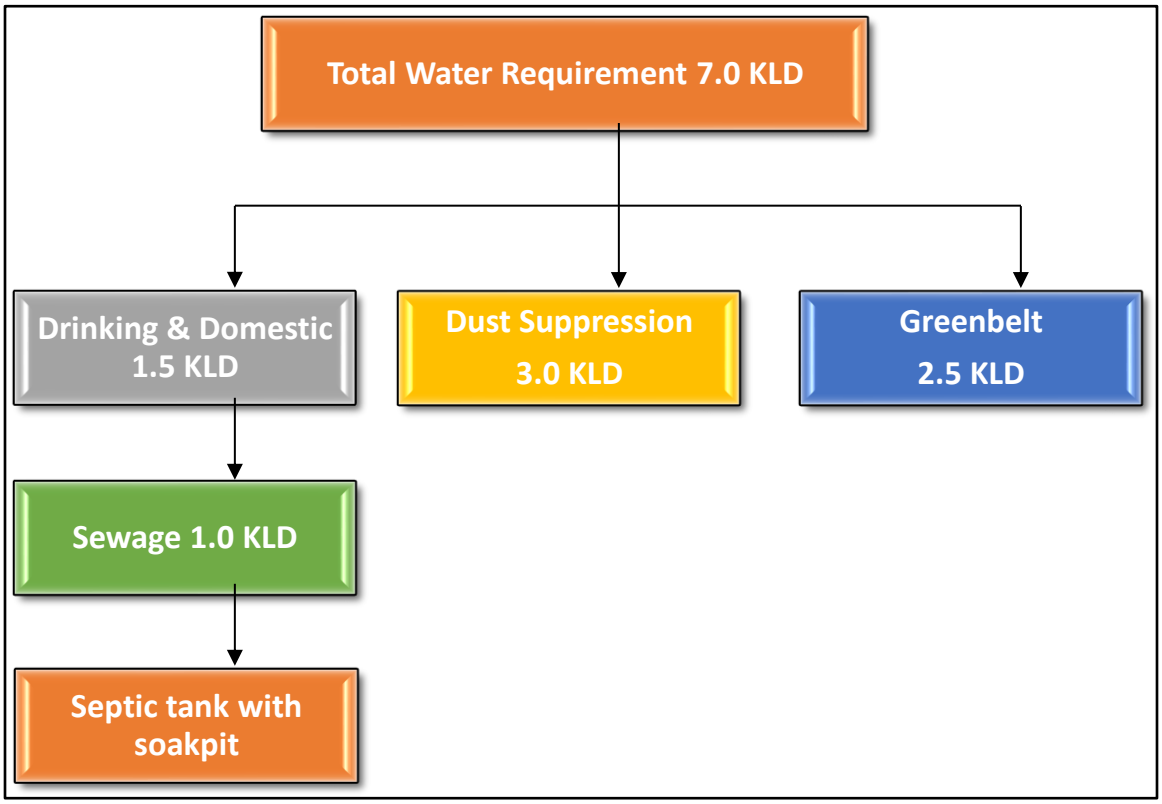
- Tank - 2.21 km (SW)
- Meenakshipuram Tank - 3.64 km (W)
- Valai Ar - 3.0 km (NE)
- Bodipuram Lake - 5.55 km (E)
- Karupasamy Temple Dam - 7.25 km (SE)
- Veerapandi River - 6.85 km (SE)
- Veerapandi Check Dam - 6.00 km (SE)

Based on the drainage map given in the Fig.NO.3.22, it is found that there is no stream connect the lease area to the water body. As the proposed mining activity takes place with 100 % recovery. Moreover, no toxic element will be quarried out or no chemicals or hazardous substances are used during mining process. No other water bodies close to the project site, there is no proposal for discharging of wastewater outside the project area. There is no proposal for a rough stone processing or workshop within the project area, so no effluent is anticipated in the mine.

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 7.0 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 ground water table occurs at a depth of 70 m BGL. The mining will go up to the maximum depth of 25 m BGL. 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 Bodinaickanur Taluk is given below.

Ground Water Level Status in Bodinaickanur Taluk							
S. No.	Firka	Net Annual Ground water availability	Existing gross Draft for irrigation	Existing gross Draft for domestic and industrial water supply	Existing gross draft for all uses	Stage of ground water development	Category
1	Bodinaickanur	1,952.78	1,091.60	3.89	1,095.49	56	Safe

Source: nwm.gov.in

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

Rainwater Harvesting Plan

Since the lease proximate areas are with less water potential and the rainwater is the major source for replenishment of ground water, effective rainwater harvesting and other water augmentation measures are proposed in this project.

- Development of garland drain around the quarry connected to settling tank.
- Cleaning of drain periodically to prevent siltation

- The supernatant clear water from the settling pond will drain into the nearby channel on the eastern side of the lease.
- Utilizing the rainwater harvested in the mine pit to meet the water requirement of the project.

The maximum annual rainfall of the area is 1103 mm. Taking into consideration of 0.35 as runoff co-efficient for mining area, the total quantity of rain water can be harvested per annum from the area has been tabulated as below.

Table 4.1 – Rainwater Harvesting Plan

S.NO	Rainwater Harvesting Area	Area in Sq.m	Average annual rainfall	Volume of harvestable quantity (Cum) of rain water per annum
1	Quarry Area	16900	1.1	6507
Total Harvested Rainfall				6507

Total surface water runoff is 6507 Cum per Annum. 10% of this amount will be evaporated and rest 5856 m^3 will be recharged in the rain water harvesting pit.

Two sumps with each capacity 3500 Cu.m will provided to harvest the rainwater. The rain water stored in the sump will be utilized for plantation, dust suppression activities. The capacity of Rain water harvesting post will be sufficient to arrest the surface runoff from the lease area considering the highest amount of rain fall.

4.2.3 BIOLOGICAL ENVIRONMENT

The details and list of flora, fauna, reserved forest and cropping pattern within the 10km radius of study area is given in chapter 3. The impact on ecology and biodiversity due to the proposed mining activity has to be studied in detail to prepare the management plan to safeguard the flora, fauna, forest products and aquatic living organism etc.

A detailed anticipated impact of Ecology and Biodiversity due to mining activity is described in below Table.

Table 4.2 Ecological Impact Assessments and Its Mitigations -Part 1

S.NO	Issues	Assessment	Mitigations
1	Proximity to national park/ wildlife sanctuary / reserve forest / mangroves / coastline/estuary/sea	Agamalai R.F – 180 m (N), Perumalkovil karadu R.F. – 8.0 km (E) & Bodi Hill West Forest-9.20 km-West. project does not attract Forest Conservation Act, 1980. There is no wild life sanctuaries found around 10km radius and the area does not attract Wildlife Protection Act, 1972 and C.R.Z. Notification, 1991.	The fugitive dust generated by the mining activity will be suppressed by frequent sprinkling of water based on evaporation rate in the site specific.
2	Activities of the project affects the breeding / nesting sites of birds and animals	No breeding and nesting site was identified in mining lease site. The fauna sighted mostly migrated from buffer area. The fauna in the buffer zone may be affected by noise generated due to mining activity.	The noise due to the mining activity will be controlled by developing green belt all along the lease boundary, regular maintenance of tippers, excavators, transporting the tippers within speed limits.

3	Located near an area populated by rare or endangered species	No endangered, critically endangered, vulnerable species sighted in core mining lease area and also in buffer zone.	NIL
4	Proposed project restricts access to waterholes for wildlife	No waterholes are in core zone. No Wild life sanctuary within 10km radius.	NIL
5	Proposed mining project impact surface water quality that also provide water to wildlife	„NO“ scheduled or threatened wildlife animal sighted regularly in core area. There is no proposal for discharge of wastewater to nearby water bodies.	NIL
6	Proposed mining project increase siltation that would affect nearby Biodiversity area.	Surface runoff management structures like garland drain, settling pond etc. as explained above will be constructed and as such there will not be any appreciable impact on surface water quality which in turn can affect the bio diversity of the area.	
7	Risk of fall/slip or cause death to wild animals due to project activities	In the post mining stage, wire fencing is proposed all around the mined-out void to prevent falling of animals in the mine pits.	
8	The project release effluents into a water body that also	As the proposed project is mining activity there will be no possibilities of release of effluents. Also,	NIL

	supplies water to a wildlife	no Wild life sanctuary within 10km radius.	
9	Mining project effect the forest-based livelihood/ any specific forest production which local livelihood depended	Agamalai R.F – 180 m (N), Perumalkovil karadu R.F. – 8.0 km (E) & Bodi Hill West Forest-9.20 km-West.	All the necessary control measures will be adopted to protect the nearby forest.
10	Project likely to affect migration routes	No migration route observed during monitoring period.	NIL
11	Project likely to affect flora of an area, which have medicinal value	No such significantly important medicinal value species within the ML area and its nearby region.	NIL
12	Forestland is to be diverted, has carbon high sequestration	„NO“. There is no forest land within the lease area.	NIL
13	The project likely to affect wetlands, fish breeding grounds, marine ecology	‘NO“. No wetland, fish breeding grounds, marine ecology present in core mining area.	NIL

(Format Source: EIA Guidance Manual-Mining and Minerals, 2010)

Table 4.3 Ecological Impact Assessments and Its Mitigations -Part 2

Identified Impacts	Ecological Significance of impact	Magnitude	Phase / duration	Reversibility	Mitigation
Project site Habitat due to Site Clearance.	There are no trees in the core zone. The Mining activity will be carried within the lease area. No clearance of vegetation in the buffer zone	Low impact	Planning stage	Irreversible	The quarried-out pit will be used as water storage pond which increases agricultural activity in the buffer zone.
Impact on Surrounding habitat due to fugitive emission	The fugitive emission due to the mining activities such as drilling, blasting, loading and transportation on the haul road will be deposited on the flora and crop field in the buffer zone which affects growth and its productivity.	Temporary Impact	Operational stage	Reversible	The sprinkling of water over the haul road will be done. Then completely wet drilling will be take place. The transportation vehicles will be maintained and serviced Properly.
road construction	No Road construction is required to assess the project site. The existing internal Road connects the	No Impact	-	-	-

	project site to the existing SH and NH				
Ecological Impact on Surrounding/ Eco sensitive habitat due to waste water generated from the project activity.	Since the proposed project is a mining activity no waste water generation is expected. Sewage will be generated due to the workers	No impact	-	-	-
Ecological Impact on Surrounding / Eco sensitive habitat due to Noise generated from the project activity.	During drilling or blasting, transportation of rough stone noise will be generated and it may slightly affect the movement of fauna around the lease area.	Temporary impact	Only during drilling, blasting operation and transportation period. (5 years)	NO	Avenue trees will be planted along the lease area to minimize the noise level. Milli second detonators shall be used preferably 25–50ms per delay to control vibrations. Regular maintenance of vehicles and driving the tipper within specified limits also control the noise generations.
Ecological Impact on Surrounding/ Eco sensitive	There is no eco sensitive habitat found around the lease area. The fugitive emission from drilling,	Temporary impact	During Operation Phase	NO	The truck driver will be advised to drive the vehicle within 20km/hr inside the

habitat due to Transportation	blasting, vehicle movement will form layer in leaves thus reducing the gaseous exchange process. This ultimately affects the growth of plants. The animals like dog, cattle may get accident due to truck movement.				lease area and 40km/hr outside the lease area. The sprinkling of water over the haul road will be done. Then completely wet drilling will be take place.

Carbon Emission:

Carbon released from quarrying machineries and tippers during quarrying would be 233 kg per day, 85,045 kg per year and 4,25,225 kg over five years, as provided in below Table.

Description	Per Day	Per year	For Five Years
Total fuel consumption in liters	87	26,052	1,30,260
Co2 emission in kg	233	85,045	4,25,225

Carbon Sequestration:

To mitigate carbon emission due to mining activities. We recommend planting trees around the quarry to offset the carbon emission. Fuel efficient machinery and optimize transportation routes to reduce emissions from diesel powered vehicles. Conduct regular vehicular emission tests for the transport vehicles to ensure minimal impact due to carbon emissions. To further mediate the carbon emissions, additional plantation will be carried out around the lease area.

Greenbelt Development

In order to compensate the loss of vegetation cover, it is suggested to carry out afforestation program mainly in proposed mine lease area earmarked for plantation program as per Approved Mining Plan in different phases. This habitat improvement program would ensure the faunal species to re-colonize and improve the abundance status in the core zone. Greenbelt / Plantation will be carried out to enhance the vegetative growth and aesthetic in the safety zone area.

Table – 4.4 GREENBELT DEVELOPMENT PLAN

Year	No. of trees proposed to be planted	Survival %	Name of the Species	No. of trees expected to be grown
I	400	85%	Neem, Casuarina, Pongamia pinnata, etc.,	340
II				
III				
IV				
V				
Total	**400**			**340**

Nearly 0.40 Ha. of area is proposed for Greenbelt development by planting 400 Nos of trees and expected growth is around 340 Nos @ survival rate of 85%.

The objectives of the green belt cover will cover the following:

- Noise abatement.
- Reuse of waste water to the extent possible.
- Prevention of soil erosion.
- Ecological restoration.
- Aesthetic, biological and visual improvement of area due to improved vegetative and plantations cover.

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 production of 1,62,825 m^3 of Rough Stone for the period of 5 years upto a depth of 25 m BGL.

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 in homogeneity 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_2), Oxides of Nitrogen (NOx) 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 1,62,825 m^3 of Rough Stone for the period of 5 years upto a depth of 25 m BGL 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 2.81 µg/m^3 of PM 2.5 & 3.62 µg/m^3 of PM10 within the mine area and surrounding cluster area 4.32 µg/m^3 of PM 2.5 & 5.37 µg/m^3 of PM10, where mining operations are being carried out. The impact of mining operations would be negligible beyond 0.5 km.

Figure – 4.2 – Figure 4.5 represents the spatial distribution of the predicted ground level concentrations of PM_{10} 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.M.Suriyachelvan is quantified and presented below:

Area Emissions – Total Material handling (Rough Stone)

Quantity, TPA	Rough Stone: 1,62,825 m^3 (5 Years)
Operational Hours Per Year	2400
Activity Rate, t/hr.	400.512
Emission of dust, g/t.	0.16
Emission of dust, g /hr.	51.221
Area of influence, m^2	620
Uncontrolled emission rate g/s/m^2	0.000031542
Controlled emission rate, PM10 g/s/m^2	0.00003154
Controlled emission rate, PM2.5 g/s/m^2	0.000021432

Area Emissions – Total Material handling (Cluster Rough Stone)

Quantity, m^3	**Proposed Quarries:** • Thiru.M.Suriyachelvan: Rough Stone: 1,62,825 m^3 (5 Years) • Thiru.R.Subburaj: Rough Stone: 6,40,440 m3 & Gravel: 31,164 m3 (Five Years))
Operational Hours Per Year	2400
Activity Rate, t/hr.	395.623
Emission of dust, g/t.	0.22

Emission of dust, g /hr.	66.5465
Area of influence, m^2	624
Uncontrolled emission rate g/s/m^2	0.002825
Controlled emission rate, PM10 g/s/m^2	0.0028255
Controlled emission rate, PM2.5 g/s/m^2	0.00018836

(I) Line Source – Transport of Rough Stone from Pit to Boundary

Quantity, TPA	Rough Stone: 1,62,825 m^3 (5 Years)
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	694
Lead length/trip, Km	0.8
Total VKT/Year	60243
Emission Kg/VKT	0.20
Total emission Kg/Year	189632
Uncontrolled emission rate g/s/m	2.9321
Controlled emission rate, PM10 g/s/m	0.2932
Controlled emission rate, PM2.5 g/s/m	0. 055232

Line Source – Transport of Rough Stone (Cluster)

Quantity, m^3	**Proposed Quarries:** • Thiru.M.Suriyachelvan: Rough Stone: 1,62,825 m^3 (5 Years) • Thiru.R.Subburaj: Rough Stone: 6,40,440 m3 & Gravel: 31,164 m3 (Five Years))
Operational Hours Per Year	2405
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	1062
Lead length/trip, Km	0.11
Total VKT/Year	384562
Emission Kg/VKT	0.226
Total emission Kg/Year	154723
Uncontrolled emission rate g/s/m	0.0016950
Controlled emission rate, PM10 g/s/m	0.001695
Controlled emission rate, PM2.5 g/s/m	0.00047091

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 $PM_{2.5}$

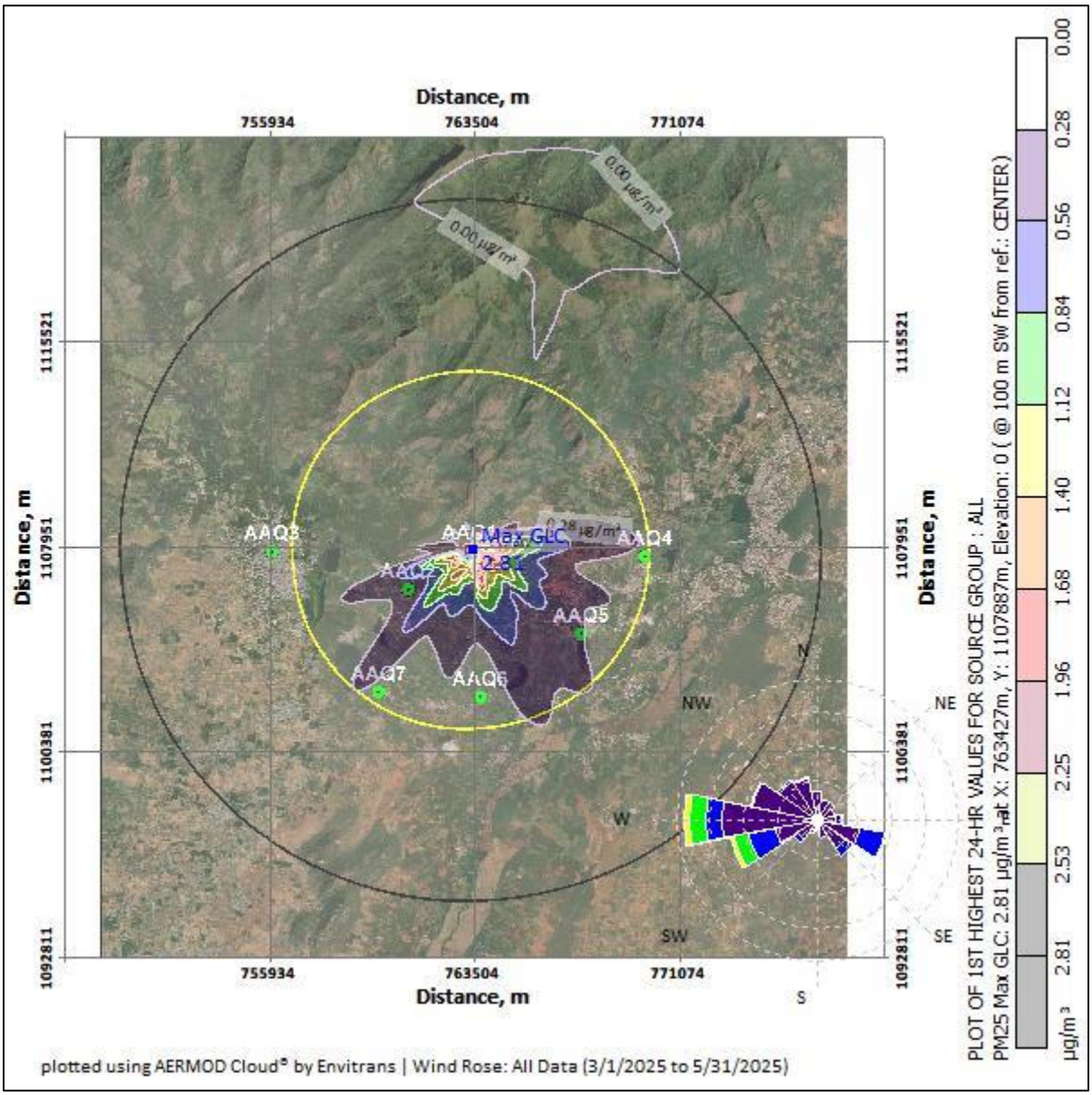


FIG 4.3 Isopleth of GLC Prediction for PM_{10}

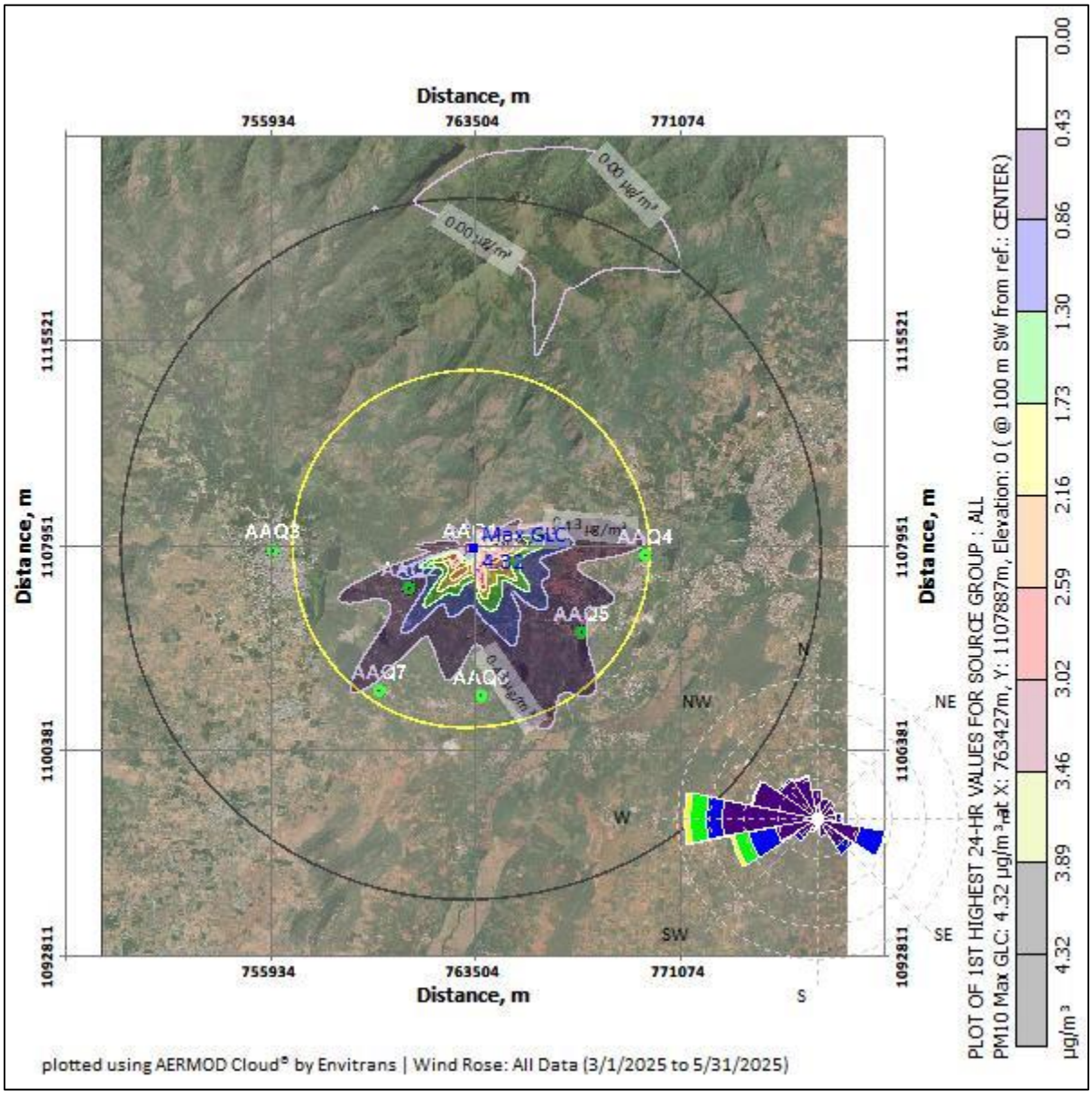


FIG 4.4 Isopleth of GLC Prediction –Cumulative for $PM_{2.5}$

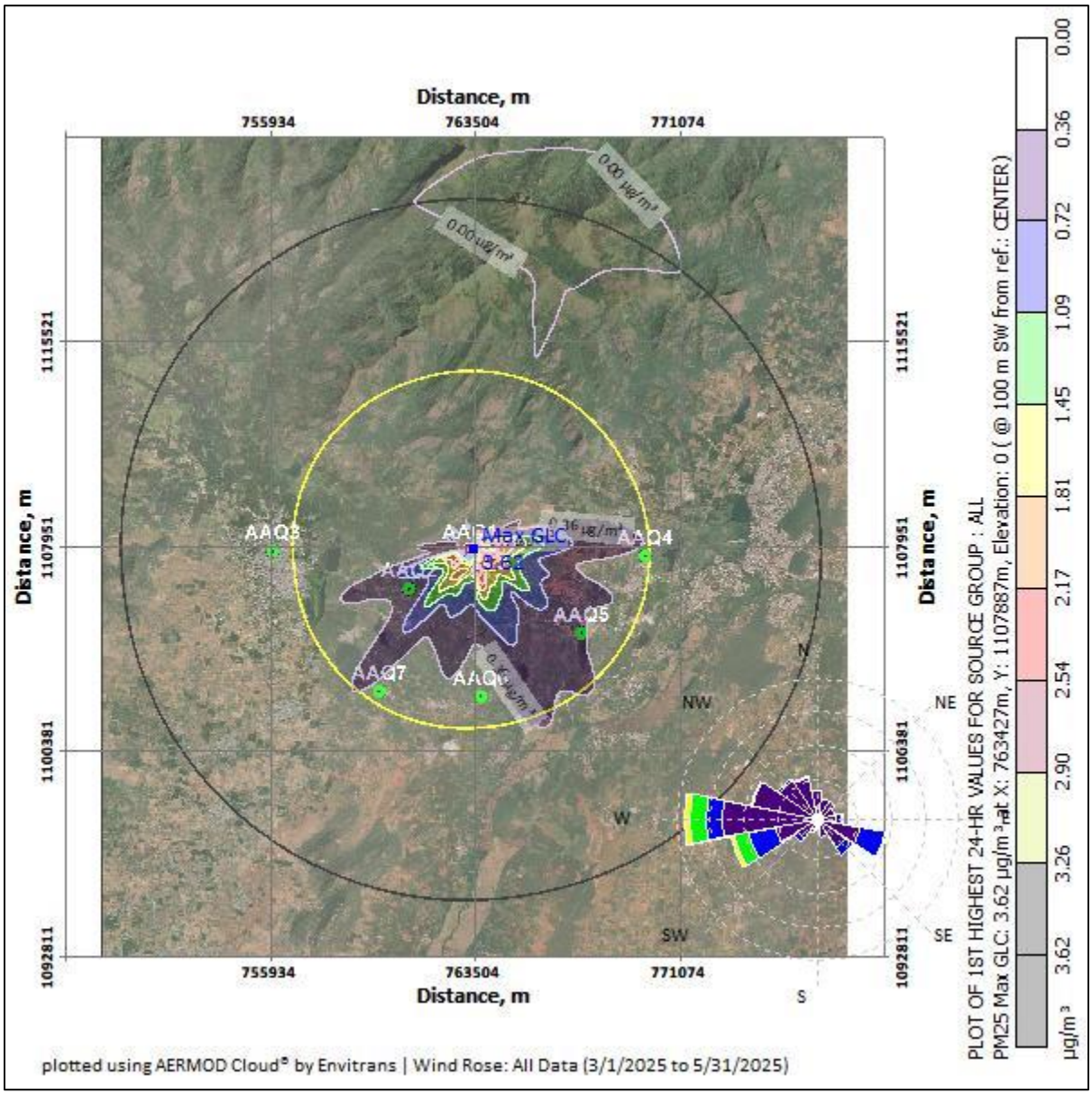
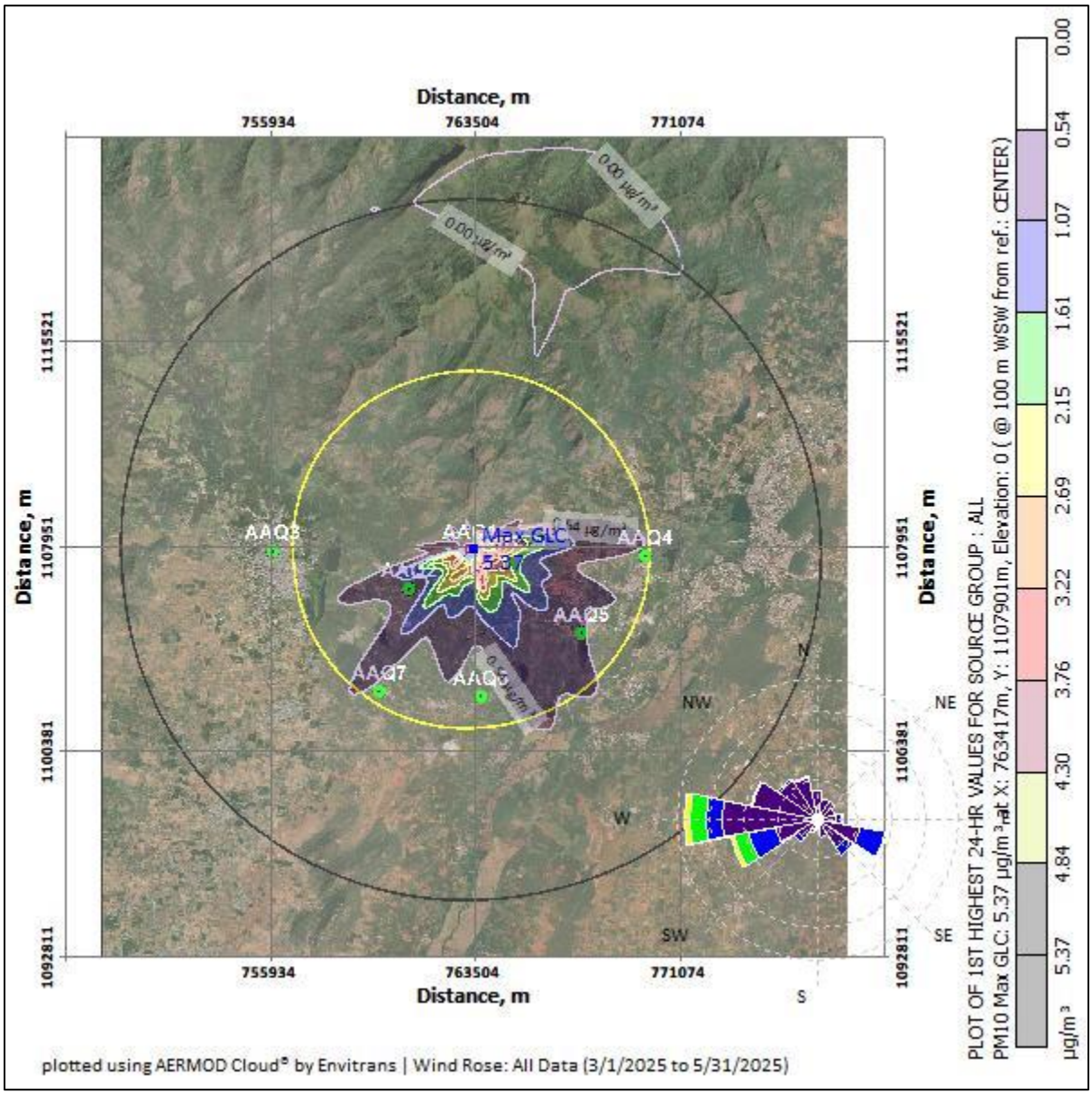


FIG 4.5 Isopleth of GLC Prediction –Cumulative for PM_{10}



PREDICTED AMBIENT AIR QUALITY:

The post project Concentrations of PM10, PM2.5, (GLC) (base line + incremental) after adopting necessary control measures is given in Table No - 4.5 to 4.8.

Table 4.5 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	34.90	2.81	37.71	60
2	Durairajapuram	31.10	2.53	33.63	
3	Bodinayakanur	29.30	2.25	31.55	
4	Boothipuram	26.80	1.96	28.76	
5	Kodangipatti	29.60	1.68	31.28	
6	Kamarajapuram	24.48	1.40	25.88	
7	Vishvaspuram	28.24	1.12	29.36	

Table 4.6 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	34.90	3.62	38.52	60
2	Durairajapuram	31.10	3.26	34.36	
3	Bodinayakanur	29.30	2.90	32.20	
4	Boothipuram	26.80	2.54	29.34	
5	Kodangipatti	29.60	2.17	31.77	
6	Kamarajapuram	24.48	1.81	26.29	
7	Vishvaspuram	28.24	1.45	29.69	

Table 4.7 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	72.80	4.32	77.12	100
2	Durairajapuram	69.70	3.89	73.59	

3	Bodinayakanur	63.80	3.46	67.26	
4	Boothipuram	55.60	3.02	58.62	
5	Kodangipatti	64.40	2.59	66.99	
6	Kamarajapuram	52.10	2.16	54.26	
7	Vishvaspuram	60.10	1.73	61.83	

Table 4.8 Cluster 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	72.80	5.37	78.17	100
2	Durairajapuram	69.70	4.84	74.54	
3	Bodinayakanur	63.80	4.30	68.10	
4	Boothipuram	55.60	3.76	59.36	
5	Kodangipatti	64.40	3.22	67.62	
6	Kamarajapuram	52.10	2.69	54.79	
7	Vishvaspuram	60.10	2.15	62.25	

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 PM_{10} are in the range of 54.26 µg/m^3 to 77.12 µg/m^3 and for $PM_{2.5}$ are in the range of 25.88 µg/m^3 to 37.71 µg/m^3 and PM_{10} are surrounding area range of 54.79 µg/m^3 to 78.17 µg/m^3 and for $PM_{2.5}$ are in the range of 26.29 µg/m^3 to 38.52 µg/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

S.No.	Source Name	Noise Level in dB (A)
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 Durairajapuram, Bodinayakanur, Boothipuram, Kodangipatti, Kamarajapuram, Vishvaspuram Villages, the values are given below.

TABLE 4.9 Noise Levels in Monitoring Locations

S. No.	Location	Distance and direction from Mine lease area	Day Equivalent (in dBA)	Night Equivalent (dBA)
1	Within Mine Lease area	Core Zone	49.3	39.6
2	Durairajapuram	2.09 km, SW	52.4	39.9
3	Bodinayakanur	5.53 km, W	50.3	38.6
4	Boothipuram	5.0, E	49.4	42.2
5	Kodangipatti	3.97 Km, SE	48.2	41.1

6	Kamarajapuram	4.17 Km, S	45.4	37.9
7	Vishvaspuram	4.67 Km, SW	49.8	43.5

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

From the primary Socio-economic survey & through secondary data available from established literature and census data 2011, it is found that there would be positive

impact on Socio-economic condition of the nearby area. There is no habitation within 300 m of the proposed mining lease area. Therefore, no major impact is anticipated on the nearby habitation during the entire life of the mine. The entire lease area is in the proponent's possession. Hence, there are no habitations or hutments in the core zone area and no rehabilitation or resettlement problems will arise here.

The mining operations in the proposed mine will employ about 24 persons directly and indirect basis through allied opportunities in logistics, trading, repairing works etc. good employment potential will arise, which will provide raising income levels and standards of living in the area through various service related activities connected with the project operations as shown under.

- Project related logistical operations for transport of Rough Stone, etc,
- Various trading services for consumer goods, spare parts, sundry items, etc.
- Contractual services connected with the project.
- Green belt and horticultural works in the project.
- Casual labor needs for various activities.

The State and the Central governments will also get benefited through financial revenues by way of royalty, tax etc from this project.

Mine management will contribute for the upliftment of these villages by conducting regular medical camps, assistance in developing necessary infrastructure facilities like maintenance of schools, village roads, drinking water supply, etc.

From above details, it is clear that the project operations will have highly beneficial positive impact in the area. However, towards the socio economic development of the surrounding area, the proponent has earmarked an amount of Rs.3.0 Lakhs under Corporate Environmental Responsibility.

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 24 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).

Table 4.10 Impacts on humans due to various mining activities

S.No.	Type of activity	Impact
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 horses. 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.

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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, Department of Geology and Mining, Theni vide Rc.No.60/Mines/2025, Dated: 09.06.2025.

- 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 2.

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.

Table 6.1 Environmental Monitoring Schedule

Sl.No.	Description of Parameters	Parameters	Frequency
1	Air	Air Quality for SPM, PM-10, PM-2.5, SO_2 and NO_x	24-hour average samples Once in a 3 month.
2	Water	General, Physical, and chemical parameters	Once per season
3	Noise	L_{eq}, L_{max}, L_{min}, L_{eq} Day & L_{eq} 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 – 3.8, 3.10,3.11 3.14 & 3.16.

6.1.5 MEASUREMENT METHODOLOGY

(a) Ambient Air Quality

Ambient air quality will be monitored for SO_2, NO_x, PM_{10} and $PM_{2.5}$. 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	
S.No.	**Particulars**
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

Sl. No	Budget planned for	Capital Cost Amount (INR)	Recurring Cost/Annum Amount (INR)
1	Air Environment	7.44	1.04
2	Noise Environment	0.30	0.02
3	Waste Management	0.25	0.12
4	Mine Closure	0.40	0.08
5	Implementation of EC, Mining Plan & DGMS Condition	0.66	0.71
Total		**9.05**	**1.97**
Total EMP Cost for 5 years is 19.93 lakhs (This amount will be subjected to change after public hearing) i.e., 9.05 Lakhs of Capital Cost + 10.88 Lakhs of Recurring cost (For 5 Years)			

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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

S.NO	Risk Factor	Causes of risk	Control Measures
1	Accidents due to explosives and heavy mining machineries	Improper handling and unsafe working practice	• 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. • Entry of unauthorized persons will be prohibited. • Fire-fighting and first-aid provisions in the mine office complex and mining area. • 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. • Quarry operation will be done as per approved mining plan and other applicable statutory guidelines issued by DGMS, Dept. of Mining & Geology-TamilNadu. • Handling of explosives, charging and firing shall be carried out under competent statutory persons. • 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.
2	Drilling	Improper and unsafe practices. Due to high pressure of compressed air, hoses may burst. Drill Rod may break.	• Safe operating procedure established for drilling (SOP) will be strictly followed. • Only trained operators will be deployed. • 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. • Drilling shall not be carried on simultaneously on the benches at places directly one above the other. • Periodical preventive maintenance and replacement of worn-out accessories in the compressor and drill equipment as per operator manual.

			• Drills unit shall be provided with wet drilling to ensure efficient working.
3	Blasting	Fly rock, ground vibration, Noise and dust. Improper charging, stemming & Blasting/ fining of blast holes. Vibration due to movement of vehicles.	• Restrict maximum charge per delay as per approved mining plan. • Proper blasting design with optimum spacing & burden, Charge per delay and stemming. • SOP for Charging, Stemming & Blasting/Firing of Blast Holes will be followed by blasting crew during initial stage of operation. • Shots are fired during day time only. • Charging and firing shall be carried out in the same day. • Siren will be done for each blasting. Blasting evacuation plan prepared and executed. • The danger zone will be distinctly demarcated (by means of red flags).
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.	• 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. • Loading according to the vehicle capacity. • Periodical maintenance of vehicles as per operator manual.
6	Natural calamities	Unexpected happenings	• An emergency management plan will be prepared considering all possible national calamity and the same will be executed if any such situation occurs.

			• Escape Routes will be provided to prevent inundation of storm water. • Fire Extinguishers & Sand Buckets in the designated areas.
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.

7.3.3 CUMULATIVE IMPACT STUDY

There are two proposed Quarries including this proposed quarry are located within a radius of 500 m. The existing and proposed quarries situated within 500 m radius are presented in below Table 7.2 and the letter received from Dept. of Geology and Mining, Theni stating the quarries detail within 500m radius is enclosed in Annexure – 3.

Table 7.2 Details of Quarries within 500m radius

Sl. No	Name of the Lessee	Village & S. F. No.	Extent (Ha)	Lease Status
a. Abandoned / Expired Quarries				
1	R.Subburaj,	Kodangipatty Village, S.F.No. 2/2,2/4,2/5,3/2,10/2C	4.36.50	28.09.2017 to 27.09.2022 EC granted by SEIAA-TN on 24.11.2016 (File No. 5888)
b. Existing Quarries				
NIL				
c. Proposed Quarries				

1	Thiru.M. Suriyachelvan	Kodangipatty Village, S.F.No.3/1	1.69.00	Present Proposed
2	R.Subburaj	Kodangipatty Village, S.F.No.10/2A, 17/1,17/3	4.72.00	Proposed Quarry EC granted by SEIAA-TN on 18.06.2025, File No, 10679
Total Area of Cluster				6.41.00 Ha

As seen above, although the individual lease area of this project is less than 5 hectares, the another one proposed Quarry within a 500-meter radius, along with this subject project, add up to more than 5 hectares i.e. 6.41.00 Ha. A map showing the existing and proposed quarry located within 500m radius is given in Figure 1.1.

The cumulative production load of existing and proposed Rough stone quarries within cluster is shown in below table.

Table 7. 3 Salient Features of Existing & Proposed Quarries

Description		P1	P2	Total
Name of the Quarry		M.Suriyachelvan	Thiru.R.Subburaj	-
Extent in Ha		1.69.00	4.72.00	6.41.00
Geological Resources in m3	Rough stone	3,94,750 m^3	19,52,070m^3	23,46,820 m^3
	Gravel	-	47,600 m^3	47,600 m^3
Mineable Reserves in m3	Rough stone	1,62,825 m^3	6,40,440 m^3	8,03,265 m^3
	Gravel	-	31,164 m^3	31,164 m^3
Five years plan period as in the approved mining plan	Rough stone	1,62,825 m^3	6,40,440 m^3	8,03,265 m^3
	Gravel	-	31,164 m^3	31,164 m^3
Production in m3	Peak Production – rough stone	32,750 m^3	1,28,560 m^3	1,61,310 m^3
	Gravel	-	31,164 m^3	31,164 m^3

Production per day in tons		300	1386	1686
Lorry Loads per day in Nos	-	30	139	169
Employment in Nos		24	32	56
Proposed Depth in meters		25 BGL	46m (11 m AGL + 35 m BGL)	-
Status of the quarry		Proposed	Proposed	-

AIR ENVIRONMENT

Based on the above production quantities the emissions due to various activities in both 2 proposed mines include various activities like ground preparation, excavation, handling and transport.

The data on the cumulative production resulting from the 2 projects have been given in Tables 7.4.

Table 7.4 Cumulative Production Load

Quarry	Total Mineral Production	Number of Lorry load per day
P1	300	30
P2	1386	139
Grand Total	**1686**	**169**

The cumulative study shows that the overall production of rough stone from the 2 proposed quarries is 1686 tons per day with a capacity of 169 trips per day.

These proposed project will bring 169 trips per day. The existing road can absorb this additional traffic due to this project. Various measures like proper maintenance of road, covering of the loaded truck with tarpaulin, water sprinkling will be carried out to ensure no adverse impact on the logistical front. Traffic density study is detailed in Chapter 2.

Ground Level Emission Calculation for Cluster

Area and Line source emission for cluster quarries is details below.

Table 7.5 Area Emissions – Total Material handling – Cluster

Quantity, m^3	**Proposed Quarries:** • Thiru.M.Suriyachelvan: Rough Stone: 1,62,825 m^3 (5 Years) • Thiru.R.Subburaj: Rough Stone: 6,40,440 m3 & Gravel: 31,164 m3 (Five Years))
Operational Hours Per Year	2400
Activity Rate, t/hr.	395.623
Emission of dust, g/t.	0.22
Emission of dust, g /hr.	66.5465
Area of influence, m^2	624
Uncontrolled emission rate g/s/m^2	0.002825
Controlled emission rate, PM10 g/s/m^2	0.0028255
Controlled emission rate, PM2.5 g/s/m^2	0.00018836

Table 7.6 Line Source – Transport of Material from Pit to Boundary

Quantity, m^3	**Proposed Quarries:** • Thiru.M.Suriyachelvan: Rough Stone: 1,62,825 m^3 (5 Years) • Thiru.R.Subburaj: Rough Stone: 6,40,440 m3 & Gravel: 31,164 m3 (Five Years))
Operational Hours Per Year	2405
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	1062
Lead length/trip, Km	0.11
Total VKT/Year	384562
Emission Kg/VKT	0.226
Total emission Kg/Year	154723
Uncontrolled emission rate g/s/m	0.0016950
Controlled emission rate, PM10 g/s/m	0.001695
Controlled emission rate, PM2.5 g/s/m	0.00047091

Table 7. 7 Incremental & Resultant GLC within cluster for $PM2_{.5}$

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	34.90	3.62	38.52	60
2	Durairajapuram	31.10	3.26	34.36	
3	Bodinayakanur	29.30	2.90	32.20	
4	Boothipuram	26.80	2.54	29.34	
5	Kodangipatti	29.60	2.17	31.77	
6	Kamarajapuram	24.48	1.81	26.29	
7	Vishvaspuram	28.24	1.45	29.69	

Table 7. 8 Incremental & Resultant GLC within cluster for PM_{10}

Cluster 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	72.80	5.37	78.17	100
2	Durairajapuram	69.70	4.84	74.54	
3	Bodinayakanur	63.80	4.30	68.10	
4	Boothipuram	55.60	3.76	59.36	
5	Kodangipatti	64.40	3.22	67.62	
6	Kamarajapuram	52.10	2.69	54.79	
7	Vishvaspuram	60.10	2.15	62.25	

The air quality modeling report for cluster seems that, even in the worst-case scenario, the resultant added concentrations with baseline figures show that the values of ambient air quality for PM_{10} are in the range of 54.79 µg/m^3 to 78.17 µg/m^3 and for $PM_{2.5}$ are in the range of 26.29 µg/m^3 to 38.52 µg/m^3 which are within the statutory limits in each case.

Figure 7.1 Cluster Isopleth of GLC Prediction for $PM_{2.5}$

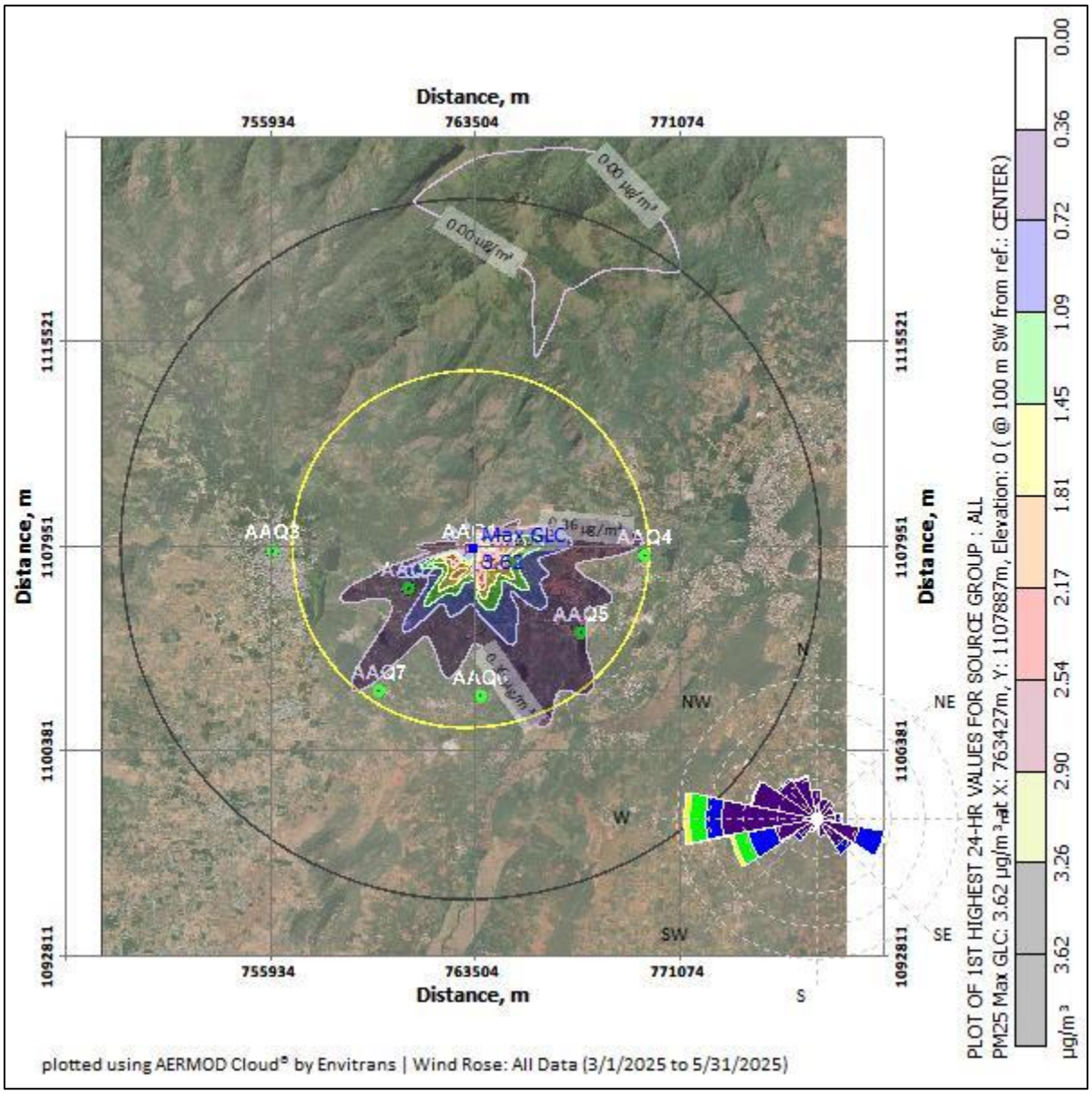
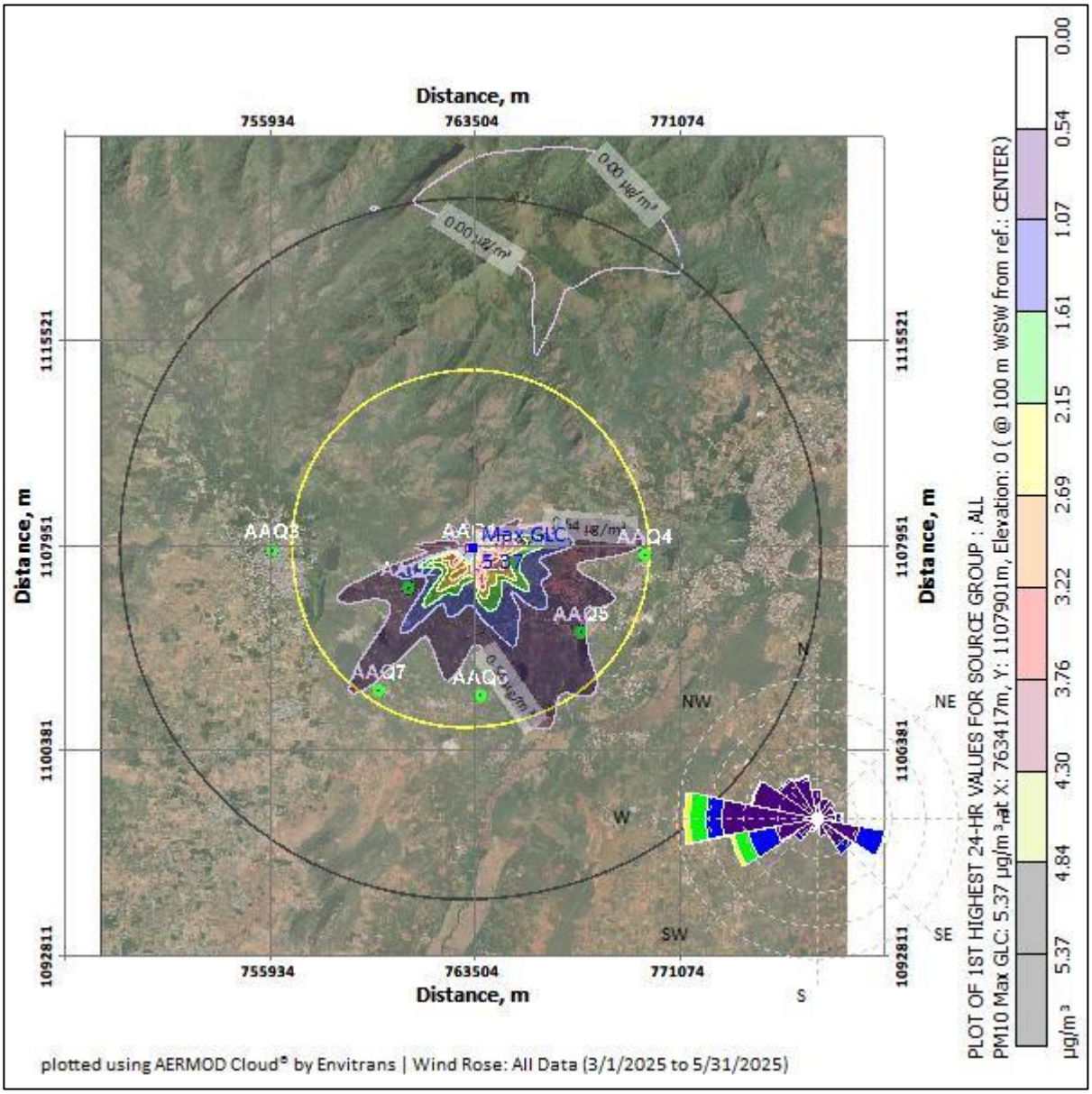


Figure 7.2 - Cluster Isopleth of GLC Prediction for PM_{10}



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 conceptual plan is provided in Figure 2.12.

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 area applied for quarry lease is exhibits almost plain topography covered by covered by Charnockite formation. The massive Charnockite formation is noticed right from the surface and sloping towards southeast side of the area, the altitude of the area is above 376m (maximum) from MSL.
- 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.

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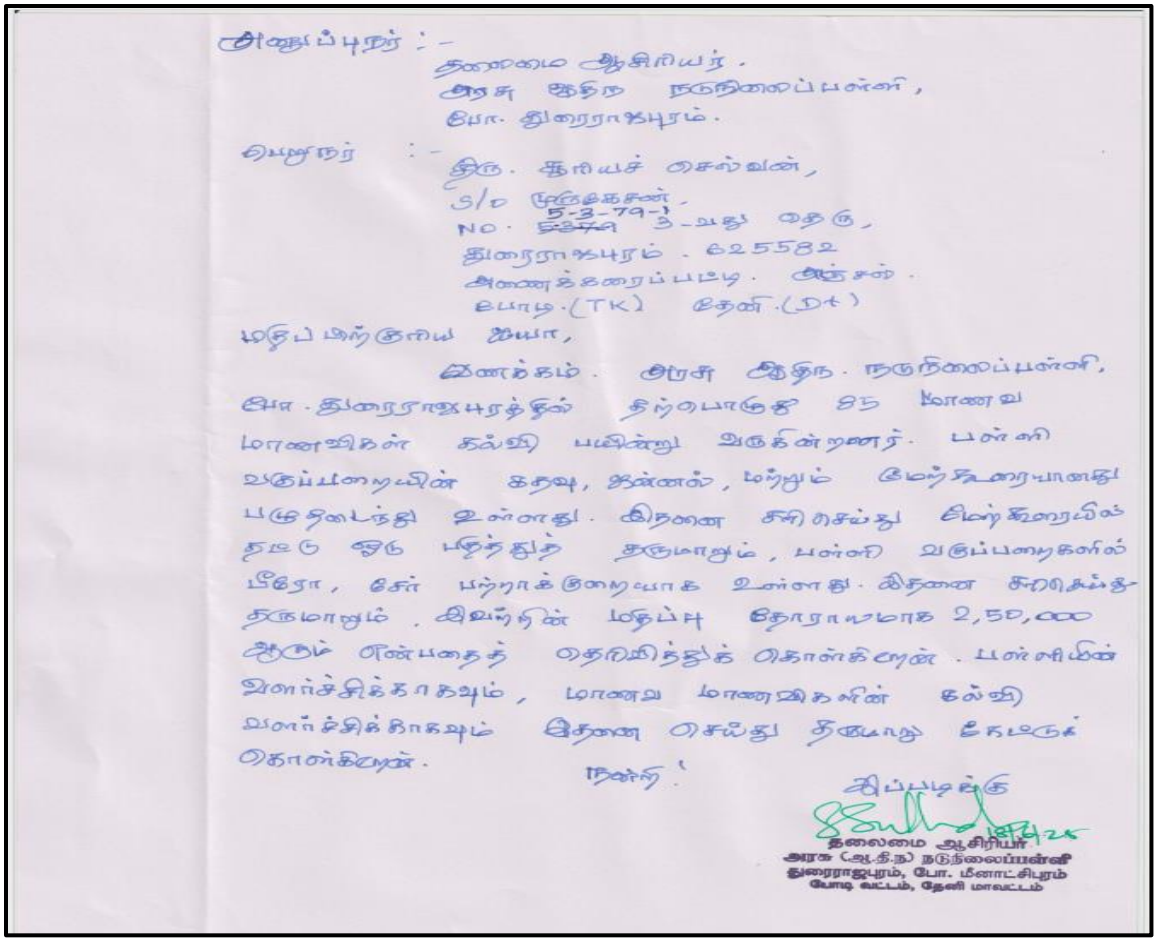
CHAPTER 8

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 M.Suriyachelvan will create direct employment opportunity for 24 local people.

PP has proposed CER amount of Rs. 3.0 Lakhs for various activities. The copy of the letter is enclosed below and CER activities will be implemented in Government Adi Dravidar nala Middle School, Durairajapuram.



அனுப்புநர் :-
தலைமை ஆசிரியர்.
அரசு ஆதிதர நடுநிலைப்பள்ளி,
போ. துரைராஜபுரம்.

பெறுநர் :-
திரு. சூரியச் செல்வன்,
S/o முருகசேன்,
5-3-79-1
No. [illegible] 3-வது தெரு,
துரைராஜபுரம். 625582
அணைக்கரைப்பட்டி. அஞ்சல்.
போடி.(TK) தேனி.(Dt)

மதிப்பிற்குரிய ஐயா,

வணக்கம். அரசு ஆதிதர. நடுநிலைப்பள்ளி, போ. துரைராஜபுரத்தில் தற்பொழுது 85 மாணவ மாணவிகள் கல்வி பயின்று வருகின்றனர். பள்ளி வகுப்பறையின் கதவு, ஜன்னல், மற்றும் மேற்கூரையானது பழுதடைந்து உள்ளது. இதனை சரிசெய்து மின்கூரையில் தடை ஏதும் பதித்தும் தருமாறும், பள்ளி வகுப்பறைகளில் மேசை, சேர் பற்றாக்குறையாக உள்ளது. இதனை சரிசெய்து தருமாறும். இவற்றின் மதிப்பு தோராயமாக 2,50,000 ஆகும் என்பதை தெரிவித்துக் கொள்கிறேன். பள்ளியின் வளர்ச்சிக்காகவும், மாணவ மாணவிகளின் கல்வி வளர்ச்சிக்காகவும் இதனை செய்து தருமாறு கேட்டுக் கொள்கிறேன்.

நன்றி.

இப்படிக்கு

தலைமை ஆசிரியர்
அரசு (ஆ.தி.ந) நடுநிலைப்பள்ளி
துரைராஜபுரம், போ. மீனாட்சிபுரம்
போடி வட்டம், தேனி மாவட்டம்

Figure 8.1 – CER Letter

The list of activities proposed for CER is mentioned below

Table 8.1 CER Activities

S. No.	PROPOSED CER ACTIVITIES	COST IN LAKHS.
1	Carrying out various infrastructure facilities	3.0
Total		**3.0**
The above-mentioned CER activities will be spent for Government Adi Dravidar nala Middle School, Durairajapuram.		

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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. TO25B0108TN5357464N, dated 13.08.2025 for the proposed project, the 'Environmental Cost Benefit Analysis' is not prescribed.

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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.

Table 10.1 Environmental Management Plan

Environmental Parameter	Mitigation Measures
Air	Wet drilling to suppress the dust emission from drill machine
	Regular water sprinkling on haulage road through fixed water sprinkler.
	3.0 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 seasonal odai passing on west side of the area and is 140m away from the area, another two seasonal odai passing on east side of the area and is 250m, 380m away from the area. There are four tanks within 1 km radius and Kottagudi River is located at 1.15 km (S). other major water bodies in buffer zone are given chapter 3.
	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. Monthly or after rainfall, inspection will do to ensure performance of water management structures and systems. There is no discharge of any effluent into nearby water bodies.

Ground Water	The quarrying operation is proposed upto a depth of 25 m below ground level, Water table is found at a depth of 70 m, hence the project will not intersect the Ground water table during entire quarry period.
Water Consumption and Wastewater generation	Water required for this project will be sourced from vendors.
	Domestic wastewater generation of 1.0 KLD will be treated in septic tank with soak pit.
	Conduct ground water and surface water monitoring for parameters specified by CPCB
Noise	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.
	Noise levels are controlled by using optimum explosive charge, proper delay detonators and proper stemming to prevent blow out of holes.
	Development of thick greenbelt all along the safety Zone (7.5 m) of the project area to attenuate the noise and the same will be maintained.
	Preventive maintenance of mining machinery and replacement of worn-out accessories to control noise generation.
	Annual ambient noise level monitoring is 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 noise control measures. Additional noise control measures will be adopted if required as per the observations during monitoring.
Ground Vibration and Fly Rock Control	Controlled blasting using delay detonators will be carried out to maintain the PPV value well within the prescribed standards of DGMS.
	Drilling and blasting will be carried under the supervision of qualified persons.
	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.

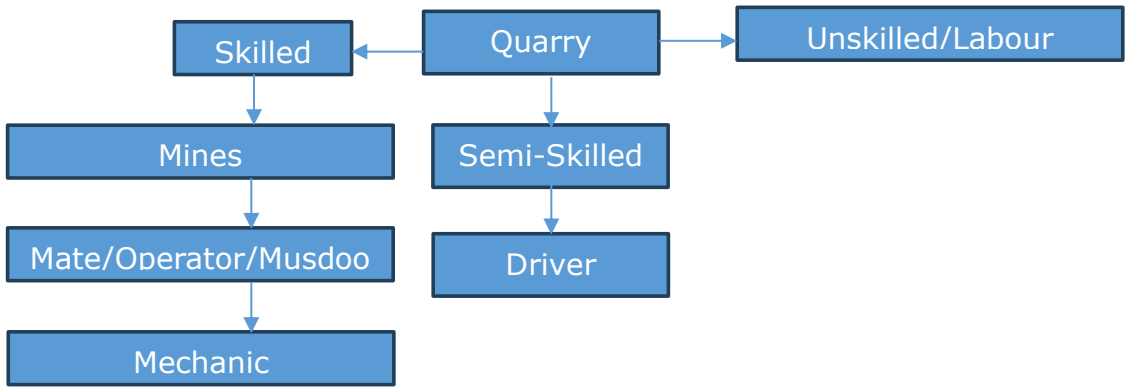
10.1.3 ADMINISTRATION AND TECHNICAL SETUP

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	4 Nos
		Mechanic	1 No
2	Semi-Skilled	Diver	3 Nos
3	Un-skilled	Labours	13 Nos
		Total	**24 Nos**

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.M.Suriyachelvan 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

Sl. No	Budget planned for	Capital Cost Amount (INR)	Recurring Cost/Annum Amount (INR)
1	Air Environment	7.44	1.04
2	Noise Environment	0.30	0.02
3	Waste Management	0.25	0.12
4	Mine Closure	0.40	0.08
5	Implementation of EC, Mining Plan & DGMS Condition	0.66	0.71
Total		**9.05**	**1.97**
Total EMP Cost for 5 years is 19.93 lakhs (This amount will be subjected to change after public hearing) i.e., 9.05 Lakhs of Capital Cost + 10.88 Lakhs of Recurring cost (For 5 Years)			

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 19.93 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& CONCLUSION

11.1 OVER ALL JUSTIFICATION FOR IMPLEMENTATION OF THE PROJECT

INTRODUCTION

Thiru.M.Suriyachelvan has obtained Precise Area Communication Letter from Assistant Director, Department of Geology and Mining, Theni, to quarry out 1,62,825 m^3 of rough stone for 5 years from an extent of 1.69.00 Ha located in S.F. Nos. 3/1 at Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.

As per EIA notification, 2006 and its subsequent amendments the proposed "Rough Stone Quarry of Thiru.M.Suriyachelvan 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. TO25B0108TN5357464N, dated 13.08.2025. This report has been prepared in line with the approved TOR for production of maximum excavation of 1,62,825 m^3 of Rough Stone.

S.No.	Description	Status/Remarks
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	1.69.00 Ha
6.	Proposed depth of Mining	25 m BGL
7.	Method of mining	Opencast Mechanized
8.	Proposed lease period	5 Years
9.	Proposed Environmental Clearance	5 Years
10.	Proposed production quantity for five years	1,62,825 m^3 of rough stone for 5 years

The Lessee Thiru.M.Suriyachelvan 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 Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State with Latitude 10°00'45.29"N to 10°00'48.77"N and Longitude: 77°24'05.46"E to 77°24'13.45"E with Survey of India Topo Sheet No. 58 G/05. 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 $N70^0W$ –$S70^0E$ with dipping towards $SE70^0$.

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 25 m below ground level. The geological reserves are estimated to be 3,94,750 m^3 of Rough Stone. The mineable reserve calculated by deducting 7.5 m safety distance and bench loss. The mineable reserves are 1,62,825 m^3 of Rough Stone which will be recovered at the rate of 100% recovery upto a depth of 25 m below 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: 1,62,825 m^3
6	Life	5 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	25 m (BGL)
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 7.0 KLD which will be procured from the outside agencies. Out of 1.5 KLD drinking water requirements, Green belt development is 2.5 KLD and dust suppression is 3.0 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 1,30,260 Litres of HSD. for entire life of the project.
3	Manpower requirement	Permanent employees – 8, temporary employees – 16
4	Financial requirement	The total project cost as per PFR will be INR 410.43 lakhs including Operational cost, Fixed Asset cost and EMP cost

5	Funds for Socio economic development	INR 3.0 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,	• Odai 1 - 140 m (W) • Odai 2 - 250 m (E) • Odai 3 - 380 m (E) • Odai 4 - 550 m (W) • Kottagudi River - 1.15 km (S) • Tank - 2.21 km (SW) • Meenakshipuram Tank - 3.64 km (W) • Valai Ar - 3.0 km (NE) • Bodipuram Lake - 5.55 km (E) • Karupasamy Temple Dam - 7.25 km (SE) • Veerapandi River - 6.85 km (SE) • Veerapandi Check Dam - 6.00 km (SE)
B	Coastal zone, biospheres,	Nil within 10km radius
C	Mountains, forests	Agamalai R.F – 180 m (N) Perumalkovil karadu R.F. – 8.0 km (E) Bodi Hill West Forest-9.20 km-West

3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, overwintering, migration	Nil within 10 km radius
4	Inland, coastal, marine or underground waters	Nil within 10 km radius
5	State, National boundaries	Nil within 10 km radius
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Nil within 10 km radius
7	Defense installations	Nil within 10 km radius
8	Densely populated or built-up area	Theni – 7.3 km E
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Theni – 7.3 km E
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.

Table 11.2 : Details Of Ambient Air Quality Monitoring Locations

S. No.	Station Code	Locations	Distance & Direction	Coordinates
1	AAQ 1	Within Mine Lease area	Core Zone	10° 0'46.73"N & 77°24'10.07"E
2	AAQ 2	Durairajapuram	2.09 km, SW	10° 0'12.78"N & 77°23'12.01"E
3	AAQ 3	Bodinayakanur	5.53 km, W	10° 0'42.10"N & 77°21'8.11"E
4	AAQ 4	Boothipuram	5.0, E	10° 0'34.85"N & 77°26'56.06"E
5	AAQ 5	Kodangipatti	3.97 Km, SE	9°59'33.04"N & 77°25'59.91"E
6	AAQ6	Kamarajapuram	4.17 Km, S	9°58'25.93"N & 77°24'17.74"E
7	AAQ7	Vishvaspuram	4.67 Km, SW	9°58'32.82"N & 77°22'45.33"E

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

Station ID	Min	Max	Avg.
Particulate matter PM-$_{2.5}$ (µg/m^3)			
AAQ-1	23.60	34.90	29.80
AAQ-2	21.90	31.10	25.90
AAQ-3	20.60	29.30	24.20
AAQ-4	18.26	26.80	22.20
AAQ-5	21.71	29.60	25.10
AAQ-6	19.12	24.48	21.82
AAQ-7	23.92	28.24	26.08
CPCB NAAQS 2009 for PM $_{2.5}$ - 60 µg/m^3			
Particulate matter PM-$_{10}$ (µg/m^3)			
AAQ-1	51.70	72.80	64.24
AAQ-2	49.20	69.70	56.90
AAQ-3	44.80	63.80	52.60
AAQ-4	39.70	55.60	48.0
AAQ-5	47.20	64.40	54.60

AAQ-6	40.70	52.10	46.44
AAQ-7	50.90	60.10	55.50
CPCB NAAQS 2009 for PM $_{10}$ - 100 µg/m^3			
Sulphur Di-oxide as SO_2 (µg/m^3)			
AAQ-1	5.70	8.60	6.80
AAQ-2	5.20	7.50	6.40
AAQ-3	4.80	6.90	5.90
AAQ-4	4.60	6.90	5.80
AAQ-5	5.10	7.20	6.20
AAQ-6	4.10	5.80	5.02
AAQ-7	4.50	6.80	5.65
CPCB NAAQS 2009 for SO_2 – 80 µg/m^3			
Oxide of Nitrogen as NO_2 (µg/m^3)			
AAQ-1	7.80	12.50	9.83
AAQ-2	7.50	10.60	9.10
AAQ-3	7.20	10.20	8.60
AAQ-4	6.40	8.70	7.60
AAQ-5	6.70	8.80	7.90
AAQ-6	5.70	9.20	7.04
AAQ-7	7.60	11.20	8.92
CPCB NAAQS 2009 for NO_2 – 80 µg/m^3			

11.2.2 WATER ENVIRONMENT

Results of Ground Water sampling Analysis in 7 locations								**Standards as Per IS 10500: 2012**	
	W1	W2	W3	W4	W5	W6	W7	**Acceptable Limits**	**Permissible Limits**
Odour	AGREEABLE	AGREEABLE	Agreeable	AGREEABLE	AGREEABLE	AGREEABLE	AGREEABLE	Agreeable	Agreeable
Turbidity	<1	<1	<1	<1	<1	<1	<1	1	5
pH at 25 °C	6.92	7.22	7.27	7.74	7.49	7.66	7.88	6.5-8.5	No Relaxation
Electrical Conductivity	788.2	1456	1124	686.4	1048	972.2	1132	-	-

Total Dissolved Solids	472	908	696	420	639	583	691	500	2000
Total hardness as CaCO3	283	516	393	204	268	232	282	200	600
Calcium as Ca	60.8	105	96.8	47.2	67.6	72.4	69.6	75	200
Magnesium as Mg	31.9	61.5	36.2	20.6	23.8	12.2	25.9	30.0	100
Calcium as CaCO3	152	263	242	118	169	181	174	-	-
Magnesium as CaCO3	131	253	151	86.0	99.0	51.0	108	-	-
Total alkalinity as CaCO3	194	259	259	172	218	192	204	200	600
Chloride as Cl-	97.5	272	214	168	185	178	198	250	1000
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)	BDL (D.L - 0.2)	BDL (D.L - 0.2)	0.2	1
Sulphates as SO42-	71.8	169	91.3	56.9	123	96.3	129	200	400
Iron as Fe	BDL (D.L - 0.01)	0.04	0.06	0.03	0.05	0.04	0.07	0.3	No Relaxation
Nitrate as NO3	2.79	3.84	3.04	2.67	3.67	3.41	3.78	45	No Relaxation
Fluoride as F	0.47	0.52	0.49	0.35	0.54	0.49	0.55	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)	BDL (D.L - 0.05)	BDL (D.L - 0.05)	0.1	0.3

All the values were found to be within permissible limits

11.2.3 NOISE ENVIRONMENT

Noise levels were measured in 7 locations and the results are given below.

Monitoring Location	N1	N2	N3	N4	N5	N6	N7
DAY EQUIVALENT	49.3	52.4	50.3	49.4	48.2	45.4	49.8
NIGHT EQUIVALENT	39.6	39.9	38.6	42.2	41.4	37.9	43.5
DAY & NIGHT EQUIVALENT	47.7	50.8	48.7	48.0	46.8	44.0	48.5
Limits as per MoEF&CC							
Day equivalent - 55 dB (A); Night equivalent - 45 dB (A); Work zone Exposure in 8 hr - 90 dB (A)							

11.2.4 SOIL ENVIRONMENT

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

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:

S. No	Parameter	Unit	S1	S2	S3	S4	S5	S6	S7
1	pH at 25 °C	-	6.46	6.82	6.71	7.02	6.83	6.59	7.14
2	Electrical Conductivity	µmhos/cm	46.92	90.41	69.4	112.3	59.24	87.18	127.5
3	Dry matter content	%	94.18	94.68	96.93	97.18	95.44	96.39	97.36
4	Water Content	%	5.82	5.32	3.07	2.82	4.56	3.61	2.64
5	Organic Matter	%	1.04	1.48	1.29	1.57	1.62	1.89	1.41
6	Soil texture	-	SILT LOAM	SANDY CLAY	SILT LOAM	SILT LOAM	SILT LOAM	SILT LOAM	SILT LOAM
7	Grain Size Distribution i. Sand	%	29.48	53.89	32.58	31.67	32.18	31.82	31.39
8	ii. Silt	%	52.08	26.82	50.34	50.42	50.75	50.38	50.68
9	iii. Clay	%	18.44	19.29	17.08	17.91	17.07	17.80	17.93
10	Phosphorous as P	mg/kg	2.32	1.68	1.89	2.49	1.82	2.08	1.89
11	Sodium as Na	mg/kg	532	466	602	669	704	624	718
12	Potassium as K	mg/kg	389	274	354	378	418	356	419
13	Nitrogen and Nitregenous Compounds	mg/kg	118	96.6	189	139	159	118	152

14	Total Sulphur	%	BDL(D.L.0.02)	BDL(D.L.0.02)	BDL(D.L.0.02)	BDL(D.L.0.02)	BDL(D.L.0.02)	BDL(D.L.0.02)	BDL(D.L.0.02)
15	Porosity	%	19.6	20.2	19.6	18.9	20.1	19.7	20.6
16	Water Holding Cabacity	Inches/foot	42	44	40	42	40	42	38

Major Land Use Units of the Study Area in Percentage

Sl.No.	LAND USE / LAND COVER	Area in Sq.Km	Area in Percentage
1	Built-up land	15.53	4.85
2	Crop land	50.61	15.87
3	Fallow land	26.21	8.20
4	Hill and Forest	99.9	31.25
5	Land with scrub	42.65	13.34
6	Land without scrub	10.05	3.14
7	Plantations	66.31	20.74
8	Water bodies	8.37	2.61
	Total Area	**319.63**	**100.00**

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 Durairajapuram, Bodinayakanur, Boothipuram, Kodangipatti, Kamarajapuram and Vishvaspuram 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 Bodinaickanur/Theni which is within 6 kms from the lease area. Major schools with higher secondary and senior secondary schools are located in Bodinaickanur. The major Panchayat Union located in the area is Bodinaickanur. Facilities like petrol pump stations, ATM facility are available in Bodinaickanur.

11.2.8 HYDROGEOLOGY OF THE LEASE AREA

There is seasonal odai passing on west side of the area and is 140m away from the area, another two seasonal odai passing on east side of the area and is 250m, 380m away from the area. There are four tanks within 1 km radius and Kottagudi River is located at 1.15 km (S). The other major water bodies in buffer are given below.

- Tank - 2.21 km (SW)
- Meenakshipuram Tank - 3.64 km (W)
- Valai Ar - 3.0 km (NE)
- Bodipuram Lake - 5.55 km (E)
- Karupasamy Temple Dam - 7.25 km (SE)
- Veerapandi River - 6.85 km (SE)
- Veerapandi Check Dam - 6.00 km (SE)

The quarrying activity will not intersect ground water table as quarrying is proposed upto a depth of 25 m bgl and water table is found at a depth of 70 m BGL.

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 25 m BGL. 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 25 m BGL. 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, 1.27.00 Ha of lease area will be left as rain water harvesting pond. 0.40.00 Ha will be developed with green belt. For this, plants like Pongamia pinnata, Syzigium cumini, Albizia lebbeck, Thespesia populnea, Bauhinia racemose, Cassia siamea, Azadirachta indiaca are selected. A total of 400 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 7.0 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 to the collection pond with silt traps.

Since the mining operation will be limited upto depth of 25m (BGL), 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.

There is seasonal odai passing on west side of the area and is 140m away from the area, another two seasonal odai passing on east side of the area and is 250m, 380m away from the area. There are four tanks within 1 km radius and Kottagudi River is located at 1.15 km (S). The other major water bodies in buffer are given below.

- Tank - 2.21 km (SW)
- Meenakshipuram Tank - 3.64 km (W)
- Valai Ar - 3.0 km (NE)
- Bodipuram Lake - 5.55 km (E)
- Karupasamy Temple Dam - 7.25 km (SE)
- Veerapandi River - 6.85 km (SE)
- Veerapandi Check Dam - 6.00 km (SE)

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. The proponent will restrict the mining operation only within the lease and no other work will be carried out near the water body 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_{10}, $PM_{2.5}$. Other than these pollutants, gaseous emissions of sulfur dioxide (SO_2) and oxides of nitrogen (NO_x) 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 3,00,000 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 19.93 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 24 people directly. Local people will be hired for unskilled labour.
- Through CSR, nearby schools, hospitals will be benefitted.
- For CSR, INR 3,00,000 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 19.93 lakhs for the five 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.

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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 a lease extent of 1.69.00 Ha. & Cluster extent of 6.41.00 Ha located at Kodangipatti Village, Bodinaickanur Taluk, Theni 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

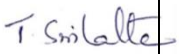
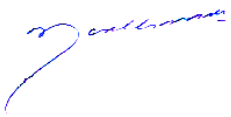
Signature & Date

Period of involvement: March 2025 to May 2025.

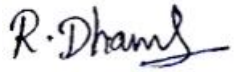
Contact information:

M/s Global Mining Solutions
Plot No.6, SF No. 13/2, A2, VS City, RC Chettypatty,
Kottamettupatty, Omalur,
Salem, Tamil Nadu – 636 455

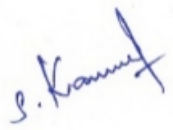
S. No.	Functional areas	Name of the expert/s	Involvement (period and task**)	Signature and Date
1	AP	Dhanalakshmi Ramanathan	Assessment of existing air quality, Impact of the project on ambient air and suggested mitigation measures for air pollution. Period: March 2025 to May 2025.	
2	WP	Abirami Kaliaperumal	Assessment of existing water quality, impact of the project on surface and ground water quality, suggested mitigation measures for minimizing the impact. Period: March 2025 to May 2025	
3	SHW	Ramadoss N	Assessment of waste generated from the project, suggested waste management practices. Period: March 2025 to May 2025	
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. Period: March 2025 to May 2025	
5	EB	Saravanan S	Baseline data collection of related to ecology of the area. Period: March 2025 to May 2025	
6	HG	Ravinthiran N	Hydrogeological feature of the area. Ground water depth and impact of project on ground water of the area. Period: March 2025 to May 2025	
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. *Period: March 2025 to May 2025*	
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.* *Period: March 2025 to May 2025*	
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.* *Period: March 2025 to May 2025*	
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.* *Period: March 2024 to May 2024*	
11	*SC*	*Shisupal Sing*	*Soil monitoring, secondary data collection on soil type, soil management practices, utilization of topsoil.* *Period: March 2025 to May 2025*	
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.* *Period: March 2025 to May 2025*	

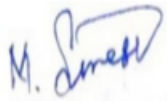
TM- EC

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

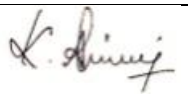
TM- FAE:

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 in the project.	
3	Mownica Balaji	NV	Dhanalakshmi Ramanathan	*Period: March to May 2025.*	Associated with the expert team in suggesting control measures for noise and Ground Vibration.	Mownica.B
		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	Balasubramani G	NV	Dhanalakshmi Ramanathan	*Period: March to May 2025.*	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 environment, identification of remedial measures and input to EIA preparation	
		Geo	Valliappan Meyyappan		Associated with the expert in preparing Geological map.	
5	Suresh Mani	LU	Srilatha Thiruveedhula	*Period: March to May 2025.*	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 Rajagopal		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 Thiruveedhula	*Period: March to May 2025.*	Associated with the expert in monitoring and 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	S. Asan ali

					safety blasting practice in the mines.	
		Geo	Valliappan Meyyappan		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.	
7	Prabu M	Geo	Valliappan Meyyappan	*Period: March to May 2025.*	Associated with Experts and involved in Field Investigations, Mapping /Geo-referencing	
8	Abirami Kaliyaperumal	RH	S V Prashant	*Period: March to May 2025.*	Associated with experts and involved in the identification risk and hazard,	

					suggesting safeguard measures.	
9	Dhanalakshmi Ramanathan	AQ	Srilatha Thiruveedhula	*Period: March to May 2025*	Involved with Expert team and involved in calculating air emission values using Meteorological data and Providing inputs for running modelling (ISCT3, AERMOD).	
10	Manikandan Manickam	AP	Ramadoss N	*Period: March to May 2025.*	Associated with expert team in assessing existing air quality, impact of the project on ambient air and suggesting mitigation measures for air pollution	
		WP	Abirami Kaliyaperumal		Involved in the identification of source of water and waste generation,	

					suggesting treatment for safe disposal of wastewater	

ANNEXURE-1

सत्यमेव जयते

File No: 12396

Government of India

Ministry of Environment, Forest and Climate Change

(Issued by the State Environment Impact Assessment Authority(SEIAA), TAMIL NADU)

****

Dated **13/08/2025**

To,

Thiru.M.Suriyachelvan
S/o.Murugesan,No.5-3-79-1, 3rd street, Durairajapuram, Anaikaraipatti, Bodinaickanur Taluk, Theni District, TAMIL NADU- 625582
suriyachelvan021@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, TN – Proposed Rough Stone quarry lease over an extent of 1.69.00 Ha at S.F.No. 3/1 of Kodangipatti Village, Bodinayakkanur Taluk, Theni District, Tamil Nadu by Thiru.M.Suriyachelvan - 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/543359/2025, Dated: 02/07/2025.
2. Minutes of the 593rd Meeting of SEAC held on 17.07.2025.
3. Minutes of the 865th meeting of SEIAA held on 05.08.2025.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO25B0108TN5357464N
(ii) File No.	12396
(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.M.Suriyachelvan
(viii) Name of Company/Organization	SURIYACHELVAN M
(ix) Location of Project (District, State)	THENI, 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 05.08.2025 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 **Thiru.M.Suriyachelvan** 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 and Forests Department, Tamil Nadu.
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, Theni District
7. The Commissioner of Geology and Mines, Guindy, Chennai-32
8. The Assistant Director, Department of Geology & Mining, Theni 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. Seac Conditions - Site Specific

S. No	Terms of Reference
1.1	**Major Condition** 1. The PP shall submit the details of Existing Pit from the Competent Authority. **General Site Specific Condition:** **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**

S. No	Terms of Reference
	details in the form of an Affidavit during the EIA appraisal: **(i) Copy of the agreement forming CMC.** **(ii) The Organisation chart of the Committee with defining the role of the members** **(iii) The 'Standard Operating Procedures' (SoP) executing the planned activities**. 2. The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report. 3. Since waterbodies are situated nearby, the PP shall carry out the hydrological study including the details of waterflow pattern to determine the impacts of the mining operation in the waterbodies. 4. The details of enumeration of structures including schools, colleges, primary health centers should be submitted along with the EIA report. 5. The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m & up to 1km 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. and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations. 6. The proponent shall furnish photographs of adequate fencing; garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan. 7. The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report. 8. 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. 9. The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding village and structures. 10. The PP shall prepare a conceptual action plan accommodating the inclusion of haul road accessibility keeping the benches intact, by ensuring the slope stability of the working benches to be constructed and existing quarry wall. 11. The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic/videographic evidence along with the EIA report.

2. Seac Standard Conditions

S. No	Terms of Reference
2.1	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: (i) Original pit dimension (ii) Quantity achieved Vs EC Approved Quantity (iii) Balance Quantity as per Mineable Reserve calculated. (iv) Mined out Depth as on date Vs EC Permitted depth (v) Details of illegal/illicit mining (vi) Violation in the quarry during the past working. (vii) Quantity of material mined out outside the mine lease area (viii) Condition of Safety zone/benches (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m. 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. 3. The proponent is requested to carry out a survey and enumerate on the structures located within

S. No	Terms of Reference
	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. 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. 5. The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report. 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. 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 & Fuel Research / Dhanbad, NIRM/Bangalore, Division of 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. 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. 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. 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. 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. 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, 13. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines? 14. Quantity of minerals mined out. · Highest production achieved in any one year · Detail of approved depth of mining. · Actual depth of the mining achieved earlier. · Name of the person already mined in that leases area. · If EC and CTO already obtained, the copy of the same shall be submitted. · Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches. 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). 16. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc., 17. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.

S. No	Terms of Reference
	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. 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. 20. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater 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 monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. 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. 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 & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind. 23. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted. 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. 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. 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. 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. 28. Impact on local transport infrastructure due to the Project should be indicated. 29. A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity. 30. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific. 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. 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

S. No	Terms of Reference
	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. 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 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. 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. 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. 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. 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. 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. 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. 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&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB. 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. 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.

3. Seiaa Standard Conditions:

S. No	Terms of Reference
3.1	**<u>Cluster Management Committee</u>** 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. 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., 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. 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.

S. No	Terms of Reference
	5. The committee shall deliberate on risk & emergency management plan, fire safety & 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. 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. 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. 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. **Agriculture & Agro-Biodiversity** 9. Impact on surrounding agricultural fields around the proposed mining Area. 10. Impact on soil flora & vegetation around the project site. 11. Details of type of vegetation including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetation all along the boundary of the proposed mining area shall committed mentioned in EMP. 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. 13. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services. 14. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock. **Forests** 15. The project proponent shall detailed study on impact of mining on Reserve forests and free ranging wildlife. 16. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna. 17. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection. 18. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site. **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. 20. Erosion Control measures. 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. 22. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir. 23. The project proponent shall study and furnish the details on potential fragmentation impact on natural Environment, by the activities. 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. 25. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil

S. No	Terms of Reference
	physical, chemical components and microbial components. 26. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites. 27. The EIA shall include the impact of mining activity on the following: a) Hydrothermal/Geothermal effect due to destruction in the Environment. b) Bio-geochemical processes and its foot prints including Environmental stress. c) Sediment geochemistry in the surface streams. **Energy** 28. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished. **Climate Change** 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. 30. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and 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. **Mine Closure Plan** 32. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued. **EMP** 33. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued and the scope for achieving SDGs. 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. **Risk Assessment** 35. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining. **Disaster Management Plan** 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. **Others** 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-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. 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.

4. Seiaa Specific Conditions:

S. No	Terms of Reference
4.1	The authority noted that the subject was appraised in the 593rd Meeting of SEAC-II held on 17.07.2025. After detailed discussions, the Authority accepts the recommendation of SEAC-II and decided to grant **Terms of Reference (ToR) along with Public Hearing for the quantity of 1,62,825m ^{3} of Rough Stone upto the depth of 25m BGL** 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-II & normal conditions & the conditions mentioned below.

Standard Terms of Reference for (Mining of minerals)

1.

S. No	Terms of Reference
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
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)
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 givenwith 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

S. No	Terms of Reference
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 rea 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 rea 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
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 Wildlifeand 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

S. No	Terms of Reference
	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-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

S. No	Terms of Reference
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 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

S. No	Terms of Reference
	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 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&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

A. 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 cle arly 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 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 is acquisition, nearby (in 2-3 km.) water body, population, with in 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 -l1013/77/2004-IA-II(I) dated 2nd December, 2009, 18th March 2010, 28th May 2010, 28th June 2010, 31st December 2010 & 30th 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 willtake 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 29th August, 2017.

ANNEXURE-2

Annexure I

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (GEOM), THENI

அனுப்புநர்
சோ.கிருஷ்ணமோகன்,
உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
தேனி.

பெறுநர்:
திரு.மு.சூரியச்செல்வன்,
த/பெ.மு.முருகேசன்,
எண்.5-3-79-1இ 3வது தெரு,
துரைராஜபுரம்,
அணைக்கரைப்பட்டி,
போடிநாயக்கனூர் வட்டம்.
தேனி மாவட்டம் - 625582.

ந.க.எண்.60/கனிமம்/2025, நாள்: 03.03.2025.

அய்யா,

பொருள்: கனிமங்களும், குவாரிகளும் - சிறுவகைக் கனிமம் - சாதாரண கற்கள் - தேனி மாவட்டம் - அரசு புறம்போக்கு நிலங்களில் உள்ள பழைய மற்றும் புதிய கல்குவாரிகளை - 1959-ம் ஆண்டு தமிழ்நாடு சிறுகனிம சலுகை விதிகளின்படி - மின்னணு டெண்டர் மற்றும் மின்னணு ஏலம் (E-Auction) முறையில் - பொது ஏலத்திற்கு கொண்டு வர மாவட்ட அரசிதழ் சிறப்பு வெளியீடு செய்யப்பட்டது - மின்னணு ஏல விண்ணப்பங்கள் வரவேற்கப்பட்டது - தேனி மாவட்டம் - போடிநாயக்கனூர் வட்டம் - கோடாங்கிபட்டி கிராமம் - அரசு புறம்போக்கு புல எண்.3/1 - விஸ்தீரணம் 1.69.00 ஹெக்டேர் பரப்பில் திரு.மு.சூரியச்செல்வன், த/பெ.மு.முருகேசன் விண்ணப்பித்தது - மின்னணு ஏலத்தில் 3,33,00,000/-க்கு அதிகபடியாககோரி வெற்றிப் பெற்ற ஏலதாரராக தேர்வு செய்யப்பட்டது - ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் ஒப்புதல் பெற்று சமர்பிக்க கோருதல் - தொடர்பாக.

பார்வை:

1. வருவாய் கோட்டாட்சியர், உத்தமபாளையம் கடிதம் ந.க.எண்.5699/2023/அ4, நாள்:17.11.2023.
2. மாவட்ட வன அலுவலர், தேனி, தேனி வனக்கோட்டம், தேனி. கடிதம் எண்.12122/2023/டி, நாள்:05.01.2024.
3. உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, தேனி அவர்களின் புலத்தணிக்கை அறிக்கை நாள்:08.01.2024.
4. தேனி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.5, நாள்:12.12.2024.
5. நேரடி மற்றும் பொது மின்னணு ஏலம் (E-auction) நாள்:22.01.2025.
6. இவ்வலுவலக குறிப்பாணை ந.க.எண்.943/கனிமம்/2024, நாள்:23.01.2025.

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பார்வை 1, 2 மற்றும் 3-ல் காணும் பரிந்துரை அறிக்கையின்படி, பார்வை 4-ல் காணும் தேனி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.5, நாள்:12.12.2024-ல் தேனி

மாவட்டம், போடிநாயக்கனூர் வட்டம், கோடாங்கிபட்டி கிராமம், அரசு புறம்போக்கு புல எண்.3/1-ன் பரப்பு 1.69.00 ஹெக்டேர் பரப்பில் குவாரி குத்தகை உரிமம் வழங்க விண்ணப்பங்கள் வரவேற்கப்பட்டது. அதனை தொடர்ந்து, பார்வை 5-ல் காணும் திரு.மு.சூரியச்செல்வன், த/பெ.மு.முருகேசன் என்பவர் தேனி மாவட்டம், போடிநாயக்கனூர் வட்டம், கோடாங்கிபட்டி கிராமம், அரசு புறம்போக்கு புல எண்.3/1-ன் பரப்பு 1.69.00 ஹெக்டேர் பரப்பு கல்குவாரிக்கு ரூ.3,33,00,000/-க்கு ஏலம் கோரி வெற்றி பெற்ற ஏலதாரராக தேர்வு செய்யப்பட்டார்.

அதனை தொடர்ந்து, பார்வை 6-ல் காணும் குறிப்பாணையில், 1959-ம் ஆண்டு தமிழ்நாடு சிறுகனிம சலுகை விதிகள், விதி எண்.8 (16) (ii) (H)-ன்படி மேற்படி ஏலத்தொகைக்கு 90% தொகை ரூ.2,89,70,000/-ஐ (2,99,70,000 - EMD தொகை 10,00,000/-) ஒரு மாத காலத்திற்குள் மின்னணு கட்டண சேவை, ESC (Electronic Clearance Service) மூலம் அரசு கணக்கு தலைப்பில் செலுத்தி அசல் சலானை சமர்ப்பிக்குமாறு கேட்டுக் கொள்ளப்பட்டது. அதனை தொடர்ந்து, ரூ.2,89,70,000/-ஐ இணையதள சலான எண்.20250219013248, நாள்:29.01.2025-ன்படி செலுத்தி சலான் சமர்ப்பித்துள்ளார்.

எனவே, வருவாய் கோட்டாட்சியர், உத்தமபாளையம், மாவட்ட வன அலுவலர், தேனி மற்றும் உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, தேனி ஆகியோர்களின் பரிந்துரை அறிக்கையின் அடிப்படையில், விண்ணப்பதாரர் திரு.மு.சூரியச்செல்வன், த/பெ.மு.முருகேசன் என்பவருக்கு தேனி மாவட்டம், போடிநாயக்கனூர் வட்டம், கோடாங்கிபட்டி கிராமம், அரசு புறம்போக்கு புல எண்.3/1-ன் பரப்பு 1.69.00 ஹெக்டேர் சாதாரண உடைகற்கள் வெட்டியெடுத்து குவாரிப்பணி செய்ய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959-ன் விதி 8(6)(c)-ன்படி 5 (ஐந்து) ஆண்டுகளுக்கு கற்குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதி குவாரி உரிமம் வழங்க ஏதுவாக 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.41-ன்படி ஏற்பளிக்கப்பட்ட சுரங்கத் திட்டத்தினை 90 தினங்களுக்குள்ளும் அதனை தொடர்ந்து, 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.42-ன்படி மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினையும் பெற்று சமர்பிக்க வேண்டும்.

நிபந்தனைகள்:

- அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டரும், அரசு புறம்போக்கு நிலங்களுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரிப் பணி மேற்கொள்ள வேண்டும்.

- அருகிலுள்ள பட்டாதாரர்களுக்கு எவ்வித இடையூறுமின்றி / அருகிலுள்ள பட்டா மற்றும் அரசு புலங்களில் எவ்வித ஆக்கிரமிப்பும் இன்றி குவாரிப்பணி மேற்கொள்ள வேண்டும்.

- கற்குவாரி குத்தகை உரிமம் பெறுவதற்கு முன்பாக ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை அவர்களின் கடிதம் ந.க.எண்.2921/எம்.எம்.4/2016, நாள்:09.03.2021-ல் தெரிவிக்கப் பட்டுள்ளவாறு குத்தகைதாரர் குவாரிபணி தொடங்குவதற்கு முன்னர் உரிமம் வழங்கப்பட்ட எல்லைகளை DGPS முறையில் அளவீடு செய்து குறுந்தட்டில் பதிவு செய்து அறிக்கையாக சமர்ப்பிக்க வேண்டும்.

உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
தேனி.

ANNEXURE-3

From
Thiru.S.Krishna Mohan,
Assistant Director,
Dept.of Geology and Mining,
Theni.

To,
Thiru.M.Suriyachelvan,
S/o.Murugesan,
No.5-3-79-1, 3rd Street,
Durairajapuram, Anaikaraipatti,
Bodinayakkanur Taluk,
Theni District – 625582.

Rc. No.60/Mines/2025, dated. 09.06.2025

Sir,

Sub: Mines and Minerals Theni District Rough Stone e-Tender cum auction conducted for Roughstone quarries in Government lands Thiru.M.Suriyachelvan, S/o.Murugesan quoted highest Bid amount (H1) For the quarry in S.F.No.3/1, over an extent of 1.69.00 hectares in Kodangipatty Village, Bodinayakkanur Taluk Declared as HI bidder H1 Bid Amount remitted Precise Area Communicated Draft Mining Plan submitted for approval Approved - Reg.

Ref:
1. Theni District Gazette Extraordinary Notification, No.5, dated:12.12.2024.
2. Notice Issued by the Assistant Director of Geology and Mining, Theni in Re.No.60/Mines/2025, dated:03.03.2025
3. Assistant Director, Geology and Mining, Theni Precise area communication letter Roc No. Rc.No.60/Mines/2025, Dated:03.03.2025.
4. Mining Plan submitted by Thiru.M.Suriyachelvan on 04.03.2025.

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As per rule 8 of the Tamil Nadu Minor Mineral Concession Rules, 1959, E-Auction for the grant of quarry lease for Roughstone quarries in Government lands were notified vide reference 1st cited in Theni District Extraordinary Gazette Notification No.5, dated12.12.2024 and Thiru.M.Suriyachelvan, S/o.Murugesan vide reference 2nd cited has been declared as the Highest Bidder for the rough stone quarry in S.F.No.3/1, to an extent of 1.69.00 hectares in Kodangipatty Village, Bodinayakkanur Taluk, Theni District.

2) The precise area communication letter was issued by the Assistant Director, Geology and Mining, Theni, vide reference 3rd cited and the highest bidder Thiru.M.Suriyachelvan, has submitted the draft Mining Plan prepared by the Recognised Qualified Person for five years and has submitted the same for approval vide reference 4th cited.

3) The draft Mining Plan submitted in respect of the precise area communication has been examined with reference to the provisions of Rule 41 of Tamil Nadu Minor Mineral Concession Rules, 1959 and the followings are observed.

i) The boundary of Co-ordinates (GPS readings) for the entire boundary pillars of the area have been incorporated and shown in the mining plan.

ii) All the conditions stipulated in the Assistant Director, Geology and Mining, Theni letter Rc.No. 60/Mines/2025, Dated: 03.03.2025 have been incorporated in the mining plan.

iii) The available geological and mineable resources in the precisea area restricted to a depth of 25m for a period of 5 years is as follows:

Depth in mts.,	**Geological reserves (in MT)**
25m	Roughstone – 10,85,562.5

iv) The Recoverable reserves estimated for 5 years on the mining plan for quarrying roughstone to a depth of 25m below ground level is as follows:

Depth in mts.,	**Mineable reserves (in MT)**
25m	Roughstone – 4,47,768.75

4) In light of the above, in exercise of the powers conferred under Rule 41(7) of Tamil Nadu Minor Mineral Concession Rules, 1959, the mining plan in respect of Rough stone quarry in Government Poramboke lands of Thiru.M.Suriyachelvan, S/o.Murugesan, is approved subject to the following conditions:

i. The mining plan is approved without prejudice to any other order or direction from any court of contempt jurisdiction.

ii. 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.

iii. The 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 and the Tamil Nadu Minor Mineral Concession Rules, 1959.

iv. The applicant is entitled for production of 4,47,768.75 Metric Ton of Rough stone for a period of 5 years as per Mining plan.

v. Quarrying operations should be carried out in accordance with the Approved Mining Plan.

vi. A safety distance of 7.5 meters should be provided to the adjoining patta lands.

vii. A safety distance of 10 meters should be provided to the adjoining Government poramboke lands.

viii. No hindrance shall be caused to the adjacent pattadars lands, Government poramboke odai and public while carrying out quarrying operations.

ix. Environmental Clearance should be obtained from the State Level Environment Impact Assessment Authority, Chennai.

Encl: Approved Mining plan.

09-06-2025

Assistant Director,
Geology and Mining,
Theni.

09/06/2025

APPROVAL MINING PLAN

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (G&M), THENI

MINING PLAN FOR KODANGIPATTI 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	:	**THENI**
TALUK	:	**BODINAICKANUR**
VILLAGE	:	**KODANGIPATTI**
S.F.NO	:	**3/1**
EXTENT	:	**1.69.00Ha**

FOR

APPLICANT

Thiru.M.Suriyachelvan,
S/o.Murugesan,
No.5-3-79-1, 3rd street, Durairajapuram,
Anaikaraipatti, Bodinaickanur Taluk,
Theni District-625582.

ECO-FRIENDLY

SUSTAINABILITY

SAFETY

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, globalminingsolutionssalem@gmail.com

QCI

NABET

(PPE)

M.Suriyachelvan,
S/o.Murugesan,
No.5-3-79-1, 3rd street,
Durairajapuram, Anaikaraipatti,
Bodinaickanur Taluk,
Theni District-625582.

CONSENT LETTER FROM THE APPLICANT

The Mining Plan in respect of **Rough Stone** quarry over an extent of 1.69.00Hectares of Government land in S.F.No.3/1 of Kodangipatti Village, Bodinaickanur Taluk, Theni 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, Theni 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

M.Suriyachelvan

Place: Theni
Date: 04.03.2025

M.Suriyachelvan,
S/o.Murugesan,
No.5-3-79-1, 3rd street,
Durairajapuram, Anaikaraipatti,
Bodinaickanur Taluk,
Theni District-625582.

DECLARATION

The Mining Plan in respect of **Rough Stone** quarry over an extent of 1.69.00Hectares of Government land in S.F.No.3/1 of Kodangipatti Village, Bodinaickanur Taluk, Theni 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

M.Suriyachelvan

Place: Theni
Date: 04.03.2025

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

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING THENI
ASST. DIRECTOR (G&M), THENI

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 1.69.00Hectares of Government land in S.F.No.3/1 of Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State applied by Thiru.M.Suriyachelvan, 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: 05.03.2025

MINING PLAN APPROVED
ASST. DIRECTOR
GEOLOGY
& MINING, THENI
ASST. DIRECTOR (G&M), THENI

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 1.69.00Hectares of Government land in S.F.No.3/1 of Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State for Thiru.M.Suriyachelvan, 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

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

Place: Salem

Datc: 05.03.2025

MINING PLAN APPROVED
ASST. DIRECTOR
GEOLOGY
& MINING, THENI
ASST. DIRECTOR (G&M), THENI

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 1.69.00Ha of (Government land) in S.F.No.3/1 of Kodangipatti Village, Bodinaickanur Taluk, Theni District, by Thiru.M.Suriyachelvan, for a period of Five 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: 05.03.2025

MINING PLAN APPROVED
ASST. DIRECTOR
GEOLOGY
& MINING, THENI
ASST. DIRECTOR (G&M), THENI

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Annexure

S. No.	Description	Annexure No.
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LIST OF PLATES

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4.0	Topo sketch of Quarry lease applied area for 10Km Radius	I-C
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MINING PLAN APPROVED
ASST. DIRECTOR
GEOLOGY
& MINING, THENI
ASST. DIRECTOR (GEOLOGY & MINING), THENI

MINING PLAN FOR MINOR MINERALS

ROUGH STONE

Over an extent of 1.69.00hectares of Government land in S.F.No.3/1 of Kodangipatti Village, Bodinaickanur Taluk, Theni 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.M.Suriyachelvan, S/o.Murugesan, residing at No.5-3-79-1, 3rd street, Durairajapuram, Anaikaraipatti, Bodinaickanur Taluk, Theni District-625582.
2. The application was processed by the Assistant Director, Department of Geology and Mining, Theni, and passed an order vide Rc.No.60/Kanimam/2025 dated 03.03.2025 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 1.69.00hectares of Government lands in S.F.No.3/1 of Kodangipatti Village, Bodinaickanur Taluk, Theni District of Tamil Nadu State for a period of five 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 to the adjoining patta lands and 10m should be provided to the Government poramboke lands while quarry operations.
   b) The applicant should not cause any hindrance to adjoining patta lands and Government lands while quarry operations.
   c) The applicant should be submit DGPS survey report before the grant of quarry lease as per As per the letter received from the Director Geology and Mining Chennai vide letter R.c.No.2921/M.M.4/2016 dated.09.03.2021, the applicant should conducted DGPS survey report submitted report along with CD.
4. Geological Resources is estimated at 10,85,562.50Ts of Rough stone and Mineable Reserves is estimated at 4,47,768.75Ts of Rough Stone and 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 4,47,768.75Ts of Rough Stone for the period of 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 180m 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	:	Kodangipatti
b.	Name of the Panchayat Union	:	Bodinaickanur
c.	The proposed total Minable Reserves	:	4,47,768.75Ts of Rough Stone
d.	The proposed quantity of reserves (level of production) for Five years to be mined is (Recoverable reserves)	:	4,47,768.75Ts of Rough Stone
e.	Total extent of the area	:	1.69.00Ha
f.	Proposed Period of mining	:	Five Years
g.	Existing depth	:	It is fresh quarry lease applied area
h.	Proposed Depth of mining	:	25m (below 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 A. Fixed Assets Cost B. Operational Cost C. EMP Cost		Rs. 3,36,00,000/- Rs. 51,50,000/- Rs. 5,00,000/- Total Project cost(A+B+C)=**Rs. 3,92,50,000/**

l. The area applied for lease is bounded by thirteen corners and the coordinates are clearly marked in plate no II.

Corners	Co- ordinates		Distance between the corners
	Latitude	Longitude	
1	10° 00' 45.45"N	77° 24' 05.64"E	1-2 = 32.2m
2	10° 00' 46.01"N	77° 24' 05.46"E	2-3 = 13.0m
3	10° 00' 46.35"N	77° 24' 05.72"E	3-4 = 54.8m
4	10° 00' 46.75"N	77° 24' 07.48"E	4-5 = 48.8m
5	10° 00' 47.39"N	77° 24' 08.94"E	5-6 = 23.2m
6	10° 00' 47.28"N	77° 24' 09.69"E	6-7 = 14.4m
7	10° 00' 47.73"N	77° 24' 09.79"E	7-8 = 26.0m
8	10° 00' 48.22"N	77° 24' 10.49"E	8-9 = 71.0m
9	10° 00' 48.77"N	77° 24' 12.75"E	9-10 = 58.2m
10	10° 00' 47.29"N	77° 24' 13.45"E	10-11 = 54.6m
11	10° 00' 46.50"N	77° 24' 11.84"E	11-12 = 37.2m
12	10° 00' 45.59"N	77° 24' 11.48"E	12-13 = 138.6m
13	10° 00' 45.29"N	77° 24' 06.94"E	13-1 = 32.6m

2.0 General Information:

	a.	Name of the Applicant	:	Thiru.M.Suriyachelvan
	b.	Address of the Applicant with phone No and e-mail id if any	:	S/o.Murugesan, No.5-3-79-1, 3rd street, Durairajapuram, Anaikaraipatti, Bodinaickanur Taluk, Theni District Pincode-625582. Cell No.: 87783 47987
	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, Theni vide Rc.No.60/Kanimam/2025 dated 03.03.2025.
	c.	Period of permission / lease granted	:	The Assistant Director, Department of Geology and Mining, Theni, has grant of lease Period for **five years.**
	d.	Name and Address of the QP preparing Mining Plan	:	**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.

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (G&M), THENI

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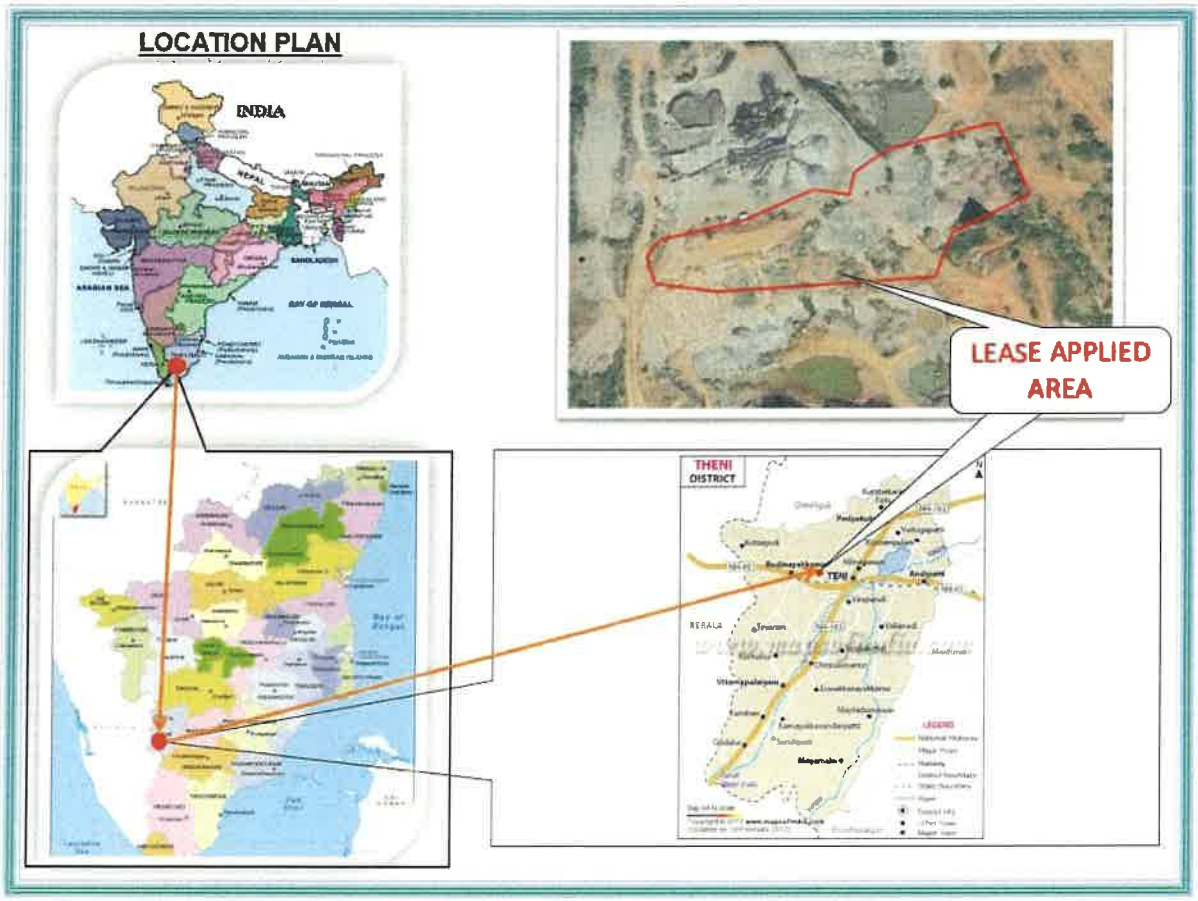
ASST DIRECTOR
GEOLOGY
& MINING, THENI
ASST. DIRECTOR (G&M), THENI

3.0 Location:

S.No	Details of the Area:	
1	Corner Coordinates	Latitude: 10°00'45.29"N to 10°00'48.77"N Longitude: 77°24'05.46"E to 77°24'13.45"E
2	Toposheet Number	58 G/05
3	The altitude of the area	376m (MSL)
4	Extent	1.69.00Ha
5	Survey No	S.F.No. 3/1
6	Village	Kodangipatti
7	Taluk	Bodinaickanur
8	District	Theni
9	State	Tamil Nadu



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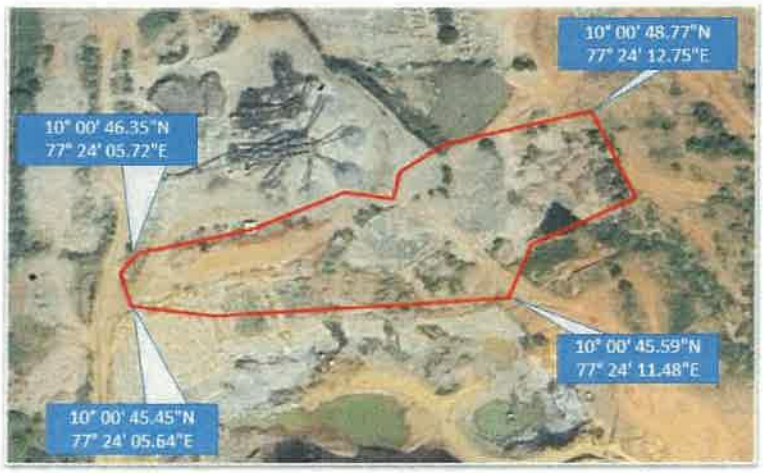
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (G&M), THENI

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: 58 G/05 Latitude: 10°00'45.29"N to 10°00'48.77"N Longitude: 77°24'05.46"E to 77°24'13.45"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 Durairajapuram– Kodangipatti village road on south side of the area. The Nearest Railway line is Bodinaickanur – Madurai line which is about 1.1Km on the south side of the area.



SATELLITE IMAGERY OF THE LEASE APPLIED AREA

TOPOGRAPHICAL VIEW OF THE LEASE APPLIED AREA

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ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (G&M), THENI

PART - A

4.0 Geology and Mineral Reserves:

4.1	a.	Topography	:	➢ The area applied for quarry lease is exhibits almost plain topography covered by covered by Charnockite formation. The massive Charnockite formation is noticed right from the surface and sloping towards southeast side of the area, the altitude of the area is above 376m (maximum) from MSL. ➢ No major river is found nearby the lease applied area. ➢ Water table is found at a depth of 70m in summer and 67m in rainy seasons. ➢ Temperature of the area is reported to be 18^{0}C to a maximum of 42^{0}C during summer. ➢ Rainfall of this area is about 800mm to 900 mm during the both NE & SW monsoons.
	b.	General Geology of the Area	:	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 N35^{0}E-S35^{0}W with dipping towards SE60^0. The general geological succession of the area is given as under. **AGE** - **ROCK TYPE** 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. Totally three sections have been drawn, one section drawn length wise as (X-Y) and another two sections drawn width wise as (A-B), (C-D) to cover maximum area considered for lease. 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 25m (below ground level) only. Availability of resources is given below.

Table No-1

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Geological Resources of Rough stone in m^3	Bulk Density	Geological Resources of Rough stone in Ts
XY-AB	I	137	58	5	39730	2.75	109257.50
	II	137	58	5	39730	2.75	109257.50
	III	137	58	5	39730	2.75	109257.50
	IV	137	58	5	39730	2.75	109257.50
	V	137	58	5	39730	2.75	109257.50
Total					**198650**	**-**	**546287.50**
XY-CD	I	106	74	5	39220	2.75	107855.00
	II	106	74	5	39220	2.75	107855.00
	III	106	74	5	39220	2.75	107855.00
	IV	106	74	5	39220	2.75	107855.00
	V	106	74	5	39220	2.75	107855.00
Total					**196100**	**-**	**539275.00**
Grand Total					**394750**	**-**	**1085562.50**

The Geological Resources of Rough stone : 10,85,562.50Ts

MINING PLAN APPROVED ASST. DIRECTOR GEOLOGY & MINING, THENI

b. Mineable Reserve

The mineable reserve calculated by deducting 7.5m safety distance and bench loss.

Table No-2

section	Bench	Length in (m)	Width in (m)	Depth in (m)	Mineable Reserves of Rough stone in m^3	Bulk Density	Mineable Reserves of Rough stone in Ts
XY-AB	I	129	45	5	29025	2.75	79818.75
	II	125	35	5	21875	2.75	60156.25
	III	120	25	5	15000	2.75	41250.00
	IV	115	15	5	8625	2.75	23718.75
Total					**74525**	**-**	**204943.75**
XY-CD	I	98	59	5	28910	2.75	79502.50
	II	93	49	5	22785	2.75	62658.75
	III	88	39	5	17160	2.75	47190.00
	IV	83	29	5	12035	2.75	33096.25
	V	78	19	5	7410	2.75	20377.50
Total					**88300**	**-**	**242825.00**
Grand Total					**162825**	**-**	**447768.75**

The mineable reserve is computed as 4,47,768.75Ts of Rough stone upto a depth of 25m (below ground level) only.

5.0 Mining:

5.1	Method of Mining	:	1. Opencast method of semi mechanized mining with 5.0m height 5m width the bench. 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	:	The rough stone is proposed to quarry 5m bench height, 5m width with conventional opencast semi-Mechanized method. 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. 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. 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 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.

The Yearwise Production and Development Table

Table No –3

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Mineable Reserves of Rough stone in m^3	Bulk Density	Mineable Reserves of Rough stone in (Ts)
I	XY-AB	I	129	45	5	29025	2.75	79818.75
	XY-CD	I	12	59	5	3540	2.75	9735.00
	Total					**32565**	-	**89553.75**
II	XY-CD	I	86	59	5	25370	2.75	69767.50
		II	29	49	5	7105	2.75	19538.75
	Total					**32475**	-	**89306.25**
III	XY-CD	II	64	49	5	15680	2.75	43120.00
	XY-AB	II	96	35	5	16800	2.75	46200.00
	Total					**32480**	-	**89320.00**
IV	XY-AB	II	29	35	5	5075	2.75	13956.25
		III	120	25	5	15000	2.75	41250.00
	XY-CD	III	64	39	5	12480	2.75	34320.00
	Total					**32555**	-	**89526.25**
V	XY-CD	III	24	39	5	4680	2.75	12870.00
		IV	83	29	5	12035	2.75	33096.25
		V	78	19	5	7410	2.75	20377.50
	XY-AB	IV	115	15	5	8625	2.75	23718.75
	Total					**32750**	-	**90062.50**
Grand Total						**162825**	-	**447768.75**

The applicant has proposed to carry out 4,47,768.75Ts of Rough stone upto a depth of 25m (below ground level) for the period of five years.

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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	3	32	1.2m to 6m	Atlas Copco	Compressed air
2	Compressor	1	-	-	Atlas Copco	Diesel Drive

	b.	Loading	:	Excavator of 0.90m^3 bucket capacity (with Rock breaker attachment) (1No).
	c.	Transportation	:	Tipper 3Nos (5/10Ts) capacity.
5.6		Disposal of Overburden	:	There is no overburden anticipated during the entire Rough Stone quarrying operation.
5.7		Brief Note on Conceptual Mining Plan for the entire lease period	:	Conceptual Mining Plan is prepared with an object of five 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. Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc. Ultimate Pit dimension is given as under,

Ultimate Pit dimension (M) end of Mining plan Period			
Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in(m)
I	215	59	25m(below ground level)

Afforestation has been proposed on all along the boundary barrier by planting trees.

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.

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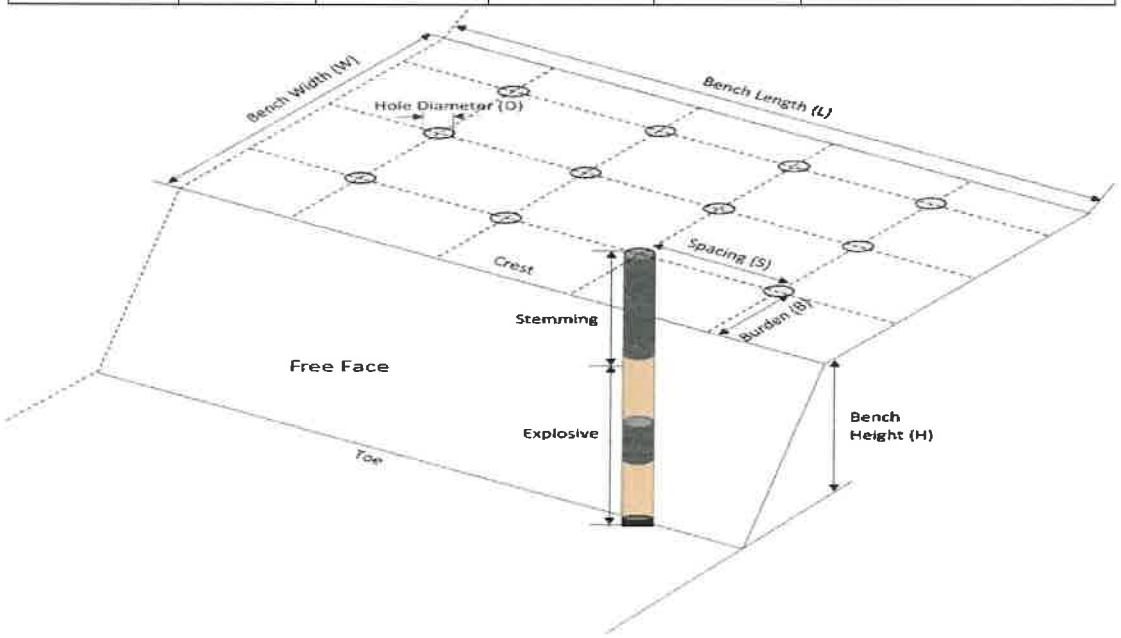
6.0 Blasting:

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	70^0 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	:	➢ Controlled blasting measures will be adopted for minimizing ground vibration and fly rock. ➢ 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.

Number of holes	:	100
Powder factor	:	6Ts/Kg of explosives
Total explosive required	:	50Kg slurry explosives
Charge / hole	:	0.5Kg
Blasting time	:	12-2 Pm

6.4	Storage of Explosives and safety measures to be taken while blasting.	:	➢ 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. ➢ ***The applicant ensure that will appoint the Mate (Should have Valid Blaster Certificate) during Blasting Operation.***

7.0 Mine Drainage:

7.1	Depth of Water table	:	The ground water table is reported as 70m below ground level. In the proposed mining plan only 25m (below ground level) for the proposed mining plan period depth 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.
7.2	Arrangement and Places where the mine water is finally proposed to be discharged	:	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

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 seasonal odai passing on west side of the area and is 140m away from the area, another two seasonal odai passing on east side of the area and is 250m, 380m away from the area.
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-85) Madurai – Bodinaickanur is about 1.4Km on south side of the area. The State Highway (SH-100) Uthamapalayam - Bodinaickanur is about 6.0Km on southwest 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 is Agamalai reserve forest situated on north side of the area and is 180m away from the lease applied area. There are no 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

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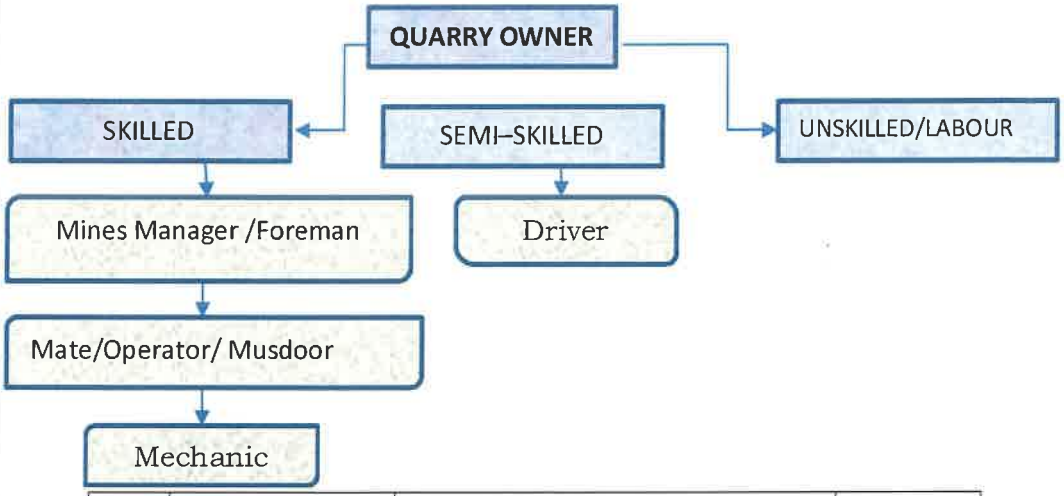
9.0 Employment Potential & Welfare Measures:

9.1 Employment Potential (Management & Supervisory personal)

The proposed organization chart



1.	Skilled	Mines Manager	1 No.
		Foreman / Mate	2 No.
		Operator	4 No.
		Mechanic	1 No.
2.	Semi–skilled	Driver	3 No.
3.	Unskilled	Labours	13Nos
		Total =	24Nos

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 Durairajapuram Village which is about 1.8km on southwest 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.

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	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 6.5Km (east) in Theni 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:		

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.

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.

PART – B

10.0 Environmental Management Plan:

10.1	Existing Land Use Pattern	:	1. The area is exhibits almost plain topography covered by charnockite formation. 2. Quarrying operation is proposed up to a depth of 25m (below ground level) for the proposed mining plan period. 3. Fluctuation of Water table in this area is in between 70m and 68m during a year. 4. This region receives the average annual rainfall of 800mm to 900mm. The surrounding area is practiced by the seasonal cultivation. The existing land use pattern is given as under.

Table No-4

Sl. No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1.	Quarrying Pit	Nil	1.27.00
2.	Infrastructure	Nil	0.01.00
3.	Roads	Nil	0.01.00
4.	Green Belt	Nil	0.40.00
5.	Unutilized	1.69.00	Nil
	Total =	**1.69.00**	**1.69.00**

10.2	Water Regime	:	Water table in this area is noticed at a depth of 68m and presently, in the proposed mining plan only 25m (below ground level) for the proposed mining plan period has been envisaged as workable depth for safe & economic quarrying for the entire lease period. hence, it will not affect the ground water depletion of this area.
10.3	Flora and Fauna	:	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.
10.4	Climatic conditions	:	Generally subtropical climatic condition prevails throughout the year and there is no sharp variation in climate. This District receives rain both in south west and north east monsoon. The average rainfall is about 800mm to 900mm and the temperature ranges from 18^{0}C during winter and to a maximum of 42^{0}C during the summer.

10.5	Human Settlement	:	The nearest habitations with the population is given as under. Table No-5

S. No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population
1.	Valayapatti	3.0Km – SE	700
2.	Durairajapuram	1.8Km-SW	900

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 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.

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10.10	Proposal of Reclamation of Land affected during mining activities and at the end of mining.	:	In the proposed mining plan 25m (below 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 25m depth, fencing will be constructed around the quarried pits to prevent inherent entry of the public and cattle.
10.11	Program for Afforestation	:	The 7.5m 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 4000Sqm area is proposed to use under afforestation by planting 480nos 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	Proposed Financial Estimate / Budget for (EMP) Environment Management		
	A. Fixed Asset Cost: 1. Land Cost (Tender amount) 2. First aid room and accessories 3. Labour Shed 4. Sanitary Facility **Total=**		 Rs.3,33,00,000 Rs. 1,00,000 Rs. 1,00,000 Rs. 1,00,000 **Rs.3,36,00,000/-**
	B. Operational Cost: 1. Machineries 2. Fencing cost **Total**	 : : :	 Rs.50,00,000- Rs. 1,50,000 **Rs.51,50,000/-**

	C.EMP Cost:	:	Budget Provision for the entire quarrying period Air Quality Sampling = Rs. 40,000/- Water Quality Sampling = Rs. 40,000/- Noise Monitoring = Rs. 20,000/- Ground vibration test = Rs. 20,000/-
	Expenditure 1. Drinking water facility 2. Sanitary Arrangements 3. Safety kids 4. Water sprinkling 5. Afforestation **Total=**	: : : : : :	 Rs.1,00,000/- Rs. 50,000/- Rs. 50,000/- Rs. 1,00,000/- Rs. 80,000/- **Rs. 5,00,000/-**
	Total Project Cost (A+B+C)	:	**Rs. 3,92,50,000/-**
	CSR Cost(2% of Total Project Cost)	:	**Rs. 7,85,000/-**

11.0 Mine Closure Plan:

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. Blasting will be carried out on limited scale. Mist Water spraying on haul road is proposed to prevent the dust propagation into the air.

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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

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

Place : Salem
Date : 05.03.2025

This Mining Plan is approved based on incorporation of the particulars specified under guidelines given by the commissioner of Geology and Mining (I/c) Roc No 3863/LC/2012 Dated 19-11-2012

Assistant Director
Geology and Mining
Theni

This Mining Plan is approved subject to the condition / Stipulated and indicated in the Mining Plan Approval
Roc. No: 60/2025 Dated: 09-6-2025

Annexure I

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அனுப்புநர்
சோ.கிருஷ்ணமோகன்,
உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
தேனி.

பெறுநர்:
திரு.மு.சூரியச்செல்வன்,
த/பெ.மு.முருகேசன்,
எண்.5-3-79-1இ 3வது தெரு,
துரைராஜபுரம்,
அணைக்கரைப்பட்டி,
போடிநாயக்கனூர் வட்டம்.
தேனி மாவட்டம் - 625582.

ந.க.எண்.60/கனிமம்/2025, நாள்: 03.03.2025.

அய்யா,

பொருள்: கனிமங்களும், குவாரிகளும் - சிறுவகைக் கனிமம் - சாதாரண கற்கள் - தேனி மாவட்டம் - அரசு புறம்போக்கு நிலங்களில் உள்ள பழைய மற்றும் புதிய கல்குவாரிகளை - 1959-ம் ஆண்டு தமிழ்நாடு சிறுகனிம சலுகை விதிகளின்படி - மின்னணு டெண்டர் மற்றும் மின்னணு ஏலம் (E-Auction) முறையில் - பொது ஏலத்திற்கு கொண்டு வர மாவட்ட அரசிதழ் சிறப்பு வெளியீடு செய்யப்பட்டது - மின்னணு ஏல விண்ணப்பங்கள் வரவேற்கப்பட்டது - தேனி மாவட்டம் - போடிநாயக்கனூர் வட்டம் - கோடாங்கிபட்டி கிராமம் - அரசு புறம்போக்கு புல எண்.3/1 - விஸ்தீரணம் 1.69.00 ஹெக்டேர் பரப்பில் திரு.மு.சூரியச்செல்வன், த/பெ.மு.முருகேசன் விண்ணப்பித்தது - மின்னணு ஏலத்தில் 3,33,00,000/-க்கு அதிகபடியாககோரி வெற்றிப் பெற்ற ஏலதாரராக தேர்வு செய்யப்பட்டது - ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் ஒப்புதல் பெற்று சமர்பிக்க கோருதல் - தொடர்பாக.

பார்வை:

1. வருவாய் கோட்டாட்சியர், உத்தமபாளையம் கடிதம் ந.க.எண்.5699/2023/அ4, நாள்:17.11.2023.
2. மாவட்ட வன அலுவலர், தேனி, தேனி வனக்கோட்டம், தேனி. கடிதம் எண்.12122/2023/டி, நாள்:05.01.2024.
3. உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, தேனி அவர்களின் புலத்தணிக்கை அறிக்கை நாள்:08.01.2024.
4. தேனி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.5, நாள்:12.12.2024.
5. நேரடி மற்றும் பொது மின்னணு ஏலம் (E-auction) நாள்:22.01.2025.
6. இவ்வலுவலக குறிப்பாணை ந.க.எண்.943/கனிமம்/2024, நாள்:23.01.2025.

****

பார்வை 1, 2 மற்றும் 3-ல் காணும் பரிந்துரை அறிக்கையின்படி, பார்வை 4-ல் காணும் தேனி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.5, நாள்:12.12.2024-ல் தேனி

மாவட்டம், போடிநாயக்கனூர் வட்டம், கோடாங்கிபட்டி கிராமம், அரசு புறம்போக்கு புல எண்.3/1-ன் பரப்பு 1.69.00 ஹெக்டேர் பரப்பில் குவாரி குத்தகை உரிமம் வழங்க விண்ணப்பங்கள் வரவேற்கப்பட்டது. அதனை தொடர்ந்து, பார்வை 5-ல் காணும் திரு.மு.சூரியச்செல்வன், த/பெ.மு.முருகேசன் என்பவர் தேனி மாவட்டம், போடிநாயக்கனூர் வட்டம், கோடாங்கிபட்டி கிராமம், அரசு புறம்போக்கு புல எண்.3/1-ன் பரப்பு 1.69.00 ஹெக்டேர் பரப்பு கல்குவாரிக்கு ரூ.3,33,00,000/-க்கு ஏலம் கோரி வெற்றி பெற்ற ஏலதாரராக தேர்வு செய்யப்பட்டார்.

அதனை தொடர்ந்து, பார்வை 6-ல் காணும் குறிப்பாணையில், 1959-ம் ஆண்டு தமிழ்நாடு சிறுகனிம சலுகை விதிகள், விதி எண்.8 (16) (ii) (H)-ன்படி மேற்படி ஏலத்தொகைக்கு 90% தொகை ரூ.2,89,70,000/-ஐ (2,99,70,000 - EMD தொகை 10,00,000/-) ஒரு மாத காலத்திற்குள் மின்னணு கட்டண சேவை, ESC (Electronic Clearance Service) மூலம் அரசு கணக்கு தலைப்பில் செலுத்தி அசல் சலானை சமர்ப்பிக்குமாறு கேட்டுக் கொள்ளப்பட்டது. அதனை தொடர்ந்து, ரூ.2,89,70,000/-ஐ இணையதள சலான எண்.20250219013248, நாள்:29.01.2025-ன்படி செலுத்தி சலான் சமர்ப்பித்துள்ளார்.

எனவே, வருவாய் கோட்டாட்சியர், உத்தமபாளையம், மாவட்ட வன அலுவலர், தேனி மற்றும் உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, தேனி ஆகியோர்களின் பரிந்துரை அறிக்கையின் அடிப்படையில், விண்ணப்பதாரர் திரு.மு.சூரியச்செல்வன், த/பெ.மு.முருகேசன் என்பவருக்கு தேனி மாவட்டம், போடிநாயக்கனூர் வட்டம், கோடாங்கிபட்டி கிராமம், அரசு புறம்போக்கு புல எண்.3/1-ன் பரப்பு 1.69.00 ஹெக்டேர் சாதாரண உடைகற்கள் வெட்டியெடுத்து குவாரிப்பணி செய்ய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959-ன் விதி 8(6)(c)-ன்படி 5 (ஐந்து) ஆண்டுகளுக்கு கற்குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதி குவாரி உரிமம் வழங்க ஏதுவாக 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.41-ன்படி ஏற்பளிக்கப்பட்ட சுரங்கத் திட்டத்தினை 90 தினங்களுக்குள்ளும் அதனை தொடர்ந்து, 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.42-ன்படி மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினையும் பெற்று சமர்பிக்க வேண்டும்.

நிபந்தனைகள்:

- அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டரும், அரசு புறம்போக்கு நிலங்களுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரிப் பணி மேற்கொள்ள வேண்டும்.

- அருகிலுள்ள பட்டாதாரர்களுக்கு எவ்வித இடையூறுமின்றி / அருகிலுள்ள பட்டா மற்றும் அரசு புலங்களில் எவ்வித ஆக்கிரமிப்பும் இன்றி குவாரிப்பணி மேற்கொள்ள வேண்டும்.

- கற்குவாரி குத்தகை உரிமம் பெறுவதற்கு முன்பாக ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை அவர்களின் கடிதம் ந.க.எண்.2921/எம்.எம்.4/2016, நாள்:09.03.2021-ல் தெரிவிக்கப் பட்டுள்ளவாறு குத்தகைதாரர் குவாரிபணி தொடங்குவதற்கு முன்னர் உரிமம் வழங்கப்பட்ட எல்லைகளை DGPS முறையில் அளவீடு செய்து குறுந்தட்டில் பதிவு செய்து அறிக்கையாக சமர்ப்பிக்க வேண்டும்.

உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
தேனி.

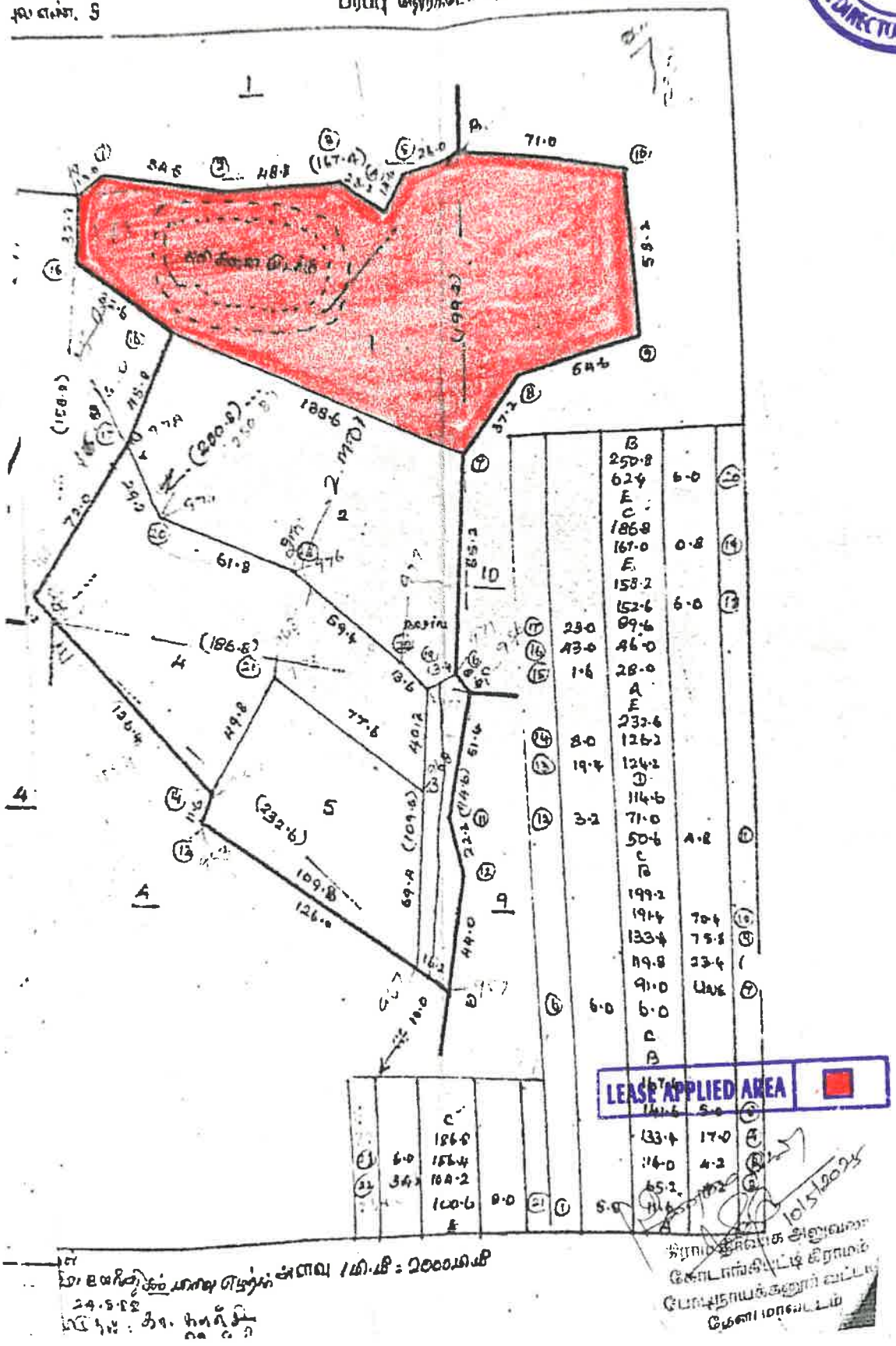
ANNEXURE II

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (GEOLOGY), THENI

கனிமம்

கிராமம் { வட்டம் S
மாவட்டம் தேனி

பரப்பு தொகுதி 4.10.0 ஹெ.



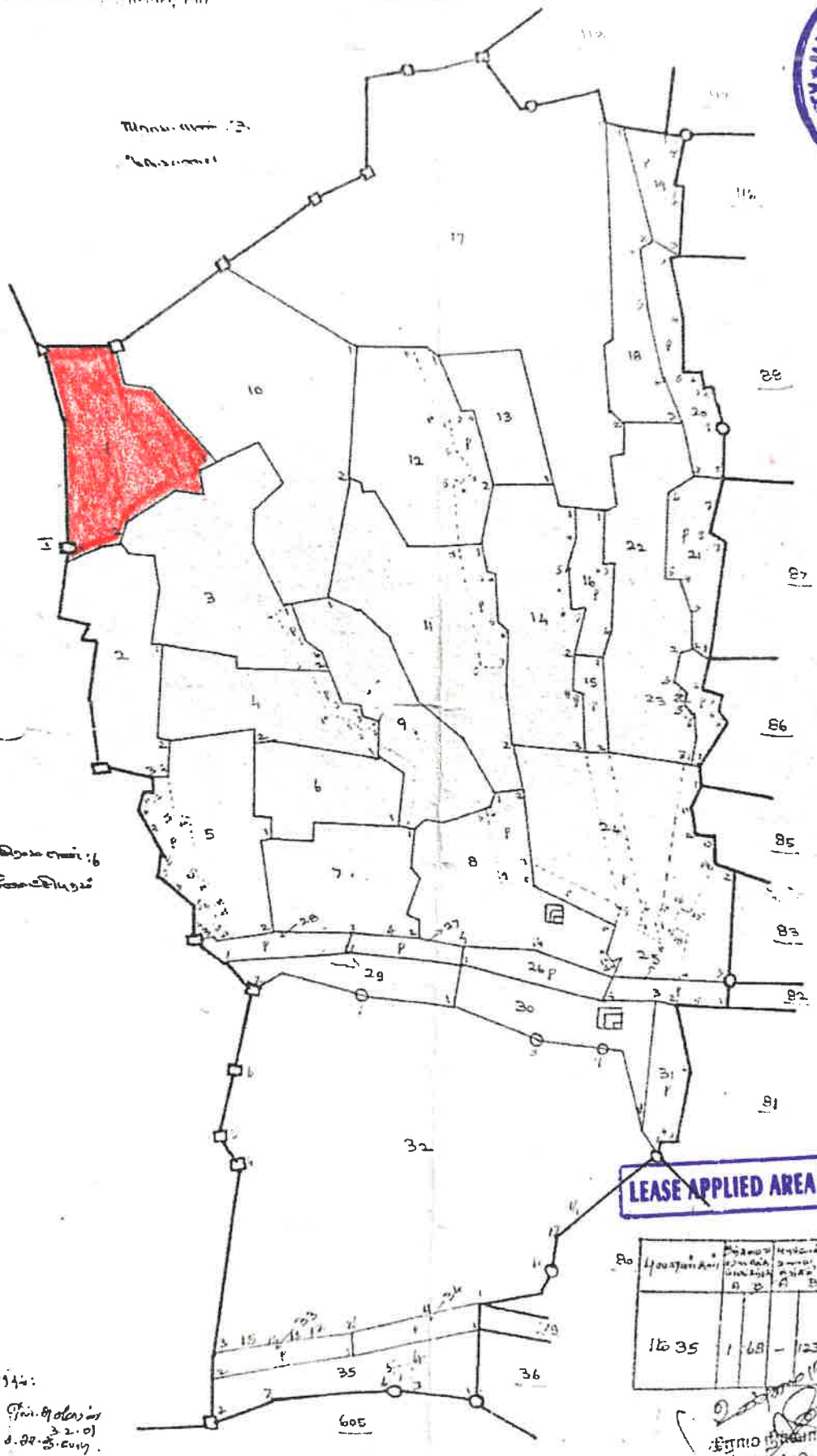
1 மீ உயரத்தில் காண எதுங்ஸ்வே 1மி.மீ = 2000மிமீ

24.5.22

10/5/2022

ANNEXURE III

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (GRM), THENI



1635	1	68	–	123	1.79

1434 ஆம் பகுதியில் கிராமக் கணக்கு

மாவட்டம் வட்டம்

நில வரித் திட்டத்தின்படி புலன்களின் விபரம்.					கைப்பற்று தாரருடைய பெயரும் எண்ணும் அல்லது அறுபோக தாரருடைய பெயர்	சாகுபடி பருவத்தின் பெயர்.	முதல் போகம்.				
நில அளவை எண்.	உட்பிரிவு எண்.	பரப்பு.	தீர்வை.	ஈர போகம் அல்லது இரு போகம்.		நிலத்தின் எந்த பருதி பருவ சாகுபடியாளரால் பயிரிடப்பட்டுள்ளதாக.	எந்த மாதத்தில் பயிர் செய்யப்பட்டது அறுவடை செய்யப்பட்டது.	பயிரின் பெயர்.	பயிரை / அறுவடை யான பரப்பு.	உண்மையான பாய்ச்சல் ஆதாரம்.	விளைச்சல் அளவு விழுக்காடு.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
3	-	1.47.0									

10/5/25

ஊராட்சி உதவியாளர்
கோடாங்கிபட்டி கிராமம்
பெரியகுளம் ஒன்றியம்
தேனி மாவட்டம்

380/25-R.F. III-A-10-50,00,000 Cps.-GBP.-Mdu.-7,-2017.

ஏன் 2

கிராமத்தில் வருடவாரி புலவாரி கைப்பற்று சாகுபடி அடங்கல் கணக்கு

இரண்டாம் போகம்.							
எந்த மாதத்தில் பயிர் செய்யப்பட்டது அறுவடை செய்யப்பட்டது.	பயிரின் பெயர்.	பயிரை / அறுவடையான பரப்பு.	உண்மையான பாய்ச்சல் ஆதாரம்.	விளைச்சல் அளவு விழுக்காடு.	வரிசை அறுவைகளின் குறிப்புரை :- (1) புலன்களில் பருதிகளில் பட்டும் பயிரிடப்பட்டுள்ள விபரங்கள் அமைந்தும் இவ்வாறு (2) வகைப்பாடுகளின் தன்மையும் (3) முக்கனியும் மாதத்தில் பயிர்கள் (4) பயிரிடப்பட்டுள்ள பருதிகளுக்கு பிரதேசங்களுக்கு நீர் பாய்ச்சப்பட்ட விபரங்கள்.	கீழ்க்கண்டவகையில் பயிரிடப்படாத உள்ள நிலத்தின் தன்மை மற்றும் பயிரின் விவரங்கள் ஒவ்வொரு நில அளவை எண் அல்லது அதன் பருதியில். (அ) வனம். (ஆ) பயனற்ற பயிர் செய்ய இயலாத நிலம். (இ) வியாபாரம் மற்றும் இதர காரியங்களுக்கு மான் படுத்தப் படும் நிலம். (ஈ) பயிரிடத்தக்க தரிசு (உ) நிலையான புல் தரைகளும் மற்றும் இதர மேய்ச்சல் நிலங்களும். (ஊ) விதைக்கப்பட்ட நிகர பயிர் செய்கப்படாத மலைகள் பயிர்களும் நேரப்பகுதியும். (எ) தடபத தரிசுகள் (ஏ) இதர தரிசு நிலங்கள்	பயிர் சாகுபடி குறிப்புகள்.
(13)	(14)	(15)	(16)	(17)	(18)	(18அ)	(19)
					மானவு		

MINING PLAN APPROVED ★ ASST. DIRECTOR (GEOLOGY & MINING), THENI ★ ASST. DIRECTOR GEOLOGY & MINING, THENI

ANNEXURE IV

ANNEXURE 14

மதுரை மாவட்டம், உத்தமபாளையம் வட்டம் சி. எண். 5. கோடாங்கிபட்டி கிராமத்தின் 'அ' பதிவேடு.

தலைப்பின் விளக்கவரிசை எண் & வரையறை.

1. [illegible]
2. [illegible]
3. நன்செய்(ந), மானாவரி (ம)
4. நன்செய்(ந), புன்செய்(பு), மானாவரி(மா), சோலை ஏற்படாத தரிசு (தி.ஏ.த.) புறம் போக்கு (பு.போ). நன்செய்யாயின் பாசன ஆதாரம். அதன் வகுப்பும்.
5. இதுபோக நன்செய்யாயின் மொத்தத் தீர்வை விகம்.
6. [illegible]
7. தரம்.
8. ஒன்றுபட்ட நன்செய் தீர்வை விகம்
9. பரப்பளவு.
10. தீர்வை.
11. பட்டா மாறுதல், மற்றும் பதிவு பெற்ற உரிமையாளரின் பெயரும்.
12. குறிப்புரை.

1	2	3	4	5	6	7	8	9	10	11	12
							ஏ. வை. சென்ஸ்.	ஏ. வை.	ரூ. வை.		
1	1	1-1	ச	ந	...	7-3	5	2 15	1 44·0	3 09	...
	2	-2	ச	பு	...	7-3	5	2 15	0 85·0	1 83	...
	3	-3	ச	ந	...	7-3	5	2 15	0 97·0	2 09	1225 கூ. கொக்கையன்.
									3 26·0	7 01	
2	1	2-1	ச	தி.ஏ.த	...	...	...	...	0 27·5	...	...
	2	-2	ச	ந	...	7-3	5	2 15	0 52·0	1 11	150 சி. கொக்கர் சாமி (1). கொ. விராமையன் (2).
	3	-3	ச	பு	...	7-3	5	2 15	0 38·5	1 26	229 க. கண்ணுசாமி.
	4	-4	ச	பு	...	7-3	5	2 15	0 09·5	1 49	2125 ச. [illegible]
	5	-5	ச	பு	...	7-3	5	2 15	0 44·5	1 12	2216 ஏ. முத்தையன்.
									2 92·0	5 48	
3	1	3-1	ச	தி.ஏ.த	...	...	...	...	1 09·0	...	...
	2	-2	ச	பு	...	7-3	6	1 24	1 05·0	1 30	2217 [illegible]

[illegible]

கிராம நிர்வாக அலுவலர்
கோடாங்கிபட்டி கிராமம்
போடிநாயக்கனூர் வட்டம்
தேனி மாவட்டம்

आयकर विभाग
INCOME TAX DEPARTMENT

सत्यमेव जयते

भारत सरकार
GOVT. OF INDIA

MINING PLAN APPROVED ASST. DIRECTOR & MINING, THENI

ई– स्थायी लेखा संख्या कार्ड
e - Permanent Account Number (e-PAN) Card
MKXPS3618F

नाम / Name	SURIYACHELVAN M
पिता का नाम / Father's name	MURUGESAN
जन्म की तारीख / Date of Birth	07/12/2000
लिंग / Gender	Male

हस्ताक्षर / Signature

Signature Not Verified
Digitally signed by Income Tax Deptt.
Date: 2024.06.12 11:33:49 GMT+05:30

- ✓ Permanent Account Number (PAN) facilitate Income Tax Department linking of various documents, including payment of taxes, assessment, tax demand tax arrears, matching of information and easy maintenance & retrieval of electronic information etc. relating to a taxpayer.
  स्थायी लेखा संख्या (पैन) एक करदाता से संबंधित विभिन्न दस्तावेजों को जोड़ने में आयकर विभाग को सहायक होता है, जिसमें करों के भुगतान, आकलन, कर मांग, टैक्स बकाया, सूचना के मिलान और इलक्ट्रॉनिक जानकारी का आसान रखरखाव व बहाली आदि भी शामिल है।
- ✓ Quoting of PAN is now mandatory for several transactions specified under Income Tax Act, 1961 (Refer Rule 114B of Income Tax Rules, 1962)
  आयकर अधिनियम, 1961 के तहत निर्दिष्ट कई लेनदेन के लिए स्थायी लेखा संख्या (पैन) का उल्लेख अब अनिवार्य है (आयकर नियम, 1962 के नियम 114B, का संदर्भ लें)
- ✓ Possessing or using more than one PAN is against the law & may attract penalty of upto Rs. 10,000.
  एक से अधिक स्थायी लेखा संख्या (पैन) का रखना या उपयोग करना, कानून के विरुद्ध है और इसके लिए 10,000 रुपये तक का दंड लगाया जा सकता है।
- ✓ The PAN Card enclosed contains Enhanced QR Code which is readable by a specific Android Mobile App. Keyword to search this specific Mobile App on Google Play Store is "Enhanced QR Code Reader for PAN Card.
  संलग्न पैन कार्ड में एनहान्स क्यूआर कोड शामिल है जो एक विशिष्ट एंड्रॉइड मोबाइल ऐप द्वारा पठनीय है। Google Play Store पर इस विशिष्ट मोबाइल ऐप को खोजने के लिए कीवर्ड "Enhanced QR Code Reader for PAN Card" है।

Cut

आयकर विभाग
INCOME TAX DEPARTMENT

भारत सरकार
GOVT. OF INDIA

स्थायी लेखा संख्या कार्ड
Permanent Account Number Card
MKXPS3618F

नाम / Name
SURIYACHELVAN M

पिता का नाम / Father's Name
MURUGESAN

जन्म की तारीख / Date of Birth
07/12/2000

हस्ताक्षर / Signature

Fold

इस कार्ड के खोने/पाने पर कृपया सूचित करें/लौटाएं:
आयकर पैन सेवा इकाई, प्रोटीयन ईगव टेक्नोलॉजीज़ लिमिटेड
(पूर्व में एनएसडीएल ई-गवर्नेंस इंफ्रास्ट्रक्चर लिमिटेड)
चौथी मंजिल, सफायर चैंबर,
बानेर रोड, बानेर,
पुणे - 411045

If this card is lost / someone's lost card is found, please inform / return to :
Income Tax PAN Services Unit, Protean eGov Technologies Limited
(formerly NSDL e-Governance Infrastructure Limited)
4th Floor, Sapphire Chambers,
Baner Road, Baner,
Pune - 411045
Tel: 91-20-2721 8080, e-mail: tinpan@proteantech.in

Electronically issued and Digitally signed ePAN is a valid mode of issue of Permanent Account Number (PAN) post amendments in clause (c) in the Explanation occurring after sub-section (8) of Section 139A of Income Tax Act, 1961 and sub-rule (6) of Rule 114 of the Income Tax Rules, click here

ANNEXURE VI

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (GEOLOGY), THENI

भारत सरकार

आधार

இந்திய அரசாங்கம்

Government of India

இந்திய தனிப்பட்ட அடையாள ஆணைய அமைப்பு

Unique Identification Authority of India

பதிவேட்டு எண்/ Enrolment No.: 2193/12201/20061

To
சூரியச்செல்வன் மு
Suriyachelvan M
S/O: Murugesan,
NO 5.3-79-1,
3RD STREET,
DURAIRAJAPURAM ANNAIKKARAIPATTI,
BODINAYAKANUR,
VTC: MEENAKSHIPURAM (BODI),
PO: B.meenakshipuram,
Sub District: Bodinayakanur,
District: Theni,
State: Tamil Nadu,
PIN Code: 625582,
Mobile: 8778347987

Signature Not Verified
Digitally signed by the Unique Identification Authority of India
Date: 2024/07/17 10:53:08 GMT+05:30

உங்கள் ஆதார் எண் / Your Aadhaar No. :

9273 2515 3433

VID : 9137 2358 0367 7867

எனது ஆதார், எனது அடையாளம்

Government of India

Aadhaar no. issued: 17/07/2013

சூரியச்செல்வன் மு
Suriyachelvan M
பிறந்த நாள்/DOB: 07/12/2000
ஆண்/ MALE

ஆதார் என்பது அடையாளத்திற்கான சான்றாகும், குடியுரிமை அல்லது பிறந்த தேதிக்கான சான்றல்ல. இது சரிபார்ப்புக்கு மட்டுமே பயன்படுத்தப்பட வேண்டும் (ஆன்லைன் அங்கீகாரம் அல்லது QR குறியீட்டை ஸ்கேன் செய்தல்/ஆஃப்லைன் XML)

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).

9273 2515 3433

எனது ஆதார், எனது அடையாளம்

Government of India

AADHAAR

தகவல் / INFORMATION

- ஆதார் என்பது அடையாளத்திற்கான சான்றாகும். குடியுரிமை அல்லது பிறந்த தேதிக்கான சான்றல்ல பிறந்த தேதி என்பது ஆதார் எண் வைத்திருப்பவரால் சமர்ப்பிக்கப்பட்ட விதிமுறைகளில் குறிப்பிடப்பட்டுள்ள பிறந்த தேதி ஆவணத்தின் ஆதாரம் மூலம் ஆதரிக்கப்படும் தகவலின் அடிப்படையில் அமைந்துள்ளது.
- இந்த ஆதார் கடிதத்தை UIDAI நியமித்த அங்கீகார நிறுவனத்தால் ஆன்லைன் அங்கீகாரம் அல்லது ஆப் ஸ்டோர்களில் கிடைக்கும் எம் ஆதார் அல்லது ஆதார் QR ஸ்கேனர் செயலியை பயன்படுத்தி QR குறியீடு ஸ்கேனிங் அல்லது www.uidai.gov.in ல் கிடைக்கும் பாதுகாப்பான QR குறியீடு ரீடர் செயலியை பயன்படுத்தி சரிபார்க்க வேண்டும்.
- ஆதார் தனித்துவமானது மற்றும் பாதுகாப்பானது.
- ஆதார் பதிவு செய்யப்பட்ட நாளிலிருந்து ஒவ்வொரு 10 வருடங்களுக்குப் 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.
- ஆதார்/பயோமெட்ரிக்ஸைப் பயன்படுத்தாதபோது பாதுகாப்பை உறுதிசெய்ய, ஆதார்/பயோமெட்ரிக்ஸ் லாக்/அன்லாக் 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.
- 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.

இந்திய தனிப்பட்ட அடையாள ஆணைய அமைப்பு

Unique Identification Authority of India

Details as on: 03/07/2024

முகவரி:
S/O: முருகேசன், எண் 5.3-79-1, 3 வது தெரு, துரைராஜபுரம் அணைக்கரைப்பட்டி, போடிநாயக்கனூர், மீனாட்சிபுரம் (போடி), பி. மீனாட்சிபுரம், தேனி, தமிழ் நாடு - 625582

Address:
S/O: Murugesan, NO 5.3-79-1, 3RD STREET, DURAIRAJAPURAM ANNAIKKARAIPATTI, BODINAYAKANUR, MEENAKSHIPURAM (BODI), PO: B.meenakshipuram, DIST: Theni, Tamil Nadu - 625582

9273 2515 3433

VID : 9137 2358 0367 7867

1947 | help@uidai.gov.in | www.uidai.gov.in

ANNEXURE VII

CHETTINAD CEMENT CORPORATION LTD.

(Regd. Office: RANI SEETHAI HALL BUILDING IV & V FLOORS, 603, ANNA SALAI, MADRAS-60
WORKS OFFICE: PULIYUR.

TELE: PHONE 21144 22744 21745 KARUR
GRAM "CEMENT" Puliyur C.F.
Telex: 0468-215.
STD Code: 04324

All Co... Kumararaja... PULIYUR CEMENT ... POST (Karur Taluk...

MINING PLAN APPROVED ASST. DIRECTOR GEOLOGY & MINING (HEM) ASST. DIRECTOR (GEM) (HEM)

T.RAJU.,B.E.,
MINES MANAGER & DY.GENERAL MANAGER.

22nd 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, Quality control and other allied mining activities in the following Pits of our Seethainagar Limestone Mines in Anna District.

Name of the Pit.		Average Raising/day.
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.

19.

ANNAMALAI UNIVERSITY

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.

Annamalainagar
8th December 1976.

A. Chandrasekhar
Vice-Chancellor.

PLATE NO: I

DATE OF SURVEY : 04.03.2025

APPLICANT:

THIRU.M.SURIYACHELVAN,
S/o.MURUGESAN,
No.5-3-79-1, 3rd STREET,
DURAIRAJAPURAM, ANAIKARAIPATTI,
BODINAICKANUR TALUK,
THENI DISTRICT - 625582.

QUARRY LEASE APPLIED AREA:

S.F.NO : 3/1
EXTENT : 1.69.00 Ha,
VILLAGE : KODANGIPATTI,
TALUK : BODINAICKANUR,
DISTRICT : THENI.

INDEX

Q. LEASE APPLIED AREA :

TOPO SHEET NO : 58 G/05

LATITUDE : 10°00'45.29"N to 10°00'48.77"N

LONGITUDE : 77°24'05.46"E to 77°24'13.45"E

LOCATION 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 BASED UPON THE LEASE MAP AUTHENTICATED BY STATE GOVERNMENT.

ASSISTANT DIRECTOR (GEOLOGY), THENI
MINING PLAN APPROVED

C.NATARAJAN,M.Sc.,
QUALIFIED PERSON

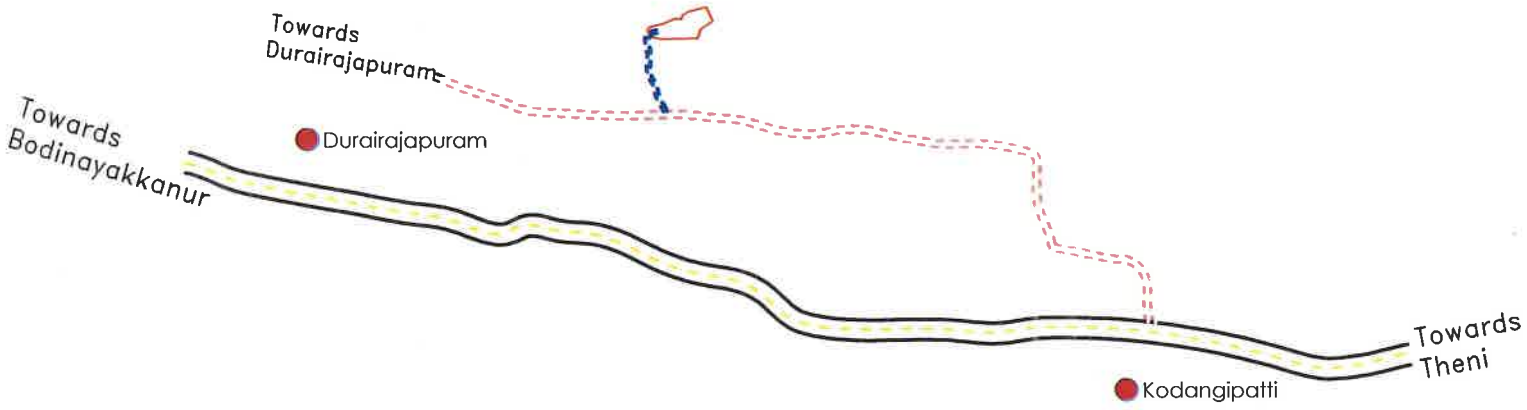


PLATE NO: 1D

DATE OF SURVEY : 04.03.2025

APPLICANT:

THIRU.M.SURIYACHELVAN,
S/o.MURUGESAN,
No.5-3-79-1, 3rd STREET,
DURAIRAJAPURAM, ANAIKARAIPATTI,
BODINAICKANUR TALUK,
THENI DISTRICT - 625582.

QUARRY LEASE APPLIED AREA:

S.F.NO : 3/1
EXTENT : 1.69.00 Ha,
VILLAGE : KODANGIPATTI,
TALUK : BODINAICKANUR,
DISTRICT : THENI.

INDEX

Q.LEASE APPLIED AREA

APPROACH ROAD

VILLAGE ROAD

NATIONAL 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 LEPO OF THE LEASE MAP AUTHENTICATED BY STATE GOVERNMENT

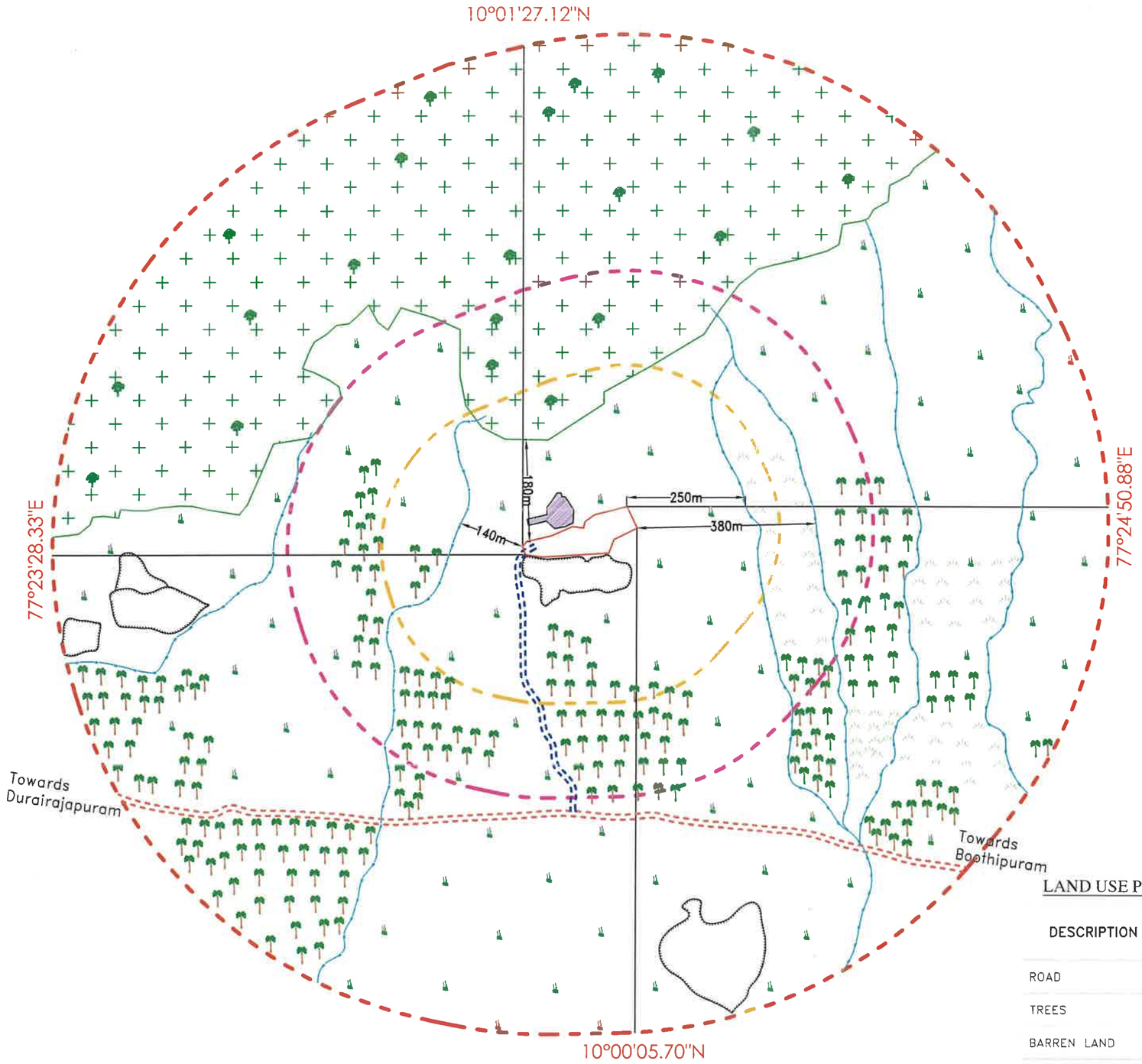
ASST. DIRECTOR GEOLOGY & MINING THENI

ASST. DIRECTOR ★ MINING PLAN APPROVED ★ GEOLOGY & MINING, THENI

C.NATARAJAN,M.Sc.,M.Phil.,
QUALIFIED PERSON

PLATE NO: 1A

DATE OF SURVEY : 04.03.2025



APPLICANT:

THIRU.M.SURIYACHELVAN,
S/o.MURUGESAN,
No.5-3-79-1, 3rd STREET,
DURAIRAJAPURAM, ANAIKARAIPATTI,
BODINAICKANUR TALUK,
THENI DISTRICT - 625582.

MINING PLAN APPROVED ★ ASST. DIRECTOR (G&M), THENI ★ ASST. DIRECTOR GEOLOGY & MINING, THENI

QUARRY LEASE APPLIED AREA:

S.F.NO : 3/1
EXTENT : 1.69.00 Ha,
VILLAGE : KODANGIPATTI,
TALUK : BODINAICKANUR,
DISTRICT : THENI.

INDEX

TOPO SHEET NO : 58 G/05

LATITUDE : 10°00'45.29"N to 10°00'48.77"N

LONGITUDE : 77°24'05.46"E to 77°24'13.45"E

Q.LEASE APPLIED AREA
300M RADIUS
500M RADIUS
1KM RADIUS
APPROACH ROAD
VILLAGE ROAD
BARREN LAND
TREES
AGRICULTURAL LAND
QUARRY PIT
CRUSHER UNIT
ODAI
AGAMALAI RESERVED FOREST

LAND USE PATTERN

DESCRIPTION	AREA IN (%)
ROAD	05
TREES	20
BARREN LAND	35
AGRICULTURAL LAND	05
WATER BODIES	10
FOREST	25

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: 1B

DATE OF SURVEY : 04.03.2025

APPLICANT:

THIRU.M.SURIYACHELVAN,
S/o.MURUGESAN,
No.5-3-79-1, 3rd STREET,
DURAIRAJAPURAM, ANAIKARAIPATTI,
BODINAICKANUR TALUK,
THENI DISTRICT - 625582.

QUARRY LEASE APPLIED AREA:

S.F.NO : 3/1
EXTENT : 1.69.00 Ha,
VILLAGE : KODANGIPATTI,
TALUK : BODINAICKANUR,
DISTRICT : THENI.

INDEX

TOPO SHEET NO : 58 G/05

LATITUDE : 10°00'45.29"N to 10°00'48.77"N

LONGITUDE : 77°24'05.46"E to 77°24'13.45"E

Q.LEASE APPLIED AREA	
300M RADIUS	
500M RADIUS	
1KM RADIUS	
APPROACH ROAD	
VILLAGE ROAD	

SATELLITE IMAGERY MAP

SCALE 1 : 10,000

PREPARED BY:

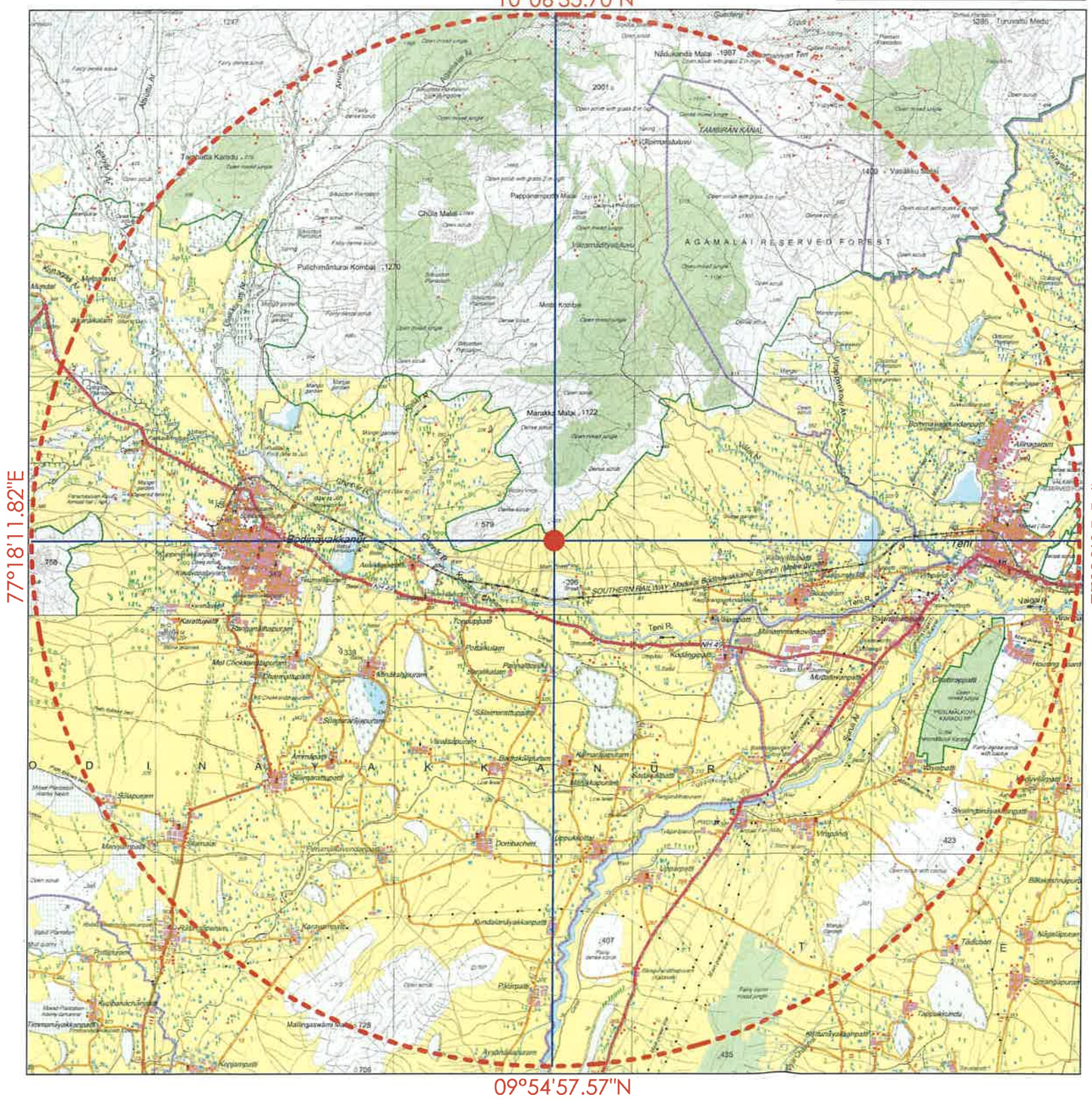
THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE BASED UPON THE LEASE MAP AUTHENTICATED BY STATE GOVERNMENT

C.NATARAJAN,M.Sc.,M.Phil.,
QUALIFIED PERSON

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (G&M), THENI

PLATE NO-I C

DATE OF SURVEY : 04.03.2025



APPLICANT:

THIRU.M.SURIYACHELVAN,
S/o.MURUGESAN,
No.5-3-79-1, 3rd STREET,
DURAIRAJAPURAM, ANAIKARAIPATTI,
BODINAICKANUR TALUK,
THENI DISTRICT - 625582.

QUARRY LEASE APPLIED AREA:

S.F.NO : 3/1
EXTENT : 1.69.00 Ha,
VILLAGE : KODANGIPATTI,
TALUK : BODINAICKANUR,
DISTRICT : THENI.

INDEX

TOPO SHEET NO : 58 G/05

LATITUDE : 10°00'45.29"N to 10°00'48.77"N

LONGITUDE : 77°24'05.46"E to 77°24'13.45"E

Q.LEASE APPLIED AREA

10KM RADIUS

CONVENTIONAL SYMBOLS

TOPO SKETCH OF QUARRY LEASE APPLIED AREA FOR 10Km RADIUS

SCALE– 1:100000

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

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (G&M), THENI

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (GR.M), THENI

BOUNDARY CO ORDINATES		
LABEL	LATITUDE	LONGITUDE
1	10° 00' 45.45"N	77° 24' 05.64"E
2	10° 00' 46.01"N	77° 24' 05.46"E
3	10° 00' 46.35"N	77° 24' 05.72"E
4	10° 00' 46.75"N	77° 24' 07.48"E
5	10° 00' 47.39"N	77° 24' 08.94"E
6	10° 00' 47.28"N	77° 24' 09.69"E
7	10° 00' 47.73"N	77° 24' 09.79"E
8	10° 00' 48.22"N	77° 24' 10.49"E
9	10° 00' 48.77"N	77° 24' 12.75"E
10	10° 00' 47.29"N	77° 24' 13.45"E
11	10° 00' 46.50"N	77° 24' 11.84"E
12	10° 00' 45.59"N	77° 24' 11.48"E
13	10° 00' 45.29"N	77° 24' 06.94"E
WGS - 84, DATUM		

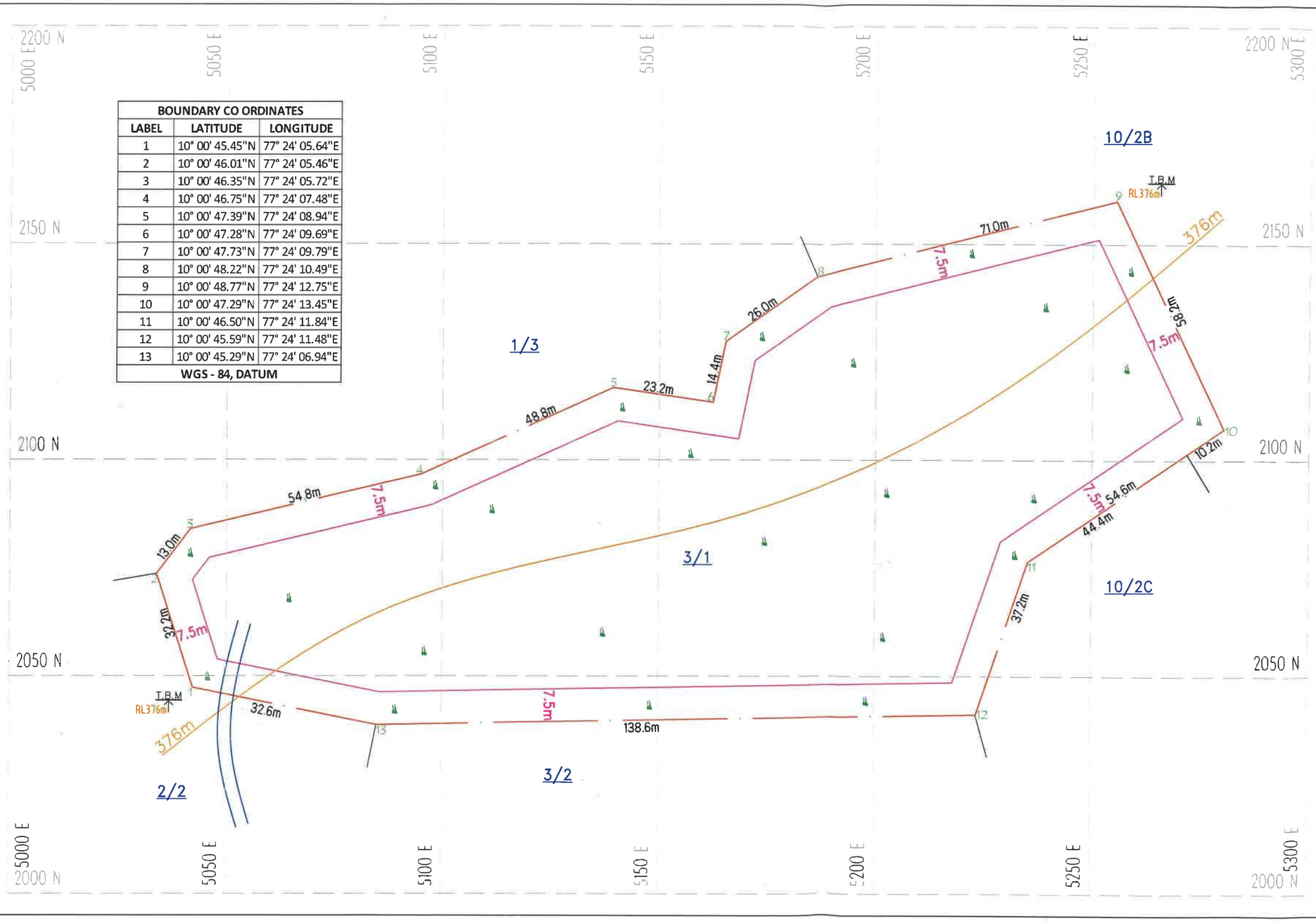


PLATE NO-II

DATE OF SURVEY : 04.03.2025

APPLICANT:

THIRU.M.SURIYACHELVAN,
S/o.MURUGESAN,
No.5-3-79-1, 3rd STREET,
DURAIRAJAPURAM, ANAIKARAIPATTI,
BODINAICKANUR TALUK,
THENI DISTRICT - 625582.

QUARRY LEASE APPLIED AREA:

S.F.NO : 3/1
EXTENT : 1.69.00 Ha,
VILLAGE : KODANGIPATTI,
TALUK : BODINAICKANUR,
DISTRICT : THENI.

INDEX

- QUARRY LEASE APPLIED BOUNDARY
- 7.5m SAFETY DISTANCE
- TEMPORARY BENCH MARK (T.B.M)
- APPROACH ROAD
- CONTOUR
- SCRUB

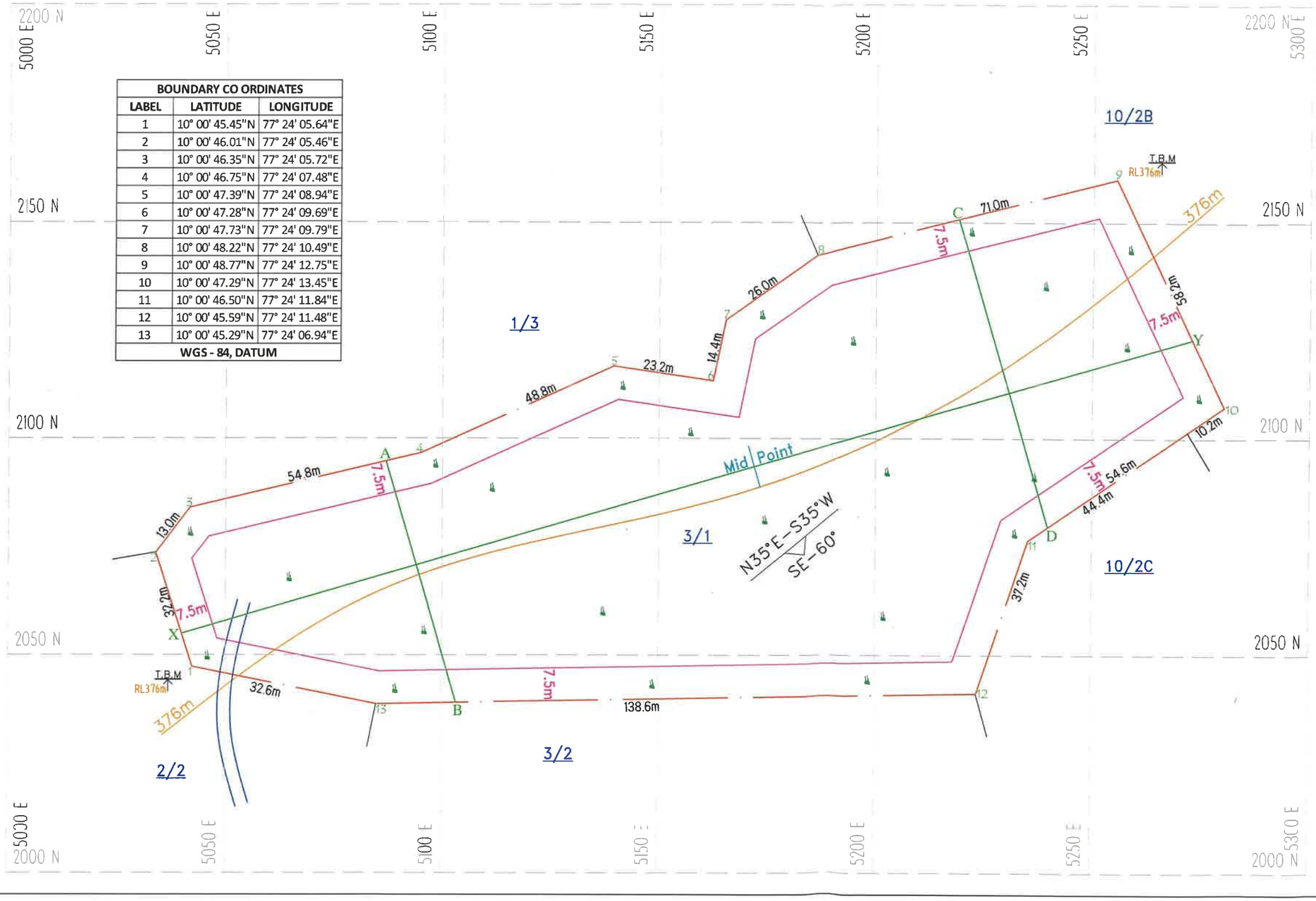
QUARRY LEASE & SURFACE PLAN

SCALE 1 : 1000

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



BOUNDARY CO ORDINATES		
LABEL	LATITUDE	LONGITUDE
1	10° 00' 45.45"N	77° 24' 05.64"E
2	10° 00' 46.01"N	77° 24' 05.46"E
3	10° 00' 46.35"N	77° 24' 05.72"E
4	10° 00' 46.75"N	77° 24' 07.48"E
5	10° 00' 47.39"N	77° 24' 08.94"E
6	10° 00' 47.28"N	77° 24' 09.69"E
7	10° 00' 47.73"N	77° 24' 09.79"E
8	10° 00' 48.22"N	77° 24' 10.49"E
9	10° 00' 48.77"N	77° 24' 12.75"E
10	10° 00' 47.29"N	77° 24' 13.45"E
11	10° 00' 46.50"N	77° 24' 11.84"E
12	10° 00' 45.59"N	77° 24' 11.48"E
13	10° 00' 45.29"N	77° 24' 06.94"E
WGS - 84, DATUM		

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (GRAM), THENI

PLATE NO-III

DATE OF SURVEY : 04.03.2025

APPLICANT:

THIRU.M.SURIYACHELVAN,
S/o.MURUGESAN,
No.5-3-79-1, 3rd STREET,
DURAIRAJAPURAM, ANAIKARAIPATTI,
BODINAICKANUR TALUK,
THENI DISTRICT - 625582.

QUARRY LEASE APPLIED AREA:

S.F.NO : 3/1
EXTENT : 1.69.00 Ha,
VILLAGE : KODANGIPATTI,
TALUK : BODINAICKANUR,
DISTRICT : THENI.

INDEX

- QUARRY LEASE APPLIED BOUNDARY
- 7.5m SAFETY DISTANCE
- TEMPORARY BENCH MARK (T.B.M)
- APPROACH ROAD
- CONTOUR
- SCRUB
- STRIKE & DIP

TOPOGRAPHY, GEOLOGICAL & PLAN

SCALE 1 : 1000

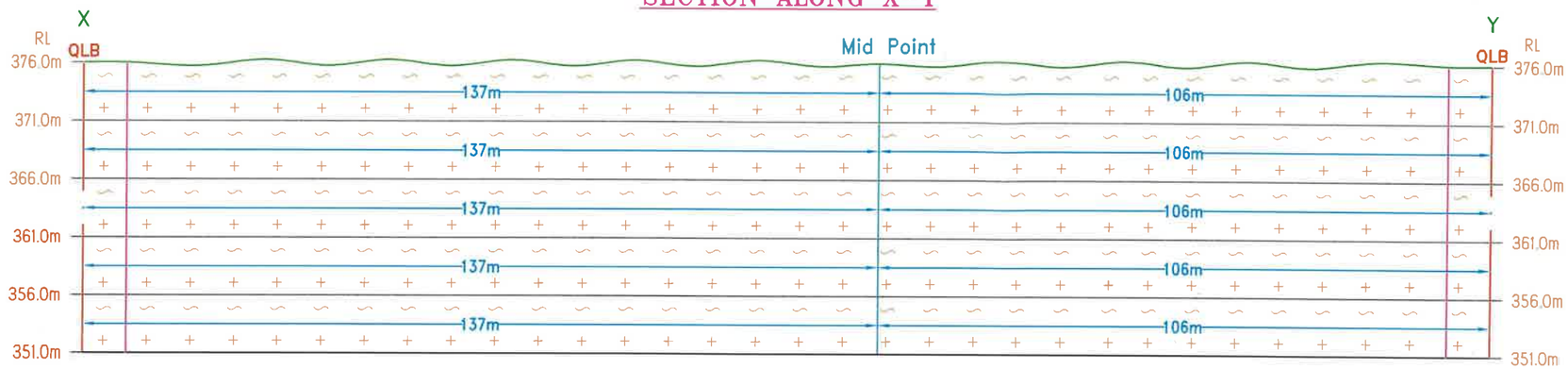
PREPARED BY :

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

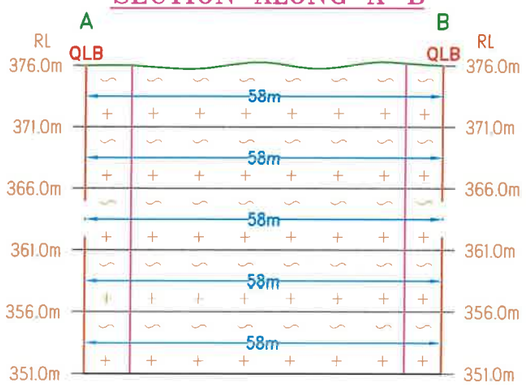
C.NATARAJAN M.Sc.,M.Phil.,
QUALIFIED PERSON

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (GR&M), THENI

SECTION ALONG X–Y



SECTION ALONG A–B



SECTION ALONG C–D

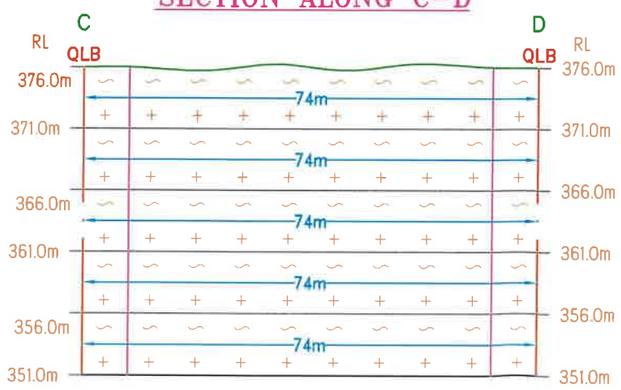


PLATE NO-III A

DATE OF SURVEY : 04.03.2025

APPLICANT:

THIRU.M.SURIYACHELVAN,
S/o.MURUGESAN,
No.5-3-79-1, 3rd STREET,
DURAIRAJAPURAM, ANAIKARAIPATTI,
BODINAICKANUR TALUK,
THENI DISTRICT - 625582.

QUARRY LEASE APPLIED AREA:

S.F.NO : 3/1
EXTENT : 1.69.00 Ha,
VILLAGE : KODANGIPATTI,
TALUK : BODINAICKANUR,
DISTRICT : THENI.

INDEX

QUARRY LEASE APPLIED BOUNDARY

7.5m SAFETY DISTANCE

ROUGH STONE

TOPOGRAPHY, GEOLOGICAL & SECTIONS

SCALE 1 : 1000
SECTIONS HOR 1:1000, VER 1:500

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

ANNEXURE-4

From
Assistant Director,
Dept. of Geology and Mining,
Theni.

To
The Chairman,
State level Environment
Impact Assessment Authority,
3rd floor, Panagal Maligai,
No.1, Jeenis Road,
Saidapet,Chennai.

Roc. No.60/Mines/2025, dated.19.06.2025

Sir,

Sub: Mines and Minerals - Minor Mineral - Rough Stone - Theni District – Bodinayakkanur Taluk - Kodangipatty Village - Govt. land – quoted highest Bid Amount (H1) for the quarry in in S.F. Nos. 3/1 - Over an extent of 1.69.00 Hects – Thiru.M.Suriyachelvan – Precise area communicated – Draft Mining Plan submitted - Approval accorded – 500 meter radius quarry details –Requested - Regarding.

Ref:
1. Theni District Gazette Extraordinary Notification, No.5, dated: 12.12.2024
2. Notice Issued by the Assistant Director of Geology and Mining, Theni dated: 03.03.2025 in Rc.No.60/Mines/2025, dated:03.03.2025.
3. Assistant Director, Geology and Mining, Theni Precise area communication letter Rc.No.60/Mines/2025, Dated:03.03.2025
4. Mining Plan submitted by Thiru.M. Suriyachelvan on 04.03.2025.

******

As per rule 8 of the Tamil Nadu Minor Mineral Concession Rules, 1959, E-Auction for the grant of quarry lease for Roughstone quarries in Government lands were notified vide reference 1st cited in Theni District Extraordinary Gazette Notification No.5, dated 12.12.2024 and Thiru. M.Suriyachelvan, S/o.Murugesan vide reference 2nd cited has been declared as the Highest Bidder for the rough stone quarry in S.F.No.3/1, to an extent of 1.69.00 hectares in Kodangipatty Village, Bodinayakkanur Taluk, Theni District.

2) The precise area communication letter was issued by the Assistant Director, Geology and Mining, Theni, vide reference 3rd cited and the highest bidder Thiru.M.Suriyachelvan, has submitted the draft Mining Plan prepared by the Recognised Qualified Person for five years and has submitted the same for approval vide reference 4th cited.

Accordingly, Thiru.M.Suriyachelvan has submitted the draft Mining Plan and the same has been approved on 09.06.2025. In this connection the applicant has requested to furnish the details of quarry lease situated within 500 mts radius from the subject quarry for obtaining Environmental Clearance from the State Level Environment Impact Assessment Authority.

In this connection it is informed that the following existing and abandoned quarries are located within 500 radius distance from the proposed area for clearance.

A. Existing Quarries

S. No.	Name of the owner	Village and Taluk	S.F.No.	Extent (in Hects)	Collector's Proc No.& Date.	Lease Period
1.	Nil					

B. Abandoned/Expired Quarries

S. No.	Name of the owner	Village and Taluk	S.F. No.	Extent (in Hects)	Collector's Proc No.& Date.	Lease Period
1.	R.Subburaj, S/o.Rama subbu, No.D1/252-A, Green Park Apartment, P.T.Rajan Road, Visalatchipuram, Thallakulam, Madurai.	Kodangipatty Village - Bodi nayakkanur Taluk	2/2, 2/4, 2/5, 3/2, 10/2C	4.36.5	Rc.No.37/ Mines/2016, date: 28.09.2017.	28.09.2017 to 27.09.2022

C.Present Proposed Quarries

Sl. No.	Name of the owner	Village and Taluk	S.F.No.	Extent (in Hects)
1.	Thiru.M.Suriyachelvan, S/o.Murugesan, No.5-3-79-1, 3rd Street, Durairajapuram, Anaikaraipatti, Bodinayakkanur Taluk, Theni District – 625582	Kodangipatty Village - Bodinayakkanur Taluk	3/1	1.69.00
2.	R.Subburaj, S/o.Ramasubbu, No.D1/252-A, Green Park Apartment, P.T.Rajan Road, Visalatchipuram, Thallakulam, Madurai.	Kodangipatty Village - Bodinayakkanur Taluk	10/2A, 17/1, 17/3	4.72.00

19.06.2015

Assistant Director,
Geology and Mining,
Theni.

19/06/2015

ANNEXURE-5

TOPOGRAPHICAL VIEW OF KODANGIPATTI VILLAGE,

ROUGH STONE QUARRY

NAME OF THE APPLICANT : M.SURIYACHELVAN

DISTRICT : THENI

TALUK : BODINAICKANUR

VILLAGE : KODANGIPATTI

S.F.NO : 3/1

EXTENT : 1.69.00Ha

16/6/2025

VAO SIGN & SEAL

கிராம நிர்வாக அலுவலர்
கோடாங்கிபட்டி கிராமம்
போடிநாயக்கனூர் வட்டம்
தேனி மாவட்டம்

Place: Kodangipatti

Date: 16/6/2025

சான்று

தேனி மாவட்டம், போடிநாயக்கனூர் வட்டம், கோடாங்கிப்பட்டி வருவாய் கிராமம் புலஎண் : 3/1 மொத்த விஸ்தீர்ணம் 1.69.0 ஹெக்டர் வகைபாடு சர்க்கார் தீர்வை ஏற்படாத தரிசு(UAWD) என்ற இடத்தில் முருகேசன் மகன் சூர்யச்செல்வன் என்பவரின் பெயரில் சாதாரண உடைகல் மற்றும் குவாரி குத்தகை உரிமம் கோரி விண்ணப்பித்துள்ளார். பிரஸ்தாப புலஎண் : 3/1 மொத்த விஸ்தீர்ணம் 1.69.0 ஹெக்டர் நிலத்தை சுற்றி 300 மீட்டர் சுற்றளவில் அங்கீகரிக்கப்பட்ட வீட்டுமனைகள் புராதனச்சின்னங்கள், கோவில்கள், கிருஸ்துவ தேவாலயங்கள், மசூதிகள், பள்ளிகள், கல்லூரிகள், பறவைகள் சரணாலயம், மற்றும் விலங்குகள் சரணாலயம் ஏதுமில்லை என்பதற்கு வழங்கலானச் சான்று,

16/6/2025

கிராம நிர்வாக அலுவலர்
கோடாங்கிப்பட்டி கிராமம்
போடிநாயக்கனூர் வட்டம்
தேனி மாவட்டம்

ANNEXURE-6

Annexure I

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (GEOM), THENI

அனுப்புநர்
சோ.கிருஷ்ணமோகன்,
உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
தேனி.

பெறுநர்:
திரு.மு.சூரியச்செல்வன்,
த/பெ.மு.முருகேசன்,
எண்.5-3-79-1இ 3வது தெரு,
துரைராஜபுரம்,
அணைக்கரைப்பட்டி,
போடிநாயக்கனூர் வட்டம்.
தேனி மாவட்டம் - 625582.

ந.க.எண்.60/கனிமம்/2025, நாள்: 03.03.2025.

அய்யா,

பொருள்: கனிமங்களும், குவாரிகளும் - சிறுவகைக் கனிமம் - சாதாரண கற்கள் - தேனி மாவட்டம் - அரசு புறம்போக்கு நிலங்களில் உள்ள பழைய மற்றும் புதிய கல்குவாரிகளை - 1959-ம் ஆண்டு தமிழ்நாடு சிறுகனிம சலுகை விதிகளின்படி - மின்னணு டெண்டர் மற்றும் மின்னணு ஏலம் (E-Auction) முறையில் - பொது ஏலத்திற்கு கொண்டு வர மாவட்ட அரசிதழ் சிறப்பு வெளியீடு செய்யப்பட்டது - மின்னணு ஏல விண்ணப்பங்கள் வரவேற்கப்பட்டது - தேனி மாவட்டம் - போடிநாயக்கனூர் வட்டம் - கோடாங்கிபட்டி கிராமம் - அரசு புறம்போக்கு புல எண்.3/1 - விஸ்தீரணம் 1.69.00 ஹெக்டேர் பரப்பில் திரு.மு.சூரியச்செல்வன், த/பெ.மு.முருகேசன் விண்ணப்பித்தது - மின்னணு ஏலத்தில் 3,33,00,000/-க்கு அதிகபடியாககோரி வெற்றிப் பெற்ற ஏலதாரராக தேர்வு செய்யப்பட்டது - ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் ஒப்புதல் பெற்று சமர்பிக்க கோருதல் - தொடர்பாக.

பார்வை:

1. வருவாய் கோட்டாட்சியர், உத்தமபாளையம் கடிதம் ந.க.எண்.5699/2023/அ4, நாள்:17.11.2023.
2. மாவட்ட வன அலுவலர், தேனி, தேனி வனக்கோட்டம், தேனி. கடிதம் எண்.12122/2023/டி, நாள்:05.01.2024.
3. உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, தேனி அவர்களின் புலத்தணிக்கை அறிக்கை நாள்:08.01.2024.
4. தேனி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.5, நாள்:12.12.2024.
5. நேரடி மற்றும் பொது மின்னணு ஏலம் (E-auction) நாள்:22.01.2025.
6. இவ்வலுவலக குறிப்பாணை ந.க.எண்.943/கனிமம்/2024, நாள்:23.01.2025.

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பார்வை 1, 2 மற்றும் 3-ல் காணும் பரிந்துரை அறிக்கையின்படி, பார்வை 4-ல் காணும் தேனி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.5, நாள்:12.12.2024-ல் தேனி

மாவட்டம், போடிநாயக்கனூர் வட்டம், கோடாங்கிபட்டி கிராமம், அரசு புறம்போக்கு புல எண்.3/1-ன் பரப்பு 1.69.00 ஹெக்டேர் பரப்பில் குவாரி குத்தகை உரிமம் வழங்க விண்ணப்பங்கள் வரவேற்கப்பட்டது. அதனை தொடர்ந்து, பார்வை 5-ல் காணும் திரு.மு.சூரியச்செல்வன், த/பெ.மு.முருகேசன் என்பவர் தேனி மாவட்டம், போடிநாயக்கனூர் வட்டம், கோடாங்கிபட்டி கிராமம், அரசு புறம்போக்கு புல எண்.3/1-ன் பரப்பு 1.69.00 ஹெக்டேர் பரப்பு கல்குவாரிக்கு ரூ.3,33,00,000/-க்கு ஏலம் கோரி வெற்றி பெற்ற ஏலதாரராக தேர்வு செய்யப்பட்டார்.

அதனை தொடர்ந்து, பார்வை 6-ல் காணும் குறிப்பாணையில், 1959-ம் ஆண்டு தமிழ்நாடு சிறுகனிம சலுகை விதிகள், விதி எண்.8 (16) (ii) (H)-ன்படி மேற்படி ஏலத்தொகைக்கு 90% தொகை ரூ.2,89,70,000/-ஐ (2,99,70,000 - EMD தொகை 10,00,000/-) ஒரு மாத காலத்திற்குள் மின்னணு கட்டண சேவை, ESC (Electronic Clearance Service) மூலம் அரசு கணக்கு தலைப்பில் செலுத்தி அசல் சலானை சமர்ப்பிக்குமாறு கேட்டுக் கொள்ளப்பட்டது. அதனை தொடர்ந்து, ரூ.2,89,70,000/-ஐ இணையதள சலான எண்.20250219013248, நாள்:29.01.2025-ன்படி செலுத்தி சலான் சமர்ப்பித்துள்ளார்.

எனவே, வருவாய் கோட்டாட்சியர், உத்தமபாளையம், மாவட்ட வன அலுவலர், தேனி மற்றும் உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, தேனி ஆகியோர்களின் பரிந்துரை அறிக்கையின் அடிப்படையில், விண்ணப்பதாரர் திரு.மு.சூரியச்செல்வன், த/பெ.மு.முருகேசன் என்பவருக்கு தேனி மாவட்டம், போடிநாயக்கனூர் வட்டம், கோடாங்கிபட்டி கிராமம், அரசு புறம்போக்கு புல எண்.3/1-ன் பரப்பு 1.69.00 ஹெக்டேர் சாதாரண உடைகற்கள் வெட்டியெடுத்து குவாரிப்பணி செய்ய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959-ன் விதி 8(6)(c)-ன்படி 5 (ஐந்து) ஆண்டுகளுக்கு கற்குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதி குவாரி உரிமம் வழங்க ஏதுவாக 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.41-ன்படி ஏற்பளிக்கப்பட்ட சுரங்கத் திட்டத்தினை 90 தினங்களுக்குள்ளும் அதனை தொடர்ந்து, 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.42-ன்படி மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினையும் பெற்று சமர்பிக்க வேண்டும்.

நிபந்தனைகள்:

- அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டரும், அரசு புறம்போக்கு நிலங்களுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரிப் பணி மேற்கொள்ள வேண்டும்.

- அருகிலுள்ள பட்டாதாரர்களுக்கு எவ்வித இடையூறுமின்றி / அருகிலுள்ள பட்டா மற்றும் அரசு புலங்களில் எவ்வித ஆக்கிரமிப்பும் இன்றி குவாரிப்பணி மேற்கொள்ள வேண்டும்.

- கற்குவாரி குத்தகை உரிமம் பெறுவதற்கு முன்பாக ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை அவர்களின் கடிதம் ந.க.எண்.2921/எம்.எம்.4/2016, நாள்:09.03.2021-ல் தெரிவிக்கப் பட்டுள்ளவாறு குத்தகைதாரர் குவாரிபணி தொடங்குவதற்கு முன்னர் உரிமம் வழங்கப்பட்ட எல்லைகளை DGPS முறையில் அளவீடு செய்து குறுந்தட்டில் பதிவு செய்து அறிக்கையாக சமர்ப்பிக்க வேண்டும்.

உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
தேனி.

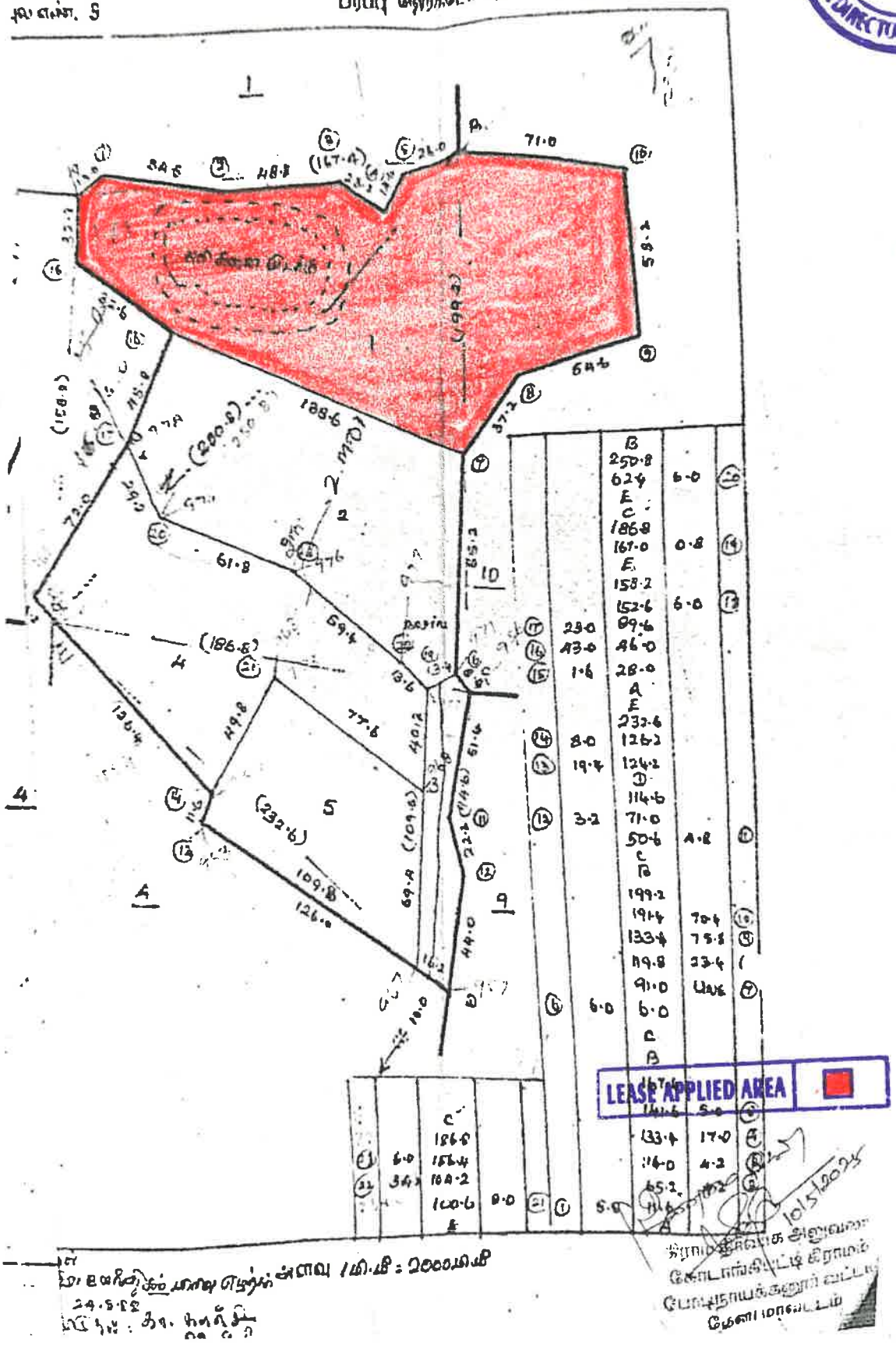
ANNEXURE II

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (GEOLOGY), THENI

கனிமம்

கிராமம் { வட்டம் S
மாவட்டம் தேனி

பரப்பு தொகுதி 4.10.0 ஹெ.



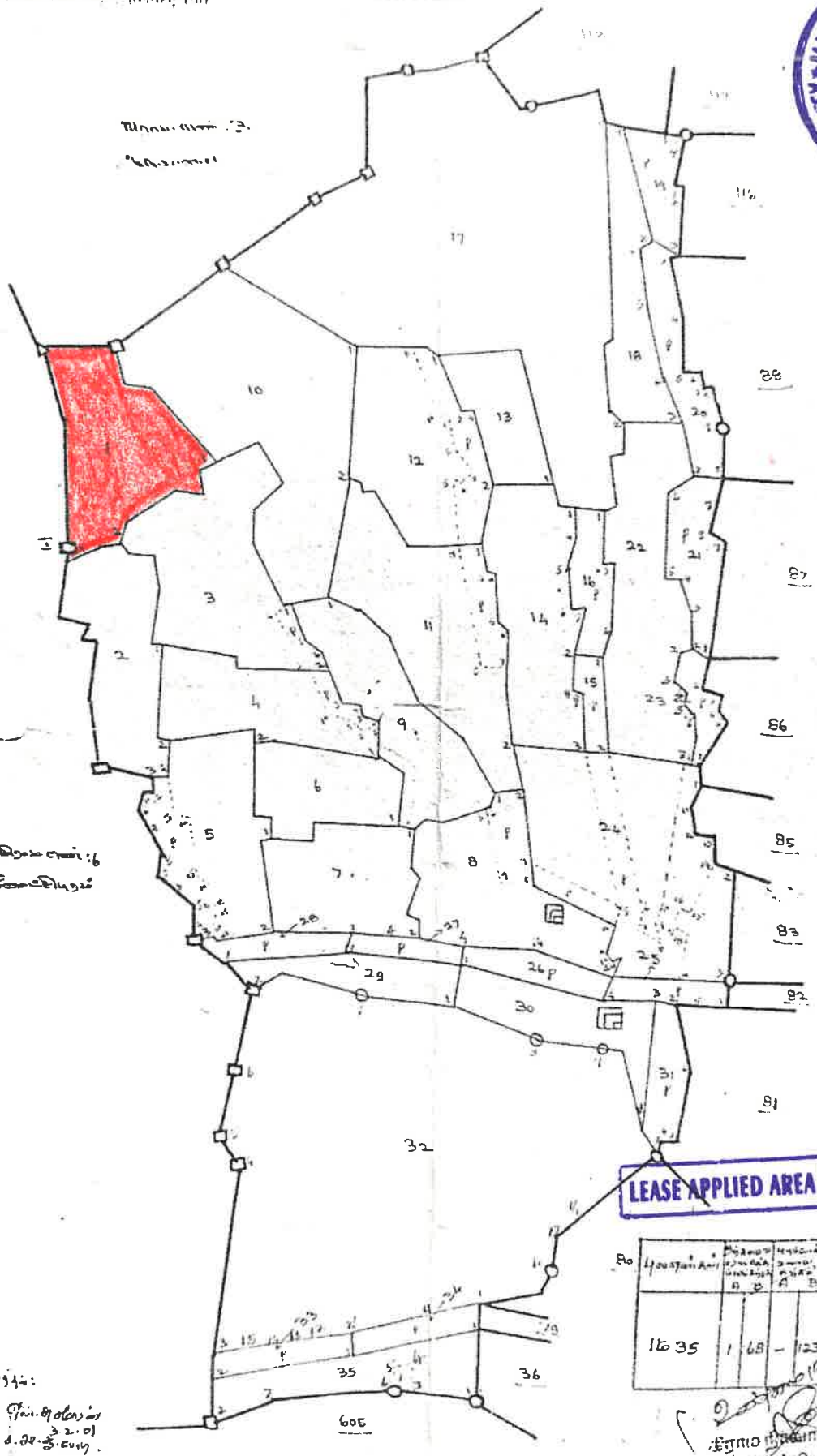
1 மீ உயரத்தில் காண எதுங்ஸ்வே 1மி.மீ = 2000மிமீ

24.5.22

10/5/2022

ANNEXURE III

MINING PLAN APPROVED
ASST. DIRECTOR GEOLOGY & MINING, THENI
ASST. DIRECTOR (GRM), THENI



1635	1	68	–	123	1.79

1434 ஆம் பகுதியில் கிராமக் கணக்கு

மாவட்டம் வட்டம்

நில வரித் திட்டத்தின்படி புலன்களின் விபரம்.					கைப்பற்று தாரருடைய பெயரும் எண்ணும் அல்லது அறுபோக தாரருடைய பெயர்	சாகுபடி பருவத்தின் பெயர்.	முதல் போகம்.				
நில அளவை எண்.	உட்பிரிவு எண்.	பரப்பு.	தீர்வை.	ஈர போகம் அல்லது இரு போகம்.		நிலத்தின் எந்த பருதி பருவ சாகுபடியாளரால் பயிரிடப்பட்டுள்ளதாக.	எந்த மாதத்தில் பயிர் செய்யப்பட்டது அறுவடை செய்யப்பட்டது.	பயிரின் பெயர்.	பயிரை / அறுவடை யான பரப்பு.	உண்மையான பாய்ச்சல் ஆதாரம்.	விளைச்சல் அளவு விழுக்காடு.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
3	-	1.47.0									

10/5/25

ஊராட்சி உதவியாளர்
கோடாங்கிபட்டி கிராமம்
பெரியகுளம் ஒன்றியம்
தேனி மாவட்டம்

380/25-R.F. III-A-10-50,00,000 Cps.-GBP.-Mdu.-7,-2017.

ஏன் 2

கிராமத்தில் வருடவாரி புலவாரி கைப்பற்று சாகுபடி அடங்கல் கணக்கு

இரண்டாம் போகம்.							
எந்த மாதத்தில் பயிர் செய்யப்பட்டது அறுவடை செய்யப்பட்டது.	பயிரின் பெயர்.	பயிரை / அறுவடையான பரப்பு.	உண்மையான பாய்ச்சல் ஆதாரம்.	விளைச்சல் அளவு விழுக்காடு.	வரிசை அறுவைகளின் குறிப்புரை :- (1) புலன்களில் பருதிகளில் பட்டும் பயிரிடப்பட்டுள்ள விபரங்கள் அமைந்தும் இவ்வாறு (2) வகைப்பாடுகளின் தன்மையும் (3) முக்கனியும் மாதத்தில் பயிர்கள் (4) பயிரிடப்பட்டுள்ள பருதிகளுக்கு பிரதேசங்களுக்கு நீர் பாய்ச்சப்பட்ட விபரங்கள்.	கீழ்க்கண்டவகையில் பயிரிடப்படாத உள்ள நிலத்தின் தன்மை மற்றும் பயிரின் விவரங்கள் ஒவ்வொரு நில அளவை எண் அல்லது அதன் பருதியில். (அ) வனம். (ஆ) பயனற்ற பயிர் செய்ய இயலாத நிலம். (இ) வியாபாரம் மற்றும் இதர காரியங்களுக்கு மான் படுத்தப் படும் நிலம். (ஈ) பயிரிடத்தக்க தரிசு (உ) நிலையான புல் தரைகளும் மற்றும் இதர மேய்ச்சல் நிலங்களும். (ஊ) விதைக்கப்பட்ட நிகர பயிர் செய்கப்படாத மலைகள் பயிர்களும் நேரப்பகுதியும். (எ) தடபத தரிசுகள் (ஏ) இதர தரிசு நிலங்கள்	பயிர் சாகுபடி குறிப்புகள்.
(13)	(14)	(15)	(16)	(17)	(18)	(18அ)	(19)
					மானவு		

MINING PLAN APPROVED ★ ASST. DIRECTOR (GEOLOGY & MINING), THENI ★ ASST. DIRECTOR GEOLOGY & MINING, THENI

ANNEXURE IV

ANNEXURE 14

மதுரை மாவட்டம், உத்தமபாளையம் வட்டம் சி. எண். 5. கோடாங்கிபட்டி கிராமத்தின் 'அ' பதிவேடு.

தலைப்பின் விளக்கவரிசை எண் & வரையறை.

1. [illegible]
2. [illegible]
3. நன்செய்(ந), மானாவரி (ம)
4. நன்செய்(ந), புன்செய்(பு), மானாவரி(மா), சோலை ஏற்படாத தரிசு (தி.ஏ.த.) புறம் போக்கு (பு.போ). நன்செய்யாயின் பாசன ஆதாரம். அதன் வகுப்பும்.
5. இதுபோக நன்செய்யாயின் மொத்தத் தீர்வை விகம்.
6. [illegible]
7. தரம்.
8. ஒன்றுபட்ட நன்செய் தீர்வை விகம்
9. பரப்பளவு.
10. தீர்வை.
11. பட்டா மாறுதல், மற்றும் பதிவு பெற்ற உரிமையாளரின் பெயரும்.
12. குறிப்புரை.

1	2	3	4	5	6	7	8	9	10	11	12
							ஏ. வை. சென்ஸ்.	ஏ. வை.	ரூ. வை.		
1	1	1-1	ச	ந	...	7-3	5	2 15	1 44·0	3 09	...
	2	-2	ச	பு	...	7-3	5	2 15	0 85·0	1 83	...
	3	-3	ச	ந	...	7-3	5	2 15	0 97·0	2 09	1225 கூ. கொக்கையன்.
									3 26·0	7 01	
2	1	2-1	ச	தி.ஏ.த	...	...	...	...	0 27·5	...	...
	2	-2	ச	ந	...	7-3	5	2 15	0 52·0	1 11	150 சி. கொக்கர் சாமி (1). கொ. விராமையன் (2).
	3	-3	ச	பு	...	7-3	5	2 15	0 38·5	1 26	229 க. கண்ணுசாமி.
	4	-4	ச	பு	...	7-3	5	2 15	0 09·5	1 49	2125 ச. [illegible]
	5	-5	ச	பு	...	7-3	5	2 15	0 44·5	1 12	2216 ஏ. முத்தையன்.
									2 92·0	5 48	
3	1	3-1	ச	தி.ஏ.த	...	...	...	...	1 09·0	...	...
	2	-2	ச	பு	...	7-3	6	1 24	1 05·0	1 30	2217 [illegible]

[illegible]

கிராம நிர்வாக அலுவலர்
கோடாங்கிபட்டி கிராமம்
போடிநாயக்கனூர் வட்டம்
தேனி மாவட்டம்

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**
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/2590	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2590	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	69.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	32.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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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/25/2591	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2591	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	62.6	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	29.4	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2592	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2592	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	62.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	29.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2593	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2593	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	60.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2594	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2594	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	53.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2595	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2595	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	52.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2596	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2596	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	58.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2597	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2597	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	48.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2598	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2598	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	51.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2599	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2599	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	51.5	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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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/25/2600	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2600	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	59.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2601	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2601	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	57.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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
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TEST REPORT

Report No.	SARL/25/2602	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2602	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	48.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2603	Report Date.	17.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2603	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	58.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2618	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2618	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	60.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2619	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2619	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	49.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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
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TEST REPORT

Report No.	SARL/25/2620	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2620	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	57.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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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/25/2621	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2621	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	54.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2622	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2622	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	43.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	20.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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For Shrient Analytical and Research Labs Pvt. Ltd

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Shrient Analytical & Research Labs Pvt. Ltd Chennai - 45

Authorized Signatory
S. BALAMURUGAN
Asst.Technical Manager

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TEST REPORT

Report No.	SARL/25/2623	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2623	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	53.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2624	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2624	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	63.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	29.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2625	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2625	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	41.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	19.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2626	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2626	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	56.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2627	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2627	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	46.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2628	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2628	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	70.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	34.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	11.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2629	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2629	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	49.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2630	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2630	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	67.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	31.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2631	Report Date.	24.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2631	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	51.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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For Shrient Analytical and Research Labs Pvt. Ltd

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Shrient Analytical & Research Labs Pvt. Ltd Chennai - 45

Authorized Signatory
S. BALAMURUGAN
Asst.Technical Manager

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TEST REPORT

Report No.	SARL/25/2646	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2646	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	52.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2647	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2647	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	64.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	30.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2648	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2648	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	60.6	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	28.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2649	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2649	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	57.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2650	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2650	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	44.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	20.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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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/25/2651	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2651	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	54.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2652	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2652	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	49.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2653	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2653	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	49.6	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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Phone Number +91 82208 36377 Email: -**info@shrientanalytical.com**
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TEST REPORT

Report No.	SARL/25/2654	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2654	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	63.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	29.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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Shrient Analytical & Research Labs Pvt. Ltd Chennai - 45

Authorized Signatory
S. BALAMURUGAN
Asst.Technical Manager

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TEST REPORT

Report No.	SARL/25/2655	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2655	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	40.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	19.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	5.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2656	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2656	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	50.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2657	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2657	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	56.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2658	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2658	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	44.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2659	Report Date.	31.03.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2659	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	54.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2674	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2674	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	48.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2675	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2675	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	42.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	19.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2676	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2676	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	58.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2677	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2677	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	50.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2678	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2678	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	44.5	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	20.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2679	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2679	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	55.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2680	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2680	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	45.6	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2681	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2681	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	42.5	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	19.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2682	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2682	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	50.5	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2683	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2683	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	53.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2684	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2684	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	72.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	33.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	11.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2685	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2685	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	53.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2686	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2686	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	66.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	30.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2687	Report Date.	07.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2687	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	57.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2702	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2702	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	51.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2703	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2703	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	61.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	28.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2704	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2704	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	59.5	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2705	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2705	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	54.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2706	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2706	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	46.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2707	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2707	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	55.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2708	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2708	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	49.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2709	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2709	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	50.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2710	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2710	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	49.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2711	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2711	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	52.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2712	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2712	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	57.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2713	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2713	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	53.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2714	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2714	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	48.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2715	Report Date.	14.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2715	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	53.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2730	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2730	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	47.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2731	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2731	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	49.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2732	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2732	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	60.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	28.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2733	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2733	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	50.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2734	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2734	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	45.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2735	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2735	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	56.5	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2736	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2736	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	51.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2737	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2737	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	40.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	18.4	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2738	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2738	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	46.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2739	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2739	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	44.6	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	20.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2740	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2740	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	70.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	32.4	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2741	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2741	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	49.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2742	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2742	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	72.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	33.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	11.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2743	Report Date.	21.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2743	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	61.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	29.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2758	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2758	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	67.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	31.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2759	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2759	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	50.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2760	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2760	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	62.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	29.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2761	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2761	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	50.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2762	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2762	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	60.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2763	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2763	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	41.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	19.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2764	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2764	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	57.5	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2765	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2765	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	50.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.4	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2766	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2766	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	47.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2767	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2767	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	41.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	19.4	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	5.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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For Shrient Analytical and Research Labs Pvt. Ltd

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Asst.Technical Manager

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TEST REPORT

Report No.	SARL/25/2768	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2768	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	51.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2769	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2769	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	52.6	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2770	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2770	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	47.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2771	Report Date.	28.04.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2771	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	52.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2786	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2786	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	60.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	28.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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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/25/2787	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2787	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	42.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	20.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2788	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2788	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	54.5	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2789	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2789	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	56.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2790	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2790	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	49.6	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2791	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2791	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	51.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2792	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2792	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	44.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	20.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2793	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2793	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	39.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	18.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2794	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2794	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	52.6	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2795	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2795	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	46.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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For Shrient Analytical and Research Labs Pvt. Ltd

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Shrient Analytical & Research Labs Pvt. Ltd Chennai - 45

Authorized Signatory
S. BALAMURUGAN
Asst.Technical Manager

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TEST REPORT

Report No.	SARL/25/2796	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2796	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	69.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	32.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2797	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2797	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	63.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	29.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2798	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2798	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	65.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	30.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2799	Report Date.	05.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2799	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	69.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	31.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2814	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2814	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	56.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2815	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2815	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	49.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/2816	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2816	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	58.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2817	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2817	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	55.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2818	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2818	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	47.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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For Shrient Analytical and Research Labs Pvt. Ltd

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Shrient Analytical & Research Labs Pvt. Ltd Chennai - 45.

Authorized Signatory
S. BALAMURUGAN
Asst.Technical Manager

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TEST REPORT

Report No.	SARL/25/2819	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2819	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	55.6	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2820	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2820	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	51.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2821	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2821	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	52.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2822	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2822	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	48.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2823	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2823	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	46.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2824	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2824	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	58.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.4	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2825	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2825	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	53.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2826	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2826	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	43.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	20.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2827	Report Date.	12.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2827	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	55.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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For Shrient Analytical and Research Labs Pvt. Ltd

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Shrient Analytical & Research Labs Pvt. Ltd. Chennai - 45.

Authorized Signatory

S. BALAMURUGAN
Asst.Technical Manager

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TEST REPORT

Report No.	SARL/25/2842	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2842	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	59.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2843	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2843	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	50.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2844	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2844	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	56.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.4	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2845	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2845	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	54.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.0	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2846	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2846	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	46.6	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2847	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2847	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	52.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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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/25/2848	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2848	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	58.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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
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TEST REPORT

Report No.	SARL/25/2849	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2849	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	48.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.4	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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Phone Number +91 82208 36377 Email: -**info@shrientanalytical.com**
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/2850	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2850	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	54.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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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/25/2851	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2851	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	43.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	20.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2852	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2852	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	57.6	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2853	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2853	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	65.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	30.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2854	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2854	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	69.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	32.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2855	Report Date.	19.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2855	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	60.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	28.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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X`TEST REPORT

Report No.	SARL/25/2870	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2870	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	72.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	34.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	8.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	12.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2871	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2871	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	50.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2872	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2872	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	70.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	32.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2873	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2873	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	52.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.8	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.36	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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For Shrient Analytical and Research Labs Pvt. Ltd

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Shrient Analytical & Research Labs Pvt Ltd Chennai - 45

Authorized Signatory
S. BALAMURUGAN
Asst.Technical Manager

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TEST REPORT

Report No.	SARL/25/2874	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2874	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	59.6	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.4	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2875	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2875	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	45.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	20.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2876	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2876	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	56.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2877	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2877	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	51.5	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2878	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2878	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	64.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	29.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	7.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2879	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2879	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	41.8	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	19.6	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	5.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2880	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2880	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	54.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2881	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2881	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	57.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.4	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2882	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2882	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	45.4	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.3	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2883	Report Date.	26.05.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2883	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	52.5	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	4.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/2899	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2899	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	51.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	23.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2900	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2900	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	51.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2901	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2901	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	59.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	28.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2902	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kodangipatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2902	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	59.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	27.2	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2903	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Kamarajapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2903	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	47.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	22.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2904	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Vishvaspuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2904	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	56.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.7	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2905	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2905	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	53.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.8	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.3	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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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Shrient Analytical & Research Labs Pvt. Ltd ★ Chennai - 45

Authorized Signatory

S. BALAMURUGAN
Asst.Technical Manager

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Please Contact:
For any Technical Issues&Complaints: technical@shrientanalytical.com

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Phone Number +91 82208 36377 Email: -**info@shrientanalytical.com**
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TEST REPORT

Report No.	SARL/25/2906	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2906	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	43.2	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	19.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.1	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	6.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2907	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Bodinayakanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2907	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	47.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	21.9	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.5	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2908	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Boothipuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2908	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	54.3	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.7	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2909	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2909	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	55.1	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	25.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	5.9	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2910	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2910	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	53.9	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	24.1	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.2	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2911	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2911	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	61.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	28.5	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.4	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2912	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-Durairajapuram Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2912	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_{10})	IS:5182: Part 23:2006	$\mu g/m^3$	58.7	100
2	Particulate Matter less than 2.5micron size ($PM_{2.5}$)	IS 5182 (Part 24):2019	$\mu g/m^3$	26.4	60
3	Sulphur dioxide (SO_2)	IS:5182: Part 02:2001	$\mu g/m^3$	6.6	80
4	Nitrogen Dioxide (NO_2)	IS:5182: Part 06:2006	$\mu g/m^3$	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m^3	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/25/2913	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW 1 - Within Mine Lease area

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2913	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 24th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 ˚C	APHA 24th Edition 4500 – H+ B: 2023	-	6.92	6.50-8.50
4	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µS/cm)	788.2	-
B.	**Chemical parameters**				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	472	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	283	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	60.8	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	31.9	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	152	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	131	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	194	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	97.5	1000

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TEST REPORT

Report No.	SARL/25/2913

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 (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	71.8	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL (D.L - 0.01)	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	2.79	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.47	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).

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For Shrient Analytical and Research Labs Pvt. Ltd

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Shrient Analytical & Research Labs Pvt. Ltd Chennai - 45.

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TEST REPORT

Report No.	SARL/25/2914	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW2- Durairajapuram Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2914	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 24th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 ˚C	APHA 24th Edition 4500 – H+ B: 2023	-	7.22	6.50-8.50
4	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µS/cm)	1456	-
B.	**Chemical parameters**				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	908	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	516	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	61.5	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	263	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	253	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	259	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	272	1000

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TEST REPORT

Report No.	SARL/25/2914

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 (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	169	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.04	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	3.84	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.52	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

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Authorized Signatory
S. BALAMURUGAN
Asst.Technical Manager

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TEST REPORT

Report No.	SARL/25/2915	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW3- Bodinayakanur Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2915	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 24th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 ˚C	APHA 24th Edition 4500 – H+ B: 2023	-	7.27	6.50-8.50
4	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µS/cm)	1124	-
B.	**Chemical parameters**				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	696	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	393	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	96.8	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	36.2	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	242	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	151	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	259	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	214	1000

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TEST REPORT

Report No.	SARL/25/2915

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 (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	91.3	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.06	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	3.04	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.49	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).

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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/25/2916	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW4- Boothipuram Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2916	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 24th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 ˚C	APHA 24th Edition 4500 – H+ B: 2023	-	7.74	6.50-8.50
4	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µS/cm)	686.4	-
B.	**Chemical parameters**				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	420	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	204	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	47.2	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	20.6	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	118	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	86.0	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	172	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	168	1000

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TEST REPORT

Report No.	SARL/25/2916

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 (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	56.9	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.03	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	2.67	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.35	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

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S. BALAMURUGAN
Asst.Technical Manager

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TEST REPORT

Report No.	SARL/25/2917	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW5 - Kodangipatti Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2917	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 24th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 ˚C	APHA 24th Edition 4500 – H+ B: 2023	-	7.49	6.50-8.50
4	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µS/cm)	1048	-
B.	**Chemical parameters**				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	639	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	268	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	67.6	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	23.8	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	169	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	99.0	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	218	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	185	1000

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TEST REPORT

Report No.	SARL/25/2917

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 (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	123	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.05	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	3.67	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.54	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).

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TEST REPORT

Report No.	SARL/25/2918	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW6 - Kamarajapuram

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2918	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 24th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 ˚C	APHA 24th Edition 4500 – H+ B: 2023	-	7.66	6.50-8.50
4	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µS/cm)	972.2	-
B.	**Chemical parameters**				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	583	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	232	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	72.4	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	12.2	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	181	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	51.0	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	192	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	178	1000

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TEST REPORT

Report No.	SARL/25/2918

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 (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	96.3	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.04	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	3.41	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.49	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).

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For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/2919	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW7 - Vishvaspuram

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2919	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 24th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 ˚C	APHA 24th Edition 4500 – H+ B: 2023	-	7.88	6.50-8.50
4	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µS/cm)	1132	-
B.	**Chemical parameters**				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	691	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	282	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	25.9	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	108	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	204	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	198	1000

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TEST REPORT

Report No.	SARL/25/2919

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 (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	129	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.07	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	3.78	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.55	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).

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For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/2920	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	SW 1-Kottagudi River (Up Stream)

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2920	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
A.	**Physical parameters**			
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable
2	Turbidity	APHA 24th Edition 2130 B: 2023	NTU	<1.0
3	pH at 25 ˚C	APHA 24th Edition 4500 – H+ B: 2023	-	7.92
4	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µS/cm)	145.6
B.	**Chemical parameters**			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	90
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	28.2
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	7.56
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	2.23
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	18.9
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	9.3
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	35.6
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	23.5

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TEST REPORT

Report No.	SARL/25/2920

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	21.3
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL (D.L - 0.01)
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	2.14
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.45
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^{o}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 – 2.0)
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	6.2

Remarks: 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/25/2921	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	SW 2-Kottagudi River (Down Stream)

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2921	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
A.	**Physical parameters**			
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable
2	Turbidity	APHA 24th Edition 2130 B: 2023	NTU	<1.0
3	pH at 25 ˚C	APHA 24th Edition 4500 – H+ B: 2023	-	7.85
4	Electrical Conductivity	APHA 24th Edition 2510 B: 2023	(µS/cm)	120.2
B.	**Chemical parameters**			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	72
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	21.1
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	4.68
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	2.26
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	11.7
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	9.4
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	26.3
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	25.1

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TEST REPORT

Report No.	SARL/25/2921

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	12.6
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.04
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	1.84
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.41
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^{o}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 – 2.0)
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	6.4

Remarks: 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/25/2922	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2922	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	-	6.46
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	46.92
3	Dry matter content	IS 15106: 2002	%	94.18
4	Water Content	IS 15106: 2002	%	5.82
5	Organic Matter	IS 2720: Part 22: 1972	%	1.04
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	118
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty loam
8	Grain Size Distribution i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	29.48
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	52.08
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	18.44
9	Phosphorus as P	IS 10158: 1982	mg/kg	2.32
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	532
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	389
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	%	19.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	42

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/25/2923	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	SOIL
Sample Mark	S2-Durairajapuram Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2923	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	-	6.82
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	90.41
3	Dry matter content	IS 15106: 2002	%	94.68
4	Water Content	IS 15106: 2002	%	5.32
5	Organic Matter	IS 2720: Part 22: 1972	%	1.48
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	96.6
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Sandy loam
8	Grain Size Distribution i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	53.89
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	26.82
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	19.29
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.68
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	466
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	274
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	%	20.2
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	44

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/25/2924	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	SOIL
Sample Mark	S3-Bodinayakanur Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2924	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	-	6.71
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	69.4
3	Dry matter content	IS 15106: 2002	%	96.93
4	Water Content	IS 15106: 2002	%	3.07
5	Organic Matter	IS 2720: Part 22: 1972	%	1.29
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	189
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silt loam
8	Grain Size Distribution i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	32.58
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	50.34
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	17.08
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.89
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	602
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	354
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	%	19.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	40

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/25/2925	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	SOIL
Sample Mark	S4-Boothipuram Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2925	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	-	7.02
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	112.3
3	Dry matter content	IS 15106: 2002	%	97.18
4	Water Content	IS 15106: 2002	%	2.82
5	Organic Matter	IS 2720: Part 22: 1972	%	1.57
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	139
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silt loam
8	Grain Size Distribution i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	31.67
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	50.42
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	17.91
9	Phosphorus as P	IS 10158: 1982	mg/kg	2.49
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	669
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	378
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	%	18.9
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	42

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/25/2926	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	SOIL
Sample Mark	S5-Kodangipatti Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2926	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	-	6.83
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	59.24
3	Dry matter content	IS 15106: 2002	%	95.44
4	Water Content	IS 15106: 2002	%	4.56
5	Organic Matter	IS 2720: Part 22: 1972	%	1.62
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	159
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silt loam
8	Grain Size Distribution i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	32.18
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	50.75
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	17.07
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.82
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	704
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	418
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	%	20.1
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	40

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

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Shrient Analytical & Research Labs Pvt. Ltd Chennai - 45.

Authorized Signatory

S. BALAMURUGAN
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Shrient Analytical and Research Labs Pvt. Ltd

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Phone Number +91 82208 36377 Email: - **info@shrientanalytical.com**
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TEST REPORT

Report No.	SARL/25/2927	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	SOIL
Sample Mark	S6-Kamarajapuram

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2927	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	-	6.59
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	87.18
3	Dry matter content	IS 15106: 2002	%	96.39
4	Water Content	IS 15106: 2002	%	3.61
5	Organic Matter	IS 2720: Part 22: 1972	%	1.89
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	118
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silt loam
8	Grain Size Distribution i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	31.82
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	50.38
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	17.80
9	Phosphorus as P	IS 10158: 1982	mg/kg	2.08
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	624
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	356
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	%	19.7
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	42

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

Verified

Shrient Analytical & Research Labs Pvt. Ltd Chennai - 45.

Authorized Signatory

S. BALAMURUGAN
Asst.Technical Manager

*****END OF THE REPORT*****

Please Contact:
For any Technical Issues & Complaints: technical@shrientanalytical.com

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TEST REPORT

Report No.	SARL/25/2928	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni District, Tamil Nadu State.
Sample Description	SOIL
Sample Mark	S7-Vishvaspuram

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2928	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	-	7.14
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	127.5
3	Dry matter content	IS 15106: 2002	%	97.36
4	Water Content	IS 15106: 2002	%	2.64
5	Organic Matter	IS 2720: Part 22: 1972	%	1.41
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	152
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silt loam
8	Grain Size Distribution i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	31.39
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	50.68
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	17.93
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.89
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	718
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	419
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	%	20.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	38

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

Verified

Shrient Analytical & Research Labs Pvt. Ltd Chennai - 45.

Authorized Signatory

S. BALAMURUGAN
Asst.Technical Manager

END OF THE REPORT

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TEST REPORT

Report No.	SARL/25/2929	Report Date.	02.06.2025

Customer Name & Address	Rough Stone Quarry Of Thiru.M.Suriyachelvan, At S.F.No. 3/1 Over An Extent Of 1.69.00 Hectares At Kodangipatti Village, Bodinaickanur Taluk, Theni 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-2929	Date of Monitoring	24.03.2025/ 25.03.2025
Sample Collected by	LABORATORY		

Time in hrs	N1	N2	N3	N4	N5	N6	N7
06.00	41.7	41.1	38.8	41.7	42.6	40.2	49.3
07.00	43.5	42.6	40.2	39.4	45.2	43.6	51.6
08.00	42.5	44.4	43.3	42.7	43.6	42.7	50.2
09.00	45.3	47.8	45.3	44.1	47.2	47.1	49.9
10.00	47.3	49.7	47.7	51.1	49.3	45.5	48.8
11.00	55.2	51.4	49.6	50.2	52.1	44.3	48.1
12.00	52.7	52.3	53.9	46.9	53.3	43.1	45.9
13.00	51.9	54.1	55.4	47.8	49.6	47.6	48.2
14.00	54.1	55.4	53.1	53.4	47.2	44.8	53.8
15.00	49.8	52.8	54.3	53.2	45.1	48.2	47.7
16.00	49.1	58.3	51.2	51.8	49.2	46.1	49.6
17.00	46.6	56.4	50.4	53.2	48.2	45.1	48.9
18.00	43.4	51.2	51.2	49.9	46.3	48.3	50.3
19.00	41.4	50.1	45.1	46.3	46.9	47.4	52.1
20.00	40.7	49.2	41.2	45.7	44.3	40.3	46.6
21.00	39.9	46.1	40.2	43.8	42.6	39.2	47.2
22.00	40.5	43.2	39.6	45.3	43.2	38.1	50.9
23.00	38.9	39.7	39.3	43.4	41.6	36.4	40.5
24.00	39.4	38.6	38.9	41.2	40.7	37.9	40.1
01.00	37.9	37.8	37.9	42.9	42.1	36.6	38.4
02.00	38.6	39.2	37.6	41.7	41.3	35.4	38.6
03.00	40.8	36.9	38.1	40.6	41.4	37.8	37.7
04.00	38.8	39.8	37.8	39.2	39.9	38.6	38.9
05.00	40.7	40.8	39.2	39.3	39.6	40.2	38.4

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TEST REPORT

Report No.	SARL/25/2929

Report Date.	02.06.2025

	N1	N2	N3	N4	N5	N6	N7
DAY EQUIVALENT	**49.3**	**52.4**	**50.3**	**49.4**	**48.2**	**45.4**	**49.8**
NIGHT EQUIVALENT	**39.6**	**39.9**	**38.6**	**42.2**	**41.4**	**37.9**	**43.5**
DAY & NIGHT EQUIVALENT	**47.7**	**50.8**	**48.7**	**48.0**	**46.8**	**44.0**	**48.5**

Remarks:

LOCATIONS:

N1-Within Mine Lease Area
N2-Durairajapuram Village
N3-Bodinayakanur Village
N4-Boothipuram Village
N5-Kodangipatti Village
N6-Kamarajapuram
N7-Vishvaspuram

For Shrient Analytical and Research Labs Pvt. Ltd

Verified

Shrient Analytical & Research Labs Pvt. Ltd. Chennai - 45.

Authorized Signatory
S. BALAMURUGAN
Asst.Technical Manager

*****END OF THE REPORT*****

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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

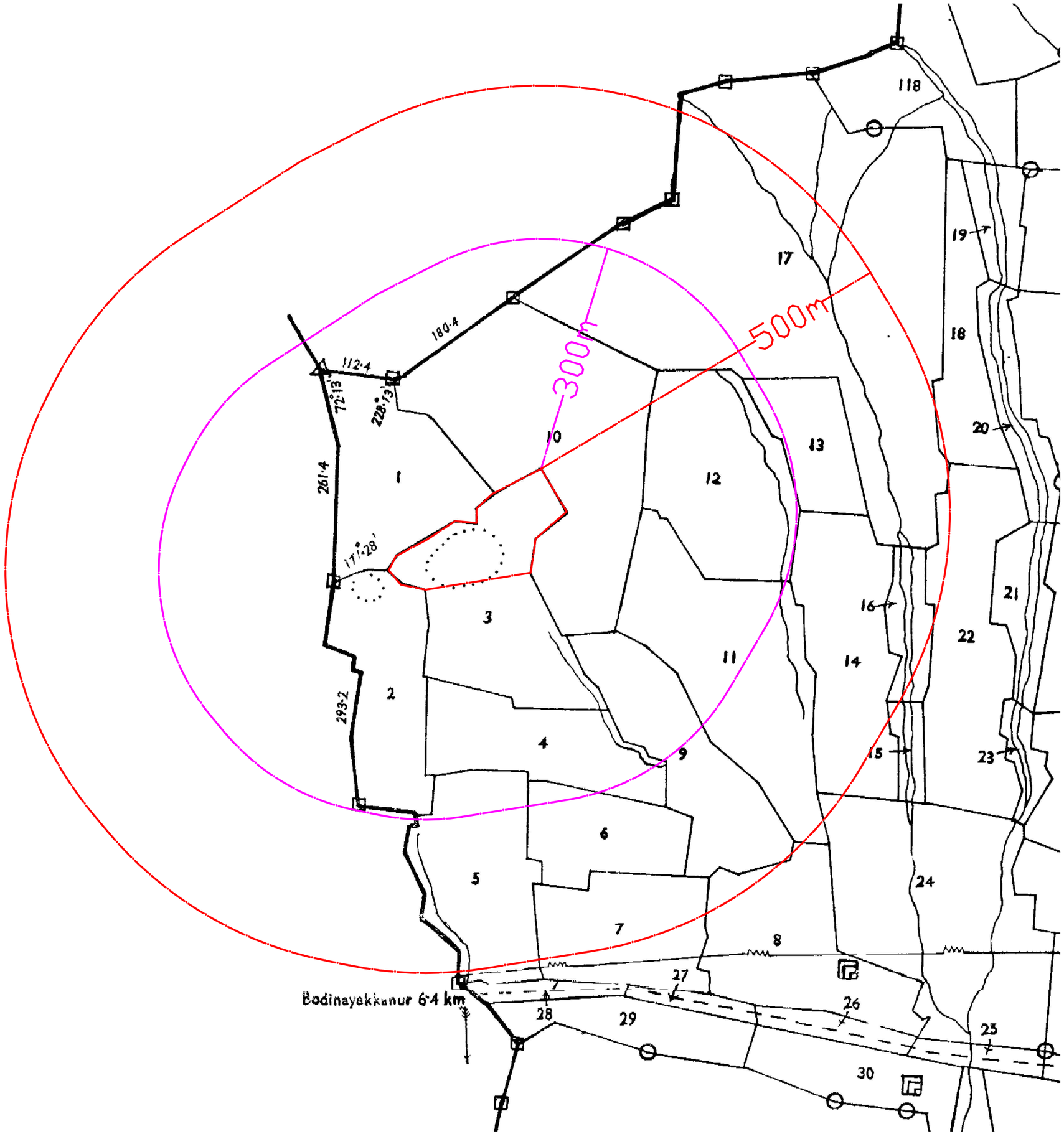
This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: SHRIENT ANALYTICAL AND RESEARCH LABS PRIVATE LIMITED

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

ANNEXURE-9


300m
500m
180·4
112·4
72°13'
228°13'
261·4
171°28'
293·2
1
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23
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25
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27
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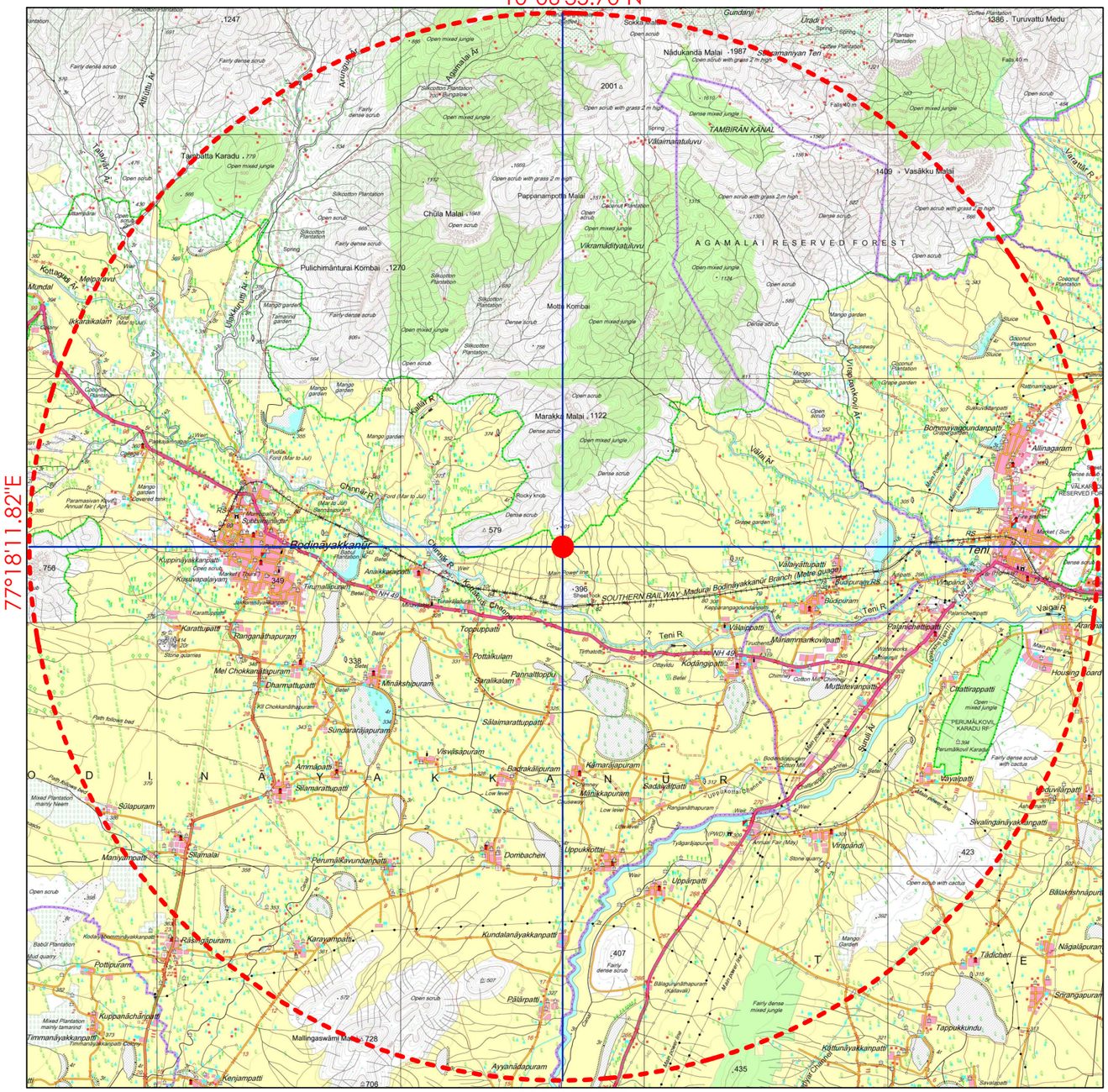
29
30
118
Bodinayekkanur 6·4 km

ANNEXURE-10

PLATE NO-I C

DATE OF SURVEY : 04.03.2025



N

APPLICANT:

THIRU.M.SURIYACHELVAN,
S/o.MURUGESAN,
No.5-3-79-1, 3rd STREET,
DURAIRAJAPURAM, ANAIKARAIPATTI,
BODINAICKANUR TALUK,
THENI DISTRICT - 625582.

QUARRY LEASE APPLIED AREA:

S.F.NO : 3/1
EXTENT : 1.69.00 Ha,
VILLAGE : KODANGIPATTI,
TALUK : BODINAICKANUR,
DISTRICT : THENI.

INDEX

TOPO SHEET NO : 58 G/05

LATITUDE : 10°00'45.29"N to 10°00'48.77"N

LONGITUDE : 77°24'05.46"E to 77°24'13.45"E

Q.LEASE APPLIED AREA

10KM RADIUS

CONVENTIONAL SYMBOLS

Express highway: with toll; with bridge; with distance stone
Roads, metalled: according to importance
Roads, double carriageway: according to importance
Unmetalled road. Cart-track. Pack-track with pass. Foot-path
Streams: with track in bed; undefined. Canal
Dams: masonry or rock-filled; earthwork. Weir
River: dry with water channel; with island & rocks. Tidal river
Submerged rocks. Shoal. Swamp. Reeds
Wells: lined, unlined. Tube-well. Spring. Tanks: perennial; dry
Embankments: road or rail; tank. Broken ground
Railways, broad gauge: double; single with station; under constn
Railways, other gauges: double; single with distance stone; do.
Mineral line or tramway. Kiln. Cutting with tunnel
Contours with sub-features. Rocky slopes. Cliffs
Sand features (1)flat. (2)sand-hills(permanent). (3)dunes(shifting)
Towns or Villages: inhabited; deserted. Fort
Huts: permanent; temporary. Tower. Antiquities
Temple. Chhatri. Church. Mosque. Idgāh. Tomb. Graves
Lighthouse. Lightship. Buoys: lighted; unlighted. Anchorage
Mine. Vine-on trellis. Grass. Scrub
Palms: palmyra; other. Plantain. Conifer. Bamboo. Other trees
Areas: cultivated; wooded. Surveyed tree
Boundary, international
state: demarcated; undemarcated
district; subdivision; tahsil or tāluk; forest
Boundary pillars: surveyed; unlocated
Heights, triangulated: station; point; approximate
Bench-mark: geodetic; tertiary; canal
Post office. Telegraph office. Overhead tank
Rest house or Inspection bungalow. Circuit house. Police station
Camping ground. Forest: reserved; protected
Spaced names: administrative; locality or tribal
Hospital. Dispensary. Veterinary / Hospital / Dispensary
Aerodrome. Helipad. Tourist site
Power line: with pylons surveyed; with poles unsurveyed

TOPO SKETCH OF QUARRY LEASE APPLIED AREA FOR 10Km RADIUS

SCALE– 1:100000

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

ANNEXURE-11

அனுப்புநர் :-

தலைமை ஆசிரியர்,
அரசு ஆதிந நடுநிலைப்பள்ளி,
போ. துரைராஜபுரம்.

பெறுநர் :-

திரு. ஆரியச் செல்வன்,
S/o முருகேசன்,
NO. 5-3-79-1 3-வது தெரு,
துரைராஜபுரம். 625582
அணைக்கரைப்பட்டி. அஞ்சல்.
போடி.(TK) தேனி.(Dt)

மதிப்பிற்குரிய ஐயா,

வணக்கம். அரசு ஆதிந. நடுநிலைப்பள்ளி, போ. துரைராஜபுரத்தில் தற்பொழுது 85 மாணவ மாணவிகள் கல்வி பயின்று வருகின்றனர். பள்ளி வகுப்பறையின் கதவு, ஜன்னல், மற்றும் மேற்கூரையானது பழுதடைந்து உள்ளது. இதனை சரிசெய்து மேற்கூரையில் தடை ஏதும் பதித்துத் தருமாறும், பள்ளி வகுப்பறைகளில் பீரோ, சேர் பற்றாக்குறையாக உள்ளது. இதனை சரிசெய்து தருமாறும், இவரின் மதிப்பு தோராயமாக 2,50,000 ஆகும் என்பதைத் தெரிவித்துக் கொள்கிறேன். பள்ளியின் வளர்ச்சிக்காகவும், மாணவ மாணவிகளின் கல்வி வளர்ச்சிக்காகவும் இதனை செய்து தருமாறு கேட்டுக் கொள்கிறேன்.

நன்றி!

இப்படிக்கு

தலைமை ஆசிரியர்
அரசு (ஆ.தி.ந) நடுநிலைப்பள்ளி
துரைராஜபுரம், போ. மீனாட்சிபுரம்
போடி வட்டம், தேனி மாவட்டம்