

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

(Public Hearing Upgraded after Terms of Reference (ToR) as per the provisions of
EIA Notification 2006 & amendments thereof)

APPROVED TOR VIDE TOR IDENTIFICATION No. TO25B0108TN5982149N (FILE NO. 12211) DATED: 03.07.2025

PROPOSED QUARRY LEASE DETAILS	
SURVEY NOS	124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B
VILLAGE	PADALUR (EAST)
TALUK	ALATHUR
DISTRICT	PERAMBALUR
EXTENT	2.75.0 Ha
CLUSTER EXTENT	5.75.0 Ha
MINEABLE RESERVES (upto 52m BGL)	ROUGH STONE : 4,67,550m ³ GRAVEL : 43,164m ³
PROPOSED PRODUCTION QUANTITY FOR FIRST FIVE YEARS (upto 47m BGL)	ROUGH STONE : 2,65,305m ³ GRAVEL : 43,164m ³
PROPOSED PRODUCTION QUANTITY FOR SECOND FIVE YEARS (upto 52m BGL)	ROUGH STONE : 2,02,245m ³
LAND	PATTA LAND

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

Category of the Project: B1 Cluster Mining, Total Cluster Area – 5.75.00 Ha

Baseline Monitoring Period – March 2025 – May 2025

APPLICANT

THIRU. D. BALAJI,

S/o. S. DEVENDIRAN,

NO. 25, I A S NAGAR, THIRUVERUMBUR TALUK,

TIRUCHIRAPALLI DISTRICT - 620 013.

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 Chettyapatty, Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455. NABET Accreditation No: NABET/EIA/23-26/SA 0241 Valid up to: 04.01.2026 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 up to: 29.09.2025 #416/15, Dhargas Road, Perungalathur, West Tambaram, Chennai, Tamil Nadu, India.



AUGUST 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						
3						
4						
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8						
9						
10						

ACKNOWLEDGEMENT

M/s. Global Mining Solutions, Salem is very much thankful Thiru. D. Balaji

S/o.S.Devendiran, Lessee for the confidence and trust placed on the organization for carrying out Environmental Impact Assessment (EIA) study for the proposed Rough Stone and Gravel quarry over a lease extent of 2.75.00 Ha., & Cluster extent of 5.75.00 Ha., located at Padalur (East) Village, Alathur Taluk, Perambalur 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 Padalur (East) 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 and Gravel quarry over a lease extent of 2.75.00 Ha & Cluster extent of 5.75.00 Ha., located at Padalur (East) Village, Alathur Taluk, Perambalur District, Tamil Nadu State.

For: M/s. Global Mining Solutions



Name: M.Manikandan

EIA Coordinator – Mining

UNDERTAKING

In Line with OM no. J-11013/41/2006-IA.II (1) dated 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. TO25B0108TN5982149N dated 03.07.2025 of Draft EIA/EMP report for the proposed Stone Quarry over a lease extent of 2.75.00 Ha., & Cluster extent of 5.75.00 Ha., located at Padalur (East) Village, Alathur Taluk, Perambalur District, Tamil Nadu Stat for the proposed production for first five years is 47m (Below Ground Level) 2,65,305m³ of Rough Stone, 43,164m³ of Gravel, second five years is 52m (Below Ground Level) 2,02,245m³ of Rough Stone formation from the proposed lease area and the details has been complied in the Draft EIA/EMP report is factually correct.

The EIA/EMP report has been prepared by M/s. Global Mining Solutions (GMS), Salem. GMS is a NABET accredited consultant for preparation of EIA/EMP report of Mining of Minerals (Opencast only) vide certificate No. NABET/EIA/2326/IA 0110, valid till 04.01.2026.

For: M/s. Global Mining Solutions



Name: M.Manikandan

EIA Coordinator – Mining



National Accreditation Board for Education and Training

Certificate of Accreditation

Global Mining Solutions

Plot No - 6 SF No 13/2 A2, VS City, RC Chettyapatty, Kottamettupatty, Omalur,
Salem, Tamil Nadu-636455

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

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

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

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

Valid up to
January 4, 2026



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

Issue Date
May 30, 2025

Prof (Dr) Varinder S Kanwar
CEO - NABET

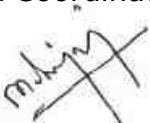
For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to QCI-NABET website.

DECLARATION BY EXPERTS

Declaration by Experts contributing to the proposed Stone Quarry over a lease extent of 2.75.00 Ha. & Cluster extent of 5.75.00 Ha in Padalur (East) Village, Alathur Taluk, Perambalur 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.

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

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. <u>Period: March 2025 to May 2025.</u>	R. Dhanal
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. <u>Period: March 2025 to May 2025</u>	K. Abirami
3	SHW	Ramados N	Assessment of waste generated from the project, suggested waste management practices. <u>Period: March 2025 to May 2025</u>	C. Ramados
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. <u>Period: March 2025 to May 2025</u>	K. Sarasvathy
5	EB	Saravanan S	Baseline data collection of related to ecology of the area. <u>Period: March 2025 to May 2025</u>	S. Saravanan
6	HG	Ravinthiran N	Hydrogeological feature of the area. Ground water depth and impact of project on ground water of the area. <u>Period: March 2025 to May 2025</u>	N. Ravinthiran
7	AQ	Srilatha Thiruveedhula	Air quality modeling utilizing the area source model.	T. Srilatha

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

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Table 1 ToR and its Compliance

S. No.	ToR Points	Compliance	Page No.
1. SEIAA Specific Conditions			
1.1.	After detailed discussions, the Authority accepts the recommendation of SEAC -I and decided to grant Terms of Reference with Public Hearing for the quantity of 4,67,550 Cu.m of Rough Stone & 43,164 m ³ of Gravel up to the depth of 52m 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-I & normal conditions & the conditions mentioned below.	Noted	
2. SEAC Conditions – Site Specific			
2.1.	1. A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of statutory personnel, appropriate environmental monitoring, good maintenance of haul roads and village/panchayat roads, authorized blasting operation etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal	The affidavit showing the Copy of the agreement forming CMC, The Organisation chart of the Committee with defining the role of the members and the 'Standard Operating Procedures' (SOP) executing the planned activities will be enclosed in Final EIA Report	
	i. Copy of the agreement forming CMC		

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

	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 PP shall furnish the consent registered land document for the proposed Extent area.	The same is enclosed as Annexure	
	3. The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report.	The evidence of boundary pillars in the site will be furnished during the final appraisal	
	4. Since water bodies are situated nearby, the PP shall carry out the hydrological study including the details of water flow pattern to determine the impacts of the mining operation in the water bodies.	The enumeration of structures is detailed in 3.5 of Chapter 3	
	5. The details of enumeration of structures including schools, colleges, primary health centres should be submitted along with the EIA report	The enumeration of structures is detailed in 3.5 of Chapter 3	
	6. 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.	The enumeration of structures is detailed in 3.5 of Chapter 3	
	7. The proponent shall furnish photographs of adequate fencing; garland drainage built with siltation tank & green belt along the	The photos of fencing and green belt is shown in Figure 2-13	86

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	periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.		
	8. The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report.	The detailed biodiversity study as a part of EIA is briefed in section 3.2 of Chapter 3	89
	9. 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 same will be furnished during final appraisal.	
	10. 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.	The comprehensive studies on the cumulative impact is detailed in Chapter 4 under section 4.3	156
	11. 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 same will be furnished during Final EIA Report	
	12. The PP should submit the detailed plan of mining as per systematic and scientific manner considering the topography of the project and the elevation deference.	Noted.	
	13. Drone video covering 360°view of the mining lease	The work is under progress and it will be furnished during final appraisal	
	14. The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic/videographic evidence along with the EIA report.	The photos of CCTV camera installed in the site will be furnished during the Final Appraisal	

3. SEAC Standard Conditions

3.1	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.	Not applicable. This is a fresh quarry.	
	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 letter detailing habitations around the proposed mining is obtained from VAO is 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	The enumeration of structures is detailed in 3.5 of Chapter 3	90

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	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.	The detailed hydrogeology report will be furnished in the final EIA report	
	5. The Project Proponent shall carry out Bio-diversity study through reputed institution and the same shall be included in the EIA report.	The same will be complied in the final EIA report	
	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 will be incorporated in the final EIA report	
	7. In case of proposed lease in an existing (or old) quarry where the benches are not formed(or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic institutions-CSIR Central Institute of Mining & Fuel Research/Dhanbad, NIRM/ Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Suratkal and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.	Not applicable. This is a fresh quarry.	

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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.	Detailed slope stability study will be carried out after commencement of the mining operation while reach mine depth after 25 m. The details of slope stability is elaborated in section 7.5 of Chapter 7	184
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	The same will be furnished during the final EIA report.	181
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.	The PP will use controlled blasting techniques with Nonel to ensure that dust generation, noise, and vibration levels remain within the prescribed limits.	
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	Not applicable. This is a fresh quarry 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?	Not applicable. This is a fresh quarry project.	
14. Quantity of minerals mined out.	Not applicable. This is a fresh quarry project.	

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	• 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).	Project coordinates superimposed in satellite imagery and given as Figure No – 2-2 in Chapter – 2. The geology and geomorphology map are provided in Figure No.3.18 and 3.19 in Chapter 3. The Soil map is provided under Figure No. 3-14, Chapter-3. The 10km Radius Index plan showing buffer zone is given in Figure No.3-5 in Chapter – 3.	65, 133,134, 119,137
16.	The PP shall carry out Drone video survey covering the cluster, green belt, fencing etc.,	This is fresh quarry. The condition 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 (80 % of the work completed). Greenbelt / Plantation is being carried out in the safety zone to enhance the vegetative growth and aesthetic in the safety zone area. In the post mining	

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		stage, an area of 0.30.0 Ha will be under greenbelt and plantation.	
	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 geological reserves - rough stone 1373400 m ³ . The mineable reserves: Rough stone 467550 m ³ . The proposed production is rough stone 265305 m ³ of Rough Stone (Five year) by Opencast Mechanized mining method. The anticipated impact and its mitigation measures are detailed in Chapter 4.	147
	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 section 2.11.4 of Chapter 2	181
	20. The Project Proponent shall conduct the Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD/TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitoring data, it may clearly be shown whether working all intersect ground water. Necessary data and documentation in this regard may be provided.	The hydrogeological study report will be furnished during the final EIA report	

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21. The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.	The baseline data for all environments is collected for the Summer Season (March 2025 to May 2025).	
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.	Cumulative impact study has been carried covering existing and this proposed quarries in the cluster and the same is incorporated in the Chapter 4. Accordingly, a detailed Environment Management Plan is prepared considering air, water, noise and soil environment and the details are given in Chapter 10.	148 and 192
23. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	The runoff water during rainy season will be collected in the bottom quarry through proper drainage pattern and the collected water will be used for plantation and dust suppression during dry season. The Rain water harvesting plan is given chapter 4.	
24. Land use of the study area delineating forest area, agricultural land, grazing land. Wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	The land use of the study area is described in Section 3.7.6.2 of Chapter 3. The anticipated impacts on the land environment and the mitigation measures are detailed in Chapter 4.	123,143

	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 furnished to 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 impact of the mining operations due to this quarry on water environment is studied and mitigation measures are proposed. Rain water harvesting plan is given Chapter 4.	145
	28. Impact on local transport infrastructure due to the Project should be indicated	Since the production is very less, only few trucks of 5/10T will be used for transport. The effect of transport on local transport will be negligible. Traffic density survey was carried out to analyse the impact of Transportation in the study area as per IRC guidelines 1961 and it is inferred that there is no significant impact due to the proposed transportation from the project area. Details in section 2.6.5.1 of Chapter 2.	87

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29. A tree survey shall be carried out (Nos. name of species, age, diameter, etc) both within the mining lease applied area & 300m buffer zone and its management during mining activity	There are no much trees within 300m buffer zone of the project area. The predominant flora noticed small tress of <i>Acacia nilotica</i> trees of very few numbers.	
30. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.	Detailed mine closure plan is given in Chapter 7.4	184
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 0.57.2 ha. Green belt development plan is provided in section 2.13 of chapter 2.	86
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 same will be furnished in the final EIA report	

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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.	182
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.	178
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.	145
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	186
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	135

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	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	186
	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. This is a fresh quarry project.	
	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 affidavit for EMP will be furnished during the final EIA 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	
4. SEIAA STANDARD CONDITIONS			
4.1	Cluster Management Committee		

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1. Cluster management committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry	There are three existing quarries and this proposed within a 500-metre radius. The proponent will take the initiative to form a cluster management committee once environmental clearance is obtained for this quarry.	
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.	
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.	
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	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	

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	committee in implementing the environmental policy devised shall be given in detail.	amendments, guidelines by MoEF&CC/SEIAA and other regulatory bodies. This policy will be displayed in the quarry.	
	7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.	Agreed. It will be complied as mentioned in the Point No.4	
	8. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public in the vicinity.	Agreed. It will be complied as mentioned in the Point No.4.	
Agriculture & Agro-Biodiversity			
	9. Impact on surrounding agricultural fields around the proposed mining Area.	Agreed.	
	10. Impact on soil flora & vegetation around the project site.	Complied. The details are given in Chapter 3.	124
	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.	
	12. The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.	The ecological details have been provided in Chapter 3 and measures have been provided in Chapter 4.	124,164
	13. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	The detailed action plan has been described in the EMP (Chapter 10) for the sustainable management for the project area and its surroundings.	189

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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.	142
Forests		
15. The project proponent shall detailed study on impact of mining on Reserve Forests free ranging wildlife.	Nedungur, Maniyankurichi, Naranamangalam, Maramareddipalayam, Elur RF are located within 10 km radius and no other reserved forest located in the buffer zone. The fauna commonly found in the core and buffer zone is given in Chapter 3.	136
16. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.	There is no schedule I species of animals observed within study area as per Wildlife Protection Act, 1972 and no species falls in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area. The anticipated impact and its mitigation measures for biological environment are detailed in Chapter 4.	164
17. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.	Not Applicable. This is a dry barren land.	
18. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.	Nedungur, Maniyankurichi, Naranamangalam, Maramareddipalayam, Elur RF are located within 10 km radius and no other reserved forest located in the buffer zone.	

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 report will be incorporated in the final EIA report.	
20. Erosion Control measures.	There is no waste generation (OB) in this quarry has been envisaged. However, there may be erosion due to rainy season and that is limited within quarry area. The control measures are explained in Chapter 4.	173
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.	Anticipated impacts and its mitigation measures are detailed in Chapter 11.	203
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 / discharge of wastewater 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.	

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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.	An ecological and biodiversity study has been conducted and the same is incorporated in the Chapter 3 of the EIA/EMP report. However, there is no any features mentioned in this condition within the M.L area. However, the impacts anticipated with respect to the environment of the project area is very negligible and it will be minimized within the project area.	164
25. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	Agreed.	
26. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.	Complied. The details are described in Chapter 4.	141
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 details will be incorporated in the final EIA report	
Energy		
28. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilize the Energy shall be furnished.	Complied. The details are described in Chapter 4.	145
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.	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.	
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.	To further reduce carbon emissions, a good greenbelt plan has been planned. The carbon emission and the measures to mitigate carbon emission have been discussed in Chapter 4.	
31. Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood.	The details are furnished in Chapter 4	
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.	
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.	Complied. The details are described in Chapter 10.	
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 37.2 lakhs i.e. Capital Cost Rs. 7.76 Lakhs + Recurring Cost Rs. 29.43 for five years, which is including greenbelt cost and cost for mine closure plan. The breakup of the EMP cost is mentioned in table 10-2.	

Risk Assessment		
35.To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.	Complied. The details are described in Chapter 7.	
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.	Complied. The details are described in Chapter 7.	
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 500 metres 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 – 5.	
38.As per the MoEF& CC office memorandum F.NO.22-65/2017-1A.11I dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.	Complied. The action plan of the public hearing will be furnished in the final EIA report	

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	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.	The same will be complied in the final EIA report	
STANDARD TOR			
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 fresh quarry	
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 a Patta land and the applicant has obtained consent from other Pattadhars. The copy of the Precise area communication letter received from the Assistant Director, Department of Geology & Mining, Perambalur District enclosed as Annexure - 2 and Adangal & A-Register enclosed as Annexure - 6	
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.	

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).	The following map in 1:50,000 Scale: Geology map of the project area covering 10km radius – Figure No. 3-17. Geomorphology Map of the Study Area covering 10 km radius – Figure No. 3-18. Important water bodies, streams and rivers are highlighted in Figure 3-6 and Soil Characteristics are shown in Figure 3-13	
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.	The following map in 1:50,000 Scale: Geology map of the project area covering 10km radius – Figure No. 3-17. Geomorphology Map of the Study Area covering 10 km radius – Figure No. 3-18. Important water bodies, streams and rivers are highlighted in Figure 3-6 and Soil Characteristics are shown in Figure 3-13	
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, Perambalur vide Rc.No. 147/2024/G&M Dated 11.04.2025. The letter copy is enclosed as Annexure – 2. b. Mining Plan Approval: The project proponent has prepared Mining Plan under rule 8, 41 & 42 of Tamil Nadu Minor Mineral	

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		Concession Rules, 1959 and the same has been approved by the Assistant Director, Department of Geology and Mining, Perambalur vide Rc.No. Rc.No. 147/2024/G&M dated 23.04.2025. The approval letter along with Mining Plan is enclosed as Annexure - 3	
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.	The proponent will frame a well-planned environmental policy. Its details are provided under Chapter 10.	
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.	The proposed quarrying operation is not underground mining and hence subsidence study is not applicable. Various risks likely to arise due to mining activities are detailed under section 7.3, Chapter-7. The impact due to ground vibrations due to blasting is given in para 4.4.4.5 of Chapter 4.	

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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.	
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 3.7.6.2 of Chapter-3. The land use pattern at present and at the end of the quarrying period has been provided in Table 3.16, Chapter-3. The Conceptual plan of mine lease area is shown in Figure No- 2-11.	
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.	There is no overburden anticipated during the entire rough stone quarrying operation.	
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.	There is no Forest Land involved in the proposed project area.	

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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.											
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.											
15.	The vegetation in the RF / PF areas in the study area, with necessary details, should be given.	The list of RF in the study area are:<table><tr><td>Nedungur Reserve Forest</td><td>3.68km, SW</td></tr><tr><td>Maniyankurichi RF</td><td>5.58km, SW</td></tr><tr><td>Naranamangalam RF</td><td>5.65km, NW</td></tr><tr><td>Maramareddipalayam Reserve Forest - Elur RF</td><td>7.61km, SW</td></tr><tr><td></td><td>8.10km (NW)</td></tr></table> The figure showing the same is illustrated in Figure 2-5.	Nedungur Reserve Forest	3.68km, SW	Maniyankurichi RF	5.58km, SW	Naranamangalam RF	5.65km, NW	Maramareddipalayam Reserve Forest - Elur RF	7.61km, SW		8.10km (NW)	
Nedungur Reserve Forest	3.68km, SW												
Maniyankurichi RF	5.58km, SW												
Naranamangalam RF	5.65km, NW												
Maramareddipalayam Reserve Forest - Elur RF	7.61km, SW												
	8.10km (NW)												
16.	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.	Not applicable											
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	Not applicable.											

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	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 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.	The detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] is carried out and the details are incorporated in section 3.7.7 of Chapter 3	
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.	Not Applicable	
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	Not Applicable	

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	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.	Not Applicable	
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	Baseline Data is collected in summer season (March 2025 – May 2025) for AAQ, WQ, NL and EB. Site-specific meteorological study data is collected. 2 Locations are chosen for upwind, 2 Locations for downwind and 2 Locations for crosswind apart from project location.	

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	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 modelling 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 Chapter 4. Air Quality Modelling for Cluster are also detailed in Chapter 4 under section 4.2.4.3.	
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 5.5 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 2.12 of chapter 2	
25.	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.	Water will be sourced from local vendors and ground water will not be extracted. Hence, not applicable.	
26.	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	Details of water conservation measures in detailed in Chapter 4.	

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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 Chapter 4	
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.	The quarrying activity will not intersect ground water table as quarrying is proposed up to a depth of 52 m BGL and water table is found at a depth of 78 m BGL.	
29.	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.	Not applicable	
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.	≈ 135 m from above MSL. Initial RL before commencement of Mining – 134m BGL and Final RL after completion of Mining Operation – 82m BGL Working Depth: 52m BGL Depth of Ground Water Table: 78m BGL	
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	Greenbelt Development are detailed in Chapter 2 0.57.2 hectares of land are allotted for greenbelt development. A total of 575 trees will be planted in the ML area.	

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	the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.		
32.	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.	This is a small quarry and the production is very less. 4 Nos. of 5T/10T tippers will be used for transport. The trips will be minimum. Hence no major impact on transport is expected	
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.	
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.	

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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.	Details of occupational health and safety aspects are given in section 4.4.7 of Chapter 4	
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 Public Health Implications anticipated due to this project. Details of CER and CSR are discussed under Chapter No. 8 under section 8.1	
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 30 people directly. Local people will be hired for unskilled labour. Through CSR, nearby schools, hospitals will be benefitted. For CSR, INR 5.0 Lakh is allocated. Based on the demand of the people during public hearing, further funds will be allocated, if necessary.	
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.	
39.	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary	The details of the public hearing will be included in Chapter 7 along with detailed action plan.	

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	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 paced by any Court of Law against the Project should be given.	There is no litigation pending against the project.	
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: 143.7 Lakhs CER Cost: Rs. 5 Lakhs EMP Cost: Rs. 37.20 Lakhs	
42.	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	Included in Chapter 7	
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.	Outlined in Chapter 8	
44.	Besides the above, the below mentioned general points are also to be followed: -		
a.	Executive Summary of the EIA/EMP Report	Yes, Enclosed	
b.	All documents to be properly referenced with index and continuous page numbering.	All the documents are 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.	Yes, Complied	
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,	Baseline monitoring results are detailed in Chapter 3. Original Baseline monitoring reports will be made available during final appraisal of the project.	
e.	Where the documents provided are in a language other than English, an English translation should be provided.	Yes, complied	

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f.	The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.	Yes, complied	
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- I 1013/41/2006-IA.11 0) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.	Noted & agreed	
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.	Noted & agreed	
i.	As per the circular no. J-I I0I I161812010-1A.II (I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance 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.	Yes, Complied	
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.	Surface Plan and Geological Plan – Figure No. 2-8 and Figure No. 2-9	26,28

1.0 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. D. Balaji proposes to operate Rough Stone and Gravel Quarry over an extent of 2.75.0 Ha Patta land in S.F. No. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B of Padalur (East) Village, Alathur Taluk, Perambalur District, Tamil Nadu State and ToR obtained vide ToR Identification No. TO25B0108TN5982149N Dated: 03.07.2025.

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

Table 1.1 – Details of Quarries within 500m Radius

S. No	Name of the Quarry Owner	S.F. Nos & Village	Lease Period	Area
a. Abandoned Quarry				
1.	Nil			
b. Existing Quarry				
1.	Thiru. D. Manjunath, S/o. Devendiran, No. 25, IAS Nagar, Thiruverumbur, Trichy District	122/1 (Block 5),Therani	17.08.2022 to 16.08.2027	1.00.0 Ha
2.	Tmt. P. Dhanalakshmi, W/o. G.R.Perumal Pillai, 1/24, Sivan Kovil Street, (Kaliyamman Kovil Street),Therani (PO), Alathur (Tk), Perambalur	124/3A, 124/3B, Padalur (E)	29.04.2022 to 28.04.2027	1.00.0 Ha
3.	Tmt. S. Pitchai, S/o. Thiru. Subbaiya, No.3/172, West Street, Koothanur Village, 85, Seedevimangalam, Alathur Tk, Perambalur Dt.	122/1 (Block 5A),Therani	18.12.2020 to 17.12.2025	1.00.0 Ha
c. Proposed Quarry				
1.	Thiru. D. Balaji, S/o. Devendiran, No. 25, IAS Nagar, Thiruverumbur, Trichy District	124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 4B, Padalur (E)	Presently proposed	2.75.0 Ha
Total Area Under Cluster		5.75.0 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/538133/2025 Dated 20.05.2025. The ToR proposal was placed in 575th SEAC meeting, dt 09.06.2025 and 846th SEIAA meeting, dated 26.06.2025. Then ToR has been issued by the SEIAA vide ToR Identification No. TO25B0108TN5982149N Dated: 03.07.2025 to prepare the

draft EIA report as per the recommended ToR for conducting Public hearing and obtaining Environmental Clearance from the SEIAA.



Figure1.1 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	Thiru. D. Balaji Rough Stone & Gravel Quarry
S.F No.	S. F. Nos. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B
Location of the Project	Padalur (East) Village, Alathur Taluk, Perambalur District, Tamil Nadu State
Extent	2.75.0 Ha.
Type of Land	Patta Land and Consent Copy is obtained

1.2.2 IDENTIFICATION OF PROJECT PROPONENT

Table -1.3- Details of Project PropONENT

Name of the Project Proponent	Thiru. D. Balaji
Communication address	S/o. S. Devendiran No. 25, I A S Nagar, Thiruverumbur Taluk, Tiruchirapalli District-620 013
e-mail Address	kksridharr06@gmail.com
Mobile No.	99659 29297

1.3 BRIEF DESCRIPTION OF THE PROJECT

1.3.1 NATURE AND SIZE OF THE PROJECT

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

Table – 1.4 Brief Descriptions of the Project

Name of the Quarry	Thiru. D. Balaji Rough Stone & Gravel Quarry	
Toposheet No	58 I /16	
Latitude between	11°05'47.07"N to 11°05'55.98"N	
Longitude between	78°51'25.59"E to 78°51'30.78"E	
The altitude of the area	134 m (AMSL)	
Proposed Depth of Mining	52 m BGL	
Geological Resources	Rough Stone	Gravel
	13,73,400 m ³	54, 936 m ³
Mineable Reserves	4,67,550 m ³	43,164 m ³
Proposed Production	4,67,550 m ³	43,164 m ³
Ultimate pit Dimension	198 m (L) X 109 m (W) X 52 m (D), Depth - 52 m BGL	
Water Level in the area	78 m BGL	
Method of Mining	Opencast Mechanized Mining Method involving drilling and blasting	
Topography	The area applied for quarry lease is exhibits almost plain topography covered by Gravel formation. The massive	

	Charnockite formation is noticed below 2m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 134m (maximum) from MSL.			
Machinery Proposed	Jack Hammer		4 Nos	
	Compressor		1 Nos	
	Excavator with bucket and rock breaker		2 Nos	
	Tipper (5/10 T)		4 Nos	
Environmental Setting within 500m Radius	Tank – 420m, N Nearest Habitation - Nil within 500m Radius Nearest RF -Nil within 500m Radius			
Details of Habitation	S. No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population
	1.	Therani	0.55Km - NE	500
	2.	Padalur	1.5km - NW	600
	3.	Thiranipalayam	2.0km - SE	500
	4.	Neikulam	4.6km - SW	2000
Proposed Manpower Development	30 Nos			
Water Requirement	5.5 KLD			
Greenbelt Development	The safety zone of 0.57.2 Ha will be developed with about 572 Nos. of plantation.			
Fuel Requirement	381.23 KL of HSD (Entire ProjectLife)			
Project Cost	Rs.143.7 Lakhs (Including operational + Fixed Asset + EMP cost).			
EMP Cost	Total EMP Cost for 10 years is 37.20 lakhs i.e., Rs.7.76 Lakhs of Capital + Recurring cost Rs. 29.43 lakhs for Five years			
CER Cost	Rs. 5 Lakhs			
Applicability of CRZ Clearance	Not Applicable			

1.3.2 NATURE OF THE PROJECT

1.4 IMPORTANCE OF THE PROJECT TO THE REGION

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

1.5 REGULATORY COMPLIANCES

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

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

1.5.1 PRESENT 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, Perambalur	Received	Rc.No. 147/2024/G&M	11.04.2025	Annexure - 2
Mine Plan Approval Letter	Assistant Director, Department of Geology and Mining, Perambalur	Approved	Rc.No. 147/2024/G&M	23.04.2025	Annexure - 3
500m radius Cluster Letter	Assistant Director, Department of Geology and Mining, Perambalur	Obtained	Letter Rc.No.147/G&M/2024	14.05.2025	Annexure - 4
VAO NOC for features within 300m radius	VAO, Padalur (East) Village	obtained	-	21.04.2025	Annexure - 5

1.5.2 SCREENING

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

1.5.3 SCOPING

The proposal was placed in the 575th meeting of SEAC on 09.06.2025. 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 846th meeting dated 26.06.2025.

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. TO25B0108TN5982149N , dated: 03.07.2025. The point wise compliance for the ToR has been incorporated in this EIA/EMP report.

The main scope of the EIA study is to quantify the cumulative impact in the study area due to cluster quarries and formulate the effective mitigation measures for this applied project area. A detailed account of the emission sources, emissions control equipment, background Air quality levels, Meteorological measurements, Dispersion model and all other aspects of pollution like effluent discharge, Dust generation etc., have been discussed in this report. The baseline monitoring study

has been carried out during the Period of **March 2025 – May 2025** for various environmental components so as to assess the anticipated impacts due the cluster quarry projects on the environment and suggest suitable mitigation measures for likely adverse impacts due to this proposed project.

The scope of study broadly covered as below,

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

1.6 NEED AND JUSTIFICATION OF THE PROJECT

- Proposed mining project will fulfill the local market requirement for real estate and infrastructure industry. This project will also provide employment to local people helping them earn livelihood.
- Employment generated consequent to the mining activity in the project will be benefit local and rural population and will have multiplier effects on local economy.
- The Project will give tremendous boosts to the local and regional economy benefiting the population.

- The social benefits arising out of this proposal can be expressed in terms of increase in the standards of living of local population, educational opportunities, training and development of skills etc.

1.7 STRUCTURE OF THE REPORT

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

1. Introduction

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

2. Project Description

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

3. Description of the Environment

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

4. Anticipated Environmental Impacts & Mitigation Measures

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

5. Analysis of Alternatives (Site And Technology)

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

6. Environmental Monitoring Program

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

7. Additional Studies

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

8. Project Benefits

This chapter presents the benefits from this project

9. Environmental Management Plan

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

10. Summary and Conclusion

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

11. Disclosure of Consultant

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

2.0 PROJECT DESCRIPTION

2.1 TYPE OF THE PROJECT

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

This project proposed to produce 4,67,550 m³ of Rough Stone and 43,164 m³ of Gravel and for the period of 10 years with ultimate depth up to 52 m.

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 and Gravel Quarry located in Padalur (East) Village, Alathur Taluk, Perambalur District, Tamil Nadu State. The area lies in the north latitude of **11°05'47.07"N to 11°05'55.98"N** and eastern longitude of **78°51'25.59"E to 78°51'30.78"E** and **toposheet number 58 I/16**. 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 Patta land and the applicant has obtained consent copy from the Pattadars & 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.

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

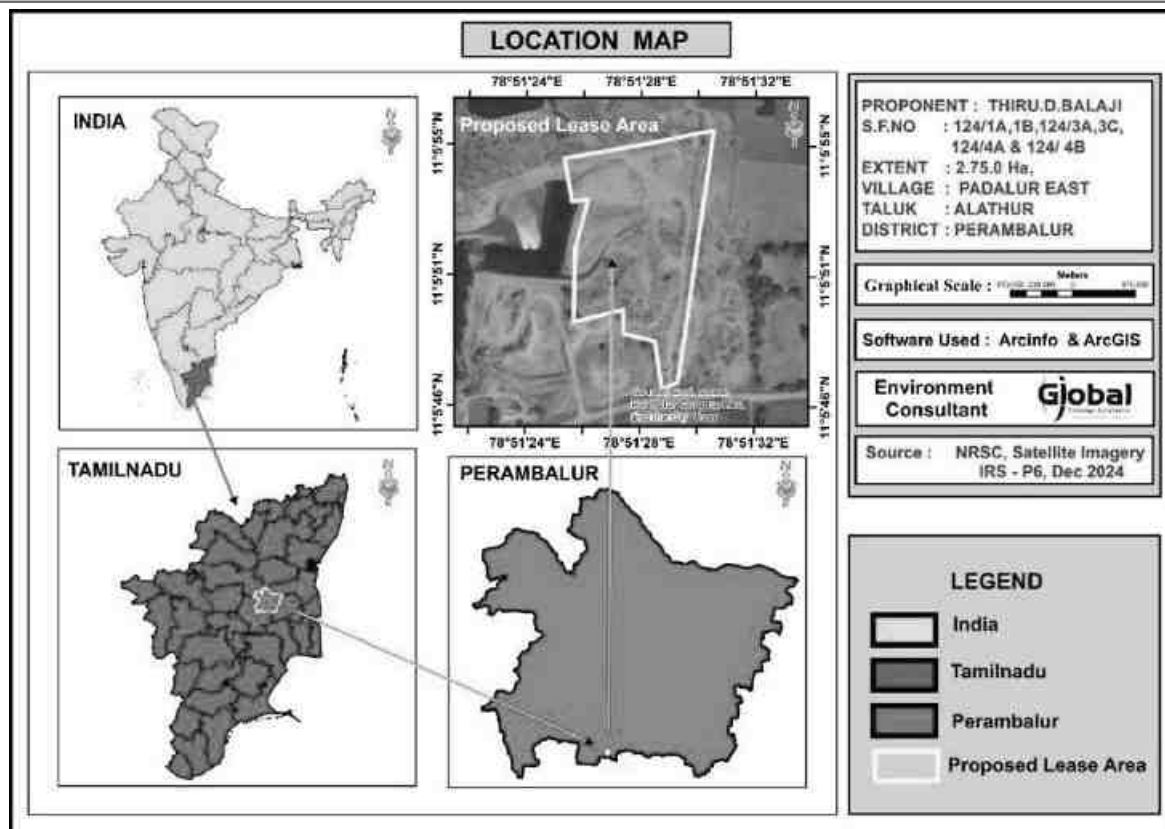


Figure 2.1 Location Map

Table 2.1 Boundary Coordinates of the Project Site

Corners	Co- ordinates	
	Latitude	Longitude
1	11° 05' 49.38"N	78° 51' 25.93"E
2	11° 05' 51.99"N	78° 51' 25.98"E
3	11° 05' 53.59"N	78° 51' 26.43"E
4	11° 05' 53.52"N	78° 51' 25.84"E
5	11° 05' 55.02"N	78° 51' 25.59"E
6	11° 05' 55.98"N	78° 51' 30.78"E
7	11° 05' 47.29"N	78° 51' 29.60"E
8	11° 05' 47.07"N	78° 51' 29.02"E
9	11° 05' 48.76"N	78° 51' 28.77"E
10	11° 05' 48.98"N	78° 51' 27.67"E
11	11° 05' 49.82"N	78° 51' 27.68"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	Patta No.	Patta Name
Padalur (East) Village, Alathur Taluk, Perambalur District	124/2A	0.46.0	1603	Thiru. D. Balaji (PP), Thiru. Nethaji and Thiru. Manjunath and Thiru. D. Balaji has obtained consent from the Pattadars.
	124/1B	1.14.0	1572	
	124/3A	0.24.0		
	124/3C	0.10.0		
	124/4A	0.69.0		
	124/4B	0.12.0		
Total		2.75.0		

Table 2.3 Site Connectivity

Nearest Roadway	- Ottathur - Therani road – 0.8km(E). - The National Highway (NH-38) Viluppuram – Trichy Road – 3.2 Km (W). - The State Highway (SH-142) Perambalur – Thuraiyur Road - 14.5Km (NW). The site is connected to NH-38 via Thiranipalayam Village Road. The site has haul roads for the transportation of mined-out mineral with adequate width
Nearest Village	Therani – 550m, NE
Nearest Railway	Ariyalur to Trichy line -16.9km, SE
Nearest Airport	Tiruchurapalli International Airport - 39.81 km, S

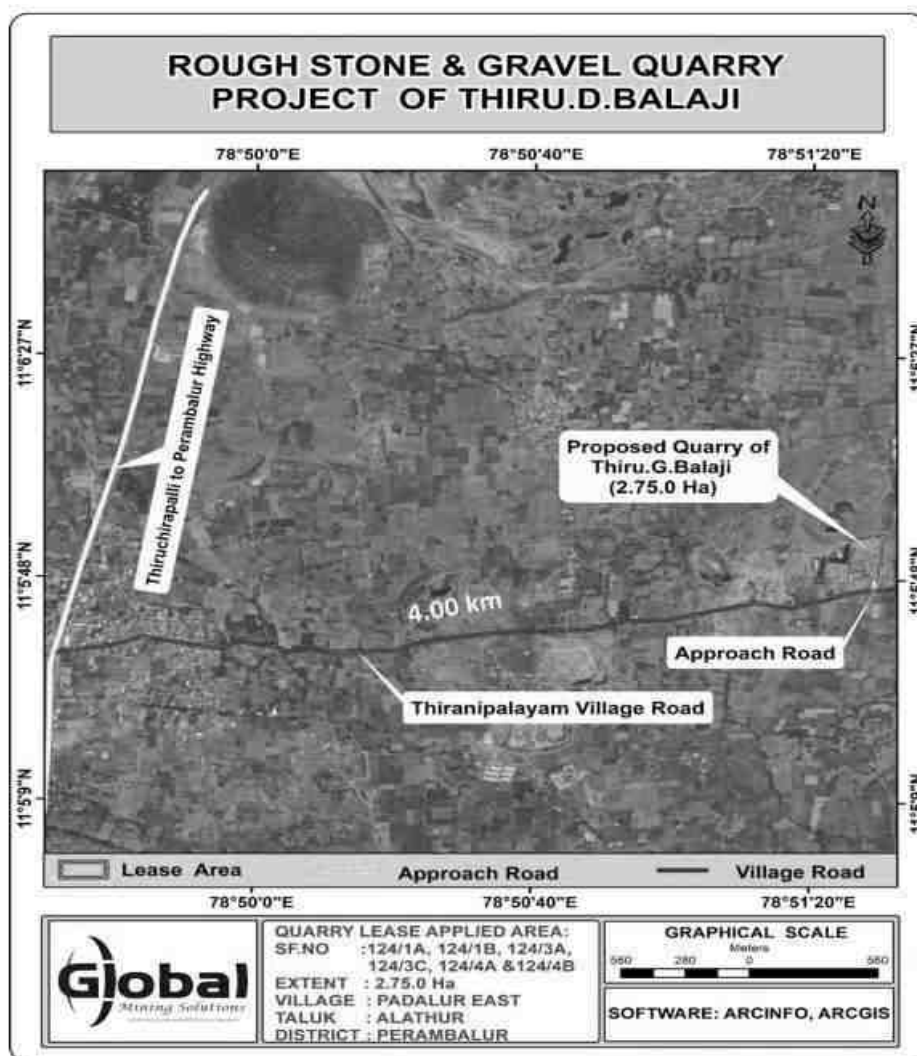


Figure 2.3 Site Connectivity Map

Table 2.4 Salient features of the Project

S. No.	Particulars	Details
1.	Proponent Name	Thiru. D. Balaji
2.	Proposed project	Rough Stone & Gravel Quarry of Thiru. D. Balaji
3.	Extent	2.75.0 Ha and the cluster area within 500 m radius including the proposed mine is 5.75.0 Ha > 5 Ha
4.	Location	S. No. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 4B, Padalur (E) Village, Alathur Taluk, Perambalur District
5.	Co-ordinates of the project site	Latitude: 11°05'47.07"N to 11°05'55.98"N Longitude: 78°51'25.59"E to 78°51'30.78"E
6.	Topography	Plain Terrain
7.	Site Elevation above MSL	≈ 135 m from above MSL. Initial RL before commencement of Mining – 134m BGL and Final RL after completion of Mining Operation – 82m BGL
8.	Topo Sheet No.	58 I /16
9.	Minerals of Mine	Rough Stone & Gravel
10.	Proposed production in m3	4,67,550 m3 of Rough Stone and 43,164 m3 of Gravel up to the depth of 52m for the period of 10 years
11.	Ultimate Depth of mining	52m (BGL)
12.	Method of Mining	Opencast Mining with a bench height of 5m and bench width of 5m is proposed
13.	Drilling/Blasting	Drilling and controlled Blasting is proposed
14.	No. of Working days	300 Days
15.	Water requirement & Source	5.5 kLD and will be sourced from local vendors
16.	Manpower	30 Nos.
17.	Project Cost	Rs. 143.7 lakhs
18.	Mining Plan Approval	Assistant Director, Department of Geology and Mining, Perambalur vide Rc.No.147/2024/G&M/ dated 23.04.2025
19.	Safety Zone	0.57.2 Ha will be maintained as safety zone and tree saplings will be planted in this area
20.	Ground water level	78 m BGL
21.	Distance of Stone Crusher	290m, SW

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

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	NH 38 (Viluppuram – Trichy Road – 3.2 Km (W). The State Highway (SH-142) Perambalur – Thuraiyur Road - 14.5Km (NW).	
2.	Interstate Boundary	Not Applicable	
3.	Nearest Railway Station	Kallagam – 17.5km, SW	
4.	Nearest Airport	Trichy International Airport – 39.81km, S	
5.	Nearest Village	Therani – 550, NE	
6.	Water bodies	Odai 760 m, SW, Odai 780m, W,Tank 640m, N, Tiruvalankurichi Eri 1.2km, NW, therani Tank, 1.52km, NE, Therani Big Lake, 2.22km, NE, Puthu Eri, 3.04km, SE, Odai Eri, 3.00 km, SE, Nakkambadi Tank, 4km, S, Vaeappan Eri, 3.91km, SW, Perumalpalayam eri, 3.7km, NW, Nochikulam Eri, 4.34km, N, Karai Tank,4.8km, NE, Karupudayan Eri, 7.36 km, SE, Sanamangalam Eri, 7.96km, SW, Maniyankurichi Tank, 7.39km, W, Chettikulam Tank,8.29km, NW, Varugapadi Tank, 7.8km, N	
7.	Reserved Forest	Nedungur Reserve Forest Maniyankurichi RF Naranamangalam RF Maramareddipalayam Reserve Forest - Elur RF	3.68km, SW 5.58km, SW 5.65km, NW 7.61km, SW 8.10km (NW)
8.	Eco Sensitive Zone and Wildlife Sanctuary (Notified)	Nil within 10km Radius	
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	Nil within 10 km radius	

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

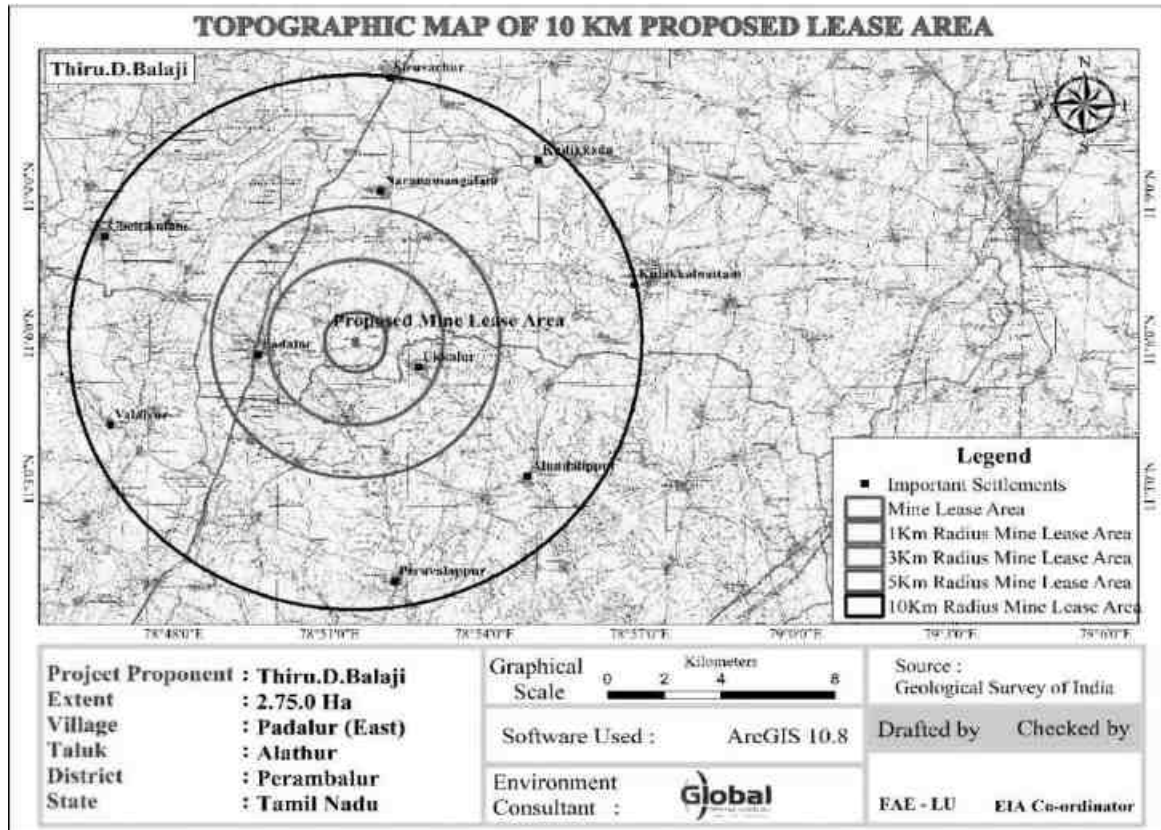


Figure 2.4 TOPO MAP OF THE PROJECT 10 KM RADIUS

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

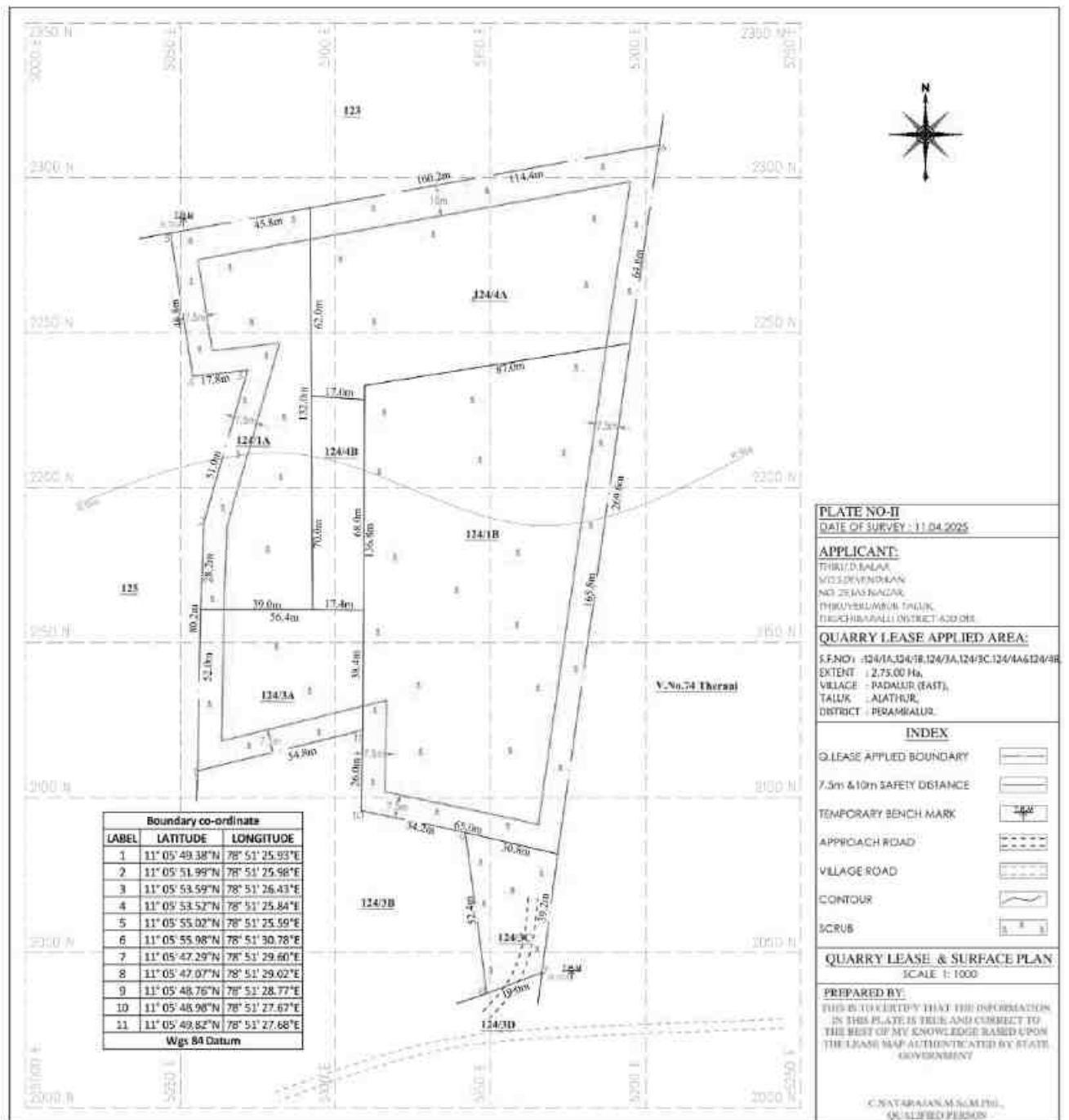


Figure 2.5 Lease Plan

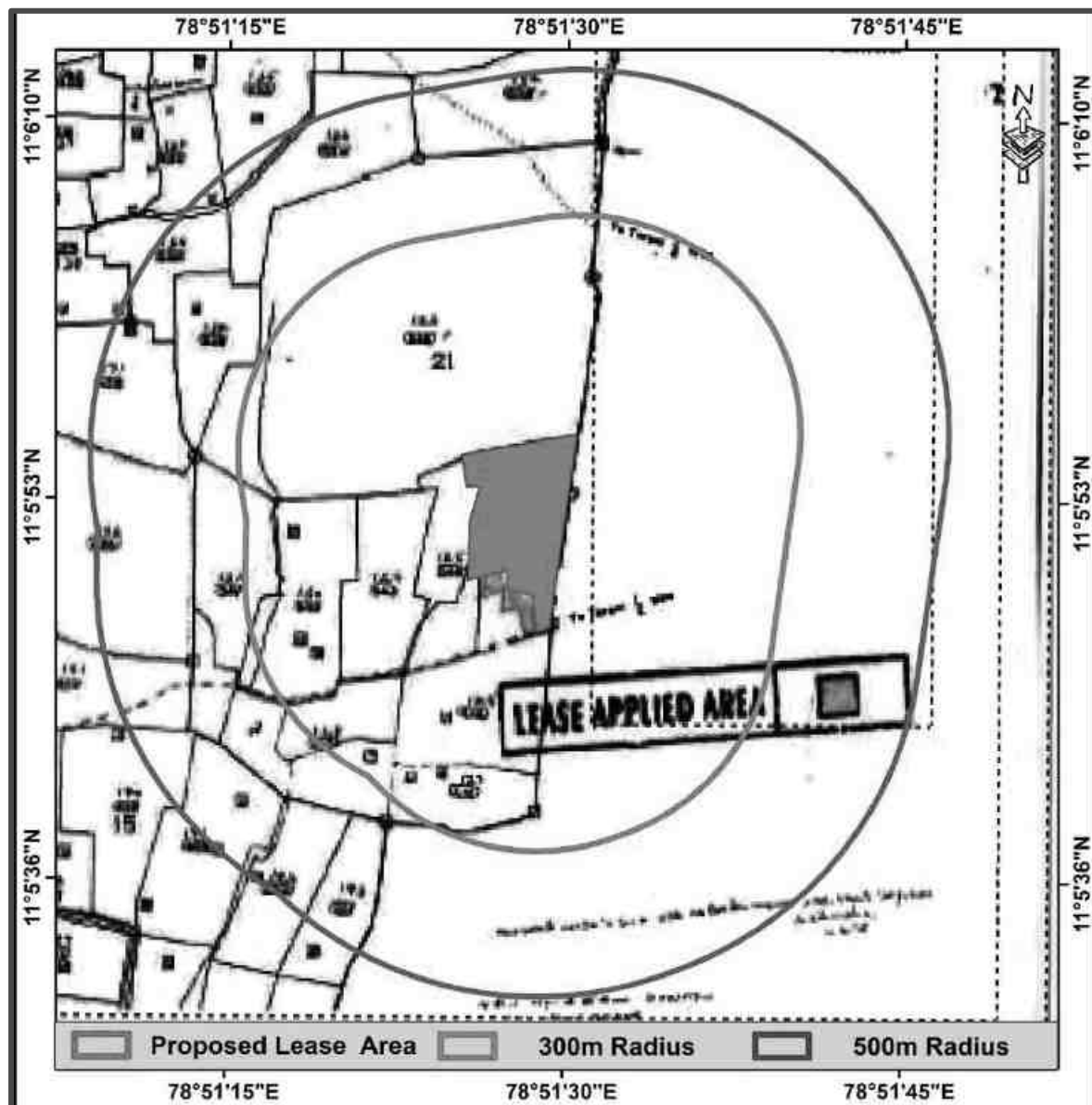


Figure 2.6 Village Map

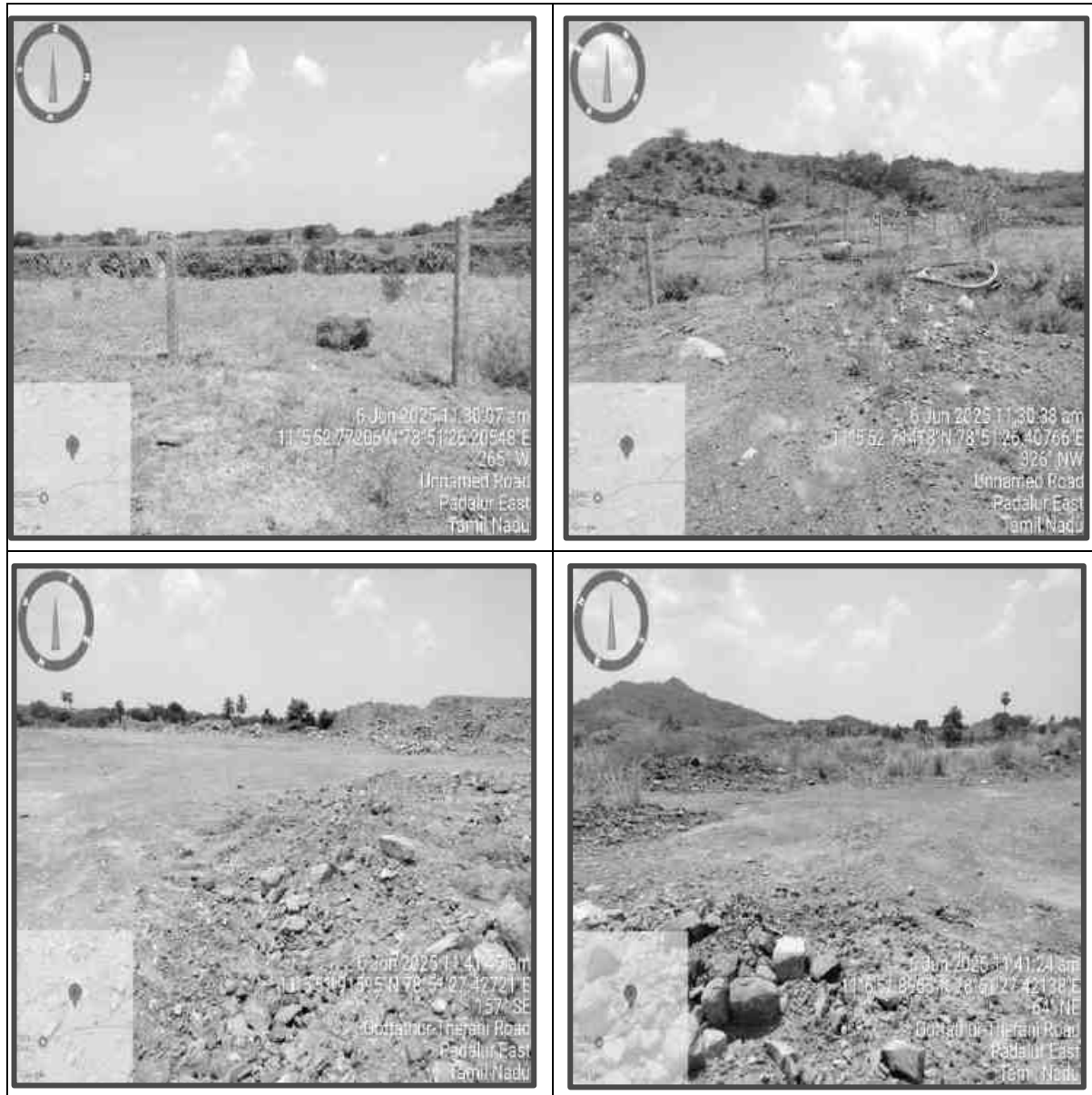


Figure 2.7 Site Photographs

2.4 LAND USE PATTERN OF THE PROJECT AREA

The entire project site Patta land and the proponent has obtained consent from other Pattadars. 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	2.15.8
Infrastructure	Nil	0.01.0
Roads	Nil	0.01.0
Greenbelt	Nil	0.57.2
Unutilized	2.75.0	Nil
Total	2.75.0	2.75.0

2.5 SIZE AND MAGNITUDE OF THE OPERATION

The proposed activity is the extraction of Rough Stone and Gravel by open cast mechanized mining method over an extent of 2.75.0 Ha and to produce 4,67,550 m³ of Rough Stone and 43,164 m³ of Gravel for the period of 10 years with ultimate depth up to 52 m. The details of geological and mineable reserves in the lease area have been provided below in the subsequent sub section.

2.6 TOPOGRAPHY AND DRAINAGE

The area applied for quarry lease is almost plain topography covered by topsoil formation. The massive Charnockite formation is noticed below and sloping towards northeastern side of the area, the altitude of the area is above 135m (maximum) from MSL. No major river is found nearby the lease applied area.

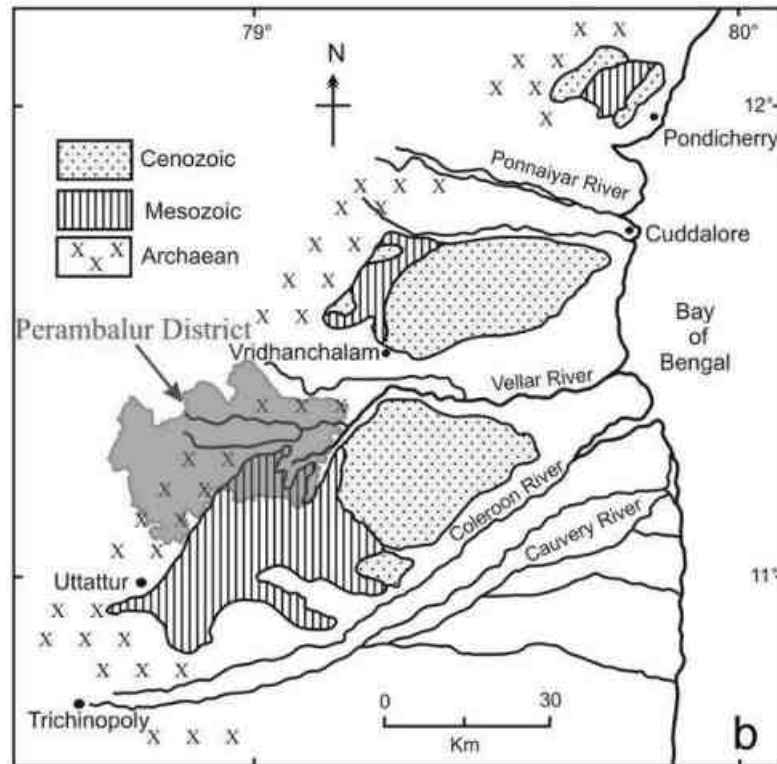
2.7 GEOLOGY

2.7.1 REGIONAL GEOLOGY

The north and western part of the district is mainly covered (> 80 %) with Archaean rocks and is mainly comprises of Hornblende Gneiss and Charnockite and the eastern part is covered with cretaceous sediments (Fig. 5). The Sathyamangalam rocks are distributed along the east-west tract in central Tamil Nadu confined between Bhavani – Attur lineament in the north and Noyil – Cauvery lineament in the south (Subramanian and Selvan, 2001). Similar rocks are also known in the northwestern part of the state in Dharmapuri district. The equivalents of Sakarsanahalli (Sargur) supracrustals are described in Dimbam–Tattakarai areas of Kollegal – Krishnagiri terrane (GSI, 1998). Though the Sathyamangalam

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

Group of rocks are said to be exposed within the Bhavani gneiss in the E-W trending belt in central Tamil Nadu in parts of Coimbatore, Salem, Namakkal, Perambalur and Tiruchirapalli districts.



Source: District Survey Report, Perambalur

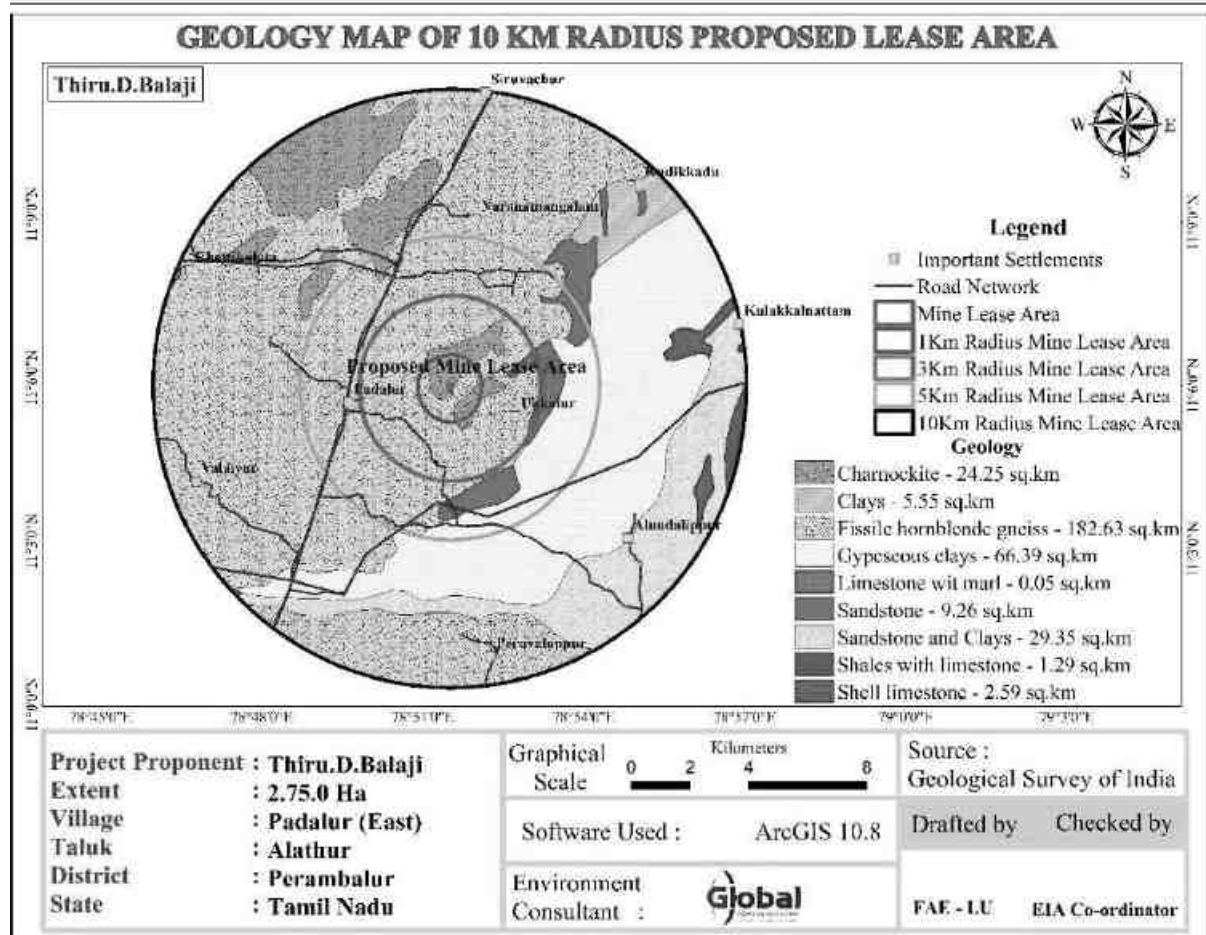


Figure 2.8 Geology Map – 10km Radius from the Project Site

2.7.2 LOCAL GEOLOGY

The geology map reveals that the area is predominantly covered with Fissile Hornblende Gnesis and the remaining area is covered with Charconite, Clays, gypseous clay, Limestone with Marl, Sandstone, Shales with Limestone and Shell Limestone. Both Primary data (Local Geology) and Secondary Data (regional Geology) reveals that the area is covered with Hornblende Gnesis and in this way, secondary data is validated with the Primary Data.

2.8 RESOURCES AND RESERVES

The Resources and Reserves of Rough Stone and Gravel 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)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in Ts	Geological Resources of Rough stone in Ts
XY-AB	I	218	126	2	54936	-	2	109872.00	-
	II	218	126	5	-	137340	2.75	-	377685.00
	III	218	126	5	-	137340	2.75	-	377685.00
	IV	218	126	5	-	137340	2.75	-	377685.00
	V	218	126	5	-	137340	2.75	-	377685.00
	VI	218	126	5	-	137340	2.75	-	377685.00
	VII	218	126	5	-	137340	2.75	-	377685.00
	VIII	218	126	5	-	137340	2.75	-	377685.00
	IX	218	126	5	-	137340	2.75	-	377685.00
	X	218	126	5	-	137340	2.75	-	377685.00
	XI	218	126	5	-	137340	2.75	-	377685.00
Total					54936	1373400	-	109872.00	3776850.00

Gravel Formation : 1,09,872 Ts

The Geological Resource of Rough Stone : 37,76,850 Ts

2.8.1 MINEABLE RESERVES

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

Table 2.8 – Available Mineable Reserves

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in Ts	Mineable Reserves of Rough stone in Ts
XY-AB	I	198	109	2	43164	-	2	86328.00	-
	II	192	103	5	-	98880	2.75	-	271920.00
	III	182	93	5	-	84630	2.75	-	232732.50
	IV	172	83	5	-	71380	2.75	-	196295.00
	V	162	73	5	-	59130	2.75	-	162607.50
	VI	152	63	5	-	47880	2.75	-	131670.00
	VII	142	53	5	-	37630	2.75	-	103482.50
	VIII	132	43	5	-	28380	2.75	-	78045.00
	IX	122	33	5	-	20130	2.75	-	55357.50
	X	112	23	5	-	12880	2.75	-	35420.00
	XI	102	13	5	-	6630	2.75	-	18232.50
Total					43164	467550	-	86328.00	1285762.50

The mineable reserve is computed as 12,85,762.50Ts of rough stone and 86,328Ts of Gravel formation up to a depth 52m (below ground level) only.

2.9 PROCESS DESCRIPTION AND TECHNOLOGY

2.9.1 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 and Figure No. 2.11 respectively.

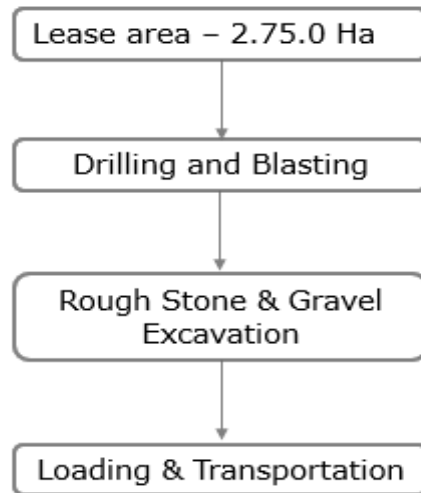


Figure 2.9 Process Flow Diagram

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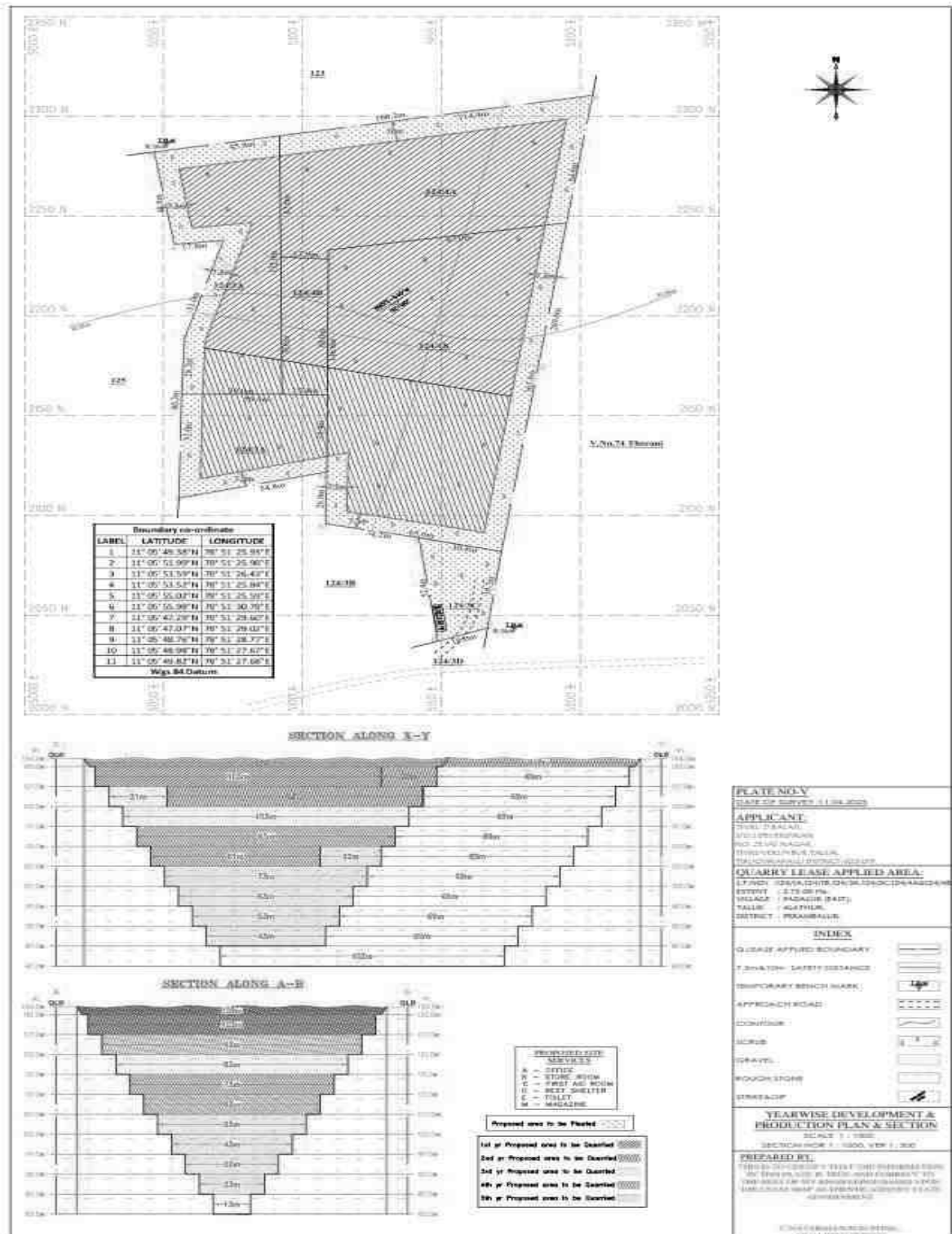


Figure 2.10 Year wise Development & Production Plan & Sections

Table 2.9 – Machinery Details

S.No.	Name of the Equipment	Capacity	Requirement
1	Excavator with Rock breaker attachment	0.90 m ³	2
2	Compressor	400 psi	1
3	Jack hammer	1.2m to 6m	4
4	Tipper	5/10 T	4

2.9.2 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° from horizontal
Number of holes	162
Powder factor	6Ts/Kg of Explosives
Total explosive required	81 Kg slurry Explosives
Charge / hole	0.5Kg
Blasting time	12-2 Pm

2.9.3 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 Dhanalakshmi Explosives to carry out the blasting operation for the proposed quarry.

2.9.4 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.

2.9.5 PRODUCTION SCHEDULE

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

Table 2.11 Year wise Production Plan

(i) First Five Years

Year	Section	Bench	Length in(m)	Width in (m)	Depth in (m)	Gravel in m³	Rough stone in m³	Bulk Density	Gravel in Ts	Mineable Reserves of Rough stone in Ts
I	XY-AB	I	129	109	2	28122	-	2	56244.00	-
		II	103	103	5	-	53045	2.75	-	145873.75
Total						28122	53045	-	56244.00	145873.75
II	XY-AB	I	69	109	2	15042	-	2	30084.00	-
		II	20	103	5	-	10300	2.75	-	28325.00
		III	92	93	5	-	42780	2.75	-	117645.00
Total						15042	53080	-	30084.00	145970.00
III	XY-AB	III	21	93	5	-	9765	2.75	-	26853.75
		IV	103	83	5	-	42745	2.75	-	117548.75
Total						-	52510	-	-	144402.50
IV	XY-AB	V	93	73	5	-	33945	2.75	-	93348.75
		VI	61	63	5	-	19215	2.75	-	52841.25
Total						-	53160		-	146190.00
V	XY-AB	VI	22	63	5	-	6930	2.75	-	19057.50
		VII	73	53	5	-	19345	2.75	-	53198.75
		VIII	63	43	5	-	13545	2.75	-	37248.75
		IX	53	33	5	-	8745	2.75	-	24048.75
		X	43	23	5	-	4945	2.75	-	13598.75
Total							53510		-	147152.50
Grand Total						43164	265305		86328.00	729588.75

The Annual Peak production quantity of Rough Stone - 53510 m³ (5th year)

Total Gravel Quantity – 43,164 m³

(ii) 6th to 10th year

Year	Section	Bench	Length in(m)	Width in (m)	Depth in (m)	Rough stone in m³	Bulk Density	Mineable Reserves of Rough stone in Ts
VI	XY-AB	II	69	103	5	35535	2.75	97721.25
		III	10	93	5	4650	2.75	12787.50
Total						40185		110508.75
VII	XY-AB	III	59	93	5	27435	2.75	75446.25
		IV	31	83	5	12865	2.75	35378.75
Total						40300		110825.00
VIII	XY-AB	IV	38	83	5	15770	2.75	43367.50
		V	69	73	5	25185	2.75	69258.75
Total						40955		112626.25
IX	XY-AB	VI	69	63	5	21735	2.75	59771.25
		VII	69	53	5	18285	2.75	50283.75
Total						40020		110055.00
X	XY-AB	VIII	69	43	5	14835	2.75	40796.25
		IX	69	33	5	11385	2.75	31308.75
		X	69	23	5	7935	2.75	21821.25
		XI	102	13	5	6630	2.75	18232.50
Total						40785		112158.75
Grand Total						202245		556173.75

2.9.6 DISPOSAL OF WASTE

There is no waste anticipated in this rough stone Quarry. The entire quarried minerals will be utilized. The overburden in the form of Gravel, after the excavation gravel will be directly loaded into tipper to the needy buyers for road project and construction works for filling and leveling of low lying areas.

2.10 CONCEPTUAL MINING PLAN / FINAL MINE CLOSURE PLAN

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

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

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

Pit	Length in m (Max)	Width in m (Max.)	Depth in m (Max.), bgl
I	198	109	52

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	2.15.8
Infrastructure	Nil	0.01.0
Roads	Nil	0.01.0
Greenbelt	Nil	0.57.2
Unutilized	2.75.0	Nil
Total	2.75.0	2.75.0

- At the end of life of mine, the excavated mine pit / void of 2.15.8 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 (0.57.2 Ha.) will be developed along the safety barrier and top benches and 0.02 Ha are approach road and Infrastructure.

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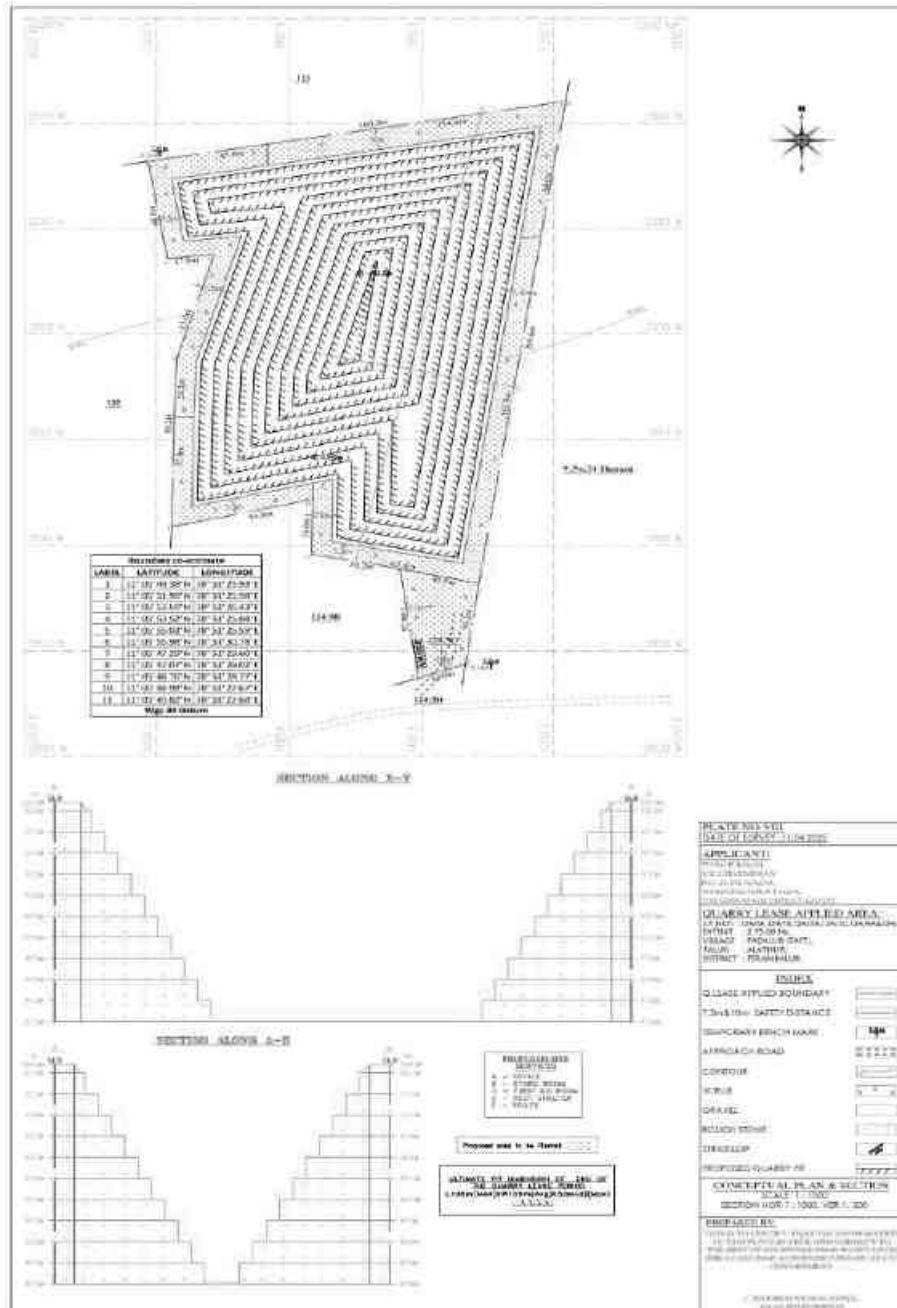


Figure 2.11 Conceptual Plan and Cross Section

2.11 PROJECT REQUIREMENT

2.11.1 WATER REQUIREMENT AND SOURCE

The total water requirement estimated for the quarry is 5.5 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	2.0
Greenbelt Development	2.0
Total	5.5

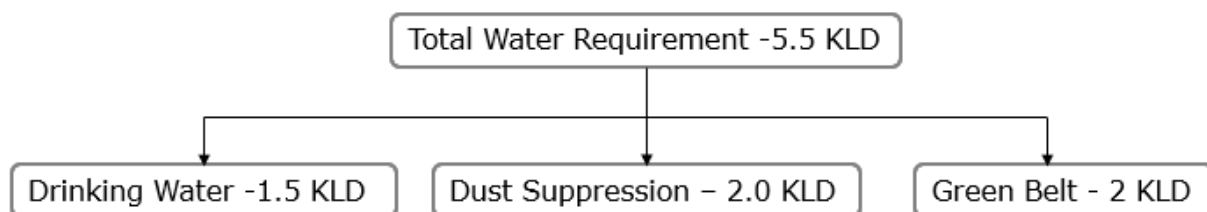


Figure 2.12 Water Balance Chart

2.11.2 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.

2.11.3 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 4,67,550 m ³	4,67,550/20 = 23,377.5

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So, Diesel consumption	= 23,377.5X 16 litres
	=374040 litres of HSD

ii) For Gravel

Per hour excavator will consume	10 liters /hr
Per hour excavator will excavate	60 m ³ of Gravel
For 43,164 m ³	43,164 /60 = 719.4
So, Diesel consumption	=719.4 X 10 litres
	=7194 litres of HSD

The Total fuel consumption is around 381234 litres of HSD for the entire period of life (10 years).

2.11.4 EMPLOYMENT GENERATION

The project will provide employment opportunities totally to 30 persons directly and 30 indirectly.

Table 2.16 Details of Manpower requirement

1.	Skilled	Mines Manager	1 No.
		Foreman / Mate	2 No.
		Operator	6 No.
		Mechanic	1 No.
2.	Semi-skilled	Driver	4 No.
3.	Unskilled	Labours	16Nos
Total =			30 Nos

2.11.5 GREEN BELT REQUIREMENT

The safety zone, covering an area of 0.57.2 Hectares, will be maintained as a green belt and planted with 572 Nos. of local species.



Figure 2.13 Fencing and Plantation Photos

2.11.6 VEHICULAR TRAFFIC DENSITY

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

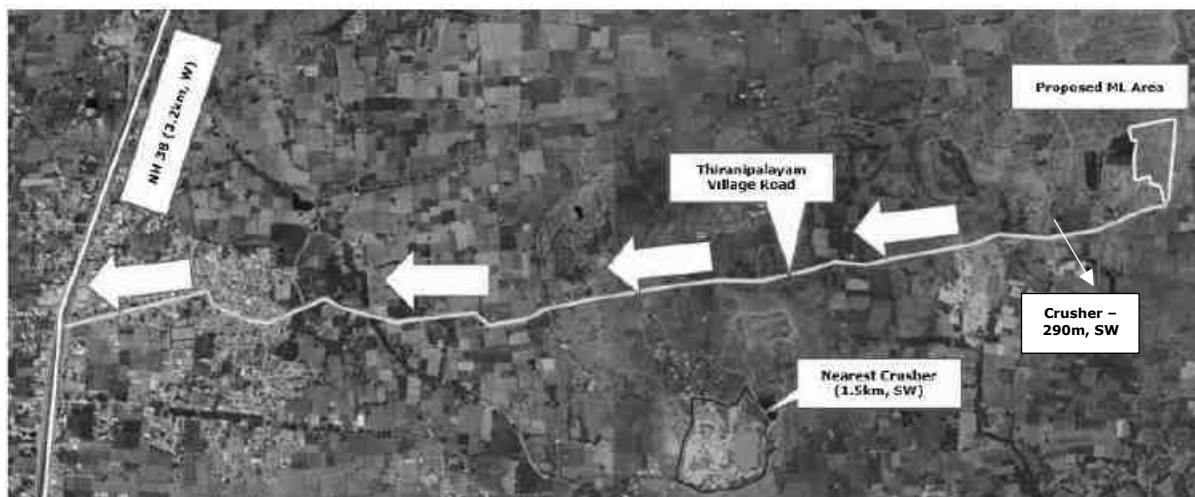


Figure 2.14 Traffic Map with Distance of nearest Crusher

The vehicular traffic survey will be carried out in the route through which mined out minerals are transported. Within 500 m radius, there are three existing quarries – Thiru. D. Manjunath and Tmt. P. Dhanalakshmi and Tmt. S. pitchai. The No. of trips per day for carrying the mine out mineral for this project is 28 Nos. The No. of trips per day for carrying the mine out mineral for Thiru. D. Manjunathan is 36 Nos., for Tmt. P. Dhanalakshmi is 14 Nos. and for Tmt. S. Pitchai is 24 Nos. Traffic Survey is conducted in NH-38.

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 38	592	14	606	2900

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 38	592	0.20	14	0.004	0.204	A*

2.11.7 INFRASTRUCTURE REQUIREMENT

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

2.11.8 PROJECT COST

The total project cost of this Rough stone & Gravel Quarry is Rs. 143.7 lakhs

2.11.9 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.

3.0 DESCRIPTION OF THE ENVIRONMENT

3.1 INTRODUCTION

As a precursor for the prediction of various types of environmental impacts likely to arise due to implementation of the project, it is essential to establish the baseline environmental setting of the project. Details of the baseline environmental parameters are required for decision making for the project design, implementation and operation from the environmental point of views. The data is to be generated through primary data collection (direct monitoring) and secondary sources (published data).

This chapter describes the environmental baseline data of core zone and surrounding areas of the project. The environmental baseline data includes the physical environment (comprising climate & meteorology, air, water, Noise and land components), biological environment and socio-economic environment, which may get affected due to this proposed project.

3.2 STUDY AREA

The study area has been divided into two zones, namely, core and buffer zones. Core zone is considered as the total lease area of mine lease, while buffer zone encompasses an area of 10 km radius distance from the periphery of core zone. This chapter incorporates the description of existing environmental status in an area encompassed within 10 km radius from the boundary of mine lease. The environmental data for the following Environmental components were collected in the study area:

- Micro-meteorological monitoring in one of the representative locations.
- Ambient air quality study comprising gaseous, particulate matter at 7 different locations including Project Site
- Water quality analysis in 7 different locations (7 Ground Water Samples)
- Noise levels monitoring in 7 different locations including Project Site
- Soil quality analysis in 7 locations including Project Site.
- Ecology and Biodiversity study
- Land use & Land Cover.

- Socio-economic survey.

3.3 STUDY PERIOD

The above-mentioned studies have been carried out systematically and meticulously as per relevant IS codes, CPCB, MoEF&CC guidelines during **March 2025 – May 2025**

3.4 MONITORING LAB

The baseline information for Air, Water, Noise, And Soil was analyzed by M/s. Shrient Analytical and Research Labs Pvt Ltd, # 416/15, Dharga Road, Perungalathur, West Tambaram, Chennai – 600 045. (Accredited by NABL as ISO/IEC/17025:2017) between **March 2025 to May 2025**

3.5 ENUMERATION OF THE STRUCTURES LOCATED WITHIN 300 M 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. The details structures located within 300 m radius are given in below table and Figure 3.1.

1. Structures Details

Table 3.1 Structures within 300 m radius

Range	No. of Structures	Structures Details
0 – 50 m	2	Shed, Store Room
50-100 m	1	Quarry Office Room
100-150	2	Hollow Block Manufacturing Unit & Shed
150 – 200 m	0	-
200 – 250 m	0	-
250 – 300 m	4	Farm Shed, Crusher Office Room, Labor House (2 Nos.)

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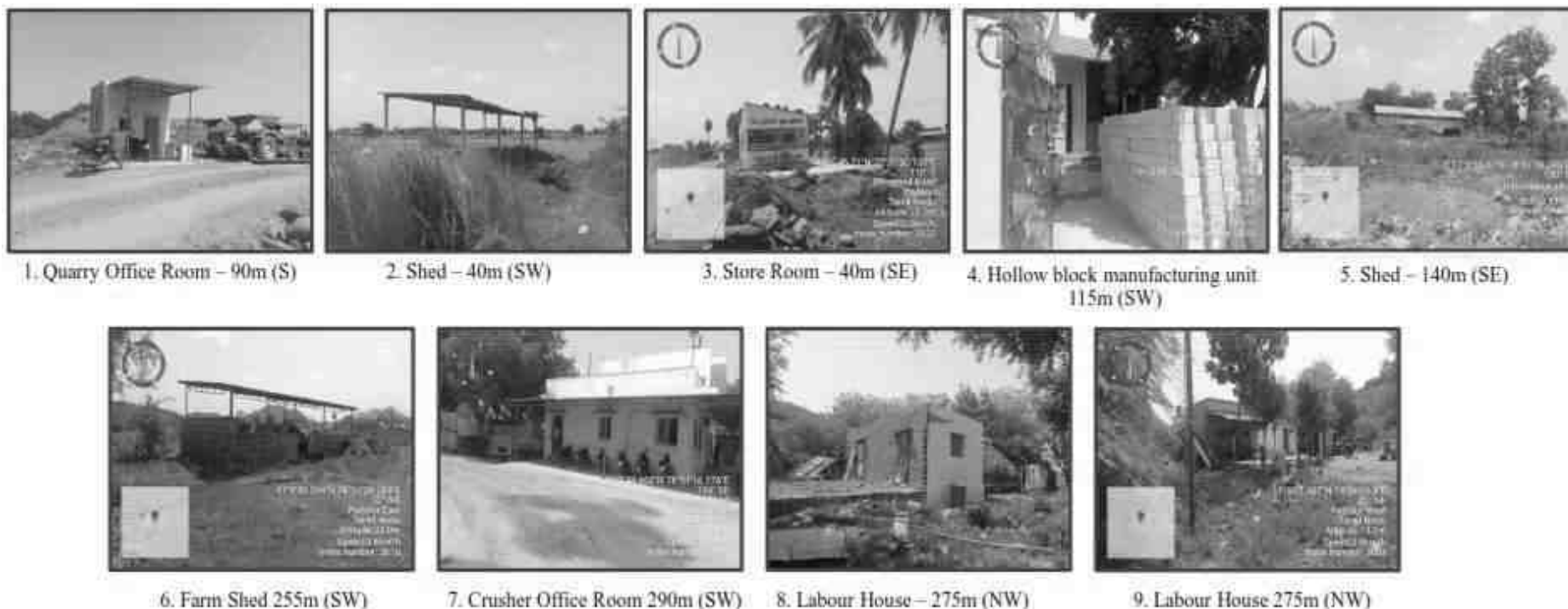


S. No	Name of the Structure	Distance and Direction	Ownership	Occupant	Type	Age
S1	Quarry Office Room	90m (S)	Not belongs to PP	Nil	Masonry	< 5 years
S2	Shed	40m (SW)		Nil	G.I Shed	< 5 years
S3	Store Room	40m (SE)		Nil	Masonry	< 5 years
S4	Hollow block manufacturing unit	115m (SW)		Nil	-	> 5 years
S5	Shed	140m (SE)		Nil	G.I Shed	< 5 years
S6	Farm Shed	255m (SW)		Nil	G.I Shed	< 5 years
S7	Crusher Office Room	290m (SW)		Nil	Concrete	> 5 years
S8	Labour House	275m (NW)		-	-	< 5 years
S9	Labour House	275m (NW)		S	Concrete	> 5 years

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Figure 3.1 Google Image showing structures located within 300 m radius

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As per the field study, 9 structures were observed within 300m radius of the project site, which are quarry and crusher related structures, hollow block unit and sheds. Hence there are no inhabited site within the 300m radius of the project site.

Figure 3.2 Photographs of the structures located within 300 m radius



Thiranipalayam Village Road- 10m (S)

Figure 3.3 Existing Features Within 500m Radius

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Sl. No	Radius	School	Temple	Inhabited Village	Remark
1	0-100 m	Nil	Nil	Nil	Nil
2	100-200 m	Nil	Nil	Nil	Nil
3	200-300 m	Nil	Nil	Nil	Nil
4	300-400 m	Nil	Nil	Nil	Nil
5	400-500 m	Nil	Nil	Nil	Nil

Figure 3.4 Enumeration of Temple, School and Inhabited Village within 500m Radius from the Project Site

3.6 ENVIRONMENTAL SETTINGS OF THE PROJECT

The Environmental settings of the project covering 10km radius of study area is given in Table 3.2. The study area map is given in Figure- 3.5 and satellite image showing 10 km radius is given in Figure 3.4.

Table 3.2 Environmental Settings of the Study Area – 10 km radius

S.NO	Particulars	Description
1.	Latitude & Longitude	Latitude: 11°05'47.07"N to 11°05'55.98"N Longitude: 78°51'25.59"E to 78°51'30.78"E
2.	The altitude of the area	≈ 135 m from above MSL. Initial RL before commencement of Mining – 134m BGL and Final RL after completion of Mining Operation – 82m BGL
3.	Topography	Plain Terrain
4.	Land use of M.L. area	Patta Land
5.	Extent of the Lease area	2.75.00 Ha
6.	Nearest Highway	NH 38 (Viluppuram – Trichy Road – 3.2 Km (W). The State Highway (SH-142) Perambalur – Thuraiyur Road - 14.5Km (NW).
7.	Nearest Railway Station	Kallagam – 17.5km, SW
8.	Nearest airport	Trichy International Airport – 39.81km, S
9.	Nearest Village	Therani – 550m, NE
10.	Nearest Town	Alathur
11	Water Bodies	Odai 760 m, SW, Odai 780m, W, Tank 640m, N, Tiruvalankurichi Eri 1.2km, NW, therani Tank, 1.52km, NE, Therani Big Lake, 2.22km, NE, Puthu Eri, 3.04km, SE, Odai Eri, 3.00 km, SE, Nakkambadi Tank, 4km, S, Vaeappan Eri, 3.91km, SW, Perumalpalayam eri, 3.7km, NW, Nochikulam Eri, 4.34km, N, Karai Tank, 4.8km, NE, Karupudayan Eri, 7.36 km, SE, Sanamangalam Eri, 7.96km, SW,

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		Maniyankurichi Tank, 7.39km, W, Chettikulam Tank, 8.29km, NW, Varugapadi Tank, 7.8km, N	
12	Historical Places/Places of Tourist/ Archeological site	NIL within 10 km radius	
13.	Environmental sensitive areas, Protected areas as per Wildlife Protection Act, 1972 (Tiger reserve, Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves)	NIL within 10 km radius	
14	Reserved / Protected Forests	Nedungur Reserve Forest Maniyankurichi RF Naranamangalam RF Maramareddipalayam Reserve Forest - Elur RF 3.68km, SW 5.58km, SW 5.65km, NW 7.61km, SW 8.10km (NW)	
15	Defence Installations	NIL within 10 km radius	
16	Seismic Zone	Zone II	
17	Other Industries in the study area	NIL within 10 km radius	
18	Interstate boundary	NIL	

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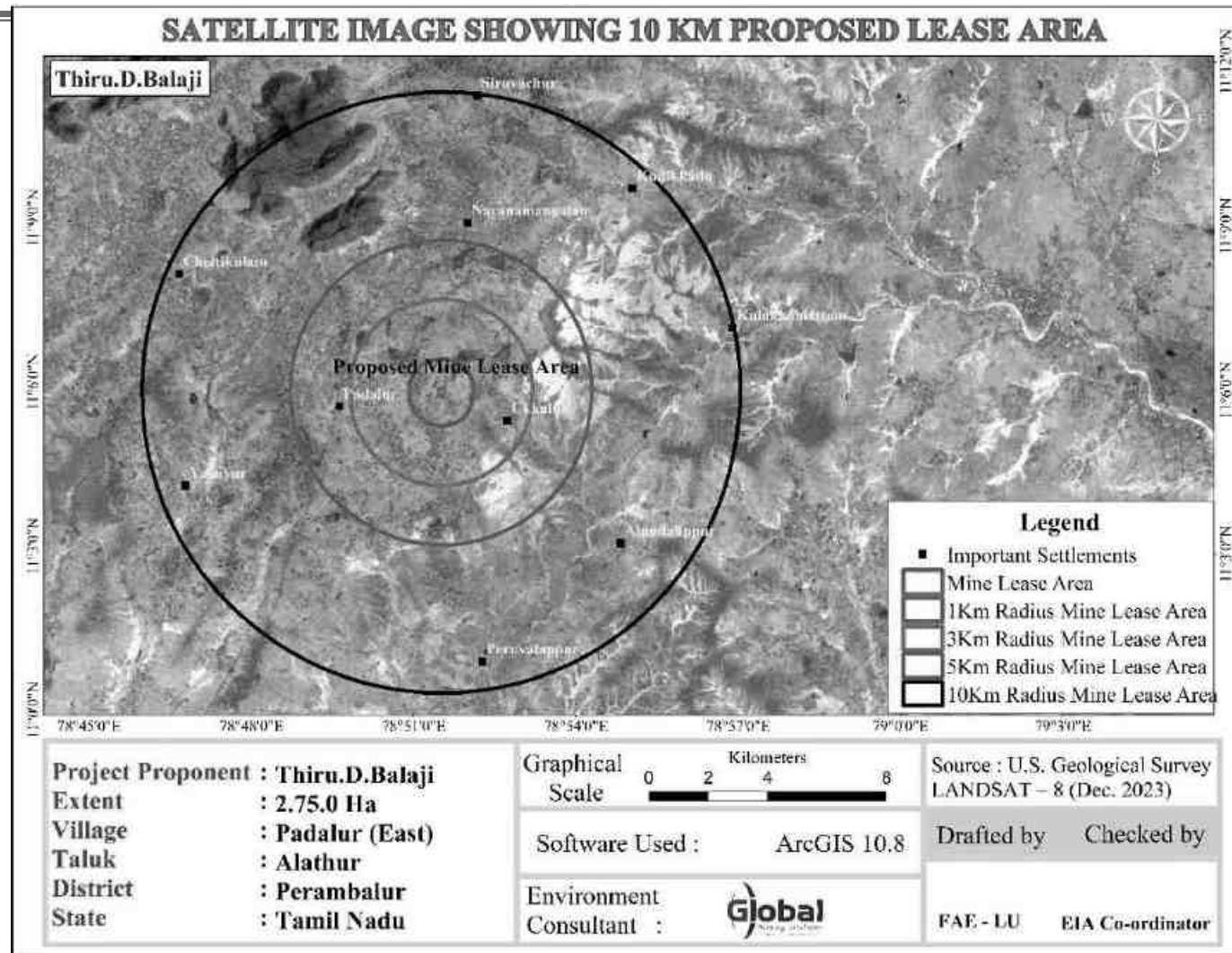


Figure 3.5 Satellite Image of the Study Area

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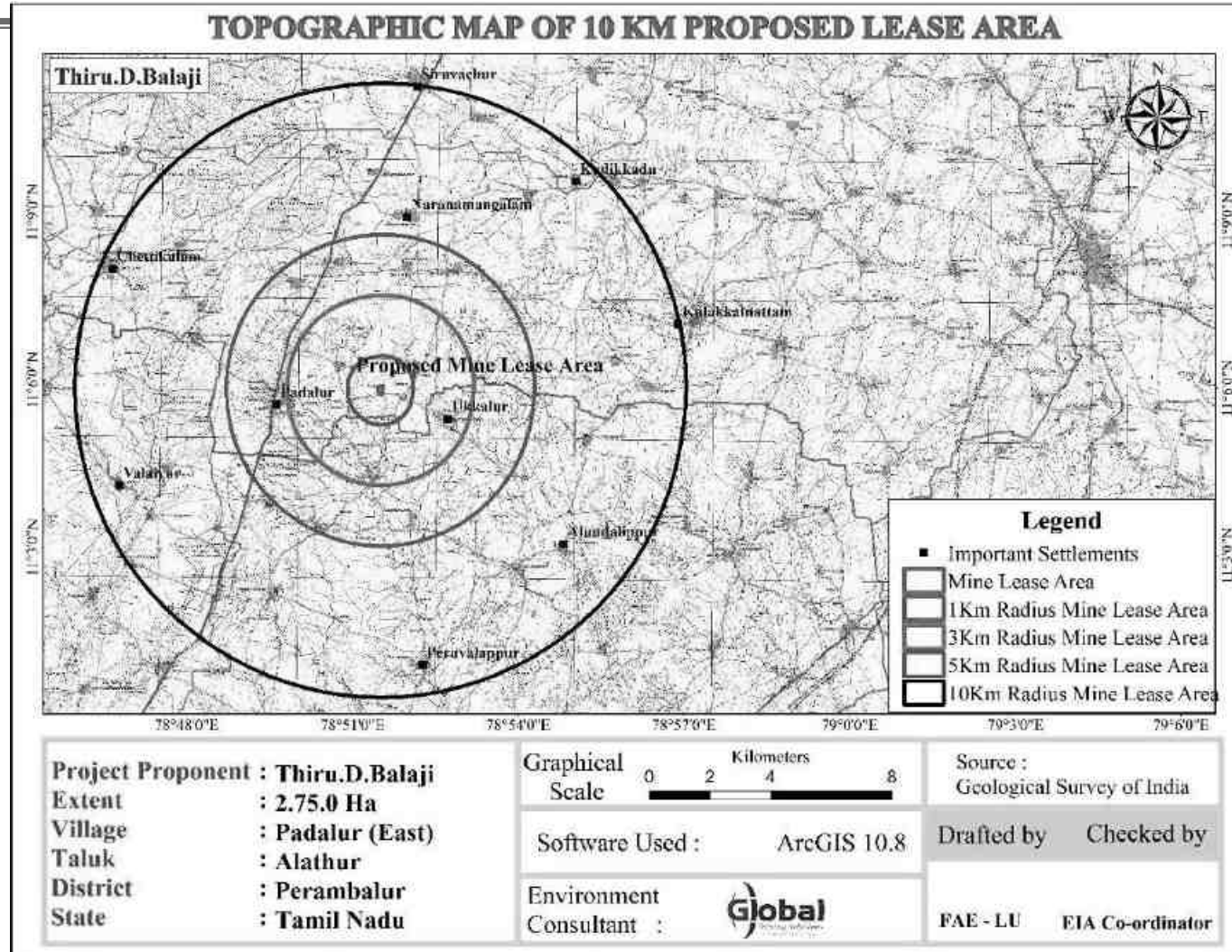


Figure 3.6 Topo map Showing Study Area

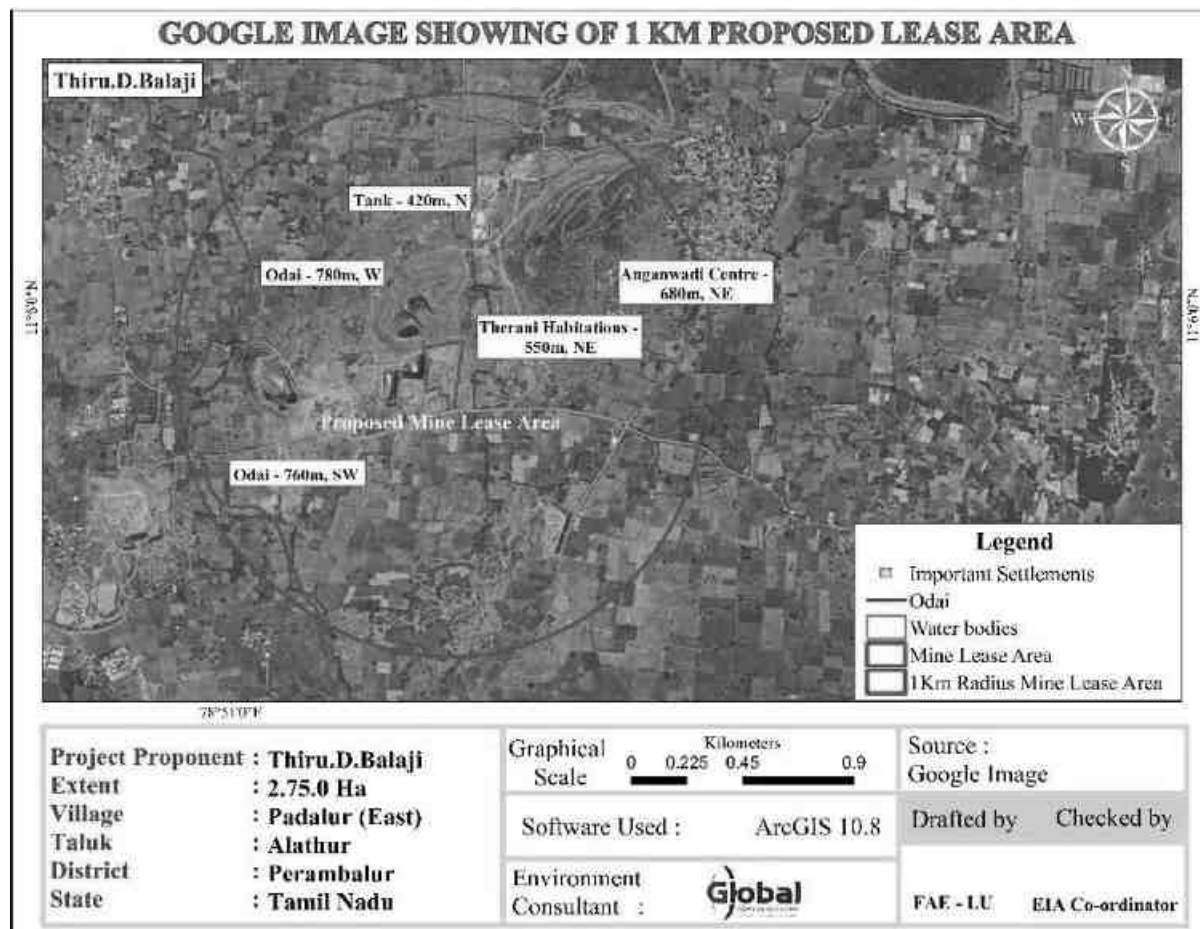


Figure 3.7 Google Image showing 1 km radius

3.7 EXISTING ENVIRONMENTAL SCENARIO

3.7.1 MICRO- METEOROLOGY

Meteorology is the key to understand the Air quality. The essential relationship between meteorological condition and atmospheric dispersion involves the wind in the broadest sense. Wind fluctuations over a very wide range of time, accomplish dispersion and strongly influence other processes associated with them.

3.7.1.1 CLIMATE AND RAINFALL DATA

Perambalur district enjoys a typical semi-arid climate with hot summers and moderately cool winters. The hottest season is from March to May. During the

period the maximum temperature often exceeds 40°C. The winter season is spread over two months viz. January and February and the nights are cool and pleasant. The district generally has a high humidity.

Table 3.3 Rainfall Data

Actual Rainfall in mm					Normal Rainfall in mm
2019	2020	2021	2022	2023	
747.3	629.2	1563.4	1043.8	737	816

Source: TWAD, Perambalur

Seismic Sensitivity

The proposed project site falls in the seismic Zone II, low damage risk zone as per BMTPC, Vulnerability Atlas of Seismic zone of India IS: 1893 – 2002.

Table 3.4 Meteorological Data Recorded at Site

S.NO	Parameters	March to May 2025
1.	Temperature (°C)	Min 13.5
		Max. 38.7
		Avg 26.0
2.	Relative Humidity (%)	Min 59
		Max 82
		Avg 71
3.	Wind Speed (km/h)	Min 0
		Max 8
		Avg 4
4.	Wind Direction	Blowing From – NE Blowing Towards - SW

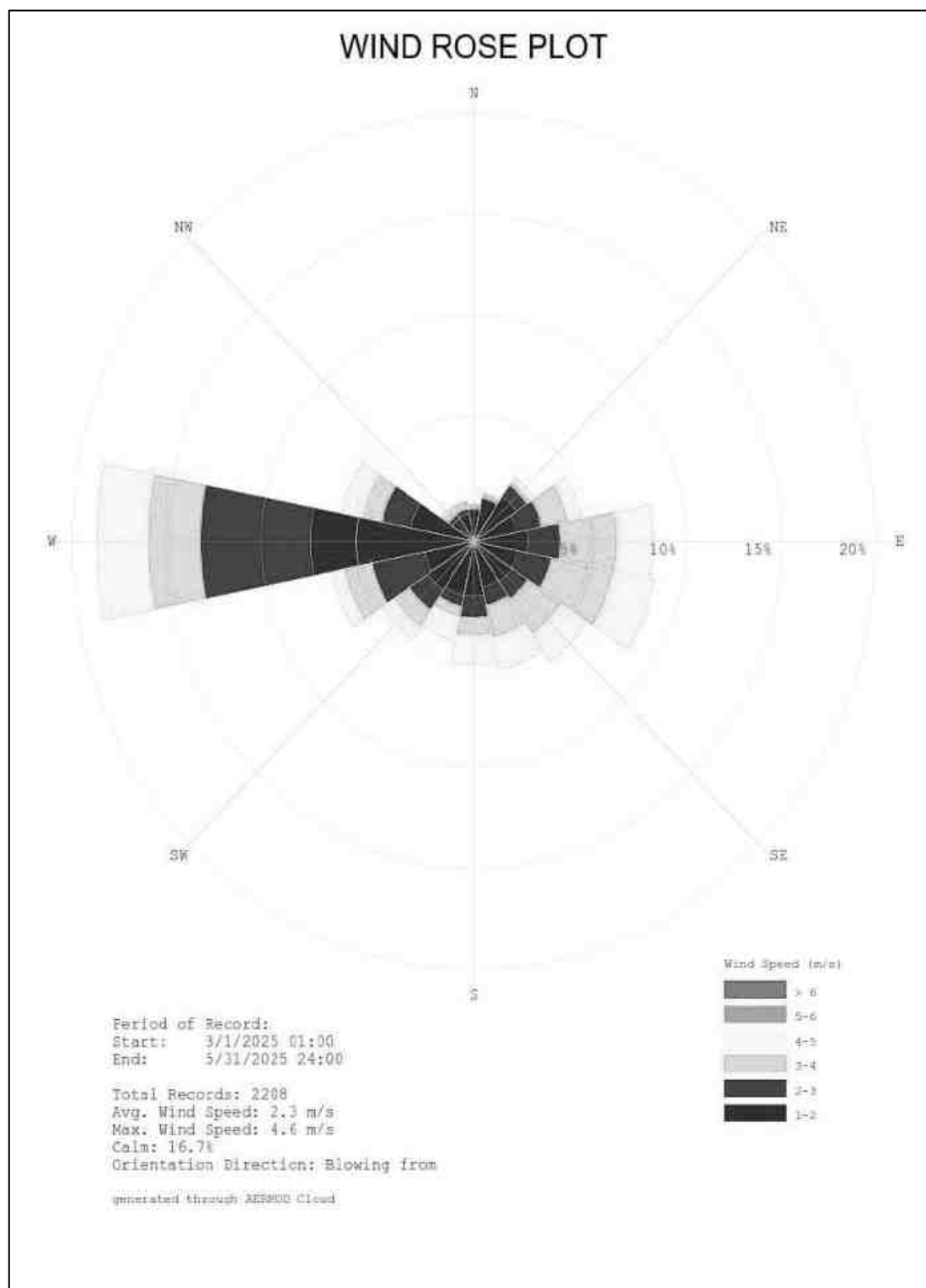


Figure 3.8 Wind Rose Diagram – Blowing From (March 2025 – May 2025)

3.7.2 AIR ENVIRONMENT

The prime objective of the ambient air quality study is to assess the existing air quality of study area and its conformity to NAAQS. The observed sources of air pollution in the study area are industrial, traffic and domestic activities. The baseline status of the ambient air quality has been established through a scientifically designed ambient air quality monitoring network considering the followings:

- Meteorological condition on synoptic scale
- Topography of the study area;
- Representatives of regional background air quality for obtaining baseline status;
- Location of residential areas representing different activities;
- Accessibility and power availability; etc.,

3.7.2.1 SAMPLING & ANALYTICAL TECHNIQUES

Table 3.5 Methodology for Air Quality Monitoring

1.	Monitoring Period	Summer (March 2025 – May 2025)
2.	Monitoring Location	The monitoring locations for ambient air study is given in Table – 3.6 and Figure 3.8.
3.	Selection Criteria	The monitoring location is selected based on terrain & wind direction. Locations were chosen in upwind, downwind and crosswind
Methodology		
4.	A. Sampling	(IS-5182:Part 1:2018)
	B. Analysis	
	Parameters	Protocol
5.	Particulate Matter (PM ₁₀)	Gravimetric (IS 5182: Part 23:2017)
	Particulate Matter (PM _{2.5})	Gravimetric (IS 5182: Part 24:2019)
	Sulphur Dioxide	Colorimetric (West & Gaeke Method) (IS 5182: Part 02: 2017)
	Nitrogen Dioxide	Colorimetric (Modified Jacob & Hocheiser Method) (IS 5182: Part 06:2017)
	Carbon Monoxide	CO Monitor
	Monitoring Frequency	2 days in a week, 4 weeks in a month for 3 months in a season.

3.7.2.2 FREQUENCY AND PARAMETERS FOR SAMPLING

Ambient air quality monitoring has been carried out with a frequency of two samples per week at seven (7) locations, adopting a continuous 24 hourly (3 shift of 8-hour) schedule for the period **March 2025 – May 2025**. The baseline data of ambient air has been generated for PM₁₀, PM_{2.5}, Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂) and Carbon Monoxide Monitoring has been carried out as per the CPCB, MoEF & CC guidelines and notifications.

It was ensured that the equipment was placed preferably at a height of at least 3m above the ground level at each monitoring station, for negating the effects of wind-blown ground dust. The equipment was placed at open space free from trees and vegetation which otherwise act as a sink of pollutants resulting in lower levels in monitoring results.

3.7.2.3 AMBIENT AIR QUALITY MONITORING STATIONS

Seven (7) monitoring stations were set up in the study area as depicted in Figure 3.8 for assessment of the existing ambient air quality. Details of the sampling locations are as per given below.

Table 3.6 – Ambient Air Quality Monitoring Locations

S. No.	Location Code	Monitoring Locations	Distance & Direction from Site	Latitude and longitude
1	AAQ1	Within ML area	-	11° 5'56.00"N, 78°51'30.60"E
2	AAQ2	Therani	1.23km, NE	11° 6'12.80"N, 78°52'5.93"E
3	AAQ3	Karai west	4.55km, NE	11° 7'58.80"N, 78°52'50.24"E
4	AAQ4	Padalur west	2.98km, SW	11° 5'24.83"N, 78°49'55.09"E
5	AAQ5	Nedungur	5.47km, SW	11° 3'50.43"N, 78°49'17.77"E
6	AAQ6	Thiruvalankurichi	1.64km, NW	11° 6'17.36"N, 78°50'40.35"E
7	AAQ7	Otathur	2.66km, S	11° 4'27.89"N, 78°51'15.53"E

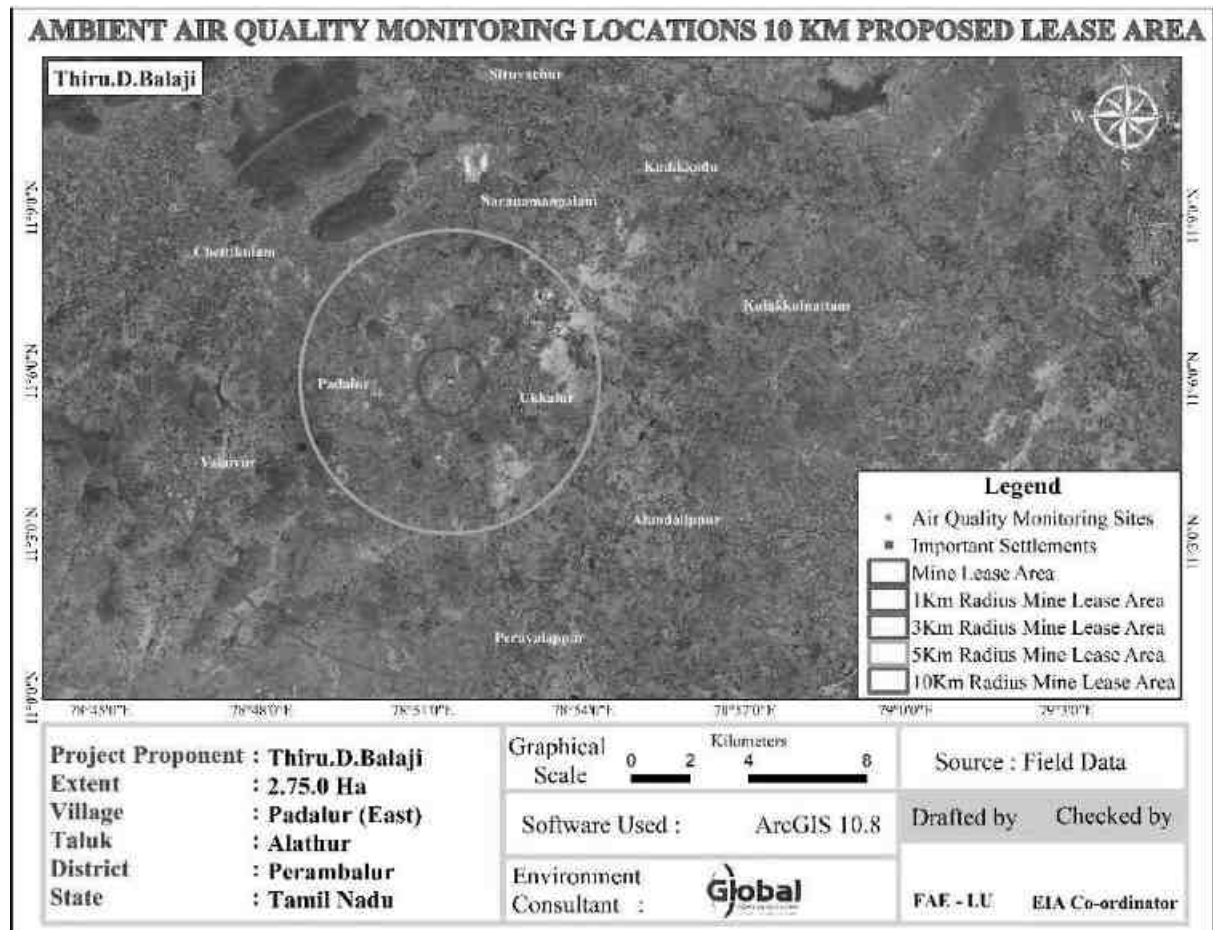


Figure 3.9 Ambient Air Quality Monitoring Locations

Table 3.7 Ambient Air Quality Data

Code	PM 10 ($\mu\text{g}/\text{m}^3$)				PM 2.5 ($\mu\text{g}/\text{m}^3$)				SO ₂ ($\mu\text{g}/\text{m}^3$)				NO _x ($\mu\text{g}/\text{m}^3$)			
	Max	Min	Avg	98 percentiles	Max	Min	Avg	98 percentiles	Max	Min	Avg	98 percentiles	Max	Min	Avg	98 percentiles
AAQ 1	75.3	52.7	64.3	74.7	36.1	25.3	30.9	35.8	7.8	5.3	6.5	7.8	9.8	7.5	8.7	9.8
AAQ 2	56.6	43.7	49.4	56.2	26.8	20.7	23.4	26.7	6.0	4.3	5.3	6.0	7.5	5.2	6.3	7.5
AAQ 3	52.7	41.7	46.4	52.2	25.1	19.9	22.1	24.9	6.2	4.1	5.1	6.2	8.2	5.9	7.1	8.2
AAQ 4	58.5	47.2	52.8	58.1	29.1	21.5	25.0	28.8	7.1	4.7	5.9	7.0	9.9	7.6	8.8	9.9
AAQ 5	55.9	45.1	49.2	55.3	26.4	20.7	23.1	26.1	8.7	6.4	7.6	8.7	10.8	8.2	9.5	10.8
AAQ 6	50.7	40.4	45.1	50.0	24.4	19.0	21.7	24.3	6.7	4.1	5.4	6.7	9.1	6.8	8.0	9.1
AAQ 7	58.9	46.1	52.8	58.7	28.3	22.1	25.3	28.2	8.0	5.6	6.8	8.0	9.5	7.4	8.5	9.5
NAAQ Standards	100 ($\mu\text{g}/\text{m}^3$)				60($\mu\text{g}/\text{m}^3$)				80 ($\mu\text{g}/\text{m}^3$)				80 ($\mu\text{g}/\text{m}^3$)			

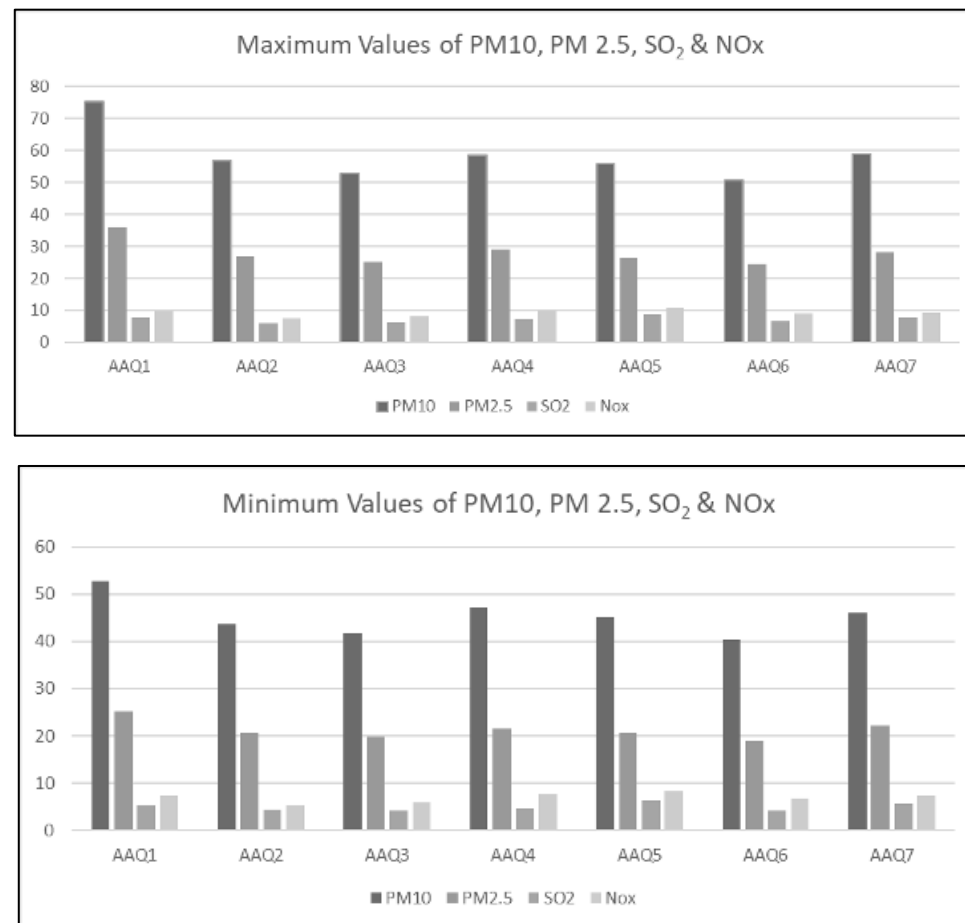


Figure –3.10 - Graphical Representation of Air Quality Data

3.7.2.4 INTERPRETATION

PM10 & PM2.5

The main sources of PM include incomplete combustion, automobile emissions, Dust and also due to the chemical reactions in the atmosphere. From the monitoring locations, it is inferred that the maximum value of both PM 10 & PM 2.5 is observed in mine lease area. The main contributing factor is that there are three other existing quarries located near the project site within 500 m radius, where the vehicular traffic will be more. Approximately 62 trucks will be used for the transportation of mined out mineral from all the three quarries. Coupled to that, there is one hollow block manufacturing unit (115m, W) and one crusher unit (290m, W), from which there will more fugitive emissions, which is also a contributing factor. Also, few other quarries, crusher units along with temples, Aavin Milk Factory and few commercial settlements are located within 2 km radius. The movement of trucks and other vehicles from these settlements will increase the automobile emission leading to the increased value of PM 10 and PM 2.5 in the ML area.

The route for carrying out the mined-out mineral to NH 38 will be through Thiranipalayam Road, which is one-way road, which may be an attributing factor. The governing factors for the transport of PM are wind direction & wind speed. The baseline monitoring is done for the three months i.e., from **March 2025 to May 2025**. The predominant wind direction is blowing from west to east and the maximum wind speed is >6mps. The greater values of Particulate matter will have its impacts on Human Health. Short term exposure may cause coughing, shortness of breath, tightness of the chest, irritation of the eyes. The Long-term exposure may lead to reduced lung function, development of respiratory diseases and also premature death of people with lung diseases.

Sox

The main Source of SO_x in mining operation can often be associated with the utilization of heavy machinery and equipment that may rely on fuel like diesel. Also mining activities such as drilling, blasting, crushing, and material transport can generate dust particles. These dust particles, particularly if finely divided, can act as catalysts, accelerating the oxidation of sulfur compounds and contributing to SO₂ formation in the atmosphere.

The maximum value is observed in Nedungur & the minimum value is observed in Karai west and Tiruvalankurichi.

The high value in Nedungur is attributed to crushers present near the monitoring location – Balaji Stone Crusher, 3 other crusher units, Sand Plant and Ginning Mill. Also, the area is high residential settlement with commercial area like café and communal properties like temple, church is present, wherein the movement of vehicles and trucks will be more. Added to that, there is NH 38 (heavy vehicular movement) located near the monitoring location and also a fuel refilling point is located alongside of the highway road, where the vehicles will stop by to refuel the vehicles, thereby releasing SO₂ into the atmosphere.

The increased value of Sox can have detrimental effects on human health. Such effects include breathing problems, particularly in asthmatics, whereas short-term exposure can lead to chest tightness and coughing and wheezing. Continued exposure to sulfur dioxide has been linked with alterations of the lung's defenses and aggravation of existing cardiovascular disease.

Sulfur dioxide is a major precursor to particulate soot, which reduces air quality. Sulphur dioxide has an acidifying effect on the environment. Acidification harms plants and animals, both on land and in water. When the ground turns acidic, vital nutrients are leached from the soil, which eventually may result in reduced fertility of the soil.

Nox

The sources of NO_x pollution include emissions by automobiles, trucks and various non-road vehicles (e.g., construction equipment). NO_x is released into the atmosphere by combustion of fuels, such as hydrocarbons, in air; especially at high temperatures, such as in car engines. In areas of high motor vehicle traffic, the nitrogen oxides emitted can be a significant source of air pollution.

The maximum value is observed in Nedungur. This is mainly due to presence of crusher units, sand plant, ginning mills and NH 38 with fuel refilling point alongside of the highway, wherein the movement of vehicles and trucks will be more. Also, there are already 2 operating mines are present in the vicinity of the monitoring location, where blasting operations will be carried out. The blasting of explosives may produce Nox, which will be dispersed in air by the wind, which may be an attributing factor.

3.7.2.5 AIR QUALITY INDEX

According to Ott (1978), an air quality index is an overall system that converts the weighed values of several air pollution-related criteria (such as pollutant concentrations) into a single number or set of numbers. The goal of an AQI is to swiftly transmit information about air quality that includes a method to account for pollutants that have short-term effects (nearly in real-time). It is similarly important that the majority of these contaminants are regularly monitored online. Real-time information on the air quality is not available in the current situation because it has been manually measured twice a week for one season, 24 hours a day. The category of air quality in the relevant period can, however, be strongly described by the data gathered over a season. The AQI Category for each of monitoring station has been found to be Satisfactory.

Table 3.8 AQI for AAQ Monitoring Locations

Monitoring Locations	AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7
AQI	75	57	53	59	56	51	59
Air Quality Condition	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory

Good	Minimal Impact	Poor	Breathing discomfort to people on prolonged exposure
(0-50)		(201-300)	
Satisfactory	Minor breathing discomfort to sensitive people	Very Poor	Respiratory illness to the people on prolonged exposure
(51-100)		(301-400)	
Moderate	Breathing discomfort to the people with lung, heart disease, children and older adults	Severe	Respiratory effects even on healthy people
(101-200)		(>401)	

3.7.3 WATER ENVIRONMENT

The water resources, both surface and groundwater play a significant role in the development of the area. The purpose of this study is to assess the water quality characteristics for critical parameters and evaluate the impacts on agricultural productivity, domestic community usage, recreational resources and aesthetics in the vicinity. The water samples were collected and transported as per the standard guidelines issued by CPCB for analysis.

3.7.3.1 METHODOLOGY

Reconnaissance survey was undertaken and monitoring locations were selected based on:

- Location of the major water bodies
- Location of project site, their water intake and effluent disposal locations
- Likely areas that can represent baseline conditions
- The water samples were collected and were analyzed for physical, chemical, and biological characteristics as per guidelines issued by IS code No.10500/2012.

3.7.3.2 GROUND WATER

The water level is being monitored by State Ground & Surface Water Resources Data Centre from 1971 onwards from a network of 1746 observation wells (shallow open wells) located all over the State. The water level readings are observed in the first week of every month by the field officers. In Perambalur District, 131 observation wells and 13 piezometers, totally 144 wells are monitoring on Monthly basis. The Central Ground Water Board also monitors the water level from 900 numbers of wells spread all over the State. They observe water level four times in a year. (i.e. January, May, August and November). The collected water level data are uploaded in GWDES software and database is maintained regularly for analyzing the water level trend with rainfall. From the Monitoring network of wells, the selected representative wells are taken for Resource Estimation computations. In Perambalur 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.

Source: NWM

3.7.3.3 SAMPLING LOCATIONS

Seven (7) ground water samples were collected from the study area and were analyzed for physio-chemical, heavy metals and bacteriological parameters in

order to assess the effect of mining and other activities on ground water. The samples were analyzed as per the procedures specified by CPCB, IS-10500:2012. The water sampling locations are given in Table 3.8 and shown as Figure 3.10.

Table 3.9 Environmental Parameters: Ground water Quality Analysis

Monitoring Period	March 2025 – May 2025
Design Criteria	Based on the Environmental settings in the study area and Drainage Pattern
Methodology	Water Samples were collected in 5 Litre fresh cans as per IS 3025 Part I and transported to the laboratory in Iceboxes
Frequency of Monitoring	Once in a season

Table 3.10 Water Sampling Locations

S. No.	Location Code	Monitoring Locations	Distance & Direction from Site	Latitude and longitude
1	WQ1	Within ML area	-	11° 5'56.00"N, 78°51'30.60"E
2	WQ2	Therani	1.23km, NE	11° 6'12.80"N, 78°52'5.93"E
3	WQ3	Karai west	4.55km, NE	11° 7'58.80"N, 78°52'50.24"E
4	WQ4	Padalur west	2.98km, SW	11° 5'24.83"N, 78°49'55.09"E
5	WQ5	Nedungur	5.47km, SW	11° 3'50.43"N, 78°49'17.77"E
6	WQ6	Thiruvallankurichi	1.64km, NW	11° 6'17.36"N, 78°50'40.35"E
7	WQ7	Otathur	2.66km, S	11° 4'27.89"N, 78°51'15.53"E



Figure 3.11 – Water Monitoring Locations

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

Table 3.11 Ground Water Quality – Analysis Result

S. No.	Parameters	W1	W2	W3	W4	W5	W6	W7
1	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
2	Turbidity	<1	<1	<1	<1	<1.0	<1	<1.0
3	pH at 25 °C	8.01	7.87	7.46	8.11	7.29	7.56	7.95
4	Electrical Conductivity	509.3	1975.0	2134.0	2062.0	1964.0	1278.0	1656
5	Total Dissolved Solids	310	1180	1286	1250	1190	780	1002
6	Total hardness as CaCO ₃	171	382	451	422	389	232	352
7	Calcium as Ca	43.2	84	103.6	96	84.8	58.4	65.2
8	Magnesium as Mg	15.12	41.28	46.08	42.48	42.48	20.64	45.36
9	Calcium as CaCO ₃	108	210	259	245	212	146	163
10	Magnesium as CaCO ₃	63.0	172	192	177	177	86.0	189
11	Total alkalinity as CaCO ₃	152.00	374.00	386.00	397.00	379.00	258.00	325.00
12	Chloride as Cl ⁻	72.6	365	512	382	367	242	344
13	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)
14	Sulphates as SO ₄ ²⁻	53.4	342	216	358	345	210	272
15	Iron as Fe	0.08	BDL(D.L-0.01)	0.04	0.14	0.12	0.05	0.15
16	Nitrate as NO ₃	BDL(D.L-1.0)	6.45	6.57	6.24	5.78	4.62	2.36
17	Fluoride as F	0.13	0.61	0.55	0.59	0.56	0.39	0.45
18	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)

3.7.3.4 DISCUSSION

Physical parameters of water

The basic physical parameters of the water include

Odour: The odour of the water is found to be agreeable in all the 7 monitoring locations.

pH:

Value observed in the project site: 8.01.

Acceptable and permissible limits: 6.5-8.5. The pH value is the measure of acid – base equilibrium. The value of pH in the project site clearly indicates that water is mildly alkaline.

Turbidity:

Value observed in the project site: <1 NTU.

Acceptable and permissible limits: 1 NTU & 5 NTU respectively. The value of turbidity generally indicates the presence of phytoplanktons and other sediments. The value in the project site indicates the water is not turbid and no any physical treatment is required to treat the turbidity of the water.

Total Dissolved Solids:

Value observed in project site: 310 mg/L.

Acceptable and permissible limits: 500 mg/L and 2000 mg/L respectively. The TDS is the presence of the inorganic salts and small amounts of organic matter present in the water. This is mainly due to the result of surface runoff as the cations and anions in the top soil is carried away by the water. As per the Guidelines of WHO, if the value of TDS is greater than 1200 mg/L, it is designated as unacceptable. Since the value of the TDS is less than 1200 mg/L, it will not cause any adverse impact.

Chemical parameters of water:

The chemical parameters of the drinking water include

Calcium:

Value observed in the project site: 43.2 mg/L.

Acceptable and permissible limits: 75 mg/L and 200 mg/L respectively.

Calcium is the essential macronutrient. The value of the calcium is within the prescribed permissible standards.

Magnesium:

Value observed in the project site: 15.12 mg/L.

Acceptable and permissible limits: 30 mg/L and 100 mg/L respectively.

The value of Magnesium in the project site is less than the permissible limit.

Chloride

Value observed in the project site: 72.6 mg/L.

Acceptable and permissible limits: 250 mg/L and 1000 mg/L respectively.

The chloride level in the project site is less than the permissible limit. Hence it will not have any major impact.

Hardness:

Value observed in project site: 171 mg/L.

Acceptable and permissible limits: 200 mg/L and 600 mg/L respectively.

The value of Hardness in the project site is within than permissible limit.

Secondary Data:

Following are the Analytical Results of samples collected from National Groundwater Monitoring Wells (May 2022)

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

S.No	District	Location	Latitude	Longitude	pH	EC *	TH**	Ca	Mg	Na	K	CO ₃	HCO ₃	Cl	SO ₄	NO ₃	F	U
639	Perambalur	Mozuramodu	11.2366	78.8922	8.16	1640	90	10	10	329	1	0	439	143	153.6	124	1.26	18.27
640	Perambalur	Nakkasalem	11.3186	78.9171	7.49	7136	365	84	83	322	9	0	110	447	207.76	148	0.54	6.71
641	Perambalur	Padalur	11.0960	78.8252	7.60	4136	1860	28	380	685	10	0	305	1702	400	35	1.29	193.00
642	Perambalur	Palavur	11.1830	78.8575	7.52	1169	430	30	80	76	5	0	195	85	254.4	81	0.84	8.84

Water Quality Index

WQI is defined as a rating reflecting the composite influence of different water quality parameters. WQI is calculated from the point of view of the suitability of water for human consumption. A quality rating scale (qi) for each parameter is assigned by dividing its concentration in each water sample by its respective standard according to the guidelines laid down in the BIS and the result multiply by 100.

$$qi = (Ci/Si) \times 100$$

Where qi is the quality rating, Ci is the concentration of each chemical parameter in each water sample in mg/l, and Si is the Indian drinking water standard for each chemical parameter in mg/l according to the guidelines. For computing the WQI, the SI is first determined for each chemical parameter, which is then used to determine the WQI as per the following equation

$$SII = Wi \times qi \quad QWI = \sum SII$$

SII is the sub-index of the ith parameter; qi is the rating based on concentration of ith parameter and n is the number of parameters. The computed WQI values are classified in to five types, "excellent water" to "water not suitable for drinking".

Water Quality Classification based on WQI Value

WQI Value	Water Quality
<50	Excellent
50-100	Good water
100-200	Poor water
200-300	Very poor water
>300	Water not suitable for drinking

Ground Water:

The Water Quality Index based on weighted average of 9 parameters (Total Hardness as CaCO₃, Calcium, Magnesium, TDS, Fluoride, pH, EC, Iron, Turbidity) has been found to be excellent in all the locations except Padalur west and otathur, wherein the water quality is good. The values are as shown below:

Monitoring Location	GW1	GW2	GW3	GW4	GW5	GW6	GW7
WQI Value	26	21	26	51	45	24	50
WQI - Indicator	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Good

3.7.4 NOISE ENVIRONMENT

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.

3.7.4.1 SAMPLING LOCATIONS

In order to assess the ambient noise levels within the study area, noise monitoring was carried out at seven (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 3.13 and in below table.

Table 3.12 Noise Monitoring Locations

S. No.	Location Code	Monitoring Locations	Distance & Direction from Site	Latitude and longitude
1	ANL1	Within ML area	-	11° 5'56.00"N, 78°51'30.60"E
2	ANL2	Therani	1.23km, NE	11° 6'12.80"N, 78°52'5.93"E

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

3	ANL3	Karai west	4.55km, NE	11° 7'58.80"N, 78°52'50.24"E
4	ANL4	Padalur west	2.98km, SW	11° 5'24.83"N, 78°49'55.09"E
5	ANL5	Nedungur	5.47km, SW	11° 3'50.43"N, 78°49'17.77"E
6	ANL6	Thiruvallankurichi	1.64km, NW	11° 6'17.36"N, 78°50'40.35"E
7	ANL7	Otathur	2.66km, S	11° 4'27.89"N, 78°51'15.53"E



Figure 3.12 Noise Monitoring Location

3.7.4.2 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.

3.7.4.3 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 3.12.

Table 3.13 Noise Monitoring Result

DESCRIPTION	ANL1	ANL2	ANL3	ANL4	ANL5	ANL6	ANL7
DAY EQUIVALENT	51.6	48.9	50.3	47.4	48.6	44.6	49.5
NIGHT EQUIVALENT	39.1	42.8	38.7	40.6	41.4	37	37.8

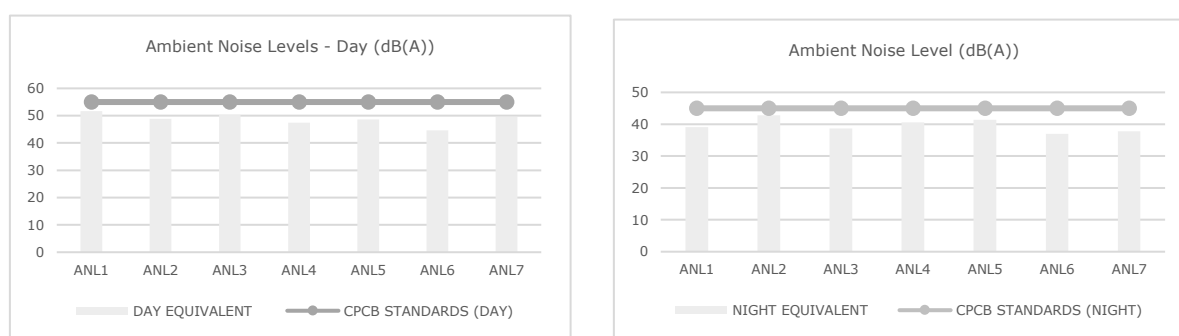


Figure 3.13 Noise Monitoring Results

3.7.4.4 DISCUSSION

Out of the 7 locations, the maximum value is observed in Mine Lease Area during day time. The maximum noise in the project site is due to the mining and crushing activity near the project site and movement of vehicles and trucks are associated to transport the mined-out mineral, which is also an attributing factor. The maximum value during night is observed in Therani. Therani is residential and the maximum noise in Therani is attributed to the movement of vehicles and trucks to NH 38 via Therani – Otathur village road.

3.7.5 SOIL ENVIRONMENT

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 Table 3.13 and Figure 3.16. The soil type of the study area is detailed below.

Sl.No.	SOIL TYPE	Area in Sq.Km	Area in Percentage
1	Brown Loam Soil	96.10	29.90
2	Clay	105.26	32.75
3	Red loom soil	95.70	29.78
4	Sandy clay loam	24.31	7.56
	Total	321.37	100.00

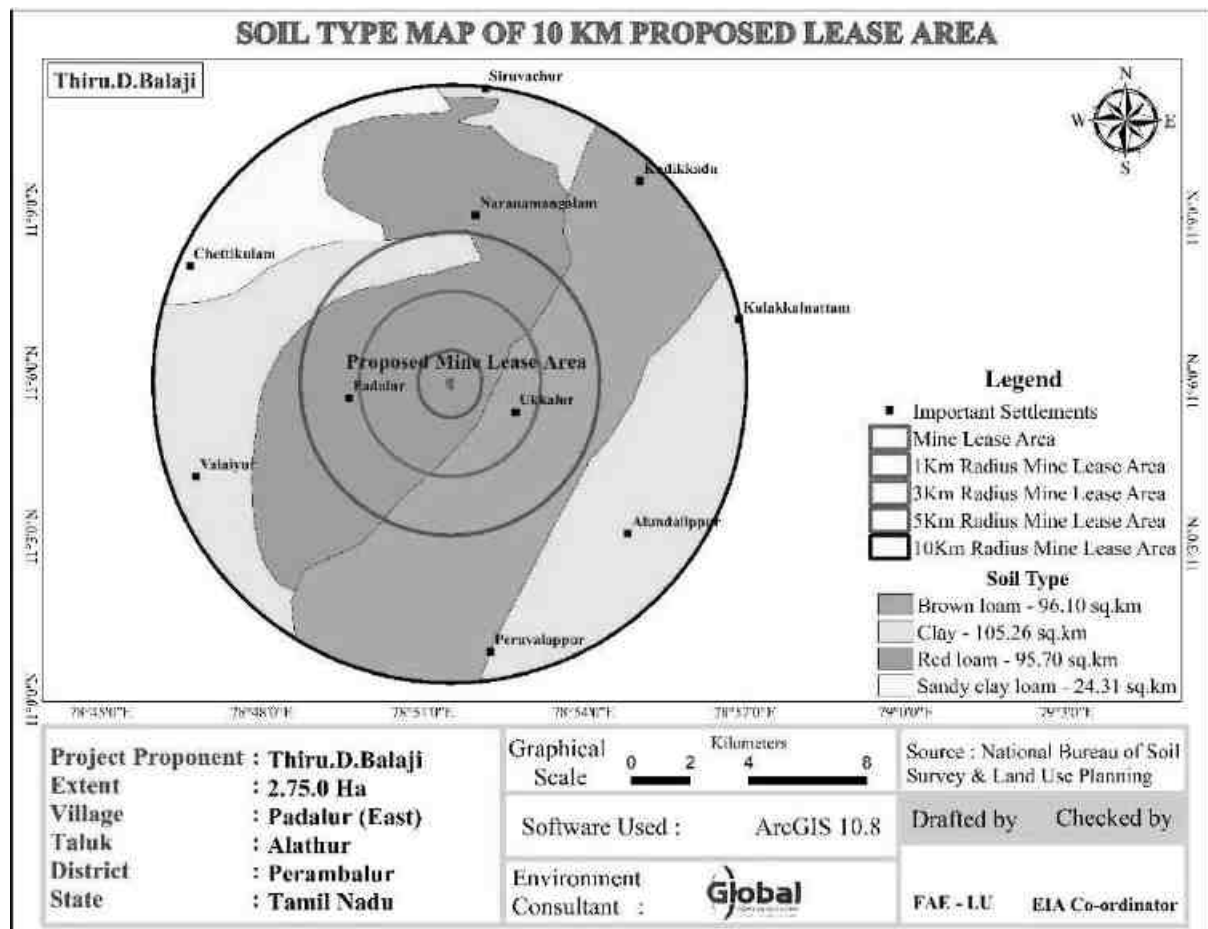


Figure 3.14 - Soil Map of the Study Area

3.7.5.1 MONITORING LOCATIONS

Soil samples were collected from 7 locations to assess the soil quality in and around the mines. Soil samples collected using sampling augers and field capacity apparatus.

Table 3.14 – Soil Sampling Locations

S. No.	Location Code	Monitoring Locations	Distance & Direction from Site	Latitude and longitude
1	SQ1	Within ML area	-	11° 5'56.00"N, 78°51'30.60"E
2	SQ2	Therani	1.23km, NE	11° 6'12.80"N, 78°52'5.93"E
3	SQ3	Karai west	4.55km, NE	11° 7'58.80"N, 78°52'50.24"E
4	SQ4	Padalur west	2.98km, SW	11° 5'24.83"N, 78°49'55.09"E
5	SQ5	Nedungur	5.47km, SW	11° 3'50.43"N, 78°49'17.77"E
6	SQ6	Thiruvalankurichi	1.64km, NW	11° 6'17.36"N, 78°50'40.35"E
7	SQ7	Otathur	2.66km, S	11° 4'27.89"N, 78°51'15.53"E

3.7.5.2 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. Three 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.

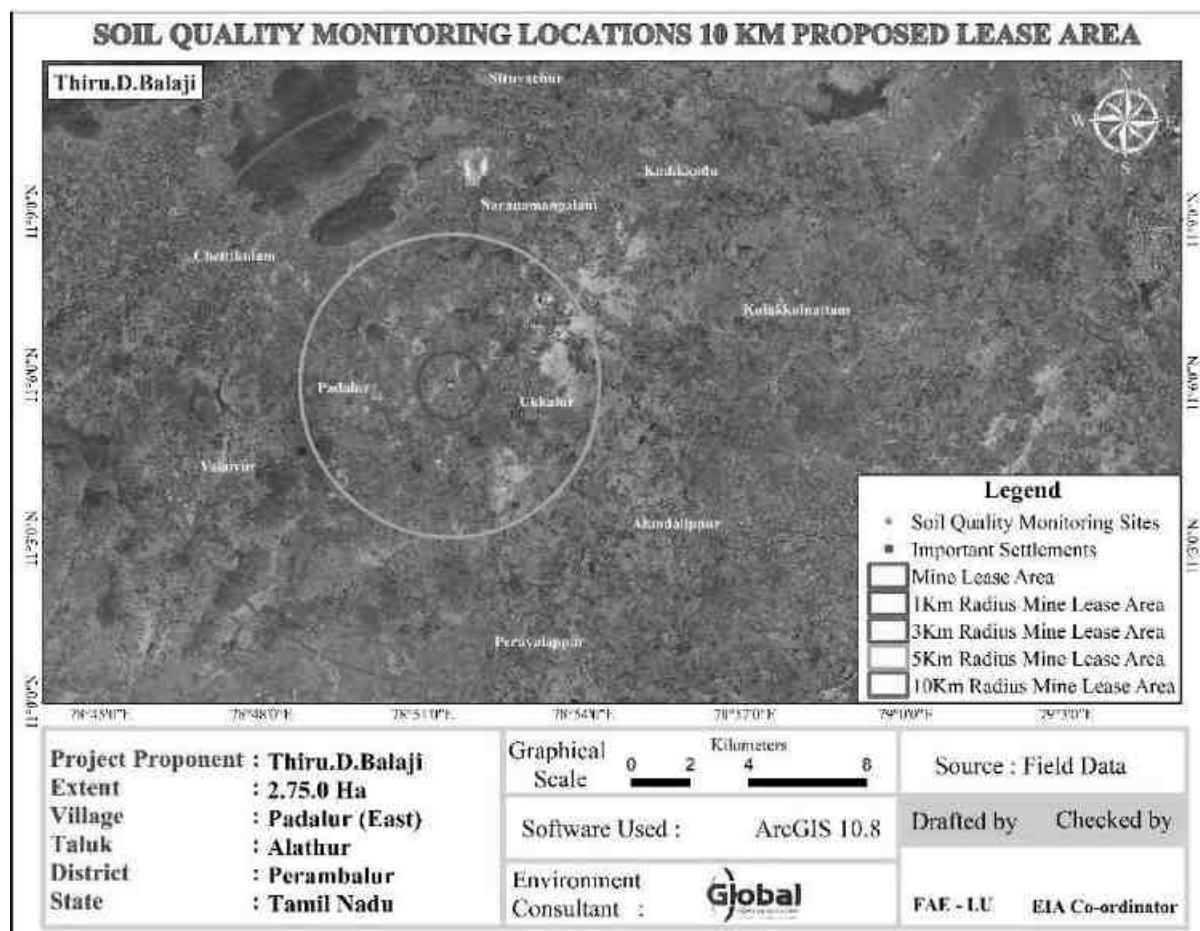


Figure 3.15 - Soil Sampling Stations

3.7.5.3 SOIL TESTING RESULT

Results of the soil samples show that the pH values were found to be 7.32 to 8.37 and Electrical Conductivity values were ranging between 182.8 – 298.30 $\mu\text{mhos/cm}$. Soils are generally Silt Loam. Organic matter values were ranging between 0.67 – 1.21 %. Total Nitrogen values were ranging between 136 – 390 mg/kg. Phosphorus values were ranging between 1.21 – 1.69 $\mu\text{g/g}$. Potassium values were ranging between 314 – 533 mg/kg. Sodium values were ranging between 566 - 1020 mg/kg. Total Sulphur values were observed to be BDL. The soil quality data for the 7 samples collected and analyzed are provided in Table no – 3.14.

Table 3.15 - Soil Testing Result

S. No.	Parameters	S1	S2	S3	S4	S5	S6	S7
1	pH at 25 °C	7.32	8.37	8.12	8.23	8.26	8.26	8.14
2	Electrical Conductivity	182.6	298.3	267.5	265.4	216.5	188	286.6
3	Dry matter content	96.85	94.35	91.48	87.05	97.40	96.88	96.80
4	Water Content	3.15	5.65	8.52	12.92	2.60	1.12	3.20
5	Organic Matter	0.72	0.75	0.97	1.21	0.78	0.67	0.92
6	Soil texture	Silty Clay loam	Silty Clay	Silty Clay	Clay	Silty Clay	Silty Clay	Silty Clay
7	Grain Size Distribution							
	i. Sand	15.47	10.66	7.65	16.24	8.47	12.47	10.34
	ii. Silt	45.32	45.55	41.02	38.0	42.67	42.78	44.23
	iii. Clay	39.21	43.79	51.33	45.76	48.86	44.75	45.4
10	Phosphorous as P	1.35	1.57	1.69	1.65	1.21	1.32	1.58
11	Sodium as Na	290	412	387	489	335	520	312
12	Potassium as K	566	624	642	694	725	1020	654
13	Total Nitrogen	252	294	154	198	136	234	390
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	Water Holding Capacity	42	38	39	42	38	40	36
16	Porosity	18.4	17.6	16.5	16.5	17.60	19.2	19.2

3.7.6 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.

3.7.6.1 LAND USE PATTERN OF THE PROJECT AREA

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

Table 3.16 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	2.15.8
Infrastructure	Nil	0.01.0
Roads	Nil	0.01.0
Greenbelt	Nil	0.57.2
Unutilized	2.75.0	Nil
Total	2.75.0	2.75.0

- At the end of life of mine, the excavated mine pit / void of 2.15.8 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 (0.57.2 Ha.) will be developed along the safety barrier and top benches and 0.02 ha are approach road and Infrastructure.

3.7.6.2 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 3.17 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	5.90	2.02
2	Crop land	24.15	8.29
3	Existing Crusher	0.22	0.08
4	Existing quarries	1.27	0.44
5	Fallow land	9.28	3.18
6	Hill and forest	22.87	7.85
7	Land with scrub	185.51	63.67
8	Land without scrub	22.57	7.75
9	Plantations	7.50	2.57
10	Water bodies	12.10	4.15
	Total Area	291.37	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 Land with scrub (63.67%)

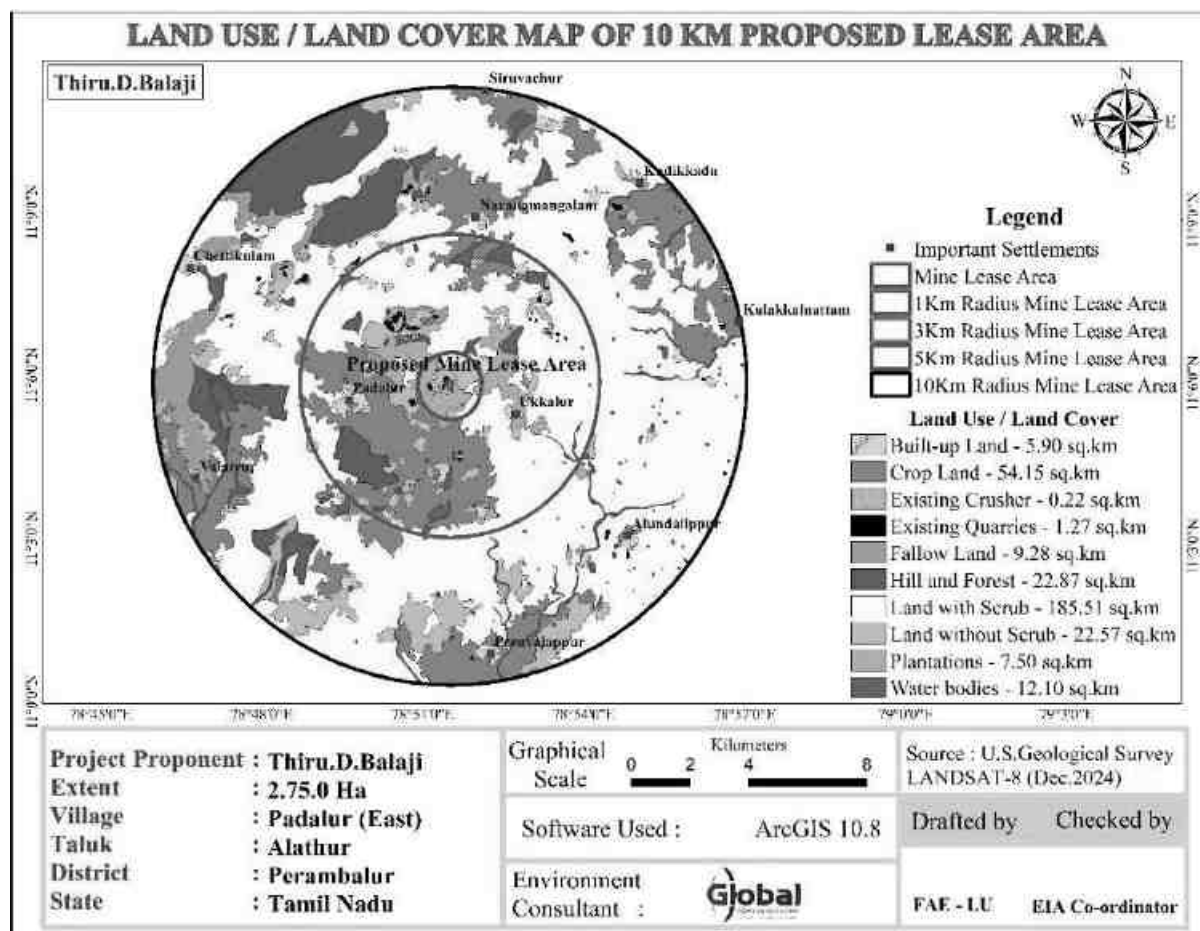


Figure 3.16 Land use map of the study area

3.7.7 BIOLOGICAL ENVIRONMENT

Study of the biological environment of any area comprises of well-planned ecological survey for the floristic and faunal composition of the areas through various scientifically planned techniques. Accordingly, the ecological survey for the proposed Rough Stone and Gravel quarry area including core and buffer zone were carried out to identify various species occurring in the area.

3.7.7.1 FLORA

An ecological survey of the study area was conducted with reference to listing of species and assessment of the existing baseline ecological (Terrestrial and Aquatic 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.

3.7.7.2 FLORISTIC COMPOSITION IN CORE ZONE

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

3.7.7.3 FLORISTIC SCENARIO IN BUFFER ZONE AREA

The present report gives the review of published secondary data and the results of field sampling conducted during **March 2025 – May 2025** and there are no forest blocks in study area. The detailed ecological assessment of the study area has been carried out and are presented in below Table. Flora is assessed based on quadratic survey to calculate phytosociological parameters like density, frequency, dominance, relative density, relative frequency, relative dominance and importance value index

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Table 3.18 Assessment of trees

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17	Erythrina variegata	Kalyana murungai	2	1	4	0.50	25.00	2	0.10	1.80	1.92	2.07	5.79
18	Borassus flabellifer	Palmyra palm	5	2	4	1.25	50.00	2.5	0.16	4.50	3.85	3.42	11.77
19	Thespesia lampas	Common mallow, kattupparuthi	1	1	4	0.25	25.00	1	0.11	0.90	1.92	2.44	5.26
20	Lannea coromandelica	Indian Ash Tree, Moya, Wodier	9	1	4	2.25	25.00	9	0.28	8.11	1.92	6.07	16.10
21	Samanea saman	Thoongumoonjj maram	3	3	4	0.75	75.00	1	0.22	2.70	5.77	4.74	13.21
22	Prosopis juliflora	Algaroba, Mesquite	5	3	4	1.25	75.00	1.67	0.10	4.50	5.77	2.19	12.46
23	Eucalyptus globulus	Blue gum	3	3	4	0.75	75.00	1	0.10	2.70	5.77	2.19	10.66
Total			111	52					4.65				

Table 3.19 Assessment of Shrubs

S. No.	Scientific Name	Local Name	Total No. of species	Total of Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Relative Density	Relative Frequency	IUCN Conservation Status
1	Jatropagossypifolia	Kaatamanaku	28	17	24	1.17	0.71	1.65	14.43	17.17	Not Assessed
2	Lantana trifolia	Shrub verbana	10	3	24	0.42	0.13	3.33	5.15	3.03	Not Assessed
3	Robiniapseudoacacia	Black locust	17	5	24	0.71	0.21	3.4	8.76	5.05	Least Concern
4	Lantana camara	Unnichi	9	6	24	0.38	0.25	1.5	4.64	6.06	Not Assessed
5	Calotropis gigantea	Erukam	14	12	24	0.58	0.50	1.17	7.22	12.12	Not Assessed

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6	Stachytarpeaurticifolia	Rat tail	15	9	24	0.63	0.38	1.67	7.73	9.09	Not Assessed
7	Datura metal	Ummattangani	5	4	24	0.21	0.17	1.25	2.58	4.04	Not Assessed
8	Hibiscus rosa sinensis	Sembaruthi	3	2	24	0.13	0.08	1.5	1.55	2.02	Not Assessed
9	Tabernaemontanadivaricata	Crepe Jasmine	3	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
10	Chloromolaena odorata	Venapacha	9	6	24	0.38	0.25	1.5	4.64	6.06	Least Concern
11	Euphorbia geniculata	Amman Pacharisi	3	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
12	Catharanthus roseus	Nithyakalyani	3	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
13	Woodfordiafruticosa	Velakkai	3	3	24	0.13	0.13	1	1.55	3.03	Least Concern
14	Morindapubescens	Mannanunai	2	2	24	0.08	0.08	1	1.03	2.02	Not Assessed
15	Acalypha indica	Kuppaimeni	20	8	24	0.83	0.33	2.5	10.31	8.08	Not Assessed
16	Parthenium hysterophorous	Vishapoondur	50	13	24	2.08	0.54	3.85	25.77	13.13	Not Assessed

Table 3.20 Assessment of herbs and grasses

S. No.	Scientific Name	Local Name	Total No. of species	Total of Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Relative Density	Relative Frequency	IUCN Conservation status
1	Plumbago zeylanica	Chittiramoolam	3	3	30	0.10	0.10	1	1.19	3.23	Not assessed
2	Mimosa pudica	Thottacherungi	6	5	30	0.20	0.17	1.2	2.38	5.38	Least concern
3	Sida acuta	Malaidangi	10	3	30	0.33	0.10	3.33	3.97	3.23	Not assessed
4	Scrophularia nodosa	Sarakkothini	15	7	30	0.50	0.23	2.14	5.95	7.53	Not assessed
5	Helicteresisora	Valampuri	2	2	30	0.07	0.07	1	0.79	2.15	Not assessed
6	Cynodondactylon	Arugu	12	6	30	0.40	0.20	2	4.76	6.45	Not assessed
7	Sporobolus fertilis	Giant Parramatta Grass	9	4	30	0.30	0.13	2.25	3.57	4.30	Not assessed

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8	Viburnum dentatum	Viburnum	5	5	30	0.17	0.17	1	1.98	5.38	Least concern
9	Heraculem spondylium	Hog Weed	20	10	30	0.67	0.33	2	7.94	10.75	Not assessed
10	Laportea canadensis	Peruganchori	30	20	30	1.00	0.67	1.5	11.90	21.51	Not assessed
11	Euphorbia hirta	Amman Pacharisi	5	4	30	0.17	0.13	1.25	1.98	4.30	Not assessed
12	Tridax procumbens	Vettukaayathalai	5	4	30	0.17	0.13	1.25	1.98	4.30	
13	Tephrosia purpurea	Kavali	20	4	30	0.67	0.13	5	7.94	4.30	
14	Sida cordifolia	Maanikham	45	4	30	1.50	0.13	11.25	17.86	4.30	
15	Tridax procumbens	Cuminipachai	15	4	30	0.50	0.13	3.75	5.95	4.30	
16	Ruellia strepera	Grandinayagam	25	4	30	0.83	0.13	6.25	9.92	4.30	
17	Senna occidentalis	Nattamsakarai	25	4	30	0.83	0.13	6.25	9.92	4.30	

Table 3.21 Evenness and species Richness by Margalef

Details	H	Hmax	Evenness	Species Richness (Margalef)
Trees	3.21	3.52	0.9	7
Shrubs	2.36	2.77	0.85	2.84
Herbs	2.56	2.83	0.9	2.89

From the above, it can be interpreted that tree community has higher diversity. While the shrub community shows less diversity. It is also observed that most of the quadrates have controlled generation of plant species with older strands. Higher tree species diversity can be interpreted as a greater number of successful species and a more stable ecosystem where more ecological niches are available, environmental change is less likely to be damaging to the ecosystem as a whole. Species richness is high for tree community when compared with herbs and shrubs.

3.7.7.4 LIST OF FAUNA

The list of fauna within the study area is given in Table No – 3.18.

Table 3.22 List of Fauna

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	Eryx johani	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	Cyprinus 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

The core zone of the area is Patta land, no forest land is involved in the project area. The proposed quarry area is covered by thorny bushes. There is no Wild Life Sanctuary or National Park within the study area of 10km. There is no schedule I species of animals observed within study area as per Wildlife Protection Act 1972 as well as no species is in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area. Hence this small mining operation over short period of time will not have any significant impact on the surrounding flora and fauna.

3.7.8 TOPOGRAPHY

The area applied for quarry lease is exhibits almost plain topography covered by Gravel formation. The massive Charnockite formation is noticed below 2m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 134m (maximum) from MSL. No major river is found nearby the lease applied area. Water table is found at a depth of 78m in summer and 75m in rainy seasons. Temperature of the area is reported to be 18°C to a maximum of 42°C during summer. Rainfall of this area is about 800mm to 900 mm during the both NE & SW monsoons.

3.7.9 DRAINAGE PATTERN OF THE AREA

Nanthai River is located at a distance of 2.3km. Two Odai are located within 1km radius i.e., 760m and 780m. The area is studded with few tanks that serve as the source of drinking water and also their surplus feeds adjoining tanks. The drainage map of the study area is given in Figure 3.18.



Figure 3.17 Drainage map of the study area

3.7.10 GEOMORPHOLOGY

Predominantly the buffer zone is dominated by Shallow Buried Pediplain and eroded pediplain. The project area is predominantly covered with Pediment. Geomorphology of the study area is detailed below. The geomorphology of the study area is given in Figure 3.20.

S. No.	GEOMORPHOLOGY	Area in Sq.Km	Area in Percentage
1	Denudational Hills	13.87	4.31
2	Eroded Pediplain	64.67	20.12
3	Linear Ridge/Dyke	0.08	0.02
4	Moderately buried pediplain	37.73	11.7
5	Pediment	16.57	5.15
6	Residual hills	1.47	0.45
7	Shallow buried pediplain	186.98	58.18
	Total Area	321.37	100.00

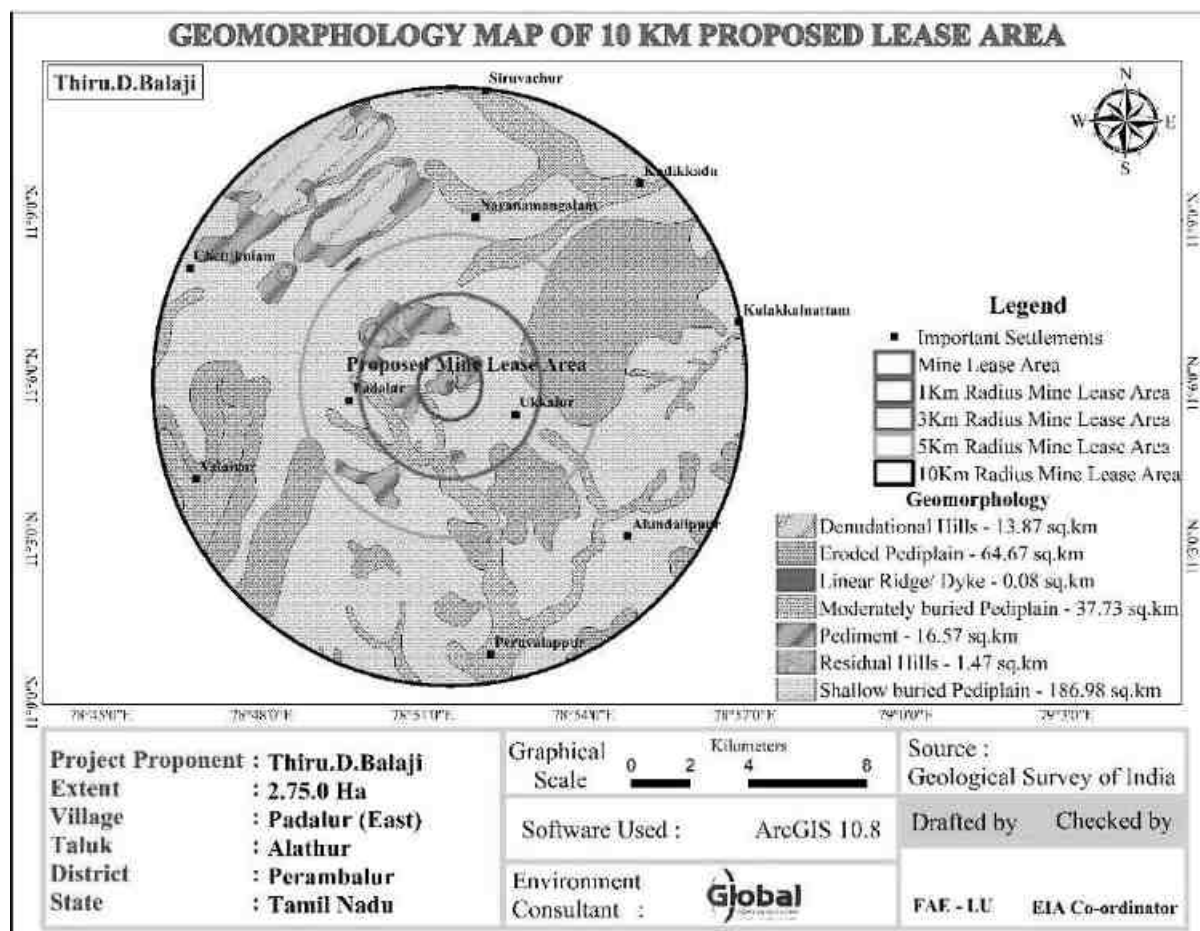


Figure 3.18 Geomorphology map of the study area

3.7.11 GEOLOGY

The regional geology of the study area is shown below in Figure 3.19. The geology map reveals that the area is predominantly covered with Fissile Hornblende Gnesis and the remaining area is covered with Charconite, Clays, gypseous clay, Limestone with Marl, Sandstone, Shales with Limestone and Shell Limestone. Both Primary data (Local Geology) and Secondary Data (regional Geology) reveals that the area is covered with Hornblende Gnesis and in this way, secondary data is validated with the Primary Data.

Sl.No.	GEOLOGY	Area in Sq. Km	Area in Percentage
1	Charnockite	24.25	7.55
2	Clays	5.55	1.73
3	Fissile hornblende gnesis	182.63	56.83
4	Gypseous clays	66.39	20.66
5	Limestone with marl	0.05	0.02

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6	Sandstone	9.26	2.88
7	Sandstone and clays	29.35	9.13
8	Shales with limestone	1.29	0.40
9	Shell limestone	2.59	0.81
	Total Area	323.64	100.00

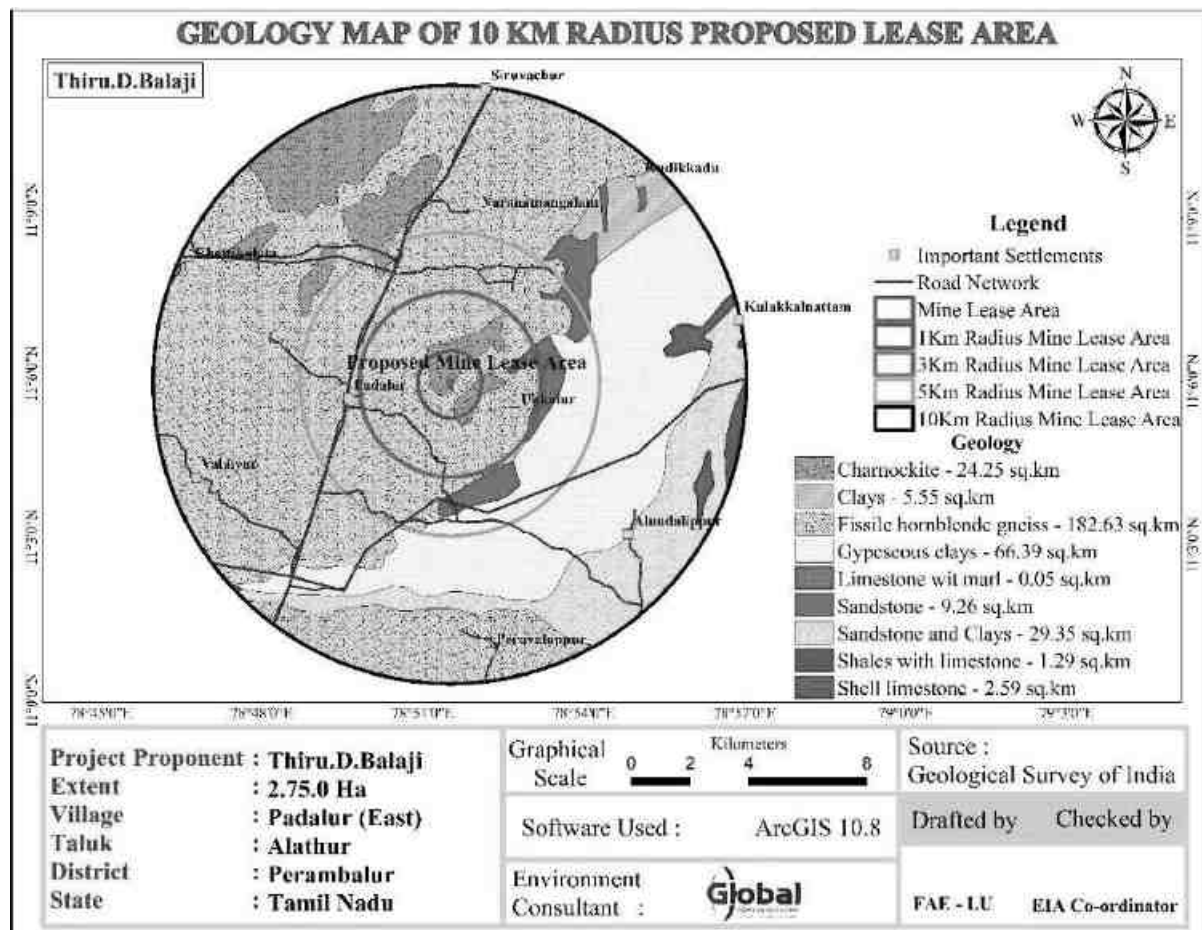


Figure 3.19 Geology map of the study area

3.7.12 LITHOLOGY

The study area is mainly dominated by intrusive rocks (182.63 Sq.m), followed by banded limestone and clay (66.39 Sq.m). The project site falls partially under Granite and partially under intrusive rocks category. Lithology of Core & Buffer Zone map is given in Figure 3.21.

Sl.No.	Lithology	Area in Sq.km
1	Argillaceous and calcareous sandstone	9.26
2	Banded limestone and clay	66.39

3	Conglomerate, limestone and clay	5.60
4	Granite	24.25
5	Intrusive rocks	182.63
6	Sandstone and clays	29.35
7	Shales with limestone	1.29
8	Shell limestone	2.59

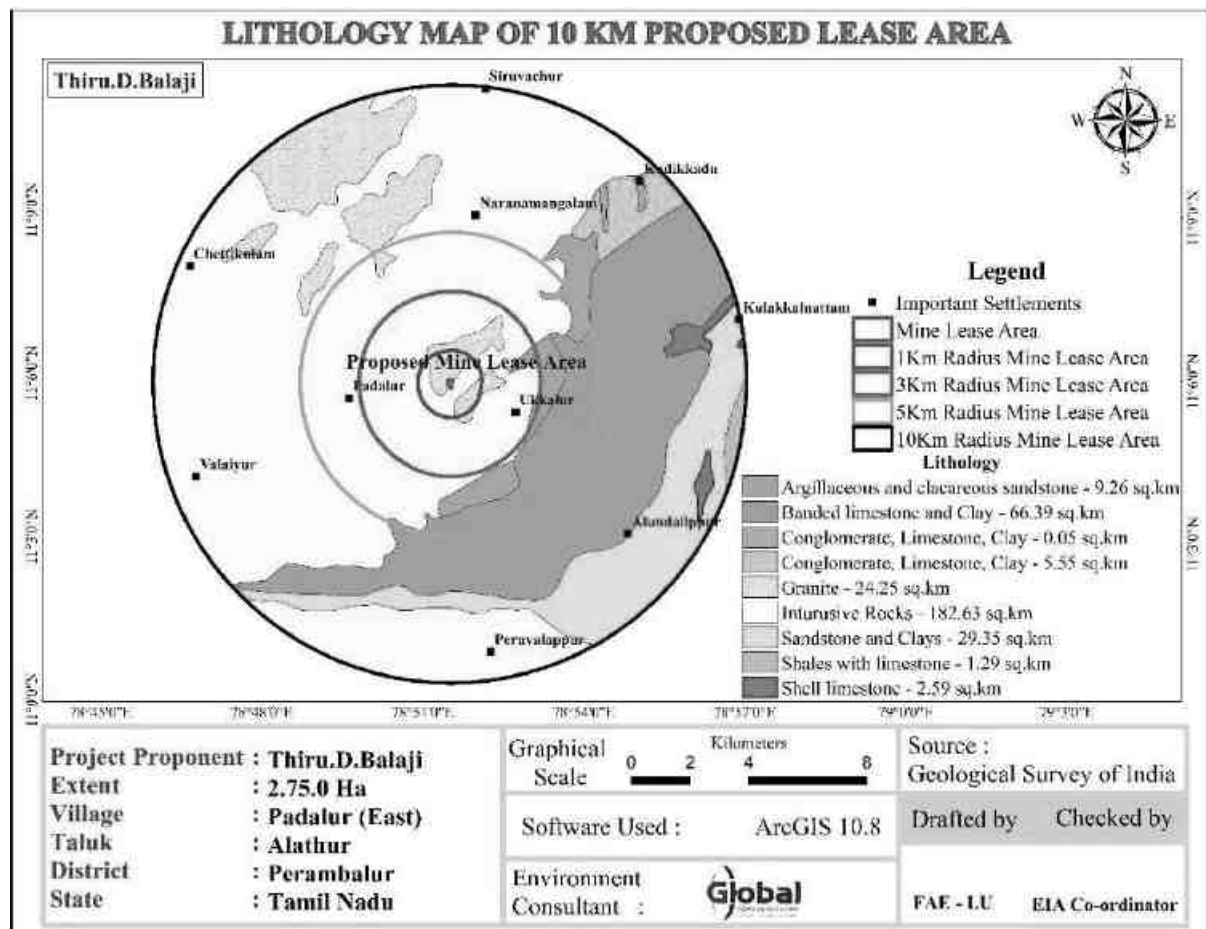


Figure 3.20 Lithology map of the study area

3.7.13 SOCIO-ECONOMIC ENVIRONMENT

Socio-economic study is an essential part of environmental study. It includes demographic structure of the area, provision of basic amenities viz., housing, education, health and medical services, occupation, water supply, sanitation, communication, transportation, prevailing diseases pattern as well as feature like temples, historical monuments etc., at the baseline level. This will help in

visualizing and predicting the possible impact depending upon the nature and magnitude of the project.

It is expected that the Socio-Economic Status of the area will substantially improve because of this proposed project. As the proposed project will provide direct and indirect employment and improve the infrastructural facilities in that area and, thus, improve their standard of living.

3.7.13.1 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.

3.7.13.2 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

SUMMARY OF VILLAGES IN BUFFER ZONE

The buffer zone of the project falls under two districts: Perambalur and Trichy

S.NO	Block / Taluk	No. of Urban Areas	No. of Villages	District
1	Perambalur	1	3	Perambalur
2	Alathur	1	15	Perambalur
3	Manachanallur	0	6	Trichy
4	Lalgudi	0	16	Trichy
Total			40	

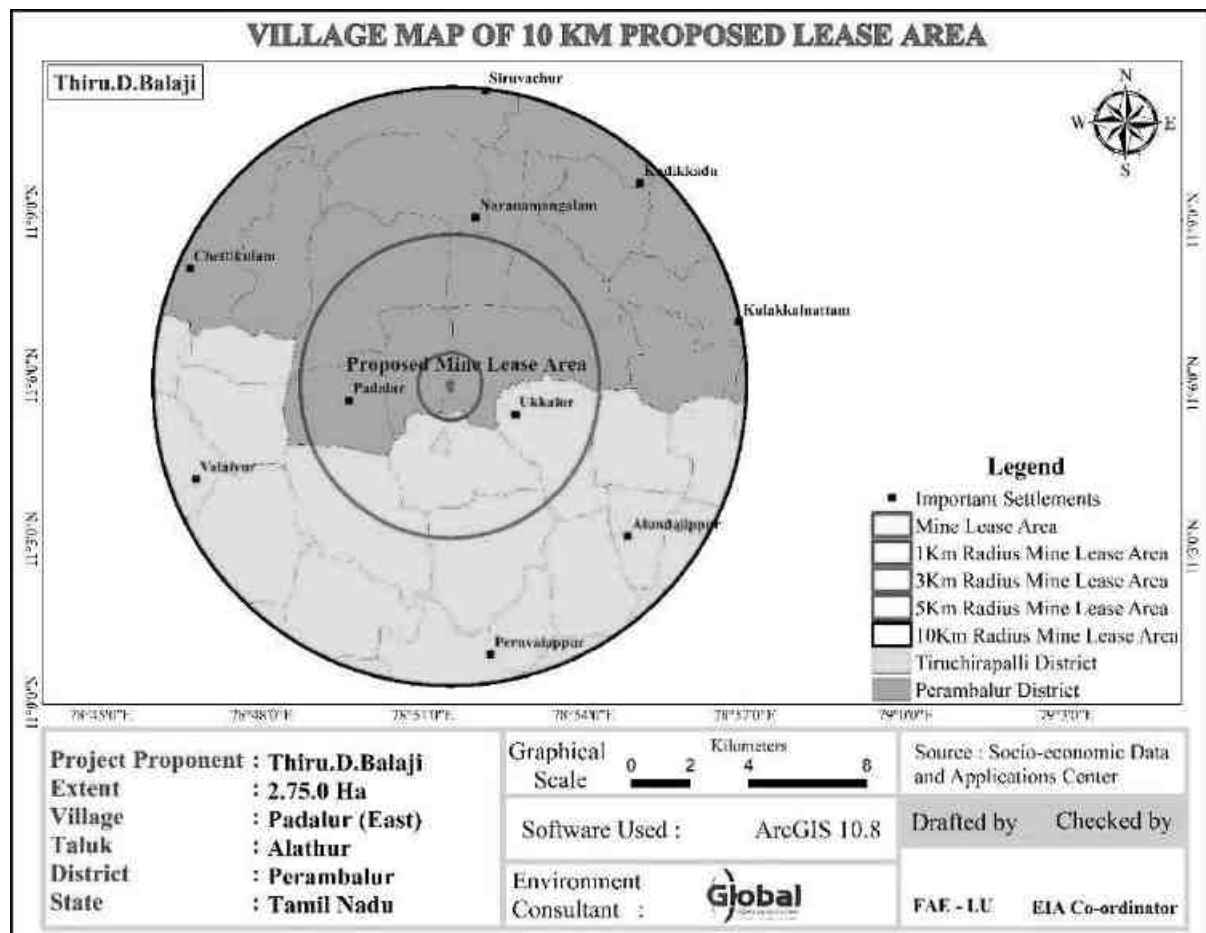


Figure 3.21 Village Map of the Study Area

Table 3.23 - Population profile of the study area

Population profile of the study area		
Particulars	No of Population	Percentage (%)
A. Population break-up by Gender		
Male Population	17729	49.90
Female Population	17793	50.09
Total	35522	100
B. Population break-up by Caste		
Scheduled Caste	6113	17.21
Scheduled Tribes	888	2.5
Others	28521	80.29
Total	35522	100
C. Literacy Level		
Total Literate Population	23284	65.55
Others	12238	34.45

Total	35522	100
D. Occupational structure		
Main workers	18078	87.19
Marginal workers	2656	12.81
Total Workers	20734	58.37
Total Non-workers	14788	41.63
Total	295280	100

Table 3.24 Population profile – Padalur East Village

Particulars	No of Population	Percentage (%)
A. Population break-up by Gender		
Male Population	871	52.28
Female Population	795	47.72
Total	1666	100
B. Population break-up by Caste		
Scheduled Caste	193	11.58
Scheduled Tribes	0	0
Others	1473	88.42
Total	1666	100
C. Literacy Level		
Total Literate Population	1210	72.65
Others	456	27.35
Total	1666	100
D. Occupational structure		
Main workers	953	91.8
Marginal workers	84	8.2
Total Workers	1037	62.25
Total Non-workers	629	37.75
Total	1666	100

Key socio-economic indicator

The consolidated report of the primary study revealing the exact scenario prevailing in the area based on the survey conducted in the 20 houses each in 5 villages (Total of 100 Houses) is listed below:

Table 3.25 Key Socio-Economic Indicator

S. No.	Indicator	Percentage
1.	People below age 18	164
2.	People above age 18	268
3.	Literates	354
4.	illiterates	78
5.	% of people employed in company	16
6.	% of people self-employed	48
7.	% of people seasonally employed	24
8.	% of people unemployed	12
9.	% of houses covered with LPG Cooking gas	100
10.	% of houses covered with toilet facility	100
11.	% of houses covered with piped water connection	100

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 are available.

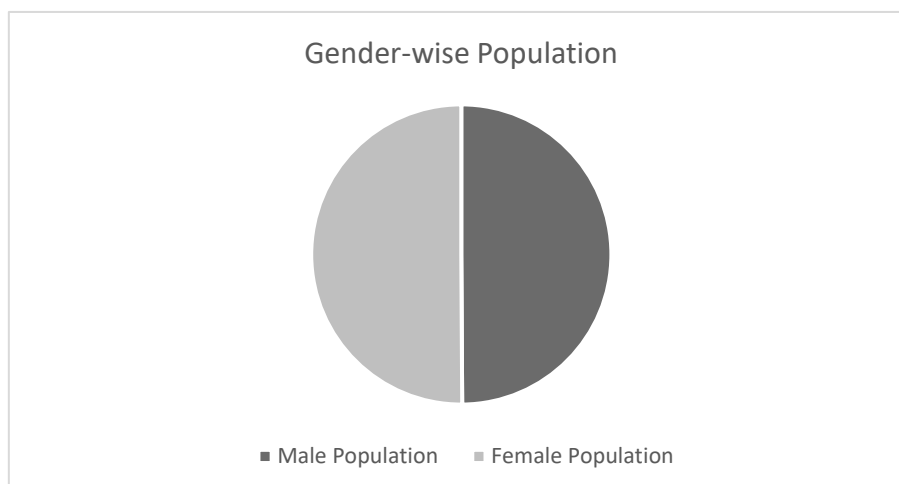


Figure 3.22 Gender-Wise Population Distribution

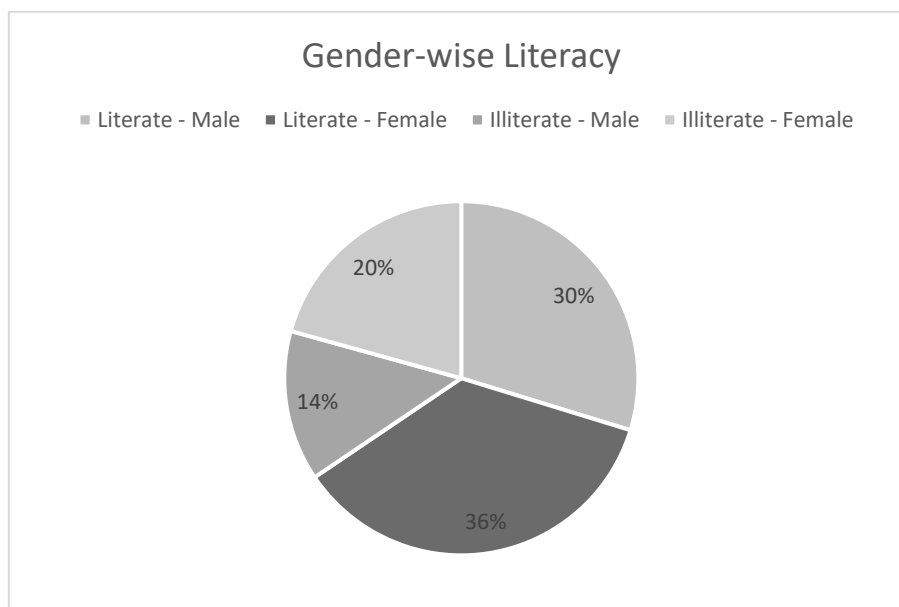


Figure 3.23 Gender Wise Literacy Distribution

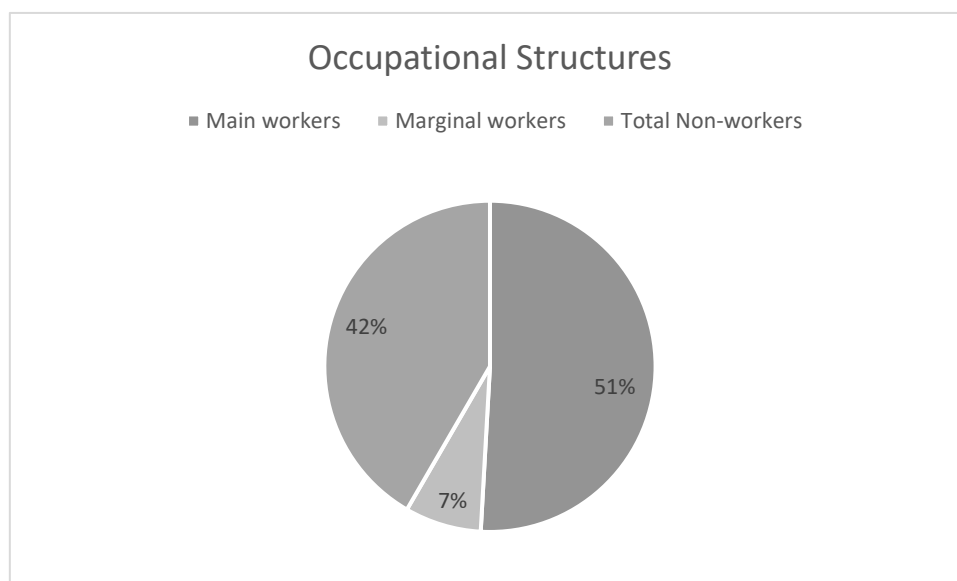


Figure 3.24 Occupational Structure Within Buffer Zone

4.0 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.1 GENERAL

Environmental impacts both direct and indirect on various environmental attributes due to cluster quarries will be created in the surrounding environment, during the operational and post-operational phases. The occurrence of mineral deposits, being site specific, their exploitation, often, does not allow for any choice except adoption of eco-friendly operation. The methods are required to be selected in such a manner, so as to maintain environmental equilibrium ensuring sustainable development.

In order to maintain the environmental commensuration with the mining operation, it is essential to undertake studies on the existing environmental scenario and assess the impact on different environmental components. This would help in formulating suitable management plans sustainable resource extraction.

4.2 PROJECT SPECIFIC IMPACTS AND MITIGATION MEASURES

This is a proposed project and Mechanized Open Cast mining will be carried out to quarry out Rough Stone and Gravel. The identified impacts during mining and associated activities have been studied in relation to various environmental components like Air, water, noise, vibration, land, transport etc., and the details of the same are elaborated in this chapter. The impact assessment is done for the peak production of the mine lease period and the entire area of quarry operation and can be construed as applicable for the entire lease period. Based on the baseline environmental status at the project site, the environmental factors that are likely to be affected (Impacts) are identified, quantified and assessed.

The following parameters are of significance in the Environmental Impact Assessment and are being discussed in detail in this chapter.

- Land environment
- Soil environment

- Water Environment
- Air Environment
- Noise Environment
- Socio economic environment
- Biological Environment

The proposed mining activity is small and not likely to have any serious impacts on the existing environment of the area. However, the potential impacts of the proposed mining and related activities on various environmental parameters are discussed.

4.2.1 LAND ENVIRONMENT

4.2.1.1 ANTICIPATED IMPACT

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 of 2.75.0 Ha. is Patta Land. The project area of 2.75.0 Ha is proposed to be altered by effective quarrying operation such as excavation (2.15.8 Ha), Infrastructure (0.01 Ha), Road (0.01 Ha) and greenbelt (0.57.2 Ha). The ultimate depth of quarrying is proposed by formation of 1 pit with maximum depth of 52 m below the ground level and will not intersect the ground water table. The present land use pattern and the post mining land use pattern is shown below.

Table 4.1 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	2.15.8
Infrastructure	NIL	0.01.0
Roads	NIL	0.01.0
Greenbelt	NIL	0.57.2
Unutilized	2.75.0	Nil
Total	2.75.0	2.75.0

- Change in topography of the mine lease area will change at the end of the life of the mine.
- At the end of life of mine, the excavated mine pit / void of 2.15.8 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 (0.57.2 Ha.) will be developed along the safety barrier and top benches and 0.02 ha are approach road and Infrastructure.
- Problems to agricultural land and human habitations due to dust, and noise caused by movement of heavy vehicles.
- Degradation of the aesthetic environment of the core zone due to quarrying.
- Soil erosion and sediment deposition in the nearby water bodies due to earthworks during the rainy season.
- Siltation of water course due to wash off from the exposed working area.
- Solid waste will be generated from the mining activity as there will be refuse, also generation of domestic waste. If it not properly managed, may cause odor and health problem to the workers

4.2.1.2 MITIGATION MEASURES

- In the rough stone and gravel quarrying operation, land degradation is minimal. After completion of the quarrying operation, the land will be allowed to collect rainwater, this rough stone does not produce any toxic effluents in the form of solids, liquids, or gases.
- It is a simple quarrying operation where 100% of stones will be removed systematically, according to the approved Mining Plan.
- The periphery of the mining lease area will be converted to a greenbelt to prevent Noise and sound propagation to the nearby lands.
- Entire mined out area will be properly fenced to prevent inadvertent entry of human and animals.
- Since the entire material from the quarry face will be directly dispatched to the consumers, there will not be any stockpiles. There are no waste dumps in this quarry. As such there will not be any wash out due to stock pile or

waste dumps. To manage surface runoff, garland drain will be constructed around the quarry and connected to a settling pond with silt traps.

- In terms of aesthetics, natural vegetation surrounding the quarry will be retained (such as in a buffer area i.e., 7.5 m safety barrier & 10 m provided to the adjoining patta and poramboke lands) so as to help minimize dust emissions.

4.2.2 SOIL ENVIRONMENT

4.2.2.1 ANTICIPATED IMPACT

Mining activities often disrupt the existing environment as they involve disturbing the untouched earth materials. The overburden in the form of top soil generated will be utilized for afforestation purpose, the surface consists of top soil formation followed by rough stone which is proposed to excavate completely during the quarrying operation. Erosion of top layer (top soil), extracted fine material can result in substantial sediment loading to surface waters and drainage ways. During rainy season surface run off may cause sedimentation in low lying areas.

4.2.2.2 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 minimise 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 (0.57.2 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.

- Monitoring and maintenance – Weekly monitoring and daily maintenance of erosion control systems so that they perform as specified specially during rainy season.

4.2.3 WATER ENVIRONMENT

4.2.3.1 ANTICIPATED IMPACT ON SURFACE AND GROUND WATER

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. The quarrying activity will not intersect ground water table as quarrying is proposed up to a depth of 52m BGL and water table is found at a depth of 75 to 78m BGL. For the management of surface run-off, rain water harvesting plan will be proposed along with garland drainage along the periphery of the project site.

Nanthai River is situated at a distance of 2.3 km in north east direction and two odais passing at 760m (SW) and 780m m in W direction. 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 and gravel processing or workshop within the project area, so no effluent is anticipated in the mine.

During rainy season rain water will be collected in the quarry pit and later used for greenbelt development and for the water sprinkling in the haul roads.

4.2.3.2 ANTICIPATED IMPACT DUE TO WATER USE IN MINE'S

The total water requirement for the project will be 5.5 KLD comprising Drinking 1.5 KLD, Dust suppression 2.0 KLD and Greenbelt 2.0 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. Improper management of domestic wastewater in ML area may cause unhygienic conditions in the site thereby causing health impacts to the labours. The water balance diagram for the same is shown in Figure No 4.1.

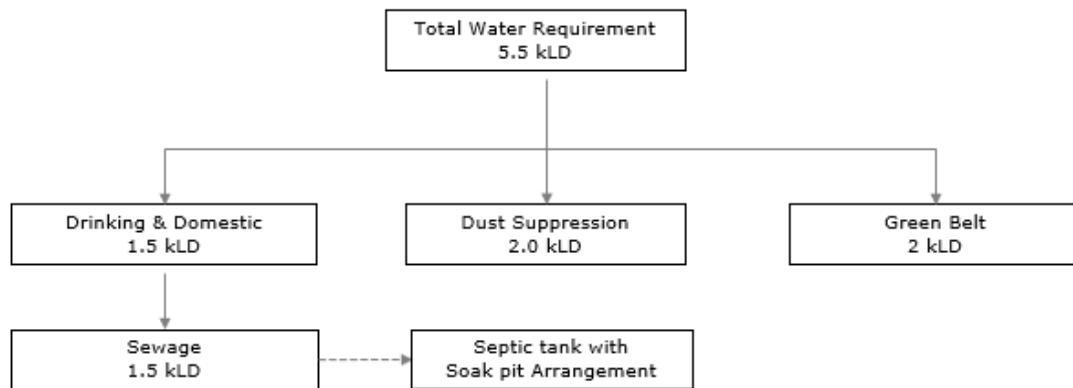


Figure 4.1 Water Balance Diagram

4.2.3.3 MITIGATION MEASURES

The following mitigation measures are suggested for water management

- Rainwater will be collected in lower part of the quarry pit by construction of garland drains to divert surface run-off and will be connected to settling tank of 6 m (l) x 6m (w) x 3m (d) to allow suspended solids to settle down if any. This collected water will act as a rain water harvesting system and will be used for dust suppression and greenbelt development.
- Regular water quality will be carried in nearby villages to ensure the water quality is not affected due to the quarrying activities.
- Domestic sewage from site office & urinals/latrines provided in project area will be discharged through septic tank followed by soak pit system.
- Only clear and settled water free from silt content will be used for dust suppression and greenbelt development.
- De-silting will be carried out before and immediately after the monsoon season and the settling tank and drains will be cleaned weekly, especially during monsoons.

4.2.3.4 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 average annual rainfall of the area is 816 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 4.2 – 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	21580	0.82	17,696
Total Harvested Rainfall				17,696

Total surface water runoff is 17696 Cum per Annum. 10% of this amount will be evaporated and rest 15926 m³ will be recharged in the rain water harvesting pit.

The dimension of the rain water harvesting pond will be 25m x 20m x20m with capacity of 10000 Cu. m. (2 Nos.). The rain water stored in the pond 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.

4.2.4 AIR ENVIRONMENT

The existing ambient air quality in the area has been described in Chapter-3. Opencast mechanized mining, using jackhammer drilling, blasting, and excavation

through an excavator, as well as mineral transport through tippers, will be carried out for the excavation of rough stone.

4.2.4.1 ANTICIPATED IMPACT

The proposed mining and allied operations may cause deterioration of air quality due to pollution arising from the project operation if prompt care is not taken. The principal sources of air pollution in general due to mining and allied activities will be:

The air-borne particulate matter generated by quarrying operations and transportation is mainly PM₁₀ and PM_{2.5}, and emissions of sulfur dioxide (SO₂) and oxides of nitrogen (NO₂) due to excavation/loading equipment and vehicles plying on haul roads are the cause of air pollution in the project area.

Furthermore, the loading, unloading, and transportation of rough stone, as well as wind erosion of the exposed area and movement of light vehicles, will cause pollution within a 500-meter radius of the project area due to quarrying activities. This has a cumulative impact on the ambient air environment around the project area.

4.2.4.2 MITIGATION MEASURES

The following measures will be adopted to control impact on the air quality due to mining operations in the lease area due to adoption of which, no major impact on air quality is envisaged due to this proposed opencast mining operation.

Table 4.3 Mitigative Measures for Air Environment

S.NO	Activity	Consequence	Mitigative Measures
1	Drilling	Dust Emission	Usage of wet drilling
			Covering of drill holes with wet cloth
			Usage of sharp drill bits for drilling of holes.
			Provision of dust mask to workers working at highly dust prone and affected areas.
2	Blasting	Prompt dust emission	Well-designed blasting parameter, effective stemming to achieve optimum breakage occurs without generating fines.
			Use of appropriate explosives for blasting and avoiding overcharging of blast holes.
			Avoiding blasting during high wind periods where the fine dust is carried out away easily affecting the ambient air quality.
			Use of controlled blasting techniques with milli second delay detonators to keep the dust generation, noise as well as vibration level within the prescribed limits.
3	Excavation and Loading	Dust emission, Gaseous Emission	Proper maintenance of HEMM will be carried out to minimize dust and gaseous emission at the source level.
			Water sprinkling will be carried out at excavation and loading area.
			Imparting sufficient training to operators on safety and environmental parameters.

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

			Avoiding overloading of dumpers.
4	Transportation	Dust emission, Gaseous Emission	Regular wetting of transport road using mobile water tanker.
			Proper maintenance of haul road and other roads
			Avoiding overloading of tippers
			Covering of loaded tippers with tarpaulins during transportation
			Vehicular emissions will be controlled through regular and proper preventive maintenance only PUC valid vehicles will be used for transportation.
5	Greenbelt	Dust emission, Gaseous Emission	Development of greenbelt / barriers around mine in the safety zone and carrying out plantation within the lease area.
6	Occupation Health	Dust emanation, Gaseous Emission	Dust mask will be provided to the workers and their use will be strictly monitored
			Annual medical checkups, trainings and campaigns will be arranged to ensure awareness about importance of wearing dust masks among all mine workers & tipper drivers
			Ambient Air Quality Monitoring will be conducted six months once to assess effectiveness of mitigation measures proposed.

4.2.4.3 AIR QUALITY IMPACT PREDICTION

The AERMOD atmospheric dispersion modeling (AERMOD Cloud remote version) is used for assessment of incremental Ground level concentration (GLC) for the proposed production. Area source model taken into consideration taking into consideration of wet drilling and loading. Further line source model was taken into consideration for transportation through haul road. Baseline meteorological studies were conducted for the period of **March 2025 to May 2025**. The following sources are considered.

TABLE 4.4 Types of Sources for Air Pollution in Mining		
S. No.	Type of mining operation	Type of Source
1	Wet drilling	Point
2	Loading	Point
3	Transportation	Line

ARRIVING EMISSION FACTOR

Emission factor for PM₁₀ for different activities are given below.

TABLE 4.5 Emission Factors for Mining Activities			
S. No.	Activity	Emission factor	Unit
1	Wet drilling	0.00008	lb/s
2	Ore loading	0.0014	Kg/t/s
3	Transportation	0.26	Kg/VKT

Source

1. Jose I. Huertas & Dumar A, Camacho & Maria E. Huertas, Standardized emissions inventory methodology for openpit mining areas, Environmental Science Pollution Research, 2012.
2. AP-42. U.S Environmental Protection Agency, Office of Air Quality Planning and Standards

4.3 EMISSIONS FROM THE PROPOSED PROJECT

The emissions from each activity after the application of control and mitigation measures like water sprinkling, proper maintenance of transport vehicles, etc., are given below.

TABLE 4.6 PM 10 and PM 2.5 Emission from Mining Activities			
S. No.	Activity	PM10	PM2.5
1	Wet drilling	0.22	0.04
2	Ore loading	0.87	0.16
3	Transportation	0.23	0.05

MODEL INPUT DATA:

The air pollution modeling carried out represents the normal operating scenarios. As the project is a mining project the major source of pollution is particulate matter. The SO_x and NO_x emission will be very less only due to vehicular emission. So the pollutant taken for prediction of incremental concentration is particulate matter (PM₁₀ & PM_{2.5}). The predicted incremental Ground Level Concentrations (GLCs) for particulate matter is likely to be contributed by the proposed project. The average predicted 24 hr average concentration has been tabulated as below.

EMISSION ESTIMATION

The emission estimations for the activities are detailed below.

Table 4.7 - Area Emissions – Total Material handling

Quantity, TPA	Rough Stone: 2,65,305 m ³ (First Five Years) Gravel: 43,164 m ³ (First Five Years)
Operational Hours Per Year	2400
Activity Rate, t/hr.	395.4213
Emission of dust, g/t.	0.15
Emission of dust, g /hr.	51.2456
Area of influence, m ²	625
Uncontrolled emission rate g/s/m ²	0.000022468
Controlled emission rate, PM10 g/s/m ²	0.000002246
Controlled emission rate, PM2.5 g/s/m ²	0.000001497

Figure 4.2 Isopleth of GLC Prediction for PM_{2.5}

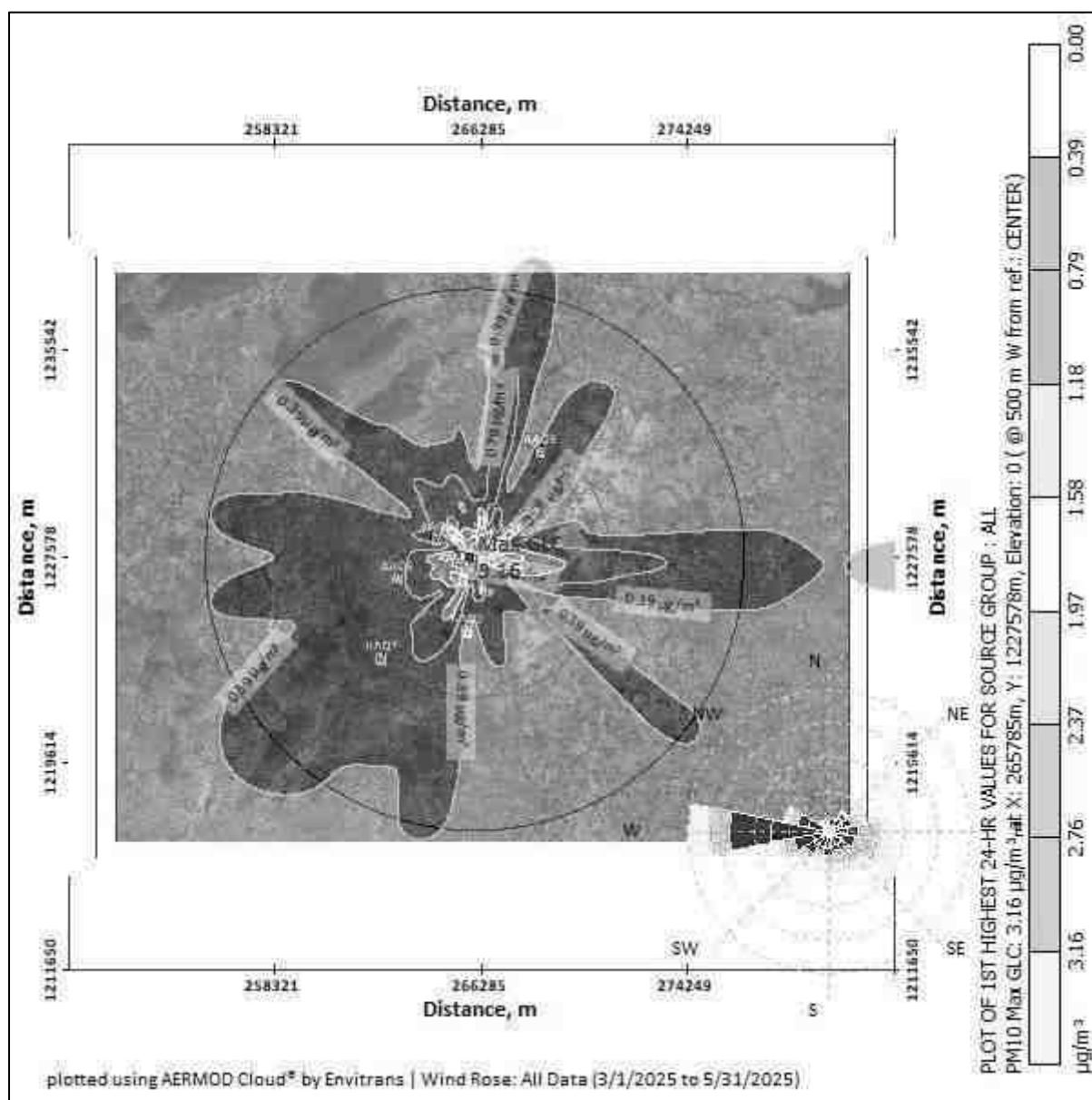


Figure 4.3 - Isopleth of GLC Prediction for PM₁₀

PREDICTED AMBIENT AIR QUALITY:

The post project Concentrations of PM₁₀, PM_{2.5}, (GLC) (base line + incremental) after adopting necessary control measures is given in Table No - 4.9 to 4.10.

Table 4.9: Concentrations of PM_{2.5} after Project Implementation					
S. No.	Location	Baseline Concentration	Predicted incremental Concentration	Post Project	Statutory Limits in µg/m³

				Concent ration	
1	Within ML area	36.1	<1.0	37.1	60
2	Therani	26.8	<1.0	27.8	
3	Karai west	25.1	<1.0	26.1	
4	Padalur west	29.1	<1.0	30.1	
5	Nedungur	26.4	<1.0	27.4	
6	Thiruvallankurichi	24.4	<1.0	25.4	
7	Otathur	28.3	<1.0	29.3	

Table4.10: Concentrations of PM 10 after Project Implementation					
S. No.	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Within ML area	75.3	3.16	78.46	100
2	Therani	56.6	1.97	58.57	
2	Karai west	52.7	1.58	54.28	
3	Padalur west	58.5	1.18	59.68	
4	Nedungur	55.9	<1	56.9	
5	Thiruvallankurichi	50.7	2.76	53.46	
6	Otathur	58.9	2.37	61.27	

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 $53.46 \mu\text{g}/\text{m}^3$ to $78.46 \mu\text{g}/\text{m}^3$ and for $\text{PM}_{2.5}$ are in the range of $25.4 \mu\text{g}/\text{m}^3$ to $37.1 \mu\text{g}/\text{m}^3$ which are within the statutory limits in each case. The mitigation measures undertaken in the mine for control of air pollution are given below.

- Wet drilling will be practiced in drilling operation.
- Water sprinkling will be done in haul roads & loading etc.
- The mines workers are provided with the dust masks.
- Three-layer plantation in the safety zone.

- DG sets shall be periodically maintained as per manufacturer's specifications.

CUMULATIVE IMPACT STUDY

There are three existing quarries and this proposed quarry is located within a radius of 500 m from the proposed project area. The existing and proposed quarries situated within 500 m radius are presented in below and the letter received from Dept. of Geology and Mining, Perambalur stating the quarries detail within 500m radius is enclosed in Annexure – 4.

S. No.	Name of the Quarry Owner	S.F. Nos & Village	Lease Period	Area
d. Abandoned Quarry				
1.	Nil			
e. Existing Quarry				
1.	Thiru. D. Manjunath, S/o. Devendiran, No. 25, IAS Nagar, Thiruverumbur, Trichy District	122/1 (Block 5),Therani	17.08.2022 to 16.08.2027	1.00.0 Ha
2.	Tmt. P. Dhanalakshmi, W/o. G.R.Perumal Pillai, 1/24, Sivan Kovil Street, (Kaliyamman Kovil Street),Therani (PO), Alathur (Tk), Perambalur	124/3A, 124/3B, Padalur (E)	29.04.2022 to 28.04.2027	1.00.0 Ha
3.	Tmt. S. Pitchai, S/o. Thiru. Subbaiya, No.3/172, West Street, Koothanur Village, 85, Seedevimangalam, Alathur Tk, Perambalur Dt.	122/1 (Block 5A),Therani	18.12.2020 to 17.12.2025	1.00.0 Ha
f. Proposed Quarry				
1.	Thiru. D. Balaji, S/o. Devendiran, No. 25, IAS Nagar, Thiruverumbur, Trichy District	124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 4B, Padalur (E)	Presently proposed	2.75.0 Ha
Total Area Under Cluster		5.75.0 Ha		

The total lease within the 500m radius works out to 5.75.0 Ha including this lease area. 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 quarries within cluster is shown in below table.

Description		P1	P2	P3	P4
Name of the Quarry		Thiru. D. Balaji	Thiru. D. Manjunath	Tmt. P. Dhanalakshmi	Tmt. S. Pitchai
Geological Resources in m ³	Rough stone	13,73,400	685200	3,00,000	7,00,000
	Gravel	54, 936	-	-	-
Mineable Reserves in m ³	Rough stone	4,67,550	139650	55,340	1,99,500
	Gravel	43,164	-	-	-
Five years plan period as in the approved mining plan	Rough stone	2,65,305	139650	55,340	1,99,500
	Gravel	43,164	-	-	-
Production per day in m ³	Peak Production	272.10	103.6	38.7	188.3
Lorry Loads per day in Nos	-	28	11	4	19
Employment in Nos		30	36	14	24
Proposed Depth in meters		47 m	40 m	34 m	55 m
Status of the quarry		Proposed	Existing	Existing	Existing

Based on the above production quantities the emissions due to various activities in all the 4 mines (3 Existing + 1 Proposed) includes various activities like ground preparation, excavation, handling and transport.

The cumulative study shows that the overall production of rough stone and gravel from the 4 quarries is 603 m³ per day with a capacity of 61 trips per day.

As P2, P3 and P4 project are existing quarries, they are part of the current traffic. The proposed project will bring 28 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.

Area Emissions – Total Material handling – Cluster

Quantity, m ³	Existing Quarries: Rough stone Thiru. D. Manjunath (139650m ³) Tmt. P. Dhanalakshmi (55,340 m ³) Tmt. S. Pitchai (1,99,500 m ³)
Operational Hours Per Year	2400
Activity Rate, t/hr.	390.326
Emission of dust, g/t.	0.21
Emission of dust, g /hr.	59.0532
Area of influence, m ²	625
Uncontrolled emission rate g/s/m ²	0.00037441
Controlled emission rate, PM ₁₀ g/s/m ²	0.0003744
Controlled emission rate, PM _{2.5} g/s/m ²	0.00003481

Line Source – Transport of Rough Stone & Gravel (Cluster)

Quantity, m ³	Existing Quarries: Rough stone Thiru. D. Manjunath (139650m ³) Tmt. P. Dhanalakshmi (55,340 m ³) Tmt. S. Pitchai (1,99,500 m ³)
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	120669
Lead length/trip, Km	0.9
Total VKT/Year	12874
Emission Kg/VKT	0.22
Total emission Kg/Year	215643
Uncontrolled emission rate g/s/m	1.7240
Controlled emission rate, PM ₁₀ g/s/m	0.17240
Controlled emission rate, PM _{2.5} g/s/m	0.04789

EMISSION ESTIMATION FROM CLUSTER

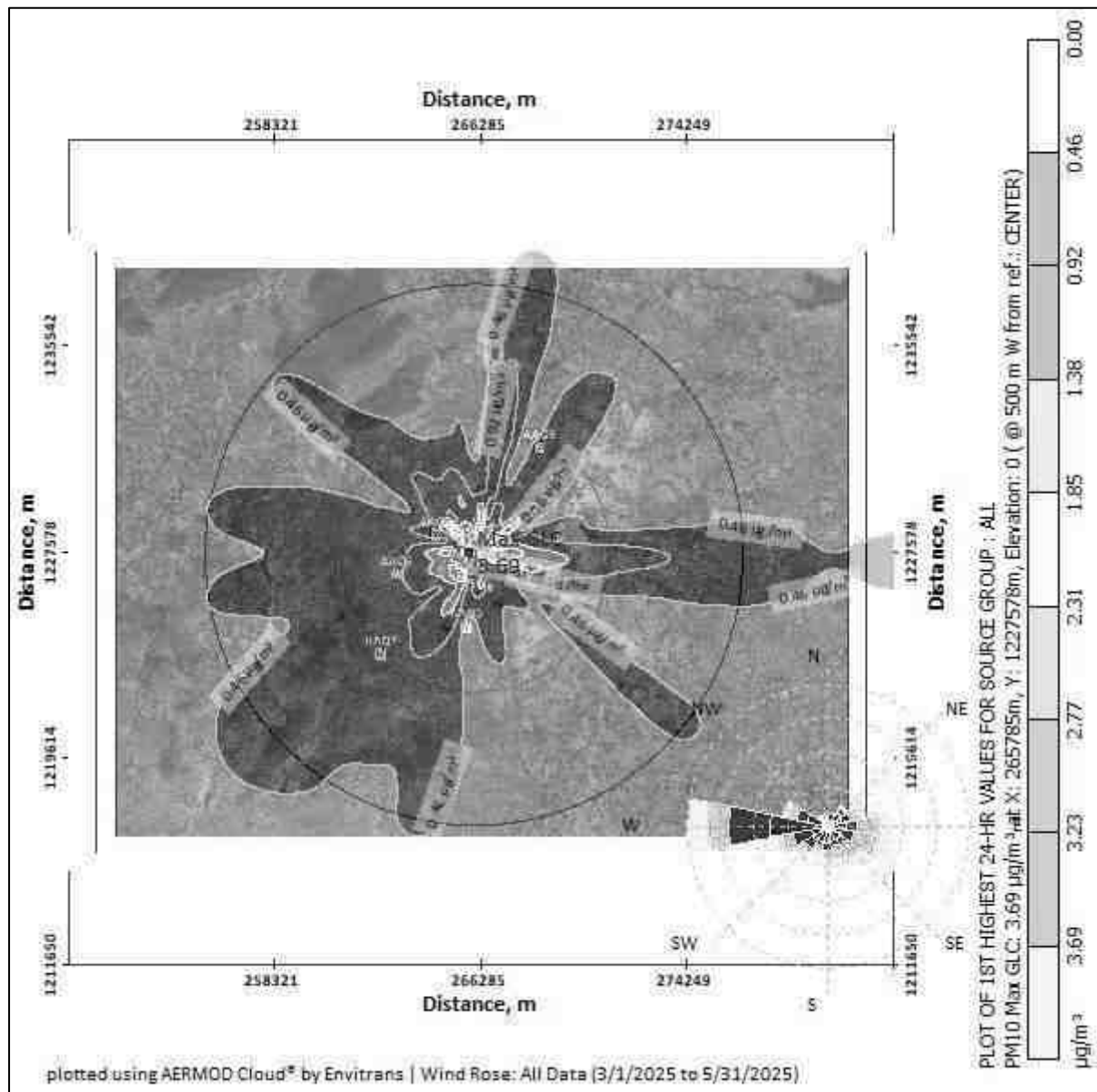
Incremental & Resultant GLC within cluster for PM_{2.5}

S. No.	Location	Baseline Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Within ML area	36.1	1.13	37.23	60
2	Therani	26.8	<1.0	27.8	
3	Karai west	25.1	<1.0	26.1	
4	Padalur west	29.1	<1.0	30.1	
5	Nedungur	26.4	<1.0	27.4	
6	Thiruvallankurichi	24.4	<1.0	25.4	
7	Otathur	28.3	<1.0	29.3	

Incremental & Resultant GLC within cluster for PM₁₀

S. No.	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Within ML area	75.3	3.16	78.46	100
2	Therani	56.6	2.31	58.91	
2	Karai west	52.7	1.85	54.55	
3	Padalur west	58.5	1.38	59.88	
4	Nedungur	55.9	<1	56.9	
5	Thiruvallankurichi	50.7	3.23	53.93	
6	Otathur	58.9	2.77	61.67	

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 PM₁₀ are in the range of 53.93 $\mu\text{g}/\text{m}^3$ to 78.46 $\mu\text{g}/\text{m}^3$ and for PM_{2.5} are in the range of 25.4 $\mu\text{g}/\text{m}^3$ to 37.23 $\mu\text{g}/\text{m}^3$ which are within the statutory limits in each case.



Cluster Isopleth of GLC Prediction for PM₁₀

NOISE ENVIRONMENT

The ambient noise levels in the study area have been discussed in Chapter - 3. The data shows that the existing noise levels are within statutory limits. The impact prediction and control measure for noise environment due to mining and allied activities is described below:

4.4 IMPACT DUE TO NOISE AND VIBRATION

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

Table 4.11 - The likely noise level in the lease area

S. No.	Source Name	Noise Level in dB (A)
1	Diesel generator	102
2	Excavator Operation	95
3	Trucks movement	95
4	Drilling	105
5	Blasting	120

4.4.1 MITIGATION MEASURES FOR NOISE CONTROL

The following noise mitigation measures are proposed for control of Noise

- Usage of sharp drill bits while drilling which will help in reducing noise;
- Secondary blasting will be totally avoided and hydraulic rock breaker are utilized for breaking boulders;
- Controlled blasting with proper spacing, burden, stemming and optimum charge/delay will reduce noise;
- The blasting will be carried out during favourable atmospheric condition and less human activity timings by using nonelectrical initiation system;
- Proper maintenance, oiling and greasing of machines will be done every week to reduce generation of noise;
- Provision of sound insulated chambers for the workers working on machines (HEMM) producing higher levels of noise;
- Green Belt will be developed around the project areas and along the haul roads. The plantation minimizes propagation of noise;
- Personal Protective Equipment (PPE) like ear muffs/ear plugs will be provided to the operators of HEMM and persons working near HEMM and their use will be ensured through training and awareness.

- Regular medical check-up and proper training to personnel to create awareness about adverse noise level effects

4.4.2 GROUND VIBRATION

The vibration due to blasting can cause damage to the nearby structures if appropriate technology and control measures are not adopted in the blasting operation. Fly rock is another possible damage causing outcome of blasting. There are many factors which influence fly rock during blasting. Most important of these factors are long explosive column with little stemming column, improper burden, loose material or pebbles near the holes and long water column in the hole.

Mitigative Measures

- Proper quantity of explosive, suitable stemming materials and appropriate delay system should be adopted to avoid overcharging and for safe blasting;
- Adequate safe distance from blasting should be maintained as per DGMS guidelines;
- Blasting shelter should be provided as per DGMS guidelines;
- Blasting operations shall be carried out only during day time;
- The charge per delay shall be minimized and preferably a greater number of delays will be used per blasts;
- During blasting, other activities in the immediate vicinity shall be temporarily stopped;
- Drilling parameters like depth, diameter and spacing will be properly designed to give proper blast;
- Blasting will be carried out under the supervision of statutory persons as approved by DGMS.
- A well-defined SOP will be framed under the leadership of top management and the same will be followed for each blasting.
- Regular PPV monitoring will be carried out to ensure PPV limits i.e., 0.5 mm/s.

4.4.3 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. 12 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	Nedungur Reserve Forest – 3.68km, SW Maniyankurichi RF – 5.58km, SW Naranamangalam RF – 5.65km, NW Maramareddipalayam Reserve Forest – 7.61km, SW Elur RF – 8.10km, NW No forests are situated within 1.0 km radius. The proposed 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	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	The noise due to the mining activity will be controlled by developing green belt all along the lease boundary, regular

	sites of birds and animals	be affected by noise generated due to mining activity.	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 supplies water to a wildlife	As the proposed project is mining activity there will be no possibilities of release of effluents. Also, no Wild life sanctuary within 10km radius.	NIL
9	Mining project effect the forest-based livelihood/ any specific forest	Five reserved forest located beyond 1 km radius. So, the proposed mining activity does	NIL

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

	production which local livelihood depended	not affect forest and forest products.	
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 4.13 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 project site to the existing SH and NH	No Impact	-	-	-
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	-	-	-

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

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 habitat due to Transportation	There is no eco sensitive habitat found around the lease area. The fugitive emission from drilling, 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.	Temporary impact	During Operation Phase	NO	The truck driver will be advised to drive the vehicle within 20km/hr inside the 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.

4.4.3.1 MITIGATION MEASURES

- Necessary mitigative measures like dust suppression, proper maintenance of equipment's, roads will be carried out to prevent dust generation.
- There is no proposal to discharge any effluent into nearby water bodies.
- Surface runoff management structures like garland drain, settling pond, protective bund 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.
- Construction of barbed wire fencing all around the boundary to prevent falling of animals in the mine pits.

Carbon Emission:

Carbon released from quarrying machineries and tippers during quarrying would be 340 kg per day, 1,24,100 kg per year and 12,41,000 kg over ten years, as provided in below Table.

Description	Per Day	Per year	For Ten Years
Total fuel consumption in liters	127	38,123	3,81,234
Co2 emission in kg	340	1,24,100	12,41,000

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.

4.4.3.2 GREENBELT DEVELOPMENT PLAN

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 – 4.14 GREENBELT DEVELOPMENT PLAN

Year	No. of trees proposed to be planted	Survival %	Name of the Species	No. of trees expected to be grown
I	580	80%	Neem, Casuarina, Pongamia pinnata, etc.,	464
II		80%		
III		80%		
IV		80%		
V		80%		

Nearly 0.57.2 Ha. of area is proposed for Greenbelt development by planting 580 Nos of trees and expected growth is around 467 Nos @ survival rate of 80%.

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.

4.4.3.3 SOCIO – ECONOMIC

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 30 persons directly and 30 people on 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 & Gravel, 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.5.0 Lakhs under Corporate Environmental Responsibility.

4.4.4 OCCUPATIONAL HEALTH AND SAFETY

Primary data collection through field survey conducted in the study area reveals that there is no reported incident of any occupational diseases in the area. Hazardous jobs like blasting, loading, etc. are planned to be executed safely and with all precautionary measures as prescribed in Metalliferous Mines Regulations of 1961, so as to minimize hazards and incidences of health problems.

Occupational health and safety hazards occur during the operational phase of mining and primarily include the following:

- Respiratory hazards
- Noise
- Explosive storage and handling

Respiratory Hazards

Long-term exposure to silica dust may cause silicosis the following measures are proposed:

- Cabins of excavators and tippers will be enclosed with AC and sound proof
- Use of personal dust masks will be made compulsory

Noise

Workers are likely to get exposed to excessive noise levels during mining activities.

The following measures are proposed for implementation

- No employee will be exposed to a noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection
- The use of hearing protection will be enforced actively when the equivalent sound level over 8 hours reaches 85 dB(A), the peak sound levels reach 140 dB(C), or the average maximum sound level reaches 110 dB(A)
- Ear muffs provided will be capable of reducing sound levels at the ear to at least 85 dB(A)
- Periodic medical hearing checks will be performed on workers exposed to high noise levels

Occupational Health Survey

All the persons will undergo pre-employment and periodic medical examination as per DGMS and 12th National Mines Safety Council recommendation.

The PP will maintain occupational health history card for their Employees.

The PP will establish first aid station within project site.

Good Drinking Water specialty will be provided at the site level.

4.4.5 WASTE MANAGEMENT

4.4.5.1 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.

4.4.5.2 LIQUID WASTE

There is no process effluent generation from this mine. Hence no liquid waste is generated. Domestic wastewater i.e 1.5 KLD will be discharged in soak pit via septic tank.

4.4.5.3 HAZARDOUS WASTE MANAGEMENT

In this project the following management practices will be followed:

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

4.4.5.4 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.

5. ANALYSIS OF ALTERNATIVES (TECHNOLOGY AND SITE)

5.1 ALTERNATE TECHNOLOGY

The mining technology is mechanized open cast 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.

5.2 ALTERNATE SITE

The project is a mining project and will be operated within the lease grant area. So, no alternate sites have been assessed. Since the resource (Rough stone & Gravel) is site-specific, the chosen location is the only site to carry out Rough Stone & Gravel quarry.

6 ENVIRONMENTAL MONITORING PROGRAMME

6.1 GENERAL

The monitoring and evaluation of environmental parameters indicates potential changes occurring in the environment, which paves way for implementation of rectifying measures wherever required to maintain the status of the natural environment. Evaluation is also a very effective tool to judge the effectiveness or deficiency of the measures adopted and provides insight for future corrections.

The main objective of environmental monitoring is to ensure that the obtained results in respect of environmental attributes and prevailing conditions during operation stage are in conformity with the prediction during the planning stage. In case of substantial deviation from the earlier prediction of results, this forms as base data to identify the cause and suggest remedial measures. Environmental monitoring is mandatory to meet compliance of statutory provisions under the Environment (Protection) Act, 1986, relevant conditions regarding monitoring covered under EC orders issued by the SEIAA as well as the conditions set forth under the order issued by Tamil Nadu Pollution Control Board while granting CTE/CTO.

6.2 MONITORING MECHANISM

The PP will undertake effective monitoring and implementation of various environmental control measures promptly and effectively and to oversee various environmental management schemes for air quality control, water quality status, noise level control, plantation programme, social development schemes, etc in the mine.

6.3 ENVIRONMENTAL MONITORING SCHEDULE AND FREQUENCY

The monitoring schedules are planned for systematic study of various pollution levels with respect to air and water qualities, noise levels, etc. to ensure that they conform to the standards laid down by Environmental Protection Act and various statutory Limits. However, based on the need and priority it may be suitably modified / improved in consultation with local authorities. Monitoring may include

socio-economic interaction, through local liaison activities or even assessment of complaints. The monitoring schedules to be adopted in this quarry are given below.

Table 6.1 Environmental Monitoring Schedule

S.NO	Environmental Attribute	Parameters to be monitored	Monitoring Locations	Frequency
1	Air Quality	Particulate Matter (PM2.5 and PM10), Sulphur dioxide (SO ₂), Oxides of Nitrogen (NO ₂), Respirable.	4 locations in the buffer zone and 2 work zone locations.	Once in season
2	Water Quality	General, Physical, and chemical parameters	Ground Water samples (around the project area) and Mine Pit water samples	Once in season
3	Hydrogeology	Water Levels	Nearby wells and Borewells	On yearly basis pre and post monsoon level
4	Noise	Leq. Lmax Lmin, Leq Day & Leq Night dB(A)	Work zone locations and buffer zone villages	Once in Season
5	Vibration	Peak Particle Velocity	Mine periphery	Regular Interval
6	Soil	Physical and Chemical Characteristics	2 Locations (1 Core & 1 Buffer)	Once in Season.
7	Greenbelt	Maintenance	Within the lease area	Regular interval

6.4 BUDGET FOR IMPLEMENTAION

The cost in respect of monitoring of environmental attributes, parameter to be monitored, sampling/monitoring locations with frequency and Monitoring work will be outsourced to external laboratory approved by NABL / MoEF. The capital and recurring cost required for the project are detailed in below table.

Total EMP Cost for 5 years is 37.20 lakhs i.e., Rs.7.76 Lakhs of Capital + Recurring cost Rs. 29.43 lakhs for Five years. The breakup of EMP cost is elaborated in Table 10.2 of Chapter 10.

6.5 SUBMISSION OF PERIODICAL REPORTS

The monitored data on air quality, water quality, noise levels and other environmental attributes will be periodically examined by the Mine Management Coordinator and Respective Head of Organization for taking necessary corrective measures.

The monitoring data will be submitted to Tamil Nadu State Pollution Control Board in the Compliance to CTO Conditions & environmental audit statements every year to MoEF & CC and Half-Yearly Compliance Monitoring Reports to MoEF & CC Regional Office and SEIAA.

Periodical reports to be submitted to: -

- MoEF & CC – Six month EC compliance report
- TNPCB - Half yearly CTO Compliance report
- MOEF & CC & TNPCB – annual Environmental Statement Report. (Form – V)
- Annual Hazardous Waste Return(Form – IV)
- Department of Geology and Mining: quarterly, half yearly annual reports.

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	Safe operating procedure established for drilling (SOP) will be strictly followed. Only trained operators will be deployed.

		pressure of compressed air, hoses may burst. Drill Rod may break.	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).

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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 natural 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.

7.4 CLUSTER MINE CLOSURE PLAN

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

7.5 SLOPE STABILITY PLAN

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

- Geological structure comprising dip, intervening shear zone formation, clay intrusion, joints / discontinuities, faults etc.,
- Lithology of formation
- slope geometry

- Ground water availability which may cause increased thrust on the faces

Site Specific Analysis

- The quarry lease area is plain terrain which is covered by topsoiled rock formation. The rock type noticed in the lease area is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian.
- Since the formation is of homogeneous rock type probability of slope failure is low and can be avoided if proper measures are adopted.
- There will be a 7.5m safety zone which will form a ridge which can also take care of the top section and as such no risk is envisaged on this front.

Mitigation Measures

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

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 and Gravel Quarry of Thiru. D. Balaji will create direct employment opportunity for 30 local people.

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

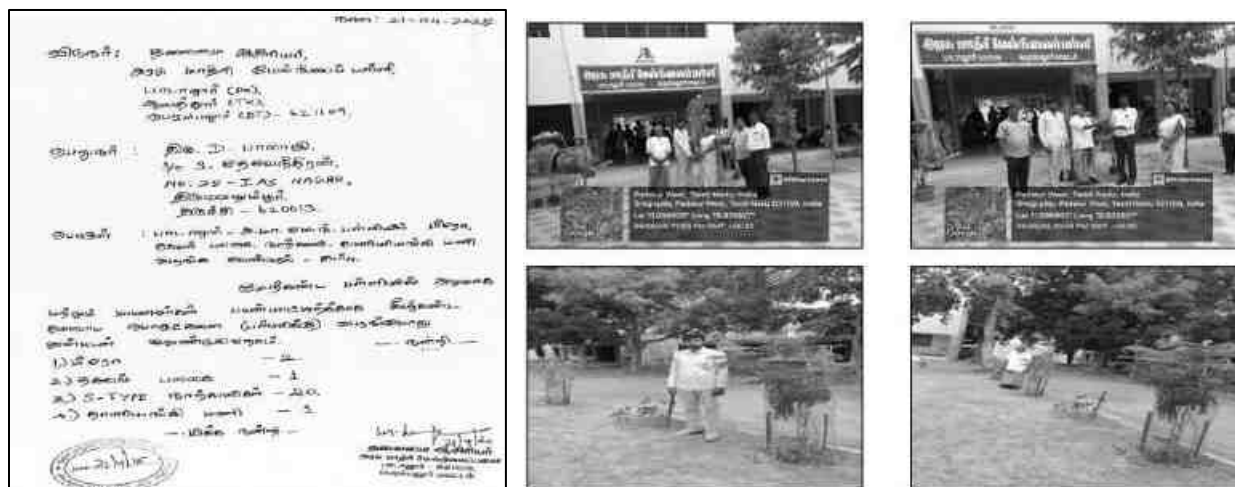


Figure 8.1 – CER Letter & School Plantation Photos

The list of activities proposed for CER is mentioned below

Table 8.1 CER Activities

S. No.	PROPOSED CER ACTIVITIES	COST IN LAKHS.
1	Plantations inside and outside the school premises	5.0
2	Providing Bureau, Notice Board, S-Type Chairs and automatic bell	
3	Maintenance of the toilet for the entire lease period	
Total		5.0
The above-mentioned CER activities will be spent for Government Model Higher Secondary School, Padalur		

9 ENVIRONMENTAL COST BENEFIT ANALYSIS

Environmental Cost Benefit Analysis is recommended during the scoping stage, if needed. In the TOR granted by SEIAA, Tamil Nadu, it is not recommended. Hence not applicable.

10 ENVIRONMENTAL MANAGEMENT PLAN

The Environmental Management plan is a site-specific plan. It is developed to ensure that the project is implemented in an environmentally sustainable manner, where all contractors and subcontractors, including consultants if any, 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 project's life cycle.

10.1 ENVIRONMENTAL POLICY

The Project Proponent – Thiru. D. Balaji shall carry out all the quarrying operations and activities in an environmentally responsible manner and to continually improve environmental performance.

The Proponent will:

- Abide by all laws, ordinances, rules, and regulations that are pertinent to its operations and activities.
- Allocate the resources required to guarantee that the environmental policy is carried out.
- Implement a programme to educate employees about environmental issues in general and their personal environmental responsibilities at work.
- Set up monitoring systems to alert as soon as there is a problem or a performance that is unexpected in relation to environmental protections.

10.2 ENVIRONMENTAL MANAGEMENT PLAN

The impacts due to this mining project are detailed in chapter 4. Mitigation measures at the source level and an overall Management Plan at the site level are elaborated

in this chapter. Details of EMP measures for implementation in the mine are given in the Table 10.1.

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.
	2.0 m ³ /day 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 assess the impact due to the mining activities and the efficacy of the adopted air pollution control measures.
	Afforestation for control of dust.
Water	
Surface water	Nanthai River is situated at a distance of 2.3 km in north east direction and two Odai's passing at 760m (SW) and 780m m in W direction. No other water bodies close to the project site; there is no effluent discharge from this proposed Quarry. So, no impact is anticipated. 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 for performance of water management structures and systems. There is no discharge of any effluent into nearby water bodies.

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Ground Water	The quarrying operation is proposed upto a depth of 52 m maximum below ground level, the water table in the area is 75 to 78m BGL, hence the project will not intersect the Ground water table during entire quarry period.
Water Consumption and Wastewater generation	The required water of 5.5 KLD will be procured from outside agencies initially and later rainwater harvested in the mine pit shall be used other than drinking purpose.
	Domestic wastewater generation of 1.5 KLD will be discharged in soak pit via septic tank.
	Conduct ground water and surface water monitoring for parameters specified by CPCB
Noise	The workers employed are provided with personal protective equipment (PPE) as such, 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 Buffer Zone (7.5 Meters) 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.
	Regular ambient noise level monitoring will be carried out in the project area and in surrounding villages to assess the impact due to the mining activities and the efficacy of the adopted noise control measures.
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.
	ensure blast holes are adequately stemmed for the depth of the hole and stemmed with suitable angular material.
	Undertake noise or vibration monitoring.

Land Environment	There is no change will be in the land use pattern as mentioned in the approved mining plan a such mine pit, safety zone etc., At conceptual stage, the mining pits will be converted into Rain Water Harvesting. Remaining area will be converted into greenbelt area.
	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 waste anticipated in this rough stone Quarry. The entire quarried minerals will be utilized.
Biological Environment	During mining, three-layer thick plantation will be carried out around the project periphery, on safety barrier zone, on top benches of quarried out area etc.,
	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 Greenbelt development programme.
	Year wise greenbelt development plan mentioned in Chapter IV

10.3 ADMINISTRATION AND TECHNICAL SETUP

The Environment Monitoring Cell discussed under Chapter 6 will ensure effective implementation of environment management plan and to ensure compliance of environmental statutory guidelines through Mine Management Level. The organizational chart for the same has been given below.

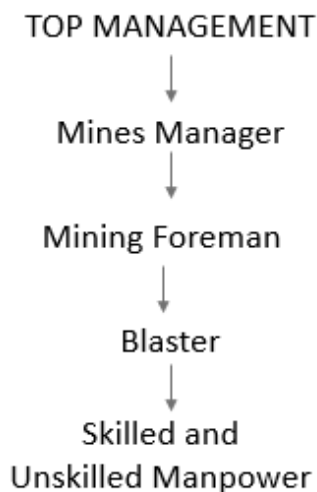


Figure 10.1 Organization Chart

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
- Green belt development
- Monitoring the progress of implementation of the environmental monitoring program
- 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.

10.4 OCCUPATIONAL SAFETY & HEALTH MANAGEMENT

Occupational safety and health are very closely related to productivity and good employer-employee relationship. The main factors of occupational health impact in quarries are fugitive dust and noise. Safety of employees during quarrying operation and maintenance of mining equipment will be taken care as per Mines Act 1952 and Rule 29 of 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 shall be regularly monitored under an occupational surveillance program. Under this program, all the employees are subjected to a detail medical examination at the time of employment.

10.5 BUDGETARY PROVISION FOR ENVIRONMENTAL MANAGEMENT

Adequate budgetary provision has been made by the Company for execution of Environmental Management Plan. The below Table gives overall investment on the environmental safeguards and recurring expenditure for successful monitoring and implementation of control measures.

Table 10.2 Environmental Management Plan Budget

Activities	Mitigation Measure	Capital cost	Recurring Cost per Annum
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	0.14	0.14
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	5.00	0.25
	Muffle blasting – To control fly rocks during blasting	0.00	0.05
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	0.40	0.08
	No overloading of trucks/tippers/tractors	0.00	0.05
	Stone carrying trucks will be covered by tarpaulin	0.00	0.10

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	Enforcing speed limits of 20 km/hr within ML area	0.08	0.01
	Regular monitoring of exhaust fumes as per RTO norms	0.00	0.05
	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	0.00	0.55
	Installing wheel wash system near gate of Rough stone and Gravel Quarry	0.20	0.05
Sub-Total (A)		5.82	1.33
Noise Environment	Provision for Portable blaster shed	0.30	0.02
Sub-Total (B)		0.30	0.02
Waste Management	Provision for domestic waste collection and disposal through authorized agency	0.20	0.10
	Installation of dust bins	0.05	0.02
Sub-Total (C)		0.25	0.12
Mine Closure	Plantation inside ML area (572 Nos.)	0.57	0.11
Sub-Total (D)		0.57	0.11
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	0.05	0.01
	Air, Water, Noise and Soil Quality Sampling every 6 Months for Compliance Report of EC Conditions	0.00	0.50
	Workers will be provided with Personal Protective Equipment's	0.30	0.03
	Health checkup for workers will be provisioned	0.00	0.15
	First Aid facility Provision	0.00	0.03
	Signage & boards for safety precautions	0.05	0.01
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles / HEMMs. Flaggers will be deployed for traffic management	0.28	0.01

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	Installation of CCTV cameras in the mines and mine entrance	0.15	0.02
Sub-Total (E)		0.83	0.76
Grant Total (A+B+C+D+E)		7.76	2.34
Total EMP Cost for 5 years is 37.20 lakhs i.e., Rs.7.76 Lakhs of Capital Cost + Rs.29.43 Lakhs of Recurring Cost (For 10 years)			

10.6 CONCLUSION

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 fund has been allocated for the same. 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. Senior Management responsible for the project will conduct a review of EMP and its implementation to ensure that the EMP remains effective and appropriate. 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.

11 SUMMARY AND CONCLUSION

11.1 INTRODUCTION

This EIA Report is prepared for Thiru. D. Balaji Rough Stone & Gravel Quarry over an extent of 2.75.0 Ha. Patta land in S. No. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 4B, Padalur (E) Village, Alathur Taluk, Perambalur District, Tamil Nadu in compliance with ToR obtained vide ToR Identification No. TO25B0108TN5982149N dated 03.07.2025.

Although the individual lease area of this project is less than 5 hectares, the three existing Quarries within a 500-meter radius, along with this project, add up to more than 5 hectares i.e. 5.75.0 Ha. A map showing the existing and proposed quarry located within 500m radius is given in Figure 1.1.

This cluster includes the three existing quarries namely Thiru. D. Manjunath (1.00 Ha), Tmt. P. Dhanalakshmi (1.00 Ha) and Tmt. S. Pitchai (1.00 Ha).

This project proposed to produce 4,67,550 m³ of Rough Stone for the period of 10 years with ultimate depth up to 52 m BGL.

11.2 PROJECT DESCRIPTION

Table 11.1 Salient Features of the Project

S. No.	Particulars	Details
23.	Proponent Name	Thiru. D. Balaji
24.	Proposed project	Rough Stone & Gravel Quarry of Thiru. D. Balaji
25.	Extent	2.75.0 Ha and the cluster area within 500 m radius including the proposed mine is 5.75.0 Ha > 5 Ha
26.	Location	S. No. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 4B, Padalur (E) Village, Alathur Taluk, Perambalur District
27.	Co-ordinates of the project site	Latitude: 11°05'47.07"N to 11°05'55.98"N Longitude: 78°51'25.59"E to 78°51'30.78"E
28.	Topography	Plain Terrain

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29.	Site Elevation above MSL	≈ 135 m from above MSL. Initial RL before commencement of Mining – 134m BGL and Final RL after completion of Mining Operation – 82m BGL
30.	Topo Sheet No.	58 I /16
31.	Minerals of Mine	Rough Stone & Gravel
32.	Proposed production in m3	4,67,550 m3 of Rough Stone and 43,164 m3 of Gravel up to the depth of 52m for the period of 10 years
33.	Ultimate Depth of mining	52m (BGL)
34.	Method of Mining	Opencast Mining with a bench height of 10m and bench width of 10m is proposed
35.	Drilling/Blasting	Drilling and controlled Blasting is proposed
36.	No. of Working days	300 Days
37.	Water requirement & Source	5.5 kLD and will be sourced from local vendors
38.	Manpower	30 Nos.
39.	Project Cost	Rs. 143.7 lakhs
40.	Mining Plan Approval	Assistant Director, Department of Geology and Mining, Perambalur vide Rc.No.147/2024/G&M/ dated 23.04.2025
41.	Safety Zone	0.57.2 Ha will be maintained as safety zone and tree saplings will be planted in this area
42.	Ground water level	78 m BGL
43.	Distance of Stone Crusher	290m, SW
44.	Previous History & CCR	This is a Fresh Lease. Hence CCR is not applicable

Table 11.2 Environmental Settings of the project site

S. No.	Particulars	Details
13.	Nearest Highway	NH 38 (Viluppuram – Trichy Road – 3.2 Km (W). The State Highway (SH-142) Perambalur – Thuraiyur Road - 14.5Km (NW).

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14.	Interstate Boundary	Not Applicable	
15.	Nearest Railway Station	Kallagam – 17.5km, SW	
16.	Nearest Airport	Trichy International Airport – 39.81km, S	
17.	Nearest Village	Therani – 550, NE	
18.	Water bodies	Odai 760 m, SW, Odai 780m, W,Tank 640m, N, Tiruvalankurichi Eri 1.2km, NW, therani Tank, 1.52km, NE, Therani Big Lake, 2.22km, NE, Puthu Eri, 3.04km, SE, Odai Eri, 3.00 km, SE, Nakkambadi Tank, 4km, S, Vaeappan Eri, 3.91km, SW, Perumalpalayam eri, 3.7km, NW, Nochikulam Eri, 4.34km, N, Karai Tank,4.8km, NE, Karupudayan Eri, 7.36 km, SE, Sanamangalam Eri, 7.96km, SW, Maniyankurichi Tank, 7.39km, W, Chettikulam Tank,8.29km, NW, Varugapadi Tank, 7.8km, N	
19.	Reserved Forest	Nedungur Reserve Forest Maniyankurichi RF Naranamangalam RF Maramareddipalayam Reserve Forest - Elur RF	3.68km, SW 5.58km, SW 5.65km, NW 7.61km, SW 8.10km (NW)
20.	Eco Sensitive Zone and Wildlife Sanctuary (Notified)	Nil within 10km Radius	
21.	Archaeological important places	Nil within 10 km radius	
22.	Defense Installations	Nil within 10 km radius	
23.	Nearest Port	Nil within 10 km radius	
24.	Seismic Zone	Nil within 10 km radius	

11.3 DESCRIPTION OF THE ENVIRONMENT

The baseline monitoring study was carried out during **March 2025 – May 2025** to assess the existing environmental scenario in the area. For the purpose of EIA studies, project area was considered as the core zone and area outside the project area up to 10km radius from the periphery of the project site was considered as buffer zone. Baseline Environmental data has been collected for: -

- a) Land
- b) Water
- c) Air
- d) Noise
- e) Biological
- f) Socio-economic status

11.3.1 LAND ENVIRONMENT

The existing land use pattern of the study area is tabulated below in table 11.2.

Table - 11.3 Land use Pattern of the study area

Sl.No.	LAND USE / LAND COVER	Area in Sq.Km	Area in Percentage
1	Built-up land	5.90	2.02
2	Crop land	24.15	8.29
3	Existing Crusher	0.22	0.08
4	Existing quarries	1.27	0.44
5	Fallow land	9.28	3.18
6	Hill and forest	22.87	7.85
7	Land with scrub	185.51	63.67
8	Land without scrub	22.57	7.75
9	Plantations	7.50	2.57
10	Water bodies	12.10	4.15
	Total Area	291.37	100.00

Source: Survey of India Toposheet and Landsat Satellite Imagery

11.3.2 SOIL CHARACTERISTICS

Results of the soil samples show that the pH values were found to be 7.32 to 8.37 and Electrical Conductivity values were ranging between 182.8 – 298.30 $\mu\text{mhos/cm}$. Soils are generally Silt Loam. Organic matter values were ranging between 0.67 – 1.21 %. Total Nitrogen values were ranging between 136 – 390 mg/kg. Phosphorus values were ranging between 1.21 – 1.69 $\mu\text{g/g}$. Potassium values were ranging between 314 – 533 mg/kg. Sodium values were ranging between 566 - 1020 mg/kg. Total Sulphur values were observed to be BDL. The soil quality data for the 7 samples collected and analyzed are provided in Table no – 3.14.

11.3.3 AMBIENT AIR QUALITY

The results of ambient air quality monitoring for the period **(March 2025 to May 2025)** are presented in Chapter 3. The ambient air quality data for PM₁₀, PM_{2.5}, SO₂, NO₂, CO studied at 5 locations as per prescribed guidelines/ methods. As per the monitoring data, the PM₁₀ values were in the range of 40.4 – 75.3 $\mu\text{g/m}^3$. PM_{2.5} values were in the range of 19.0 – 36.1 $\mu\text{g/m}^3$. SO₂ levels were ranging from 4.1 – 8.7 $\mu\text{g/m}^3$. NO₂ levels were ranging from 5.2 – 10.8 $\mu\text{g/m}^3$. While comparing with the NAAQ Norms laid by MoEF, all monitored values of PM₁₀, PM_{2.5}, 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 $\mu\text{g/m}^3$).

11.3.4 WATER ENVIRONMENT

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 7.29 to 8.01, Chlorides Ranges From 72.6 - 512 mg/l, Sulphates value found to be between 53.4 - 358 mg/l, Fluoride Ranges low in lease area i.e. 0.13 – 0.61, Hardness varies from 171 - 451 mg/l, and Total dissolved solid 310 – 1286 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.

11.3.5 NOISE ENVIRONMENT

From the table 3.12, it is observed that the day Equivalent Noise (Leq-d) level were ranging from 44.6 to 51.6 dB(A) and Night Equivalent Noise (Leq-n) level were ranging from 37.0 to 42.8 (A). While comparing with the MoEF Norm of 55 dB(A) for day time and 45 dB(A) for night time in Residential areas, the monitored ambient noise levels are within the limit values.

11.3.6 BIOLOGICAL ENVIRONMENT

There is no schedule I species of animals observed within study area as per Wildlife Protection Act 1972 as well as no species is in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area. Hence this small operation over short period of time will not have any significant impact on the surrounding flora and fauna.

11.3.7 SOCIO-ECONOMIC ENVIRONMENT

An attempt has been made to assess the impact of the proposed mining project at Padalur (East) Village on Socioeconomic aspect of the study area. The various attributes that have been taken into account are population composition, employment

generation, occupational shift, household income and consumption pattern. Implementation of the Proposed Mine Project will generate both direct and indirect employment. Besides, Mining operation will be legally valid and it will bring income to the state exchequer.

11.4 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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 each individual leases. 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 Chapter 4 of this report.

The project proponent will adopt all the necessary mitigation measures and management plan mentioned in this report and also comply the conditions stipulated in Environmental clearance and CTO of this project.

Anticipated Impacts & Mitigation Measures

Impact	Mitigation Measures
Land Environment	
❖ Destruction of natural landscapes ❖ Changes in soil characteristics ❖ Soil erosion and slope instability ❖ Problems to agricultural land and human habitations due to dust, and noise caused by movement of heavy vehicles.	❖ Rough stone does not produce any toxic effluents in the form of solids, liquids, or gases. ❖ At the end of life of mine, the excavated mine pit / void of 2.15.8 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 (0.57.2 Ha.) will be developed along the safety

	barrier and top benches and 0.02 ha are approach road and Infrastructure. ❖ The periphery of the mining lease area will be converted to a greenbelt to prevent Noise and sound propagation to the nearby lands. ❖ Entire mined out area will be properly fenced to prevent inadvertent entry of human and animals. ❖ Construction of garland drains all around the quarry pit and construction of settling traps at strategic location in lower elevations to prevent soil erosion due to surface runoff during rainfall and also to collect the storm water for various uses within the proposed area.
Water Environment	
❖ Impact due to Usage of Water in mines ❖ Generation of waste water from vehicle washing ❖ Domestic sewage ❖ Washouts from surface exposure or working areas ❖ Impact on Surface Water Resources ❖ Impact on Ground water ❖ Impact on Water Quality	❖ Nanthai River is situated at a distance of 2.3 km in north east direction and two odais passing at 760m (SW) and 780m m in W direction. 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. ❖ The required water (5.5 KLD) will be sourced initially from outside agencies. Later the rainwater collected in the mine pit sump will be used for this purpose.

	❖ Regular water quality will be carried in nearby villages to ensure the water quality is not affected due to the quarrying activities. ❖ Domestic sewage from site office & urinals/latrines provided in project area will be discharged through septic tank followed by soak pit system. ❖ Only clear and settled water free from silt content will be used for dust suppression and greenbelt development. ❖ De-silting will be carried out before and immediately after the monsoon season and the settling tank and drains will be cleaned weekly, especially during monsoons. ❖ The dimension of the rain water harvesting pond will be 25m x 20m x20m with capacity of 10000 cu.m (2 Nos.). The rain water stored in the pond will be utilized for plantation, dust suppression activities.
Air Environment	
❖ Generation of Fugitive Dust ❖ Dust will be generated mainly during excavation, loading & unloading activities. ❖ Reduction in visibility due to dust plumes. ❖ Coating of vegetation leading to reduced photosynthesis. ❖ Inhibited growth, destroying of foliage, degradation of crops; ❖ Increase in health hazards due to inhalation of dust.	❖ Using Wet drilling methods, allowing drilling only with PPE, carrying out blasting only during specified times, avoiding blasting during unfavorable 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. ❖ Speed restrictions will be imposed to avoid spillage of loaded materials upon the road and to reduce wear and tear of the road. ❖ Weekly inspections of the condition of the access road by competent person employed, and immediate action will be taken to address any potholes or damage to the road surface. ❖ Development of greenbelt is proposed in the safety zone of 10m and 7.5m barriers in the lease area. ❖ Personal Protective Equipment's will be provided to all workers
Noise & Vibration	
❖ The main noise generating source during mining operation and related activities are drilling, excavation, loading, unloading and transportation.	❖ Usage of sharp drill bits while drilling which will help in reducing noise; ❖ Secondary blasting will be totally avoided and hydraulic rock breaker are utilized for breaking boulders; ❖ Controlled blasting with proper spacing, burden, stemming and optimum charge/delay will reduce noise; ❖ The blasting will be carried out during favorable atmospheric condition and less human activity timings by using nonelectrical initiation system; ❖ Proper maintenance, oiling and greasing of machines will be done every week to reduce generation of noise;

	❖ Provision of sound insulated chambers for the workers working on machines (HEMM) producing higher levels of noise; ❖ Green Belt will be developed around the project areas and along the haul roads. The plantation minimizes propagation of noise; ❖ Personal Protective Equipment (PPE) like ear muffs/ear plugs will be provided to the operators of HEMM and persons working near HEMM and their use will be ensured through training and awareness. ❖ Regular medical check-up and proper training to personnel to create awareness about adverse noise level effects.
Ground Vibration	
❖ The vibration due to blasting can cause damage to the nearby structures if appropriate technology and control measures are not adopted in the blasting operation. ❖ Fly rock is another possible damage causing outcome of blasting.	❖ Proper quantity of explosive, suitable stemming materials and appropriate delay system should be adopted to avoid overcharging and for safe blasting; ❖ Adequate safe distance from blasting should be maintained as per DGMS guidelines; ❖ Blasting shelter should be provided as per DGMS guidelines; ❖ Blasting operations shall be carried out only during day time; ❖ The charge per delay shall be minimized and preferably more number of delays will be used per blasts;

	❖ During blasting, other activities in the immediate vicinity shall be temporarily stopped; ❖ Drilling parameters like depth, diameter and spacing will be properly designed to give proper blast; ❖ Blasting will be carried out under the supervision of statutory persons as approved by DGMS. ❖ A well-defined SOP will be framed under the leadership of top management and the same will be followed for each blasting. ❖ Regular PPV monitoring will be carried out to ensure PPV limits i.e., 0.5 mm/s.
Biological Environment	
❖ Direct impacts include land clearance and excavation causing destruction of flora and fauna and loss of habitats. ❖ Indirect impacts include habitat degradation due to noise, dust, and human activity.	❖ Only some common herbs, shrubs and grass will be cleared. So, there will be no impact on the biodiversity. ❖ Green belt development with suitable species will enhance the biodiversity of the project area. ❖ The core zone or buffer zone does not encompass any threatened flora or fauna species.
Socio-Economic Environment	
❖ Health and safety of workers and the general public.	❖ Around 30 local workers will get employment opportunities along with periodical training to generate local skills.

❖ Increase in traffic volumes and sizes of road vehicles. ❖ Economic issues, including the increase in employment opportunities.	❖ 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.
Occupational Health & Safety	
❖ Exposure to Dust ❖ Noise and Vibration Exposure ❖ Physical Hazards ❖ Respiratory hazards due to Dust exposure	❖ Provision of rest shelters for mine workers with amenities like drinking water etc. ❖ All safety measures like use of safety appliances, such as dust masks, helmets, shoes, safety awareness programs, awards, posters, slogans related to safety etc. ❖ Training of employees for use of safety appliances and first aid in vocational training center. ❖ Weekly maintenance and testing of all equipment as per manufacturers' guidelines. ❖ Pre placement and Yearly Medical Examination of all workers by a medical Officer. ❖ First Aid facility will be provided at the mine site. ❖ Close surveillance of the factors in working environment and work practices which may affect environment and worker's health by the mine's manager employed.

	❖ Working of mine as per approved mining plan and environmental plans.

11.5 ANALYSIS OF ALTERNATIVES

There are no alternatives suggested as the proposed mining area has the following advantages:

- ❖ The mineral deposit occurs in a non-forest area.
- ❖ There is no habitation within the applied lease area; hence, no R & R issues exist.
- ❖ There is no river, stream, nallas and water bodies in the or passing through the applied mine lease areas.
- ❖ Mine connectivity through road and rail is good.
- ❖ The proposed mining operations do not intersect the ground water level. Hence, no impact on ground water environment.

11.6 ENVIRONMENTAL MONITORING PROGRAM

Environmental Monitoring program will be conducted for various environmental components as per conditions stipulated in Environmental Clearance Letter issued by SEIAA & Consent to Operate issued by TNPCB. Post project monitoring program is detailed in Chapter 6.

PP will supervise the overall environmental management plan of the project during operation. The capital cost of Rs. 7.76 Lakhs and the recurring cost of Rs. 29.43 Lakhs have been allocated under the EMP budget which includes Environmental Monitoring Cost.

11.7 ADDITIONAL STUDIES

Risk Analysis & Disaster Management Plan

The methodology for the risk assessment has been based on the specific risk assessment guidance issued by the Directorate General of Mine Safety (DGMS). 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 time table are recorded along with pinpointed responsibilities. In the unlikely event that a consequence has occurred, disaster management kicks in. This includes instituting procedures pertaining to a number of issues such as communication, rescue, and rehabilitation. These are addressed in the disaster management plan. Both, the RA and DMP, are living documents and need to be updated whenever there are changes in operations, equipment, or procedures. Assessment is all about preventing accidents and taking necessary steps to prevent it from happening.

The Disaster Management Plan (DMP) is a guide, giving general considerations, directions, and procedures for handling emergencies likely to arise from planned operations. The DMP has been prepared on the basis of the Risk Assessment and related findings covered in the report.

Terms of Reference with Public Hearing (ToR) for the project was issued vide ToR Identification No. TO25B0108TN5982149N dated 03.07.2025. Now, this Draft EIA / EMP Report is prepared for conducting Public Hearing as the projects falls under B1 Category.

Although the individual lease area of this project is less than 5 Ha, the three existing quarries and this proposed quarries within the 500m radius works out to >5 Ha. A Cumulative impact study is conducted to determine the impact of the existing and proposed quarries located within 500m radius on the environment and are detailed in Section 7.4.

Cumulative Impact Study

The baseline monitoring conducted for this project reflects the cumulative impact of the existing quarry and impact of this proposed project on air environment do not exceed the permissible limits set by CPCB for air pollution.

The existing projects provided employment opportunities for 74 people and this proposed will provide direct employment opportunities for 30 people.

This proposed project has allocated Rs. 5.0 Lakhs as the CER budget.

11.8 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 30 people directly. Local people will be hired for unskilled labour.
- Through CSR, nearby schools, hospitals will be benefitted.

11.9 CONCLUSION

EIA study was performed as per the approved ToR. Various environmental attributes were studied relating with aspects of mining activities. The related impacts were identified and evaluated. Considering all the possible ways to mitigate the environmental concerns, Environmental Management Plan was prepared and

accordingly fund was allocated. The EMP has been dynamic, flexible and subject to periodic review.

The project will increase the revenue of the State Govt. as well as it will help in the social upliftment of the local community. The green belt development programme will help in increasing the green cover in the area. Thus, the proposed project is not likely to affect the environment or adjacent ecosystem adversely.

The Mine Management will be responsible for the project review of EMP and its implementation to ensure that the EMP remains effective and appropriate. 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.

12 DISCLOSURE OF CONSULTANTS

Global Mining Solutions is a NABET Accredited EIA consultant as per NABET certificate NABET/EIA/2326/IA 0110. 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 and Gravel Quarry over an extent of 2.75.0 Ha, while total cluster area of 5.75.0 Ha at Padalur (East) Village, Alathur Taluk, Perambalur District, Tamil Nadu.

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 – May 2025

Contact information:

M/s Global Mining Solutions

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

Kottamettupatty, Omalur,

Salem, Tamil Nadu – 636 455.

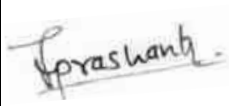
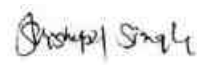
DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

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. <u>Period: March 2025 – May 2025</u>	R. Dhanal
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. <u>Period: March 2025 – May 2025</u>	K. Abirami
3	SHW	Ramadoss N	Assessment of waste generated from the project, suggested waste management practices. <u>Period: March 2025 – May 2025</u>	N. Ramadoss
4	SE	Sarasvathy K	Baseline SE study. Data compilation and assessment. Impact of the project on SE status of the area. Formulation of CER plan. <u>Period: March 2025 – May 2025</u>	K. Sarasvathy

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5	EB	Saravanan S	Baseline data collection of related to ecology of the area. <u>Period: March 2025 – May 2025</u>	
6	HG	Ravinthiran N	Hydrogeological feature of the area. Ground water depth and impact of project on ground water of the area. <u>Period: March 2025 – May 2025</u>	
7	AQ	Srilatha Thiruveedhula	Air quality modeling utilizing the area source model. Predication of the ground level concentration of the dust. Suggesting suitable mitigation measures. <u>Period: March 2025 – May 2025</u>	
8	NV	Dhanalakshmi Ramanathan	Ambient noise study of the area. Incremental noise generation due to quarry operation and impact of the noise due to the project. <u>Period: March 2025 – May 2025</u>	
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. <u>Period: Mar 2024 to May 2024.</u>	

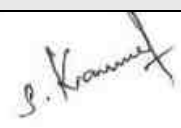
DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

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. <u>Period: March 2025 - May 2025</u>	
11	SC	Shisupal Sing	Soil monitoring, secondary data collection on soil type, soil management practices, utilization of topsoil. <u>Period: March 2025 - May 2025</u>	
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. <u>Period: March 2025 - May 2025</u>	

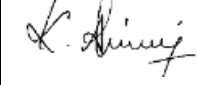
TM-EC:

S.No	Name of TM (EC)	Sector(s) proposed	Name of EC with whom to be attached	Period of involvement	Type of work	Signature
1	R. Dhanalakshmi	1	Manikandan Manickam	<u>March 2025 to May 2025.</u>	Associated with EIA Coordinator in overall preparation of Draft EIA/EMP report.	

TM- FAE:

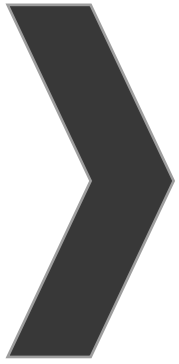
S. No	Name of TM (FAE)	Functional Area	Approved FAE (to work under)	Period of involvement	Type of work	Signature
1	Kamaraj S	HG	Ashok Kumar Rajagopal	<u>March 2025 to May 2025.</u>	Associated with Experts in studying hydrogeological pattern of study area, Studying ground water and	

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

					the impact of the project on ground water	
2	B.J.Sampatkkumar	SE	Saraswathy K	<u>March 2025 to May 2025</u>	Assisted by the Expert in preparation of socio-economic report.	
		SC	Shishupal Singh	<u>March 2025 to May 2025</u>	Assisted by the Expert in interpretation of soil sampling and their quality involved in the project.	
3	Mownica Balaji	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	Mownica B
4	Balasubramani G	GEO	Valliappan Meyyappan	<u>March 2025 to May 2025</u>	Overall site investigation and Mining Plan preparation. Associated with the expert in preparing Geological map.	
5	Suresh Mani	LU	Srilatha Thiruveedhula	<u>March 2025 to May 2025</u>	Associated with Experts in preparing Land use map based on satellite imagery, Land use classification and analysis, Impact prediction on surrounding land environment.	
6	Asan Ali S	NV	Srilatha Thiruveedhula	<u>March 2025 to May 2025</u>	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 safety blasting practice in the mines.	S. Asan ali
7	Prabu M	GEO	Valliappan Meyyappan	<u>March 2025 to May 2025</u>	Associated with Experts and involved in Field Investigations, Mapping /Geo-referencing	
8	Abirami Kaliyaperumal	RH	S V Prashant	<u>March 2025 to May 2025</u>	Involved with Expert team and involved in identification of Risk / Hazards and Safety Measures for various activity	

DRAFT EIA REPORT FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. D. BALAJI AT S.F.NO. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B OVER AN EXTENT OF 2.75.0 HECTARES AT PADALUR (EAST) VILLAGE, ALATHUR TALUK, PERAMBALUR DISTRICT, TAMIL NADU STATE

9	Dhanalakshmi Ramanathan	AQ	Srilatha Thiruveedhula	<u>March 2025 to May 2025</u>	Involved with Expert team and involved in calculating air emission values using Meteorological data and Providing inputs for running modelling (ISCT3, AERMOD).	R. Dhami
10	Manikandan Manickam	WP	Abirami Kaliyaperumal	<u>March 2025 to May 2025</u>	Associated with Identification of the source of water, impact and suggesting suitable mitigation measures for water pollution	mitig



ANNEXURE-1



File No: 12211
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA),
TAMIL NADU)



Dated **03/07/2025**



To,

Thiru. D. Balaji
S/o. S.Devendiran, No. 25, I A S Nagar, Thiruverumbur Taluk, Tiruchirapalli District, Tamil Nadu-620
013
balajidevendiran7@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 & Gravel Quarry Over an extent of 2.75.00 Ha at S.F. No: 124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B of Padalur (East) Village, Alathur Taluk, Perambalur District, Tamil Nadu by Thiru. D. Balaji - under project category – “B1” and Schedule S.No.1(a) “Mining of Minerals Projects” of EIA Notification, 2006, as amended – ToR issued along with Public Hearing - preparation of EIA report – Regarding.

Ref: 1. Online proposal No. SIA/TN/MIN/538133/2025, Dated: 20/05/2025.

2. Your application submitted for Terms of Reference dated: 23.05.2025.

3. Minutes of the 575th SEAC meeting held on 09.06.2025.

4. Minutes of the 846th SEIAA meeting held on 26.06.2025.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO25B0108TN5982149N
(ii) File No.	12211
(iii) Clearance Type	TOR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vii) Name of Project	Rough Stone and Gravel Quarry of Thiru. D. Balaji
(viii) Name of Company/Organization	D BALAJI
(ix) Location of Project (District, State)	PERAMBALUR, TAMIL NADU
(x) Issuing Authority	SEIAA
(xii) Applicability of General Conditions	no
(xiii) Applicability of Specific Conditions	no

1. In view of the particulars given in the Para 1 above, the project proposal inter alia 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 26.06.2025. 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. D. Balaji 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 Additional Chief Secretary to Government, Environment & Forests Department, Govt. of Tamil Nadu, Fort St. George, Chennai - 9
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD Cum-Office Complex, East Arjun Nagar, New Delhi 110032.
3. The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032.
4. Monitoring Cell, IA Division, Ministry of Environment, Forests & CC, Paryavaran Bhavan, CGO Complex, New Delhi 110003
5. The District Collector, Perambalur District.
6. Stock File.

Annexure 1

Specific Terms of Reference for (Mining Of Minerals)

1. Seiaa Specific Conditions:

S. No	Terms of Reference
1.1	After detailed discussions, the Authority accepts the recommendation of SEAC-I and decided to grant Terms of Reference (ToR) along with Public Hearing for the quantity of 4,67,550 m ³ of Rough Stone & 43,164 m ³ of Gravel up to the depth of 52m 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-I & normal conditions & the conditions mentioned below.

2. Seac Conditions - Site Specific

S. No	Terms of Reference
2.1	1. A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of statutory personnel, appropriate environmental monitoring, good maintenance of haul roads and village/panchayat roads, authorized blasting operation etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal: (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 PP shall furnish the consent registered land document for the proposed Extent area. 3. The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report. 4. Since water bodies are situated nearby, the PP shall carry out the hydrological study including the details of water flow pattern to determine the impacts of the mining operation in the water bodies. 5. The details of enumeration of structures including schools, colleges, primary health centres should be submitted along with the EIA report. 6. 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. 7. 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. 8. The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report. 9. 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. 10. 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. 11. 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. 12. The PP should submit the detailed plan of mining as per systematic and scientific manner considering the topography of the project and the elevation deference. 13. Drone video covering 360° view of the mining lease 14. The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic/videographic evidence along with the EIA report.

3. Seac Standard Conditions

S. No	Terms of Reference
3.1	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.

S. No	Terms of Reference
	(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 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.

S. No	Terms of Reference
	· 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. 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

S. No	Terms of Reference
	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 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.

4. Seiaa Standard Conditions:

S. No	Terms of Reference
4.1	<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. 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. <u>Agriculture & Agro-Biodiversity</u> 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. <u>Forests</u> 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. <u>Water Environment</u> 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.

S. No	Terms of Reference
	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 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: - Hydrothermal/Geothermal effect due to destruction in the Environment. - Bio-geochemical processes and its foot prints including Environmental stress. - Sediment geochemistry in the surface streams. <u>Energy</u> 28. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished. <u>Climate Change</u> 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. <u>Mine Closure Plan</u> 32. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued. <u>EMP</u> 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. <u>Risk Assessment</u> 35. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining. <u>Disaster Management Plan</u> 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. <u>Others</u> 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

S. No	Terms of Reference
	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.

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
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

S. No	Terms of Reference
1.9	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period
1.10	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given
1.11	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given
1.12	A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the State Expert Appraisal Committees
1.13	Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished
1.14	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated
1.15	The vegetation in the RF / PF areas in the study area, with necessary details, should be given
1.16	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted
1.17	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished
1.18	A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled- I fauna found in the study area, the necessary plan alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost

S. No	Terms of Reference
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
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

S. No	Terms of Reference
	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 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

S. No	Terms of Reference
	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

Additional Terms of Reference

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 clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.

32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.

- 33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
- 35) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
- 36) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
- 37) Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
- 38) Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed: -
- a) Executive Summary of the EIA/EMP Report
 - b) All documents to be properly referenced with index and continuous page numbering.
 - c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
 - d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
 - e) Where the documents provided are in a language other than English, an English translation should be provided.
 - f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
 - g) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
 - h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
 - i) As per the circular no. J-11011/618/2010-IA. II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
 - j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

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

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

1. Project name and location (Village, District, State, Industrial Estate (if applicable)).
2. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes.
3. Measures for mitigating the impact on the environment and mode of discharge or disposal.
4. Capital cost of the project, estimated time of completion.

6. A detailed study of the lithology of the mining lease area shall be furnished.
7. Details of village map, "A" register and FMB sketch shall be furnished.
8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be submitted along with EIA report.
9. Obtain a letter /certificate from the Assistant Director of Geology and Mining standing that there is no other Minerals/resources like sand in the quarrying area within the approved depth of mining and below depth of mining and the same shall be furnished in the EIA report.
10. EIA report should strictly follow the Environmental Impact Assessment Guidance Manual for Mining of Minerals published February 2010.
11. Detail plan on rehabilitation and reclamation carried out for the stabilization and restoration of the mined areas.
12. The EIA study report shall include the surrounding mining activity, if any.
13. Modeling study for Air, Water and noise shall be carried out in this field and incremental increase in the above study shall be substantiated with mitigation measures.
14. A study on the geological resources available shall be carried out and reported.
15. A specific study on agriculture & livelihood shall be carried out and reported.
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:-

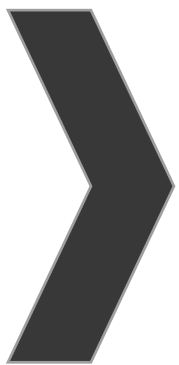
- a. A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b. All documents may be properly referenced with index, page numbers and continuous page numbering.
- c. Where data are presented in the report especially in tables, 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 -11013/77/2004-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.
- Ø After preparing the EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering

the above mentioned points, the proponent will take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

Ø The final EIA report shall be submitted to the SEIAA, Tamil Nadu for obtaining Environmental Clearance.

Ø 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

From

Thiru D.Bernard, M.Sc.,
Assistant Director,
Geology and Mining,
Perambalur.

To

Thiru.D.Balaji,
S/o.S.Devendiran,
No. 25, I A S Nagar,
Thiruverumbur Taluk,
Tiruchirapalli District-620 013.

Rc.No.147/2024/G&MDated:11.04.2025.

Sir,

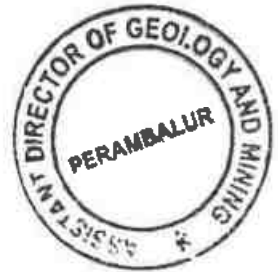
Sub: Mines and Minerals - Minor Mineral - Rough Stone& Gravel-
Perambalur District - Alathur Taluk -Padalur (East) Village -
S.F.Nos.124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 124/4B -
OAE of 2.75.00 hectares of Patta land - Quarry Lease application
preferred by Thiru. D.Balaji - Recommendations received - Precise
Area communicated - Reg.

Ref: 1. Thiru.D.Balaji, S/o.S.Devendiran application, dated
11.11.2024.
2. The Sub Collector, Perambalur letter Rc.No.
A1/4199/2024dated: 24.02.2025.
3. Inspection report of the Assistant Geologist, O/o. the
Assistant Director of Geology and Mining, Perambalur dated:
10.03.2025.

In the reference 1st cited, one Thiru.D.Balaji, S/o.S.Devendiran,No.25, I A S Nagar, Thiruverumbur Taluk, Tiruchirapalli District-620 013, preferred an application for grant of lease to quarry Rough Stone and Gravelin an extent of 2.75.0 hectares of patta lands in S.F.Nos.124/1A (0.46.0), 124/1B(1.14.0), 124/3A(0.24.0), 124/3C(0.10.0), 124/4A(0.69.0) and 124/4B(0.12.0) of Padalur (East) Village, Alathur Taluk, Perambalur District for a period of 10 years under Rule 19 of the Tamil Nadu Minor Mineral Concession Rules, 1959.

2. The Sub Collector, Perambalur in the reference 2nd furnished land availability report and recommended for grant of lease to quarry Rough Stone and Gravelover an extent of 2.75.0 hectares of patta lands in S.F.Nos.124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B of Padalur (East) Village, Alathur Taluk, Perambalur District.

3. The Assistant Geologist, O/o. Assistant Director, Geology and Mining, Perambalur has inspected the area on 10.03.2025 and submitted his report in the reference 3rd cited with the recommendation for grant of lease to quarry Rough Stone and Gravel in the above area for a period of 10 years under Rule 19 of the Tamil Nadu Minor Mineral Concession Rules, 1959 subject to certain conditions.



Based on the reports and recommendations of the Sub Collector, Perambalur and Assistant Geologist, O/o. the Assistant Director (Geology and Mining), Perambalur an extent of 2.75.0 hectares of patta lands in S.F.Nos.124/1A (0.46.0), 124/1B(1.14.0), 124/3A(0.24.0), 124/3C(0.10.0), 124/4A(0.69.0) and 124/4B(0.12.0) of Padalur (East) Village, Alathur Taluk, Perambalur District is hereby fixed as Precise Area for grant of permission to quarry Roughstone and Gravel for a period of ten years as per the powers delegated under amended provision of Rule 19(b) of the Tamil Nadu Minor Mineral Concession Rules 1959, subject to the following conditions.

1. 7.5 meters safety distance should be left out for the adjacent patta lands.
2. 10 meters safety distance should be left out for the adjacent Government lands.
3. The applicant shall not make any hindrance to the adjacent lands and public.
4. The applicant should submit approved Mining Plan, Environment Clearance and Consent to Establish (CTE) & Consent to Operate (CTO) issued by competent authorities for grant of quarrying lease in the subject area.

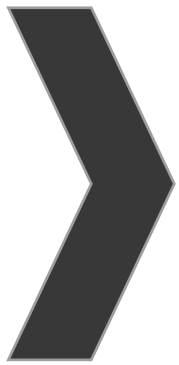
The applicant is directed to submit draft Mining Plan for the above area within 90 days for the approval of the Assistant Director, Geology and Mining, Perambalur and to submit Environment Clearance obtained from SEIAA, Tamil Nadu and CTE & CTO issued by the Tamil Nadu Pollution Control Board subsequently for further action.

[Signature]
Assistant Director,
Geology and Mining,
Perambalur.

Copy to:

1. The Chairman,
SEIAA, PanagalMaligai,
Saidapet, Chennai.
2. The Commissioner of Geology and Mining,
Chennai-32.

[Signature]
11/4/24



ANNEXURE-3

From

Thiru D.Bernard, M.Sc.,
Assistant Director,
Geology and Mining,
Perambalur.

To

Thiru.D.Balaji,
S/o.S.Devendiran,
No. 25, I A S Nagar,
Thiruverumbur Taluk,
Tiruchirapalli District-620 013.

Rc.No.147/2024/G&M**Dated:23.04.2025.**

Sir,

Sub: Mines and Minerals – Minor Mineral – Rough Stone & Gravel-
Perambalur District – Alathur Taluk –Padalur (East) Village -
S.F.Nos.124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 124/4B –
OAE of 2.75.00 hectares of Patta land – Quarry Lease application
preferred by Thiru Thiru.D.Balaji - Recommendations received -
Precise Area communicated - Draft Mining Plan submitted for
approval – Approved – Reg.

- Ref:**
1. Thiru.D.Balaji, S/o.S.Devendiran application, dated 11.11.2024.
 2. The Sub Collector, Perambalur letter Rc.No. A1/4199/2024dated: 24.02.2025.
 3. Inspection report of the Assistant Geologist, O/o. the Assistant Director of Geology and Mining, Perambalur dated: 10.03.2025.
 4. The Assistant Director, Geology and Mining, Perambalur letter Rc.No.147/G&M/2024, dated 11.04.2025.
 5. Thiru.D.Balaji, S/o.S.Devendiran letter dated 15.04.2025.

In the reference 1st cited, one Thiru.D.Balaji, S/o.S.Devendiran, No.25, I A S Nagar, Thiruverumbur Taluk, Tiruchirapalli District- 620 013, preferred an application for grant of lease to quarry Rough Stone and Gravelin an extent of 2.75.0 hectares of patta lands in S.F.Nos.124/1A (0.46.0), 124/1B(1.14.0), 124/3A(0.24.0), 124/3C(0.10.0), 124/4A(0.69.0) and 124/4B(0.12.0) of Padalur (East) Village, Alathur Taluk, Perambalur District for a period of 10 years under Rule 19 of the Tamil Nadu Minor Mineral Concession Rules, 1959.

Based on the reports and recommendations of the Sub Collector, Perambalur and Assistant Geologist, O/o. the Assistant Director (Geology and Mining), Perambalur an extent of 2.75.0 hectares of patta lands in S.F.Nos.124/1A (0.46.0), 124/1B(1.14.0), 124/3A(0.24.0), 124/3C(0.10.0), 124/4A(0.69.0) and 124/4B(0.12.0) of Padalur (East)

Village, Alathur Taluk, Perambalur District was fixed as precise area and communicated to the applicant vide letter in the reference 4th cited with a request to submit Mining Plan for the approval of the Assistant Director, Geology and Mining, Perambalur District and Environmental Clearance obtained from SEIAA for further process.

Accordingly, in the reference 5th cited, the applicant has submitted 3 copies of Draft Mining Plan prepared by Qualified Person for the above area. The draft Mining Plan submitted by Thiru.D.Balaji, has been scrutinized as per extant rules and guide lines / instructions issued by the Commissioner of Geology and Mining, Chennai in the letter Rc.No.3868/LC/2012 dated.19.11.2012. The following observations were made in scrutiny.

- a. 7.5-meter safety distance is earmarked for the adjacent patta lands.
- b. The Geological reserve has been assessed as 1,09,872 metric tonnes of Gravel and 37,76,850 metric tonnes of Roughstone upto a depth of 52 m below ground level.
- c. The mineable reserve has been computed as 86,328 metric tonnes of Gravel and 1285762metric tonnes of Roughstone upto a depth of 52 m below ground level.
- d. The roughstone and Gravel quarry lease was proposed for 10 years. The mining plan has been prepared for the proposed to production of 86,328 metric tonnes of Gravel & 7,29,589 metric tonnes of Roughstone upto a depth of 47m BGL during the first five years and remaining mineable quantity of 556173 metric tonnes of Roughstone in the second five years of lease period.
- e. The depth of water table in the subject area is reported as 78m BGL and workable depth has been proposed to 47m BGL in the mining plan. Hence, the quarrying operation will not affect the water table in the area.
- f. Drilling and blasting using jack hammers and shot hole blasting are proposed. Small dia, 25 mm slurry explosives are proposed to be used for shattering and heaving effect for removal and winning of roughstone. No deep hole drilling or primary blasting is proposed.
- g. It has been proposed adopt controlled blasting measures for minimizing ground vibration and fly rocks.
- h. Machineries like Tractor mounted compressor attached with Jack hammers, excavators with rock breaker attachment are proposed for quarrying operation. Tippers of 5/10 Tons capacity are proposed for transportation.

4) The Mining Plan is prepared in accordance with the guidelines / instructions issued and tallies with the field conditions. The special conditions imposed in the precise area communication letter have been incorporated in the Mining Plan. Therefore, the draft mining plan is hereby approved subject to the following conditions.

- i. That the Mining Plan is approved without prejudice to any other laws applicable to the quarry area from time to time whether made by the Central Government, State Government or any other authority.
- ii. That 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 (Regulations and Development) Amendment Act 2015 or Mineral (other than Atomic and Hydrocarbon Energy Minerals) concession Rules 2016, or Tamil Nadu Minor Mineral Concession Rules, 1959 or any other laws including Forest (Conservation) Act 1980, Forest Conservation Rule, 1981, Environment Protection Act, 1980 and the rules made there under.
- iii. That the Mining plan is approved without prejudice to any other order or directions from any court of competent jurisdiction.
- iv. That the approval of Mining Plan does not confer any rights for the renewal of quarry lease.
- v. The approval is valid up to the subsistence of the lease period only.

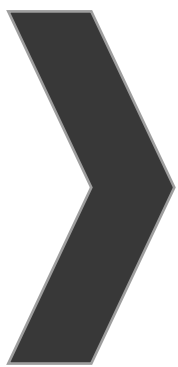
Encl: 2copies of approved Mining Plan.

[Signature]
22/04/25
Assistant Director,
Geology and Mining,
Perambalur.

Copy to:

1. The Chairman,
SEIAA, Panagal Maligai,
Saidapet, Chennai.
2. The Commissioner of Geology and Mining,
Chennai-32.

[Signature]
23/4/25



APPROVAL MINING PLAN

MINING PLAN FOR PADALUR (EAST) ROUGH STONE QUARRY

(Prepared Under Rule 19, 41 & 42 of Tamil Nadu Minor Mineral Concession
Rules, 1959)

LOCATION OF THE QUARRY LEASE APPLIED AREA

STATE : TAMIL NADU
DISTRICT : PERAMBALUR
TALUK : ALATHUR
VILLAGE : PADALUR (EAST)
S.F.NO : 124/1A, 124/1B, 124/3A,
124/3C, 124/4A AND 124/4B
EXTENT : 2.75.0Ha

FOR

APPLICANT

Thiru.D.Balaji,
S/o.S.Devendiran,
No. 25, I A S Nagar, Thiruverumbur Taluk,
Tiruchirapalli District-620 013.

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 CHETTPATTY,
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

ECO-FRIENDLY



SUSTAINABILITY



SAFETY



(PPE)





D.Balaji,
S/o.S.Devendiran,
No. 25, I A S Nagar,
Thiruverumbur Taluk,
Tiruchirapalli District-620 013.

CONSENT LETTER FROM THE APPLICANT

The Mining Plan in respect of **Rough Stone and Gravel** quarry over an extent of 2.75.0Hectares of Patta land in S.F.Nos.124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B of Padalur (East) Village, Alathur Taluk, Perambalur 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, Perambalur 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



D.Balaji

Place: Tiruchirapalli

Date: 11.04.2025

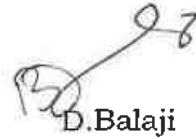


D.Balaji,
S/o.S.Devendiran,
No. 25, I A S Nagar,
Thiruverumbur Taluk,
Tiruchirapalli District-620 013.

DECLARATION

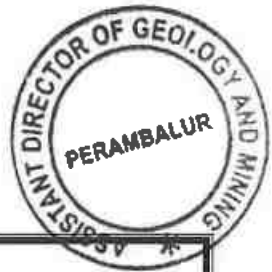
The Mining Plan in respect of **Rough Stone and Gravel** quarry over an extent of 2.75.0 Hectares of Patta land in S.F.Nos.124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B of Padalur (East) Village, Alathur Taluk, Perambalur District,, Tamil Nadu State has been prepared with my consultation and I have understood the contents and agree to implement the same in accordance with the Mining Laws.

Signature of the Applicant


D.Balaji

Place: Tiruchirapalli

Date: 11.04.2025



C.Natarajan, M.Sc., M.Phil.,

Qualified Person

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

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

Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455

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

CONTACT: 97502 23535, 94446 54520

CERTIFICATE

This is to certify that, the provisions of Minor Minerals Conservation and Development Rules, 2010 (MMCDR) have been observed in the Mining Plan for the grant of **Rough Stone and Gravel** quarry lease over an extent of 2.75.0 Hectares of Patta land in S.F.Nos.124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B of Padalur (East) Village, Alathur Taluk, Perambalur District, Tamil Nadu State applied by Thiru.D.Balaji, 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.,

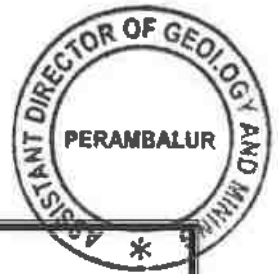
Qualified Person

C.NATARAJAN M.Sc., M.Phil.,

Qualified Person

Place: Salem

Date: 12.04.2025



C.Natarajan, M.Sc., M.Phil.,

Qualified Person

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

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

Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455

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

CONTACT: 97502 23535, 94446 54520

CERTIFICATE

Certified that, in preparation of Mining Plan for **Rough Stone and Gravel** quarry over an extent of 2.75.0Hectares of Patta land in S.F.Nos.124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B of Padalur (East) Village, Alathur Taluk, Perambalur District, Tamil Nadu State for Thiru.D.Balaji, 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.,

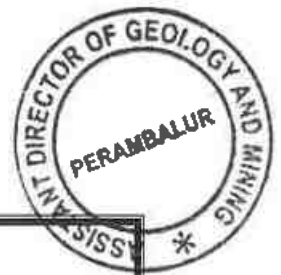
Qualified Person

C.NATARAJAN M.Sc.,M.Phil.,

Qualified Person

Place: Salem

Date: 12.04.2025



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 and Gravel quarry lease applied for an extent of 2.75.0Ha of (Patta land) in S.F.Nos. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B of Padalur (East) Village, Alathur Taluk, Perambalur District, by Thiru.D.Balaji, for a period of Ten years. Since the Mining Plan is prepared as per the provisions contained in Rule 15(1) (a) and (b) of Minerals (Other than Atomic, Hydro Carbons Energy Minerals) concession Rules 2016, the same may be approved by the Competent Authority.


C.Natarajan, M.Sc., M.Phil.,

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

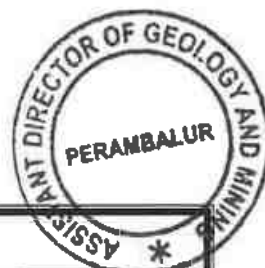
Place: Salem

Date: 12.04.2025



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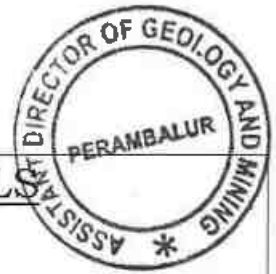


Annexure

S. No.	Description	Annexure No.
1.0	Precise Area Communication letter issued by the Assistant Director, Department of Geology and Mining,	I
2.0	Copy of FMB	II
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4.0	Copy of Patta	IV
5.0	Copy of Adangal	V
6.0	Copy of A Register	VI
7.0	Copy of Consent Document	VII
8.0	Copy of Identity Proof	VIII
9.0	Copy of QP Certificate	IX

LIST OF PLATES

S. No.	Description	Plate No.
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3.0	Satellite imagery map	I-B
4.0	Topo sketch of Quarry lease applied area for 10Km Radius	I-C
5.0	Key Plan	I-D
6.0	Quarry lease & Surface plan	II
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8.0	Mineable plan and sections	IV
9.0	Year wise Development and Production Plan & Sections	V
10.0	Second five Year wise Development and Production Plan & Sections	VA
11.0	Progressive Quarry Closer Plan & Sections	VI
12.0	Conceptual Plan & Sections	VII



MINING PLAN FOR MINOR MINERALS

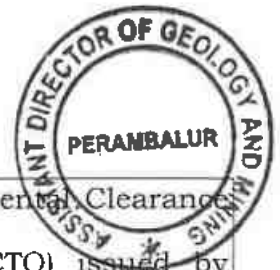
ROUGH STONE AND GRAVEL

Over an extent of 2.75.0 hectares of Patta land in S.F.Nos. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B of Padalur (East) Village, Alathur Taluk, Perambalur District, Tamil Nadu State.

(PREPARED UNDER RULE 19(1), 41 and 42 OF TNMMCR 1959)

1.0 Introduction and Executive Summary:

1. The present Mining Plan is prepared for Thiru.D.Balaji, S/o.S.Devendiran, No. 25, I A S Nagar, Thiruverumbur Taluk, Tiruchirapalli District-620 013.
2. The application was processed by the Assistant Director, Department of Geology and Mining, Perambalur, and passed an order vide Rc.No.147/2024/G&M Dated 11.04.2025. 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 and Gravel over an extent of 2.75.0 hectares of Patta lands in S.F.Nos. 124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B of Padalur (East) Village, Alathur Taluk and Perambalur District of Tamil Nadu State for a period of ten years.
3. Accordingly, Mining Plan is prepared under the provisions of rule 19(1), 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) 7.5 meters safety distance should be left out for the adjacent patta lands.
 - b) 10m safety distance should be left out for the adjacent Government lands
 - c) The applicant shall not make any hindrance to the adjacent lands and public.



- d) The applicant should submit approved Mining Plan, Environmental Clearance and Consent to Establish (CTE) & Consent to Operate (CTO) issued by competent authorities for grant of quarrying lease in the subject area.
4. Geological Resources is estimated at 37,76,850Ts of Rough stone and 1,09,872Ts of gravel formation and Mineable Reserves is estimated at 12,85,762.50Ts of Rough Stone and 86,328Ts of gravel formation 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 7,29,588.75Ts of Rough Stone, 86,328Ts of gravel formation for the period of first five years upto a depth of 47m (below ground level) and remaining quantity of 5,56,173.75Ts of Rough Stone will be proposed for the period of second five years upto depth of 52m (below ground level).
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 appoint 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 3.1km 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).



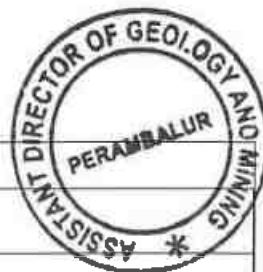
9. Environmental measures to be adopted shall be,

- 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	:	Padalur (East)																																																		
b.	Name of the Panchayat Union	:	Alathur																																																		
c.	The proposed total Movable Reserves	:	12,85,762.50Ts of Rough Stone, 86,328Ts of gravel formation																																																		
d.	The proposed quantity of reserves (level of production) for Five years to be mined is (Recoverable reserves)	:	7,29,588.75Ts of Rough Stone, 86,328Ts of gravel formation																																																		
e.	Total extent of the area	:	2.75.0Ha																																																		
f.	Proposed Period of mining	:	Five Years																																																		
g.	Existing depth	:	It is fresh quarry lease applied area																																																		
h.	Proposed Depth of mining	:	47m (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 is 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. 19,50,000/- Rs. 82,00,000/- Rs. 5,20,000/- Total Project cost(A+B+C)= Rs.1,06,70,000/-																																																		
l.	The area applied for lease is bounded by Eleven corners and the coordinates are clearly marked in plate no II.																																																				
	<table border="1"> <thead> <tr> <th rowspan="2">Corners</th><th colspan="2">Co- ordinates</th><th rowspan="2">Distance between the corners</th></tr> <tr> <th>Latitude</th><th>Longitude</th></tr> </thead> <tbody> <tr><td>1</td><td>11° 05' 49.38"N</td><td>78° 51' 25.93"E</td><td>1-2 = 80.2m</td></tr> <tr><td>2</td><td>11° 05' 51.99"N</td><td>78° 51' 25.98"E</td><td>2-3 = 51.0m</td></tr> <tr><td>3</td><td>11° 05' 53.59"N</td><td>78° 51' 26.43"E</td><td>3-4 = 17.8m</td></tr> <tr><td>4</td><td>11° 05' 53.52"N</td><td>78° 51' 25.84"E</td><td>4-5 = 46.8m</td></tr> <tr><td>5</td><td>11° 05' 55.02"N</td><td>78° 51' 25.59"E</td><td>5-6 = 160.2m</td></tr> <tr><td>6</td><td>11° 05' 55.98"N</td><td>78° 51' 30.78"E</td><td>6-7 = 269.6m</td></tr> <tr><td>7</td><td>11° 05' 47.29"N</td><td>78° 51' 29.60"E</td><td>7-8 = 19.0m</td></tr> <tr><td>8</td><td>11° 05' 47.07"N</td><td>78° 51' 29.02"E</td><td>8-9 = 52.4m</td></tr> <tr><td>9</td><td>11° 05' 48.76"N</td><td>78° 51' 28.77"E</td><td>9-10 = 34.2m</td></tr> <tr><td>10</td><td>11° 05' 48.98"N</td><td>78° 51' 27.67"E</td><td>10-11 = 26.0m</td></tr> <tr><td>11</td><td>11° 05' 49.82"N</td><td>78° 51' 27.68"E</td><td>11-1 = 54.8m</td></tr> </tbody> </table>			Corners	Co- ordinates		Distance between the corners	Latitude	Longitude	1	11° 05' 49.38"N	78° 51' 25.93"E	1-2 = 80.2m	2	11° 05' 51.99"N	78° 51' 25.98"E	2-3 = 51.0m	3	11° 05' 53.59"N	78° 51' 26.43"E	3-4 = 17.8m	4	11° 05' 53.52"N	78° 51' 25.84"E	4-5 = 46.8m	5	11° 05' 55.02"N	78° 51' 25.59"E	5-6 = 160.2m	6	11° 05' 55.98"N	78° 51' 30.78"E	6-7 = 269.6m	7	11° 05' 47.29"N	78° 51' 29.60"E	7-8 = 19.0m	8	11° 05' 47.07"N	78° 51' 29.02"E	8-9 = 52.4m	9	11° 05' 48.76"N	78° 51' 28.77"E	9-10 = 34.2m	10	11° 05' 48.98"N	78° 51' 27.67"E	10-11 = 26.0m	11	11° 05' 49.82"N	78° 51' 27.68"E	11-1 = 54.8m
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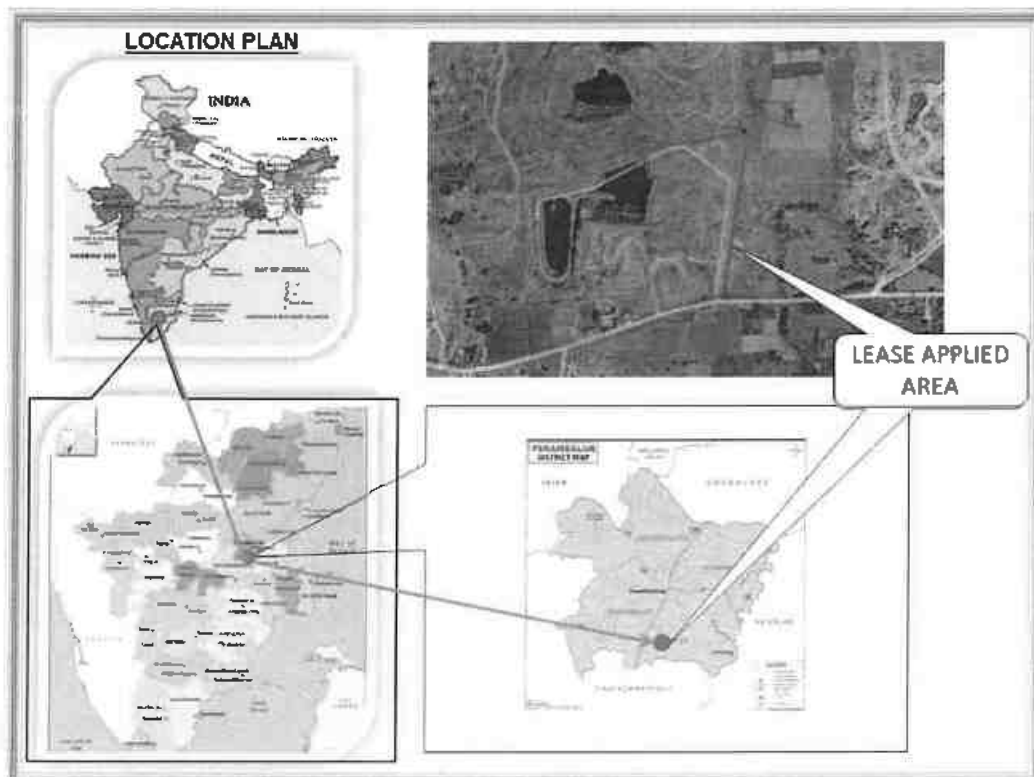
2.0 **General Information:**

2.1	a.	Name of the Applicant	:	Thiru.D.Balaji,
	b.	Address of the Applicant with phone No and e-mail id if any	:	S/o.S.Devendiran, No. 25, I A S Nagar, Thiruverumbur Taluk, Tiruchirapalli District-620 013. Cell No.: 98424 29297
	c.	Status of the Applicant	:	Individual
2.2	a.	Mineral Which the applicant intends to mine	:	Rough Stone and Gravel.
	b.	Precise area communication letter No.	:	Precise area communication letter received from the Assistant Director, Department of Geology and Mining, Perambalur, vide Rc.No. 147/2024/G&M Dated 11.04.2025.
	c.	Period of permission / lease granted	:	The Assistant Director, Department of Geology and Mining, Perambalur, has grant of lease period for ten 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.



3.0 Location:

S.No	Details of the Area:	
1	Corner Coordinates	Latitude : 11°05'47.07"N to 11°05'55.98" N Longitude : 78°51'25.59"E to 78°51'30.78"E
2	Toposheet Number	58 I / 16
3	The altitude of the area	134m (MSL)
4	Extent	2.75.0Ha
5	Survey Nos	124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B
6	Village	Padalur (East)
7	Taluk	Alathur
8	District	Perambalur
9	State	Tamil Nadu



a.	Classification of the Area (Ryotwari / poramboke / others)	:	Patta land
b.	Ownership / Occupancy of the Applied area (Surface rights)	:	It is patta land jointly registered in the name of Thiru.Nethaji, Thiru.Manjunath and Applicant (D.Balaji) vide Patta No.1603 & 1572 the applicant has obtained consent from Co-Pattadars, Please refer Annexure No: IV & VII.
c.	Toposheet No. with Latitude and Longitude	:	Topo Sheet No: 58 I / 16 Latitude : 11°05'47.07"N to 11°05'55.98"N Longitude : 78°51'25.59"E to 78°51'30.78"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 Padalur West - Thiranipalayam village road on South side of the area. The Nearest Railway line is Ariyalur to Trichy line which is about 16.9Km on Southeast side of the area.



SATELLITE IMAGERY OF THE LEASE APPLIED AREA



TOPOGRAPHICAL VIEW OF LEASE APPLIED AREA

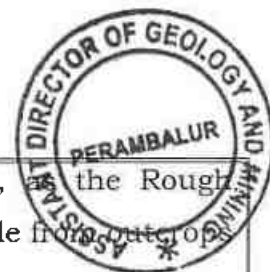
Fig. Location of the lease applied area



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 Gravel formation. The massive Charnockite formation is noticed below 2m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 134m (maximum) from MSL. ➤ No major river is found nearby the lease applied area. ➤ Water table is found at a depth of 78m in summer and 75m in rainy seasons. ➤ Temperature of the area is reported to be 18°C to a maximum of 42°C during summer. ➤ Rainfall of this area is about 800mm to 900 mm during the both NE & SW monsoons.									
	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 N45°E -S45°W with dipping towards SE60°. The general geological succession of the area is given as under. <table border="0" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;"><u>AGE</u></th> <th style="text-align: center;">-</th> <th style="text-align: left;"><u>ROCK TYPE</u></th> </tr> </thead> <tbody> <tr> <td>Recent</td> <td style="text-align: center;">-</td> <td>Gravelly soil Unconformity</td> </tr> <tr> <td>Archaean</td> <td style="text-align: center;">-</td> <td>Dolerite dyke Charnockite. Peninsular Gneissic complex and Calc Gneiss</td> </tr> </tbody> </table>	<u>AGE</u>	-	<u>ROCK TYPE</u>	Recent	-	Gravelly soil Unconformity	Archaean	-	Dolerite dyke Charnockite. Peninsular Gneissic complex and Calc Gneiss
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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 outcrops within the lease applied area.
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 52m (below ground level) only, availability of resources is given below.

Table No-1

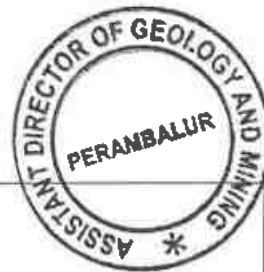
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in Ts	Geological Resources of Rough stone in Ts
XY- AB	I	218	126	2	54936	-	2	109872.00	-
	II	218	126	5	-	137340	2.75	-	377685.00
	III	218	126	5	-	137340	2.75	-	377685.00
	IV	218	126	5	-	137340	2.75	-	377685.00
	V	218	126	5	-	137340	2.75	-	377685.00
	VI	218	126	5	-	137340	2.75	-	377685.00
	VII	218	126	5	-	137340	2.75	-	377685.00
	VIII	218	126	5	-	137340	2.75	-	377685.00
	IX	218	126	5	-	137340	2.75	-	377685.00
	X	218	126	5	-	137340	2.75	-	377685.00
	XI	218	126	5	-	137340	2.75	-	377685.00
Total					54936	1373400	-	109872.00	3776850.00

Gravel Formation

: 1,09,872Ts

The Geological Resources of Rough stone

: 37,76,850Ts



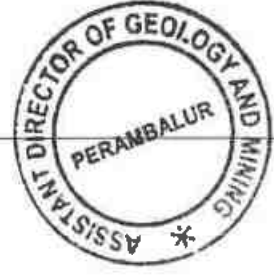
b. Mineable Reserve

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

Table No-2

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in Ts	Mineable Reserves of Rough stone in Ts
XY-AB	I	198	109	2	43164	-	2	86328.00	-
	II	192	103	5	-	98880	2.75	-	271920.00
	III	182	93	5	-	84630	2.75	-	232732.50
	IV	172	83	5	-	71380	2.75	-	196295.00
	V	162	73	5	-	59130	2.75	-	162607.50
	VI	152	63	5	-	47880	2.75	-	131670.00
	VII	142	53	5	-	37630	2.75	-	103482.50
	VIII	132	43	5	-	28380	2.75	-	78045.00
	IX	122	33	5	-	20130	2.75	-	55357.50
	X	112	23	5	-	12880	2.75	-	35420.00
	XI	102	13	5	-	6630	2.75	-	18232.50
Total					43164	467550	-	86328.00	1285762.50

The mineable reserve is computed as 12,85,762.50Ts of Rough stone and 86,328Ts of Gravel formation upto a depth 52m (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 of 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 crushers/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 crushers/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.	: The overburden in the form of Gravel, after the excavation of Gravel and Rough stone will be directly loaded into tipper to the needy crushers/other buyers for road project and construction works for filling and leveling of low lying areas.

The Yearwise Production and Development Table

Table No -3

Year	Section	Bench	Length in(m)	Width in (m)	Depth in (m)	Gravel in m³	Rough stone in m³	Bulk Density	Gravel in Ts	Mineable Reserves of Rough stone in Ts
I	XY-AB	I	129	109	2	28122	-	2	56244.00	-
		II	103	103	5	-	53045	2.75	-	145873.75
Total										
II	XY-AB	I	69	109	2	15042	-	2	30084.00	-
		II	20	103	5	-	10300	2.75	-	28325.00
		III	92	93	5	-	42780	2.75	-	117645.00
Total										
III	XY-AB	III	21	93	5	-	9765	2.75	-	26853.75
		IV	103	83	5	-	42745	2.75	-	117548.75
Total										
IV	XY-AB	V	93	73	5	-	33945	2.75	-	93348.75
		VI	61	63	5	-	19215	2.75	-	52841.25
Total										
V	XY-AB	VI	22	63	5	-	6930	2.75	-	19057.50
		VII	73	53	5	-	19345	2.75	-	53198.75
		VIII	63	43	5	-	13545	2.75	-	37248.75
		IX	53	33	5	-	8745	2.75	-	24048.75
		X	43	23	5	-	4945	2.75	-	13598.75
Total										
Grand Total						43164	265305		86328.00	729588.75

The applicant has proposed to carry out 7,29,588.75Ts of Rough stone and 86,328Ts of Gravel formation upto a depth of 47m (below ground level) for the period of first five years and remaining quantity of 5,56,173.75Ts of Rough Stone will be proposed for the period of second five years upto a depth of 52m (below ground level).

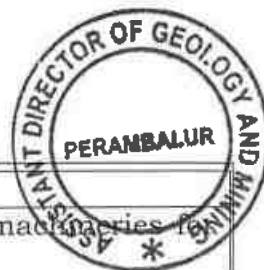


The proposed tentative yearwise production for 6th to 10th year is given below

Table No-4

Year	Section	Bench	Length in(m)	Width in (m)	Depth in (m)	Rough stone in m³	Bulk Density	Mineable Reserves of Rough stone in Ts
VI	XY-AB	II	69	103	5	35535	2.75	97721.25
		III	10	93	5	4650	2.75	12787.50
		Total				40185		110508.75
VII	XY-AB	III	59	93	5	27435	2.75	75446.25
		IV	31	83	5	12865	2.75	35378.75
		Total				40300		110825.00
VIII	XY-AB	IV	38	83	5	15770	2.75	43367.50
		V	69	73	5	25185	2.75	69258.75
		Total				40955		112626.25
IX	XY-AB	VI	69	63	5	21735	2.75	59771.25
		VII	69	53	5	18285	2.75	50283.75
		Total				40020		110055.00
X	XY-AB	VIII	69	43	5	14835	2.75	40796.25
		IX	69	33	5	11385	2.75	31308.75
		X	69	23	5	7935	2.75	21821.25
		XI	102	13	5	6630	2.75	18232.50
		Total				40785		112158.75
Grand Total						202245		556173.75





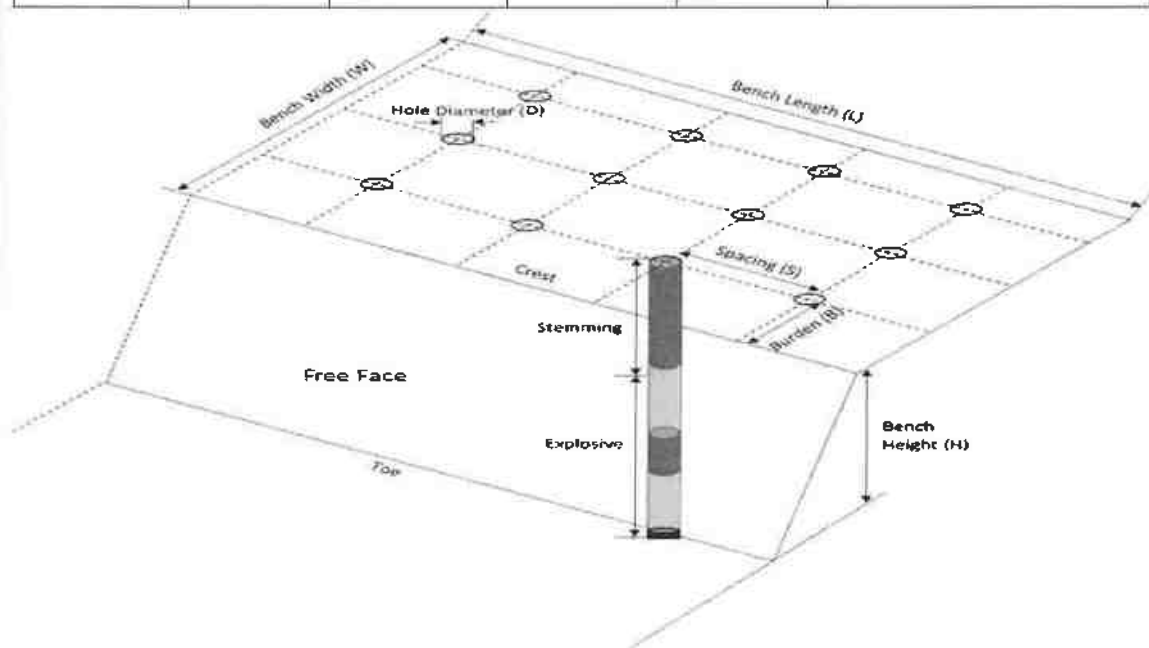
5.5	Machineries to be used																										
a.	Drilling		: It is proposed to use following machineries for quarrying rough stone																								
	S.No	Type	Nos Dia Hole mm Make Motive power																								
	1	Jack hammer	4 32 Atlas Copco Compressed air																								
	2	Compressor	1 - Atlas Copco Diesel Drive																								
b.	Loading		: Excavator of 0.90m ³ bucket capacity (with Rock breaker attachment) (2No).																								
c.	Transportation		: Tipper 4Nos (5/10Ts) capacity.																								
5.6	Disposal of Overburden		: The overburden in the form of Gravel, after the excavation gravel will be directly loaded into tipper to the needy buyers for road project and construction works for filling and leveling of low lying areas.																								
5.7	Brief Note on Conceptual Mining Plan for the entire lease period		: Conceptual Mining Plan is prepared with an object of ten years of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructures etc. 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, <table><tr><th colspan="4">Ultimate Pit dimension (M) end of Mining plan Period</th></tr><tr><th>Pit No</th><th>Length (max) in(m)</th><th>Width (Avg) in (m)</th><th>Depth(max) in(m)</th></tr><tr><td>I</td><td>198</td><td>109</td><td>47</td></tr></table> <table><tr><th colspan="4">Ultimate pit dimension End of the lease period</th></tr><tr><th>Pit No</th><th>Length (max) in(m)</th><th>Width (Avg) in (m)</th><th>Depth(max) in(m)</th></tr><tr><td>I</td><td>198</td><td>109</td><td>52</td></tr></table> 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.	Ultimate Pit dimension (M) end of Mining plan Period				Pit No	Length (max) in(m)	Width (Avg) in (m)	Depth(max) in(m)	I	198	109	47	Ultimate pit dimension End of the lease period				Pit No	Length (max) in(m)	Width (Avg) in (m)	Depth(max) in(m)	I	198	109	52
Ultimate Pit dimension (M) end of Mining plan Period																											
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Ultimate pit dimension End of the lease period																											
Pit No	Length (max) in(m)	Width (Avg) in (m)	Depth(max) in(m)																								
I	198	109	52																								

6.0 Blasting:

6.1 Blasting Pattern

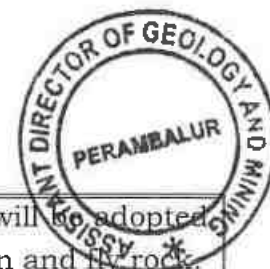
: The massive formation shall be broken into pieces of portable size by drilling and blasting using jack hammers and shot hole blasting. Powder factor of explosives for breaking such hard rock shall be in the order of 6 to 7 Tonnes per K.g of explosives. Blasting parameters are as follows.

Diameter of the hole	Spacing	Depth	Burden for hole	Pattern of hole	Inclination of hole
32-36mm	0.6m	1 to 1.5m	0.6m	Zig Zag	70° from the horizontal

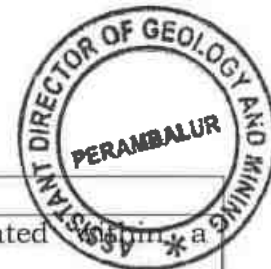


6.2 Types of Explosives

: Small dia, 25mm slurry explosive are proposed to be used for shattering and heaving effect for removal and winning of Rough stone. No deep hole drilling or primary blasting is proposed.



6.3	Measures proposed to minimize ground vibration due to blasting	➤ 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. <table><tr><td>Number of holes</td><td>: 162</td></tr><tr><td>Powder factor</td><td>: 6Ts/Kg of explosives</td></tr><tr><td>Total explosive required</td><td>: 81Kg slurry explosives</td></tr><tr><td>Charge / hole</td><td>: 0.5Kg</td></tr><tr><td>Blasting time</td><td>: 12-2 Pm</td></tr></table>	Number of holes	: 162	Powder factor	: 6Ts/Kg of explosives	Total explosive required	: 81Kg slurry explosives	Charge / hole	: 0.5Kg	Blasting time	: 12-2 Pm
Number of holes	: 162											
Powder factor	: 6Ts/Kg of explosives											
Total explosive required	: 81Kg 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. ➤ <i>The applicant ensure that will appoint the Mate (Should have Valid Blaster Certificate) during Blasting Operation.</i>										
7.0 Mine Drainage:												
7.1	Depth of Water table	The ground water table is reported as 78m below ground level. In the proposed mining plan only 47m (below ground level) and 52m 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										



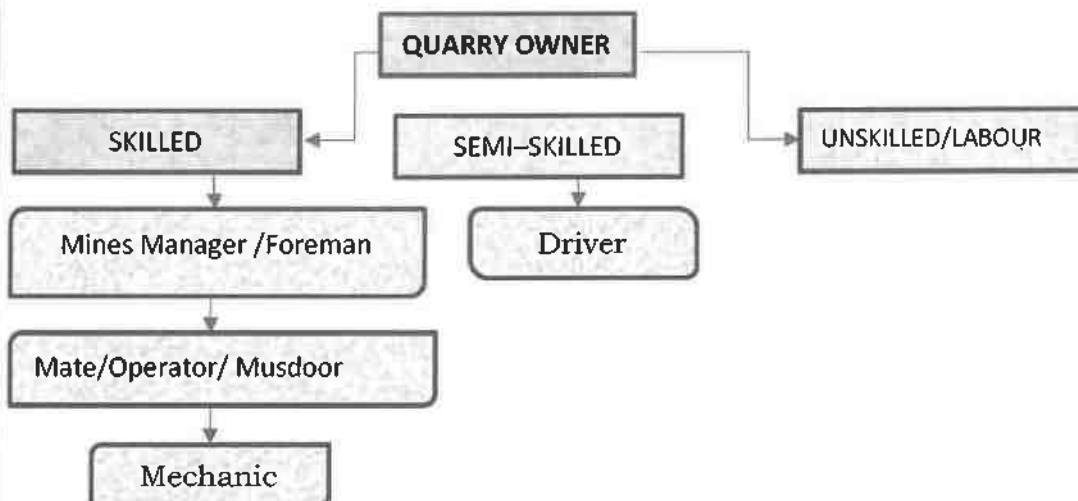
8.0 Other Permanent Structures:

8.1	Habitations / Village	:	There is no habitations situated within a radius of 300m.
8.2	Power lines (HT/LT)	:	There is no LT/HT power lines within a radius of 50m.
8.3	Water bodies (River, Pond, Lake, Odai, Channel etc)	:	There is no Water bodies (River, Pond, Lake, Odai, Channel etc) passing within a radius of 500m.
8.4	Archeological / Historical Monuments	:	There are no Archaeological / Historical Monuments within a radius of 300m.
8.5	Road (NH, SH, Village Road etc)	:	The National Highway (NH-38) Viluppuram - Trichy is about 3.2km on west side of the area. The State Highway (SH-142) Perambalur - Thuraiyur is about 14.5Km on northwest 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 no Reserved Forest, Wild Life Sanctuary within a radius of 1Km.
8.8	Any Interstate Border, Protected areas under the Wild Life (Protection) Act, 1972, Critically Polluted Areas as Identified by Central Pollution Control Board and Notified Eco sensitive areas	:	There are No inter State border within a radius of 10Kms.
8.9	Any Other Structures	:	Nil

9.0 Employment Potential & Welfare Measures:

9.1 Employment Potential (Management & Supervisory personal)

The proposed organization chart



1.	Skilled	Mines Manager	1 No.
		Foreman / Mate	2 No.
		Operator	6 No.
		Mechanic	1 No.
2.	Semi-skilled	Driver	4 No.
3.	Unskilled	Labours	16Nos
Total =			30Nos

Allowing 10% absentee, the no. of men of roll will be around 27.

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 Therani village which is about 0.9Km on northeast side of the area.

b.	Sanitary facilities	:	Semi-permanent latrines & urinals shall be maintained at convenient places for use of labourers as per the provisions of Rule (33) of the Mines Rules, 1960 separately for males and females. Washing facilities shall also be arranged as per rule (36) of the Mines Rules, 1960.
c.	First Aid Facility	:	First aid kits are kept in Mines office room, in case of such eventualities the victim will be given first aid immediately at the site and injured person will be taken to the hospital. Hospital is available at distance of 14.6Km (N) in Perambalur 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:

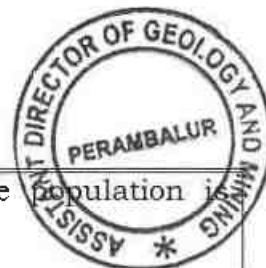
10.1	Existing Land Use Pattern	:	1. The area exhibits almost plain topography covered by Gravel formation. 2. Quarrying operation is proposed up to a depth of 47m (below ground level) for the proposed mining plan period. 3. Fluctuation of Water table in this area is in between 78m and 75m during a year. 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.

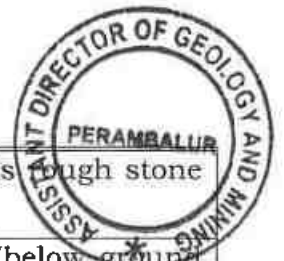
Table No-5

Sl. No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1.	Quarrying Pit	Nil	2.15.8
2.	Infrastructure	Nil	0.01.0
3.	Roads	Nil	0.01.0
4.	Green Belt	Nil	0.57.2
5.	Unutilized	2.75.0	Nil
	Total =	2.75.0	2.75.0

10.2	Water Regime	:	Water table in this area is noticed at a depth of 78m and presently, in the proposed mining plan only 47m (below ground level) and 52m depth 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°C during winter and to a maximum of 42°C during the summer.



10.5	Human Settlement	: The nearest habitations with the population is given as under.	
Table No-6			
S. No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population
1.	Therani	0.9Km - NE	500
2.	Padalur	1.5km - NW	600
3.	Thiranipalayam	2.0km - SE	500
4.	Neikulam	4.6km - SW	2000
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.
10.10	Proposal of Reclamation of Land affected during mining activities and at the end of mining.	:	In the proposed mining plan 47m (below ground level) and 52m depth 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 52m 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 and 10m safety distance along the lease boundary has been identified to be utilized for afforestation. Appropriate native species of Neem/Pungan trees will be planted in the first year. Nearly 5720Sqm area is proposed to use under afforestation by planting 687nos 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 (600000/1Ha)=		Rs. 16,50,000
	2. First aid room and accessories		Rs.1,00,000
	3. Labour Shed		Rs.1,00,000
	4. Sanitary Facility		Rs.1,00,000
	Total=		Rs. 19,50,000/-
	B. Operational Cost:		
	1. Machineries	:	Rs.80,00,000-
	2. Fencing cost	:	Rs. 2,00,000
	Total	:	Rs.82,00,000/-



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

Place : Salem
Date : 12.04.2025

This Mining Plan is Approved
Subject to the Conditions Stipulation &
Indicated to the Mining Plan Approval
Letter No. 147/1987/2024 dt. 23.4.25
Office of the A.D. Geology & Mining
Perambalur

mining plan is approved without
prejudice to any other legal stipulations
and as per the G.O.(Ms) No.79, Industries
(MMC1) Department Dt. 06.04.2015 and
subject to further fulfilment of the condition
laid down under TNMMCR 1959.

A. B. R.
Assistant Director
Dept. of Geology and Mining
Perambalur District.
23/4/25

From

Thiru D.Bernard, M.Sc.,
Assistant Director,
Geology and Mining,
Perambalur.

To

Thiru.D.Balaji,
S/o.S.Devendiran,
No. 25, I A S Nagar,
Thiruverumbur Taluk,
Tiruchirapalli District-620 013.

Rc.No.147/2024/G&MDated:11.04.2025.

Sir,

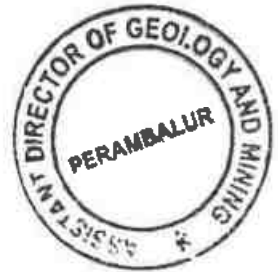
Sub: Mines and Minerals - Minor Mineral - Rough Stone& Gravel-
Perambalur District - Alathur Taluk -Padalur (East) Village -
S.F.Nos.124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 124/4B -
OAE of 2.75.00 hectares of Patta land - Quarry Lease application
preferred by Thiru. D.Balaji - Recommendations received - Precise
Area communicated - Reg.

Ref: 1. Thiru.D.Balaji, S/o.S.Devendiran application, dated
11.11.2024.
2. The Sub Collector, Perambalur letter Rc.No.
A1/4199/2024dated: 24.02.2025.
3. Inspection report of the Assistant Geologist, O/o. the
Assistant Director of Geology and Mining, Perambalur dated:
10.03.2025.

In the reference 1st cited, one Thiru.D.Balaji, S/o.S.Devendiran,No.25, I A S Nagar, Thiruverumbur Taluk, Tiruchirapalli District-620 013, preferred an application for grant of lease to quarry Rough Stone and Gravelin an extent of 2.75.0 hectares of patta lands in S.F.Nos.124/1A (0.46.0), 124/1B(1.14.0), 124/3A(0.24.0), 124/3C(0.10.0), 124/4A(0.69.0) and 124/4B(0.12.0) of Padalur (East) Village, Alathur Taluk, Perambalur District for a period of 10 years under Rule 19 of the Tamil Nadu Minor Mineral Concession Rules, 1959.

2. The Sub Collector, Perambalur in the reference 2nd furnished land availability report and recommended for grant of lease to quarry Rough Stone and Gravelover an extent of 2.75.0 hectares of patta lands in S.F.Nos.124/1A, 124/1B, 124/3A, 124/3C, 124/4A and 124/4B of Padalur (East) Village, Alathur Taluk, Perambalur District.

3. The Assistant Geologist, O/o. Assistant Director, Geology and Mining, Perambalur has inspected the area on 10.03.2025 and submitted his report in the reference 3rd cited with the recommendation for grant of lease to quarry Rough Stone and Gravel in the above area for a period of 10 years under Rule 19 of the Tamil Nadu Minor Mineral Concession Rules, 1959 subject to certain conditions.



Based on the reports and recommendations of the Sub Collector, Perambalur and Assistant Geologist, O/o. the Assistant Director (Geology and Mining), Perambalur an extent of 2.75.0 hectares of patta lands in S.F.Nos.124/1A (0.46.0), 124/1B(1.14.0), 124/3A(0.24.0), 124/3C(0.10.0), 124/4A(0.69.0) and 124/4B(0.12.0) of Padalur (East) Village, Alathur Taluk, Perambalur District is hereby fixed as Precise Area for grant of permission to quarry Roughstone and Gravel for a period of ten years as per the powers delegated under amended provision of Rule 19(b) of the Tamil Nadu Minor Mineral Concession Rules 1959, subject to the following conditions.

1. 7.5 meters safety distance should be left out for the adjacent patta lands.
2. 10 meters safety distance should be left out for the adjacent Government lands.
3. The applicant shall not make any hindrance to the adjacent lands and public.
4. The applicant should submit approved Mining Plan, Environment Clearance and Consent to Establish (CTE) & Consent to Operate (CTO) issued by competent authorities for grant of quarrying lease in the subject area.

The applicant is directed to submit draft Mining Plan for the above area within 90 days for the approval of the Assistant Director, Geology and Mining, Perambalur and to submit Environment Clearance obtained from SEIAA, Tamil Nadu and CTE & CTO issued by the Tamil Nadu Pollution Control Board subsequently for further action.

[Signature]
Assistant Director,
Geology and Mining,
Perambalur.

Copy to:

1. The Chairman,
SEIAA, PanagalMaligai,
Saidapet, Chennai.
2. The Commissioner of Geology and Mining,
Chennai-32.

[Signature]
11/4/24

District : Perambalur

Taluk : Alathur

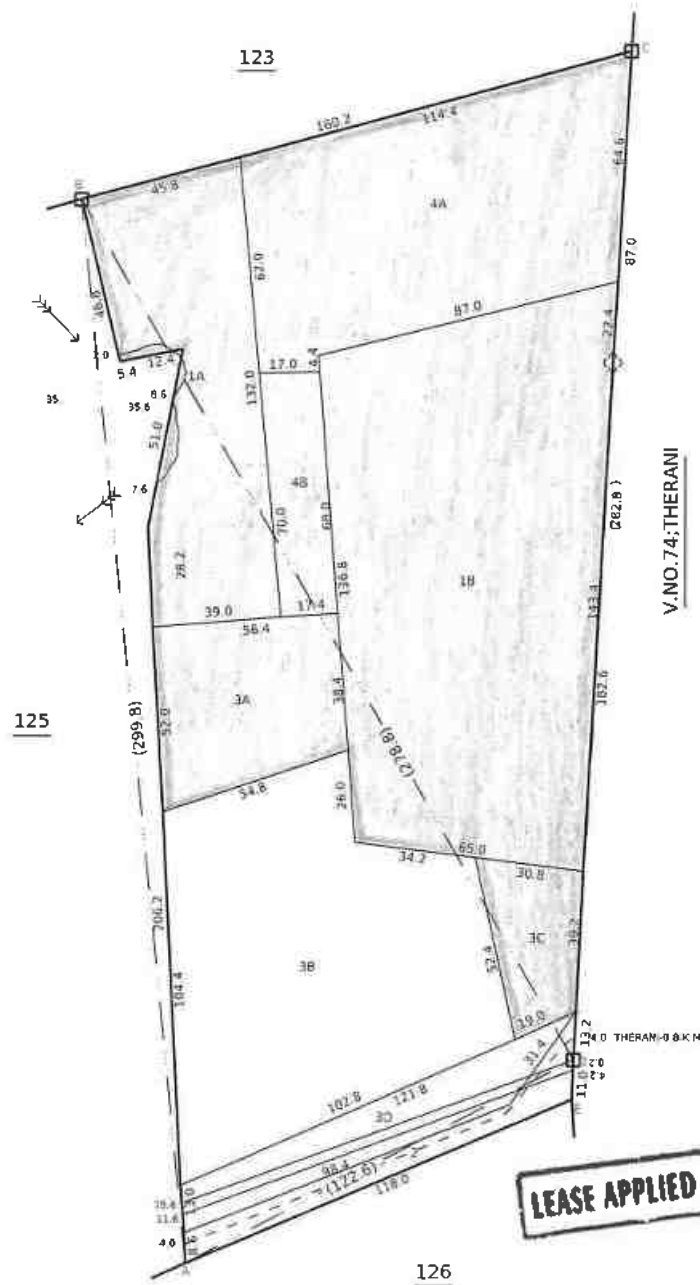
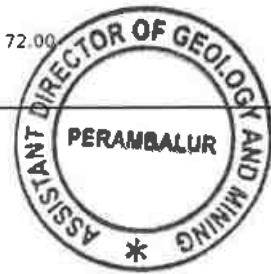
Village : Padalur(E) [972]



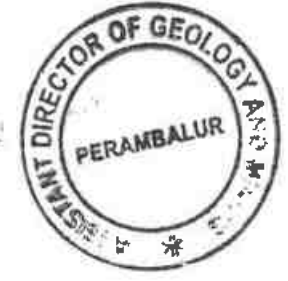
Survey No : 124

Area : Hect 03 Ares 72.00

Scale : 1 : 1007



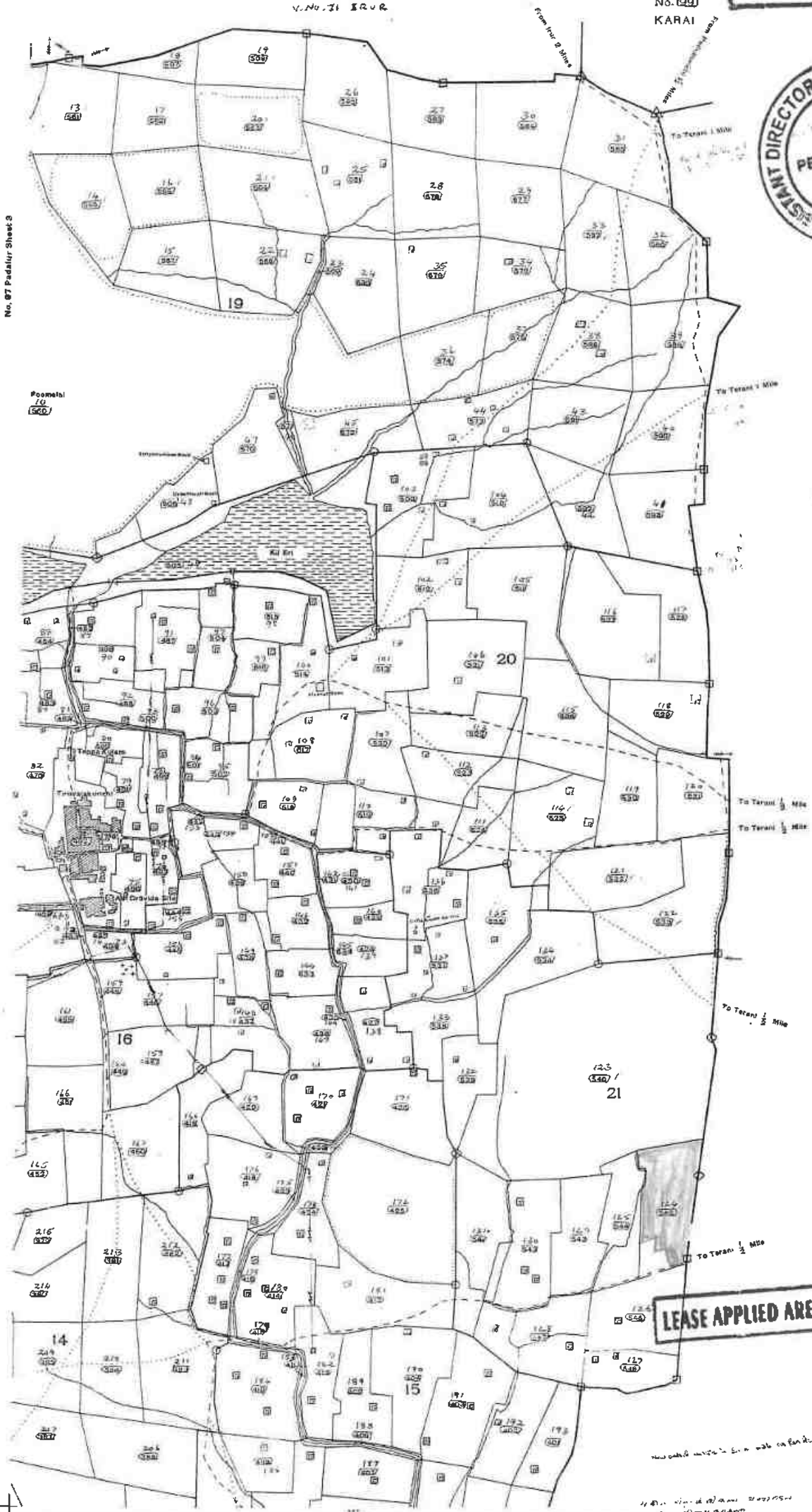
No. 69 KARAI



No. 87 Padalur Sheet 3

Poomali 16

Perambalur Taluk



74 No. 69 TERANI

LEASE APPLIED AREA

Handwritten notes at the bottom right of the map.



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு



மாவட்டம் : பெரம்பலூர்

வட்டம் : ஆலத்தூர்

வருவாய் கிராமம் : பாடாலூர் (கி)

பட்டா எண் : 1603

உரிமையாளர்கள் பெயர்

1. சீனிவாசன்

மகன்

நேதாஜி

2. தேவேந்திரன்

மகன்

மஞ்சநாத்

3. தேவேந்திரன்

மகன்

பாலாஜி

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
124	1A	0 - 46.00	0.64	--	--	--	--	2024/0103/16/242452- Digitally signed: approved through AutoMutation 26/07/2024 05:20:55:PM
		0 - 46.00	0.64					

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 16/07/972/01603/30200 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 19-12-2024 அன்று 06:03:47 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : பெரும்பலூர்

வட்டம் : ஆலத்தூர்

வருவாய் கிராமம் : பாடாலூர் (கி)

பட்டா எண் : 1572

உரிமையாளர்கள் பெயர்

1.	சீனிவாசன்	மகன்	நேதாஜி.
2.	தேவேந்திரன்	மகன்	மஞ்சநாத்
3.	தேவேந்திரன்	மகன்	பாலாஜி

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
124	1B	1 - 14.00	1.58	--	--	--	--	2024/0103/16/227649- Digitally signed: Geetha P Zonal Deputy Tahsildar 16/03/2024 06:52:10:PM
124	3A	0 - 24.00	0.33	--	--	--	--	2024/0103/16/227649- Digitally signed: Geetha P Zonal Deputy Tahsildar 16/03/2024 06:52:10:PM
124	3C	0 - 10.00	0.14	--	--	--	--	2024/0103/16/227649- Digitally signed: Geetha P Zonal Deputy Tahsildar 16/03/2024 06:52:10:PM
124	4A	0 - 69.00	0.95	--	--	--	--	2024/0103/16/227649- Digitally signed: Geetha P Zonal Deputy Tahsildar 16/03/2024 06:52:10:PM
124	4B	0 - 12.00	0.17	--	--	--	--	2024/0103/16/227649- Digitally signed: Geetha P Zonal Deputy Tahsildar 16/03/2024 06:52:10:PM
		2 - 29.00	3.17					



1937 ஆம் பசனியில்

மாண்புமிகு மாண்புமிகு

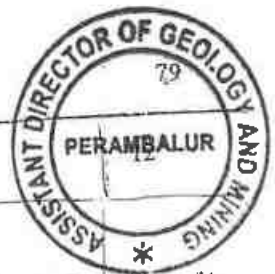
John

வயது

73

நில வரித் திட்டத்தின் படி புலன்களின் விபரம்.					சாகுபடி யாளரின் பெயர்.	முதல் போகம்.					
(1) நில அளவை எண்.	(2) உட்கிரவு எண்.	(3) பரப்பு.	(4) தீர்வை.	(5) ஒரு போகம் அல்லது இரு போகம்.	(6) கைப்பற்று தரவுருடைய பெயரும் எண்ணும் அல்லது அனுபோக தரவுருடைய பெயர்.	(7) நிலத்தின் எந்த பகுதி யாவது சாகுபடியாளரால் பயிரிடப்பட்டுள்ளதா.	(8) எந்த மாதத்தில் பயிர் செய்யப்பட்டது எந்த மாதத்தில் அறுவடை செய்யப்பட்டது.	(9) பயிரின் பெயர்.	(10) பயிரான / அறுவடை யான பரப்பு.	(11) உண்ணாமையான பாய்ச்சல் ஆதாரம்.	(12) விளைச்சல் அளவு விழுக்காடு.
124	1A	0460	064	1603	சா. முத்துசி			252			
	1B	0440	150	1572	-2-			252			
	3A	0240	033	1572	-2-			252			
	3C	0140	014	1572	-2-			252			
	4A	0040	045	1572	-2-			252			
	4B	0120	017	1572	-2-			252			
						124 முத்துசி					
						124 X					
						73 - பாடாறுவர் (விவசாயி)					
						சுமந்தர் வட்டி					
						பொருத்தம் மாவட்டம்					

சென்னை 97/2 பாடாலூர் (கிழக்கு)



1	2	3	4	5	6	7	8	9	10	11
123	...	54C	அ	தி.ஏ.த	...	...	...	...	...	...
124	1A	545-1A	அ	பு	...	8-3	14	1 38	0 45 0	0 64
	1B	-1B	ர	பு	...	8-3	14	1 38	1 14.0	1 58
	2	-2	அ	புற	...	...	...	...	0 09.5	...
	3A	-3பா	ர	பு	...	8-3	14	1 38	0 24.0	0 33
	3B	-3பா	ர	பு	...	8-3	14	1 38	0 70.5	0 98
	3C	-3பா	ர	பு	...	8-3	14	1 38	0 10.0	0 14
	3D	-3பா	ர	பு	...	8-3	14	1 38	0 17.0	0 23
	4A	-4பா	ர	பு	...	8-3	14	1 38	0 69.0	0 95
	4B	-4பா	ர	பு	...	8-3	14	1 38	0 12.0	0 17
									3 72.5	5 02
125	1	544-1	ர	பு	...	8-3	14	1 38	0 30.0	0 41
	2A	-2பா	ர	பு	...	8-1	10	2 47	0 38.0	0 94
	2B	-2பா	ர	பு	...	8-1	10	2 47	0 34.0	0 84
	3A	-3பா	ர	பு	...	8-1	10	2 47	0 98.0	2 42
	3B	-3பா	ர	பு	...	8-1	10	2 47	0 04.0	0 10
	4	-4	ர	பு	...	8-1	10	2 47	0 55.0	1 36
	5	-5	அ	புற	...	...	...	...	0 08.5	...
									67.5	6 07

தலைவர்
குத்து
தரிசு

வண்டிப்
பாதை,

469 செ.பொம்மக்
கவுண்டர்.

207 வெ.சிங்கன்.

345 கெ.துரைச்சாமி
கவுண்டர்.

469 செ.பொம்மக்
கவுண்டர்.

712 கெ.துரை
சாமி(1),
செ.பொம்மக்
கவுண்டர்(2).

344 கெ.துரைச்சாமி
ரெட்டி.

207 வெ.சிங்கன்.

151 ம.கோவிந்தன்
கவுண்டர்.

611 வெ.நெடுங்க
சாமி.

207 வெ.சிங்கன்.

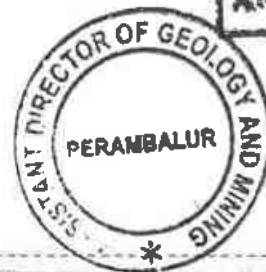
345 கெ.துரைச்சாமி
கவுண்டர்.

345 கெ.துரைச்சாமி
கவுண்டர்.

909 செ.மருத
முத்து(1),
செ.கோவிந்
தன்(2).

வண்டிப்
பாதை.

சிறுமநிலவாக அலுவலர்
73 - பாடாலூர் (கிழக்கு)
அலுவலர் வட்டம்
பெரும்பாளையம்



 Government of India   பாலாஜி தேவேந்திரன் Balaji Devendiran பிறந்த நாள்/DOB: 21/05/1996 ஆண்/ MALE 9036 7919 5059 VID : 9103 0204 1420 1190 எனது ஆதார். எனது அடையாளம்	 Unique Identification Authority of India  முகவரி: S/O தேவேந்திரன், எண் 25, ஐ ஏ எஸ் நகர், திருவெறும்புத்தாண்டுகா, திருச்சிராப்பள்ளி, தமிழ்நாடு - 620013 Address: S/O Devendiran, NO 25, I A S NAGAR, THIRUVERUMBUR TK, Tiruchirappalli, Tamil Nadu - 620013 9036 7919 5059 VID : 9103 0204 1420 1190 1947 help@uidai.gov.in www.uidai.gov.in

CHETTINAD CEMENT CORPORATION LTD

(Regd. Office: RANI SEETHAI HALL BUILDING IV & V FLOORS, 603, ANNA SALAI, MADRAS-600001)
WORKS OFFICE: PULIYUR.



TELE: 21144
PHONE 22744 KARUR
21745
GRAM "CEMENT" Puliur C.F.
Telex: 0456-215.
STD Code: 04324

All Correspondence to
Kumararajah Muthiah Nagar,
PULIYUR CEMENT FACTORY POST 639114.
(Karur Taluk, Trichy Dt.)

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

<u>Name of the Pit.</u>	<u>Average Raising/day.</u>
1. Alambadi Pit.	- 1,700 T.
2. Mallapuram Pit.	- 900 T.
3. Karikkali Pit.	- 150 T.
Total.	- 2,750 T.

He has got nearly Eight years of total experience in our Mines in the above supervisory capacity.

for CHETTINAD CEMENT CORPORATION LTD.,

(T. RAJU).

Mines Manager & Dy. General Manager.



Faculty of Science

The Senate of the Annamalai University hereby makes known that B. 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

26th December 1976.

A. Chandrasekha
Vice-Chancellor.

PLATE NO: I

DATE OF SURVEY 11.04.2025

APPLICANT:

THIRU D. BALAJI,
S/O S DEVENPIRAN
NO. 25, IAS NAGAR,
THIRUVARUR/MRUR TALUK,
TIRUCHIRAPPALLI DISTRICT-620 013.

QUARRY LEASE APPLIED AREA:

S.F.NO's : 124/1A,124/1B,124/3A,124/3C,124/4A&124/4B
EXTENT : 2.75.00 Ha.
VILLAGE : PADALUR (EAST).
TALUK : ALATHUR.
DISTRICT : PERAMBALUR.

INDEX

Q. LEASE APPLIED AREA: ●

TOPO SHEET NO : 58 I/16

LATITUDE : 11°05'47.07"N to 11°05'55.98"N

LONGITUDE: 78°51'25.59"E to 78°51'30.78"E

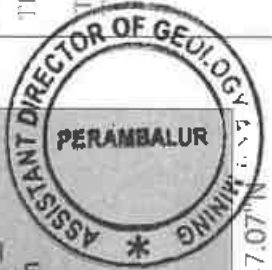
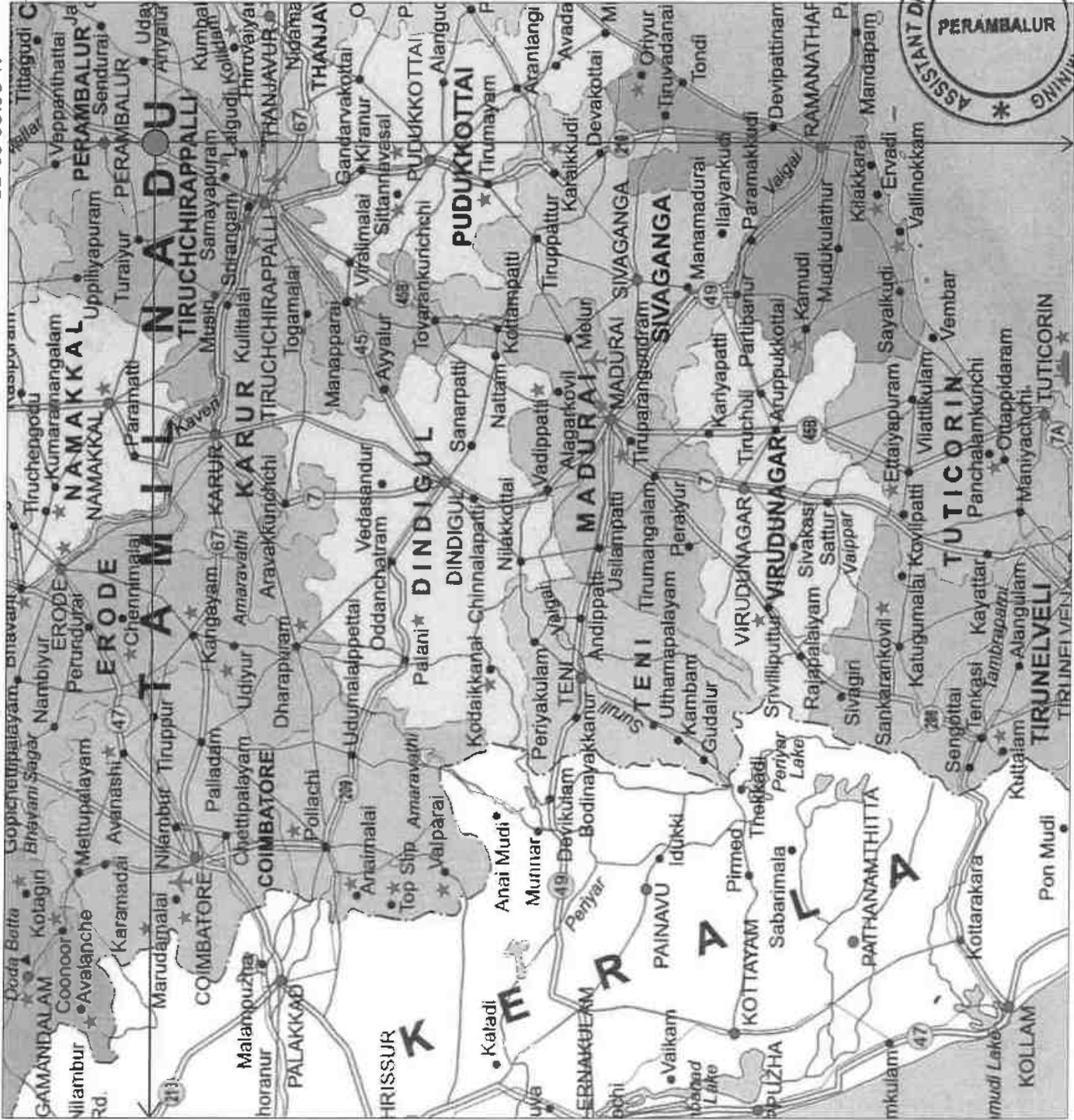
LOCATION PLAN

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

[Signature]
CH. KATARAJAN, M.Sc., M.Phil.,
QUALIFIED PERSON



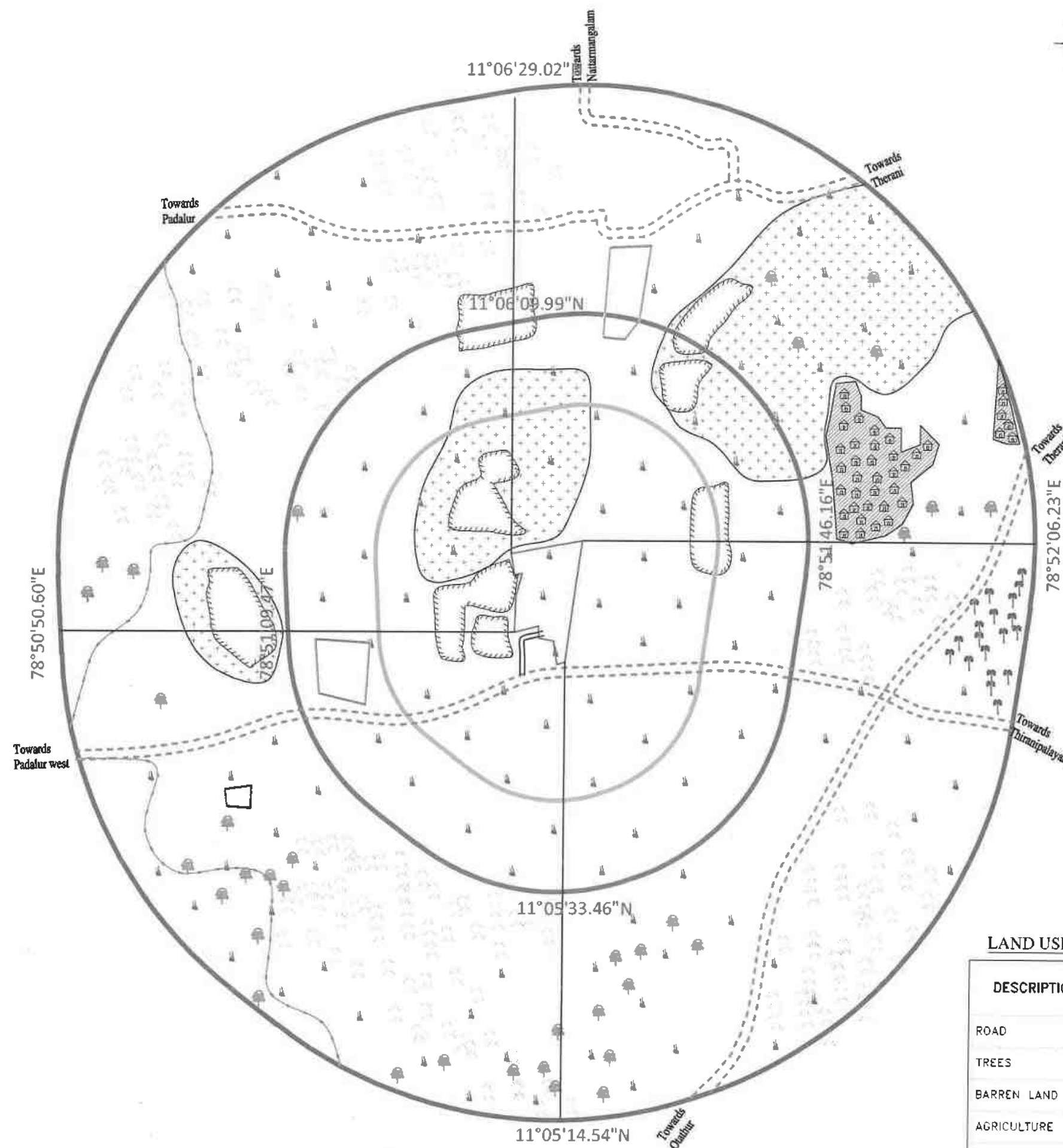
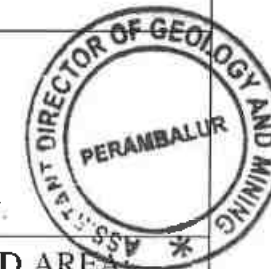


PLATE NO-IA

DATE OF SURVEY :11.04.2025

APPLICANT:

THIRU.D.BALAJI,
S/O S.DEVENDIRAN
NO. 25, IAS NAGAR,
THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT-620 013.



QUARRY LEASE APPLIED AREA:

S.F.NO's :124/1A,124/1B,124/3A,124/3C,124/4A&124/4B
EXTENT : 2.75.00 Ha.
VILLAGE : PADALUR (EAST).
TALUK : ALATHUR,
DISTRICT : PERAMBALUR.

INDEX

TOPO SHEET NO : 58 I /16

LATITUDE :11°05'47.07"N to 11°05'55.98"N

LONGITUDE:78°51'25.59"E to 78°51'30.78"E

Q.L.APPLIED AREA



300M RADIUS



500M RADIUS



1KM RADIUS



APPROACH ROAD



PANCHAYAT ROAD



BARREN LAND



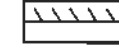
AGRICULTURAL LAND



TREES



QUARRY PIT



HABITATION



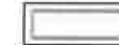
HILLOCK



ODAI



CRUSHER PLANT



LAND USE PATTERN

DESCRIPTION	AREA IN (%)
ROAD	04
TREES	09
BARREN LAND	40
AGRICULTURE	25
HABITATIONS	04
WATER BODIES	02
HILLOCK	16

ENVIRONMENTAL PLAN

SCALE 1 : 10,000

PREPARED BY:

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

GOVERNMENT

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

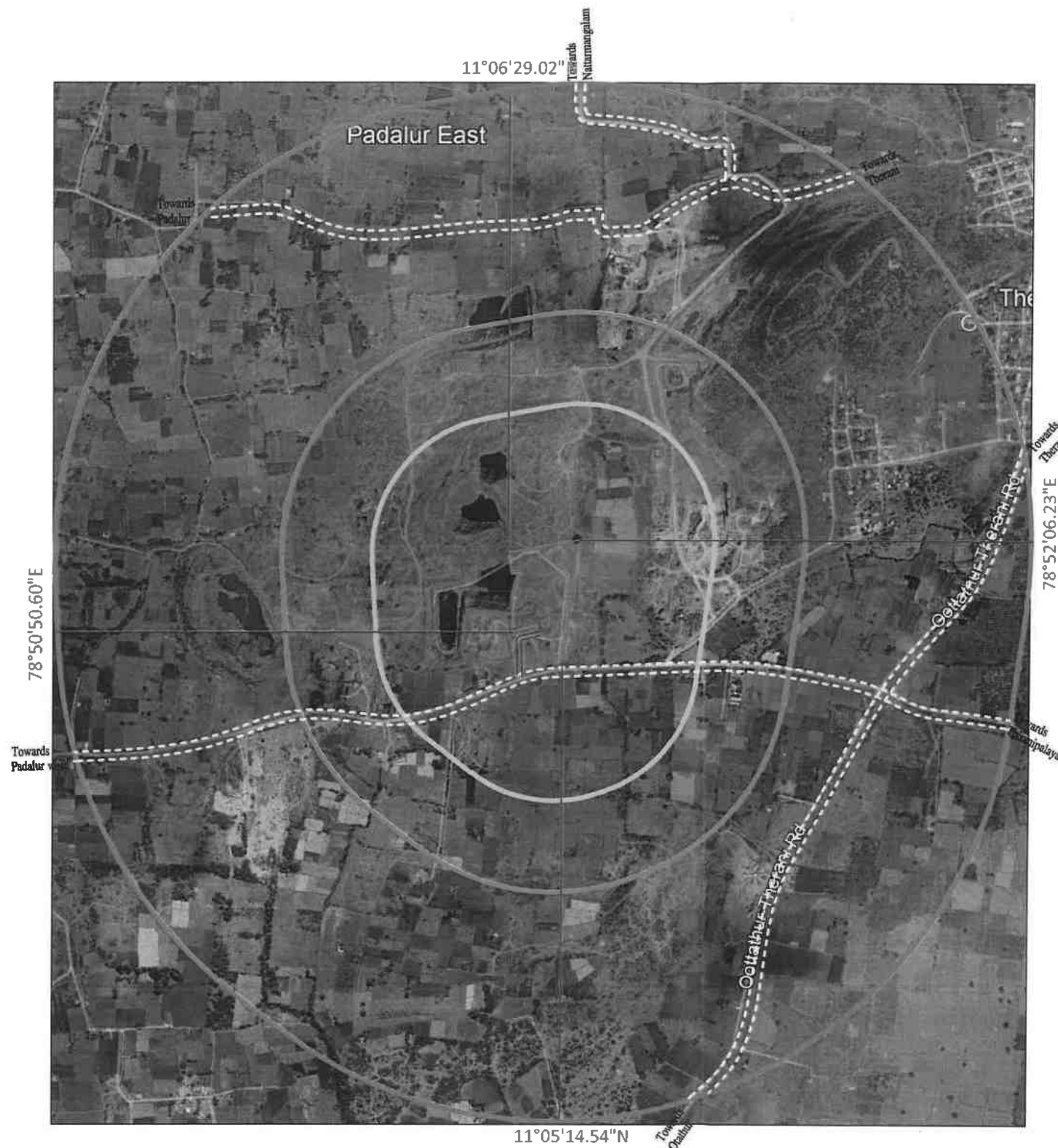


PLATE NO-IB

DATE OF SURVEY : 11.04.2025

APPLICANT:

THIRU.D.BALAJI,
S/O.S.DEVENDIRAN
NO. 25, IAS NAGAR,
THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT-620 013.

QUARRY LEASE APPLIED AREA:

S.F.NO's : 124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 124/4B
EXTENT : 2.75.00 Ha.
VILLAGE : PADALUR (EAST),
TALUK : ALATHUR,
DISTRICT : PERAMBALUR.

INDEX

TOPO SHEET NO : 58 I / 16

LATITUDE : 11°05'47.07"N to 11°05'55.98"N

LONGITUDE: 78°51'25.59"E to 78°51'30.78"E

Q.L.APPLIED AREA



300M RADIUS



500M RADIUS



1KM RADIUS



APPROACH ROAD



PANCHAYAT 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

KEY PLAN

PLATE NO:1-D

DATE OF SURVEY:11.04.2025

APPLICANT:

THIRU.D.BALAJI,
S/O.S.DEVENDIRAN
NO. 25,1AS NAGAR,
THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT-620 013.

QUARRY LEASE APPLIED AREA:

S.F.NO's :124/1A,124/1B,124/3A,124/3C,124/4A&124/4B
EXTENT : 2.75.00 Ha.
VILLAGE : PADALUR (EAST),
TALUK : ALATHUR,
DISTRICT : PERAMBALUR.

INDEX

Q.LEASE APPLIED AREA



NATIONAL HIGHWAY



PANCHAYAT ROAD



APPROACH ROAD



HABITATIONS



KEY PLAN

Not To Scale

PREPARED BY :

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




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



Towards
Perambalur

● Padalur

Therani ●



Towards
Thiruppalayam

● Padalur West

Towards
Thiruppalayam

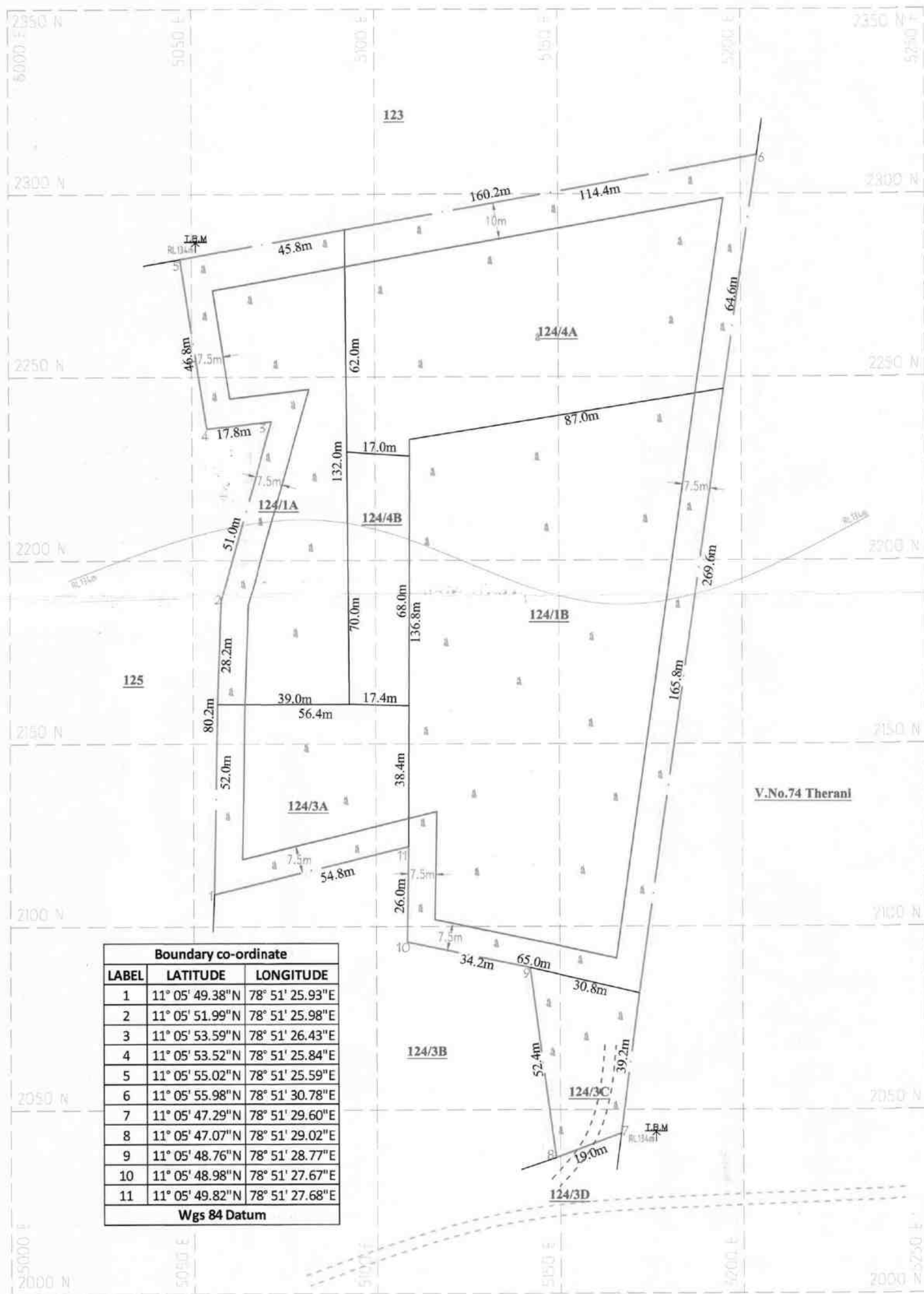


PLATE NO-II
 DATE OF SURVEY : 11.04.2025

APPLICANT:
 THIRU.D.BALAJI,
 S/O.S.DEVENDIRAN
 NO. 25,IAS NAGAR,
 THIRUVERUMBUR TALUK,
 TIRUCHIRAPALLI DISTRICT-621013.

QUARRY LEASE APPLIED AREA:
 S.F.NO's :124/1A,124/1B,124/3A,124/3C,124/4A&124/4B.
 EXTENT : 2.75.00 Ha,
 VILLAGE : PADALUR (EAST),
 TALUK : ALATHUR,
 DISTRICT : PERAMBALUR.

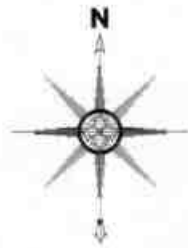
INDEX
 Q.LEASE APPLIED BOUNDARY
 7.5m & 10m SAFETY DISTANCE
 TEMPORARY BENCH MARK
 APPROACH ROAD
 VILLAGE ROAD
 CONTOUR
 SCRUB

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

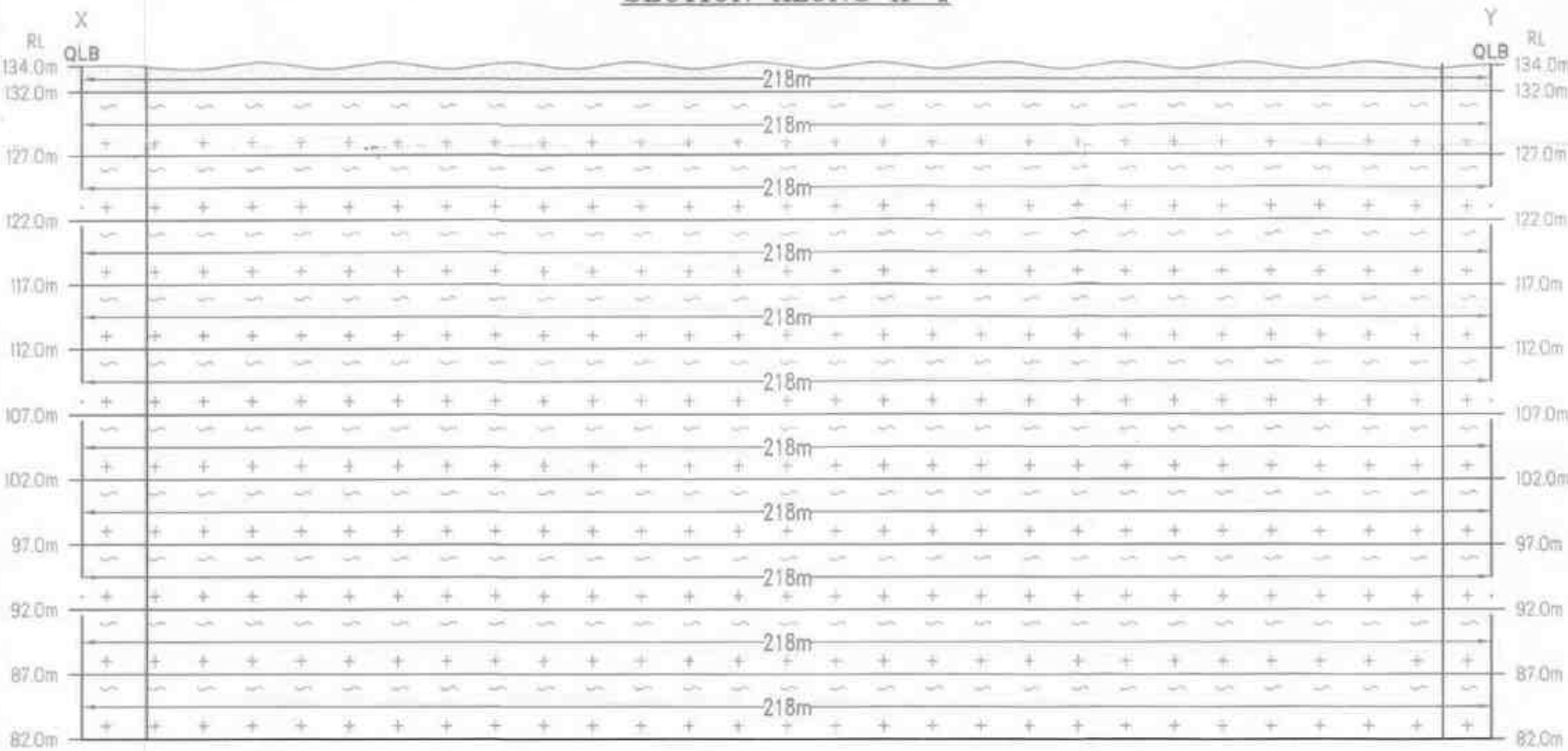
C.NATARAJAN.M.Sc,M.Phil.,
 QUALIFIED PERSON

Boundary co-ordinate		
LABEL	LATITUDE	LONGITUDE
1	11° 05' 49.38"N	78° 51' 25.93"E
2	11° 05' 51.99"N	78° 51' 25.98"E
3	11° 05' 53.59"N	78° 51' 26.43"E
4	11° 05' 53.52"N	78° 51' 25.84"E
5	11° 05' 55.02"N	78° 51' 25.59"E
6	11° 05' 55.98"N	78° 51' 30.78"E
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8	11° 05' 47.07"N	78° 51' 29.02"E
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10	11° 05' 48.98"N	78° 51' 27.67"E
11	11° 05' 49.82"N	78° 51' 27.68"E
Wgs 84 Datum		



Boundary co-ordinate		
LABEL	LATITUDE	LONGITUDE
1	11° 05' 49.38"N	78° 51' 25.93"E
2	11° 05' 51.99"N	78° 51' 25.98"E
3	11° 05' 53.59"N	78° 51' 26.43"E
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10	11° 05' 48.98"N	78° 51' 27.67"E
11	11° 05' 49.82"N	78° 51' 27.68"E
Wgs 84 Datum		

SECTION ALONG X-Y



SECTION ALONG A-B

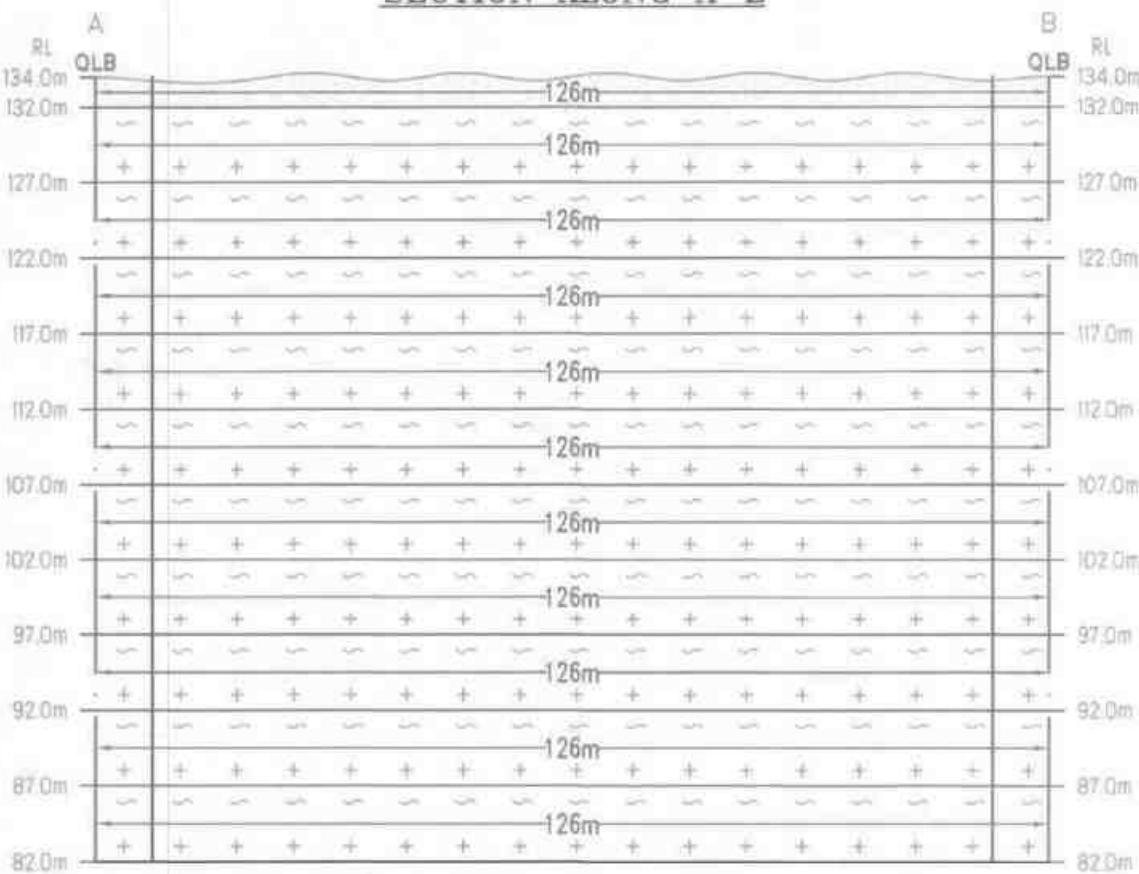
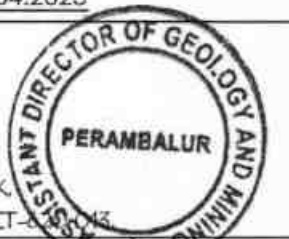


PLATE NO-III
DATE OF SURVEY :11.04.2025

APPLICANT:

THIRU.D.BALAJI,
S/O.S.DEVENDIRAN
NO. 25,IAS NAGAR,
THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT-621015



QUARRY LEASE APPLIED AREA:

S.F.NO's :124/1A,124/1B,124/3A,124/3C,124/4A&124/4B.
EXTENT : 2.75.00 Ha,
VILLAGE : PADALUR (EAST),
TALUK : ALATHUR,
DISTRICT : PERAMBALUR.

INDEX

Q.LEASE APPLIED BOUNDARY	
7.5m&10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
CONTOUR	
SCRUB	
GRAVEL	
ROUGH STONE	
STRIKE&DIP	

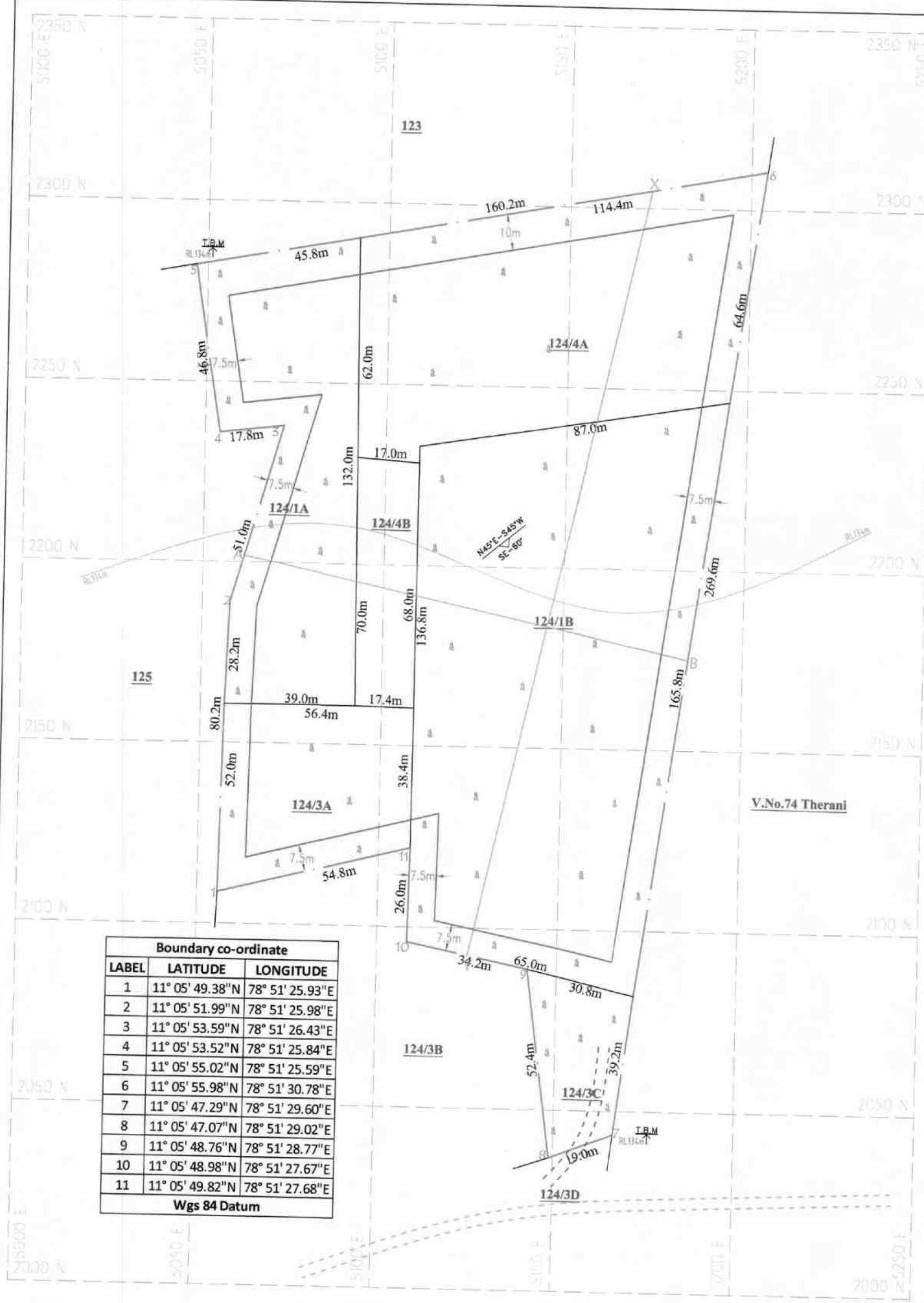
TOPOGRAPHY, GEOLOGICAL,
PLAN & SECTION

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

PREPARED BY:

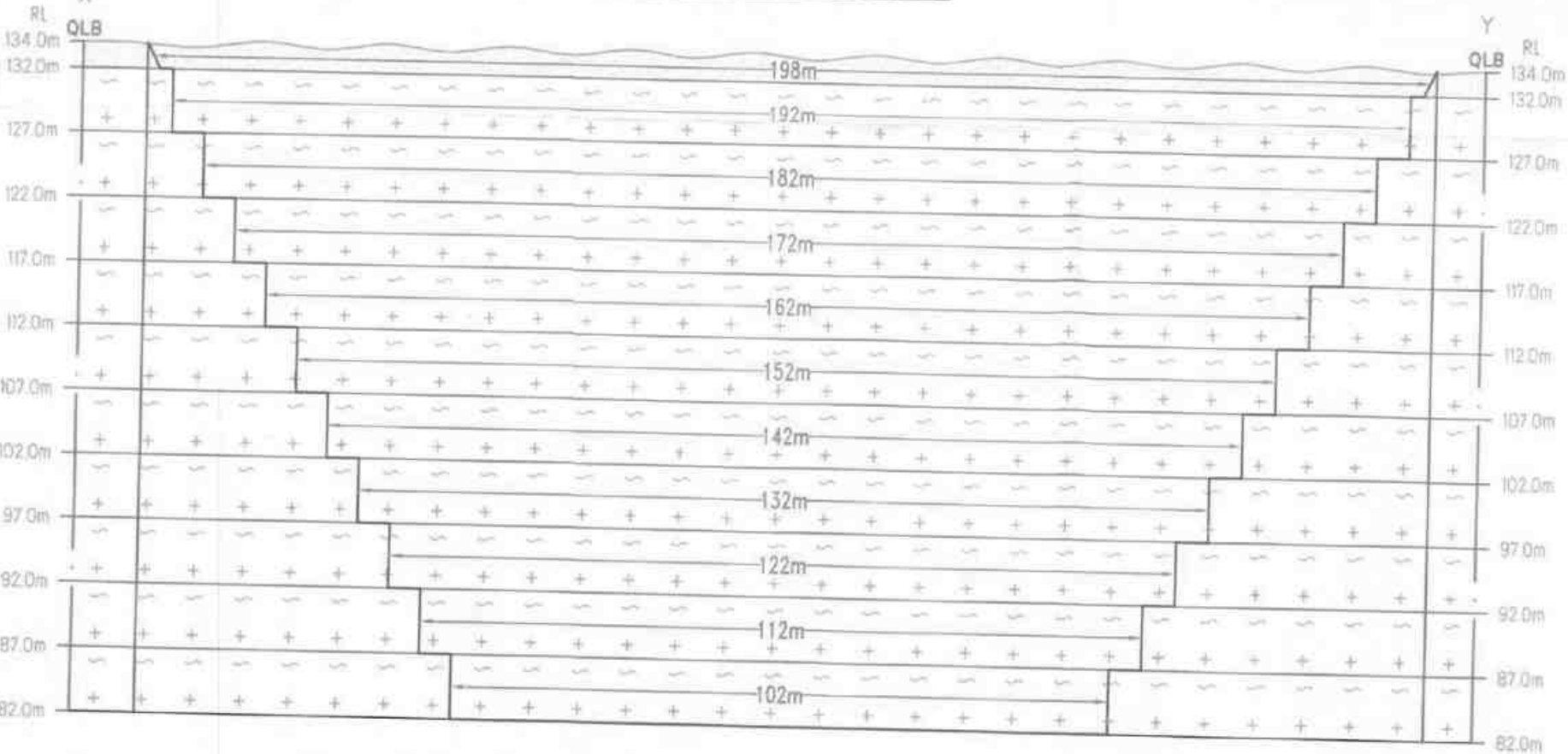
THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

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



Boundary co-ordinate		
LABEL	LATITUDE	LONGITUDE
1	11° 05' 49.38"N	78° 51' 25.93"E
2	11° 05' 51.99"N	78° 51' 25.98"E
3	11° 05' 53.59"N	78° 51' 26.43"E
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10	11° 05' 48.98"N	78° 51' 27.67"E
11	11° 05' 49.82"N	78° 51' 27.68"E
Wgs 84 Datum		

SECTION ALONG X-Y



SECTION ALONG A-B

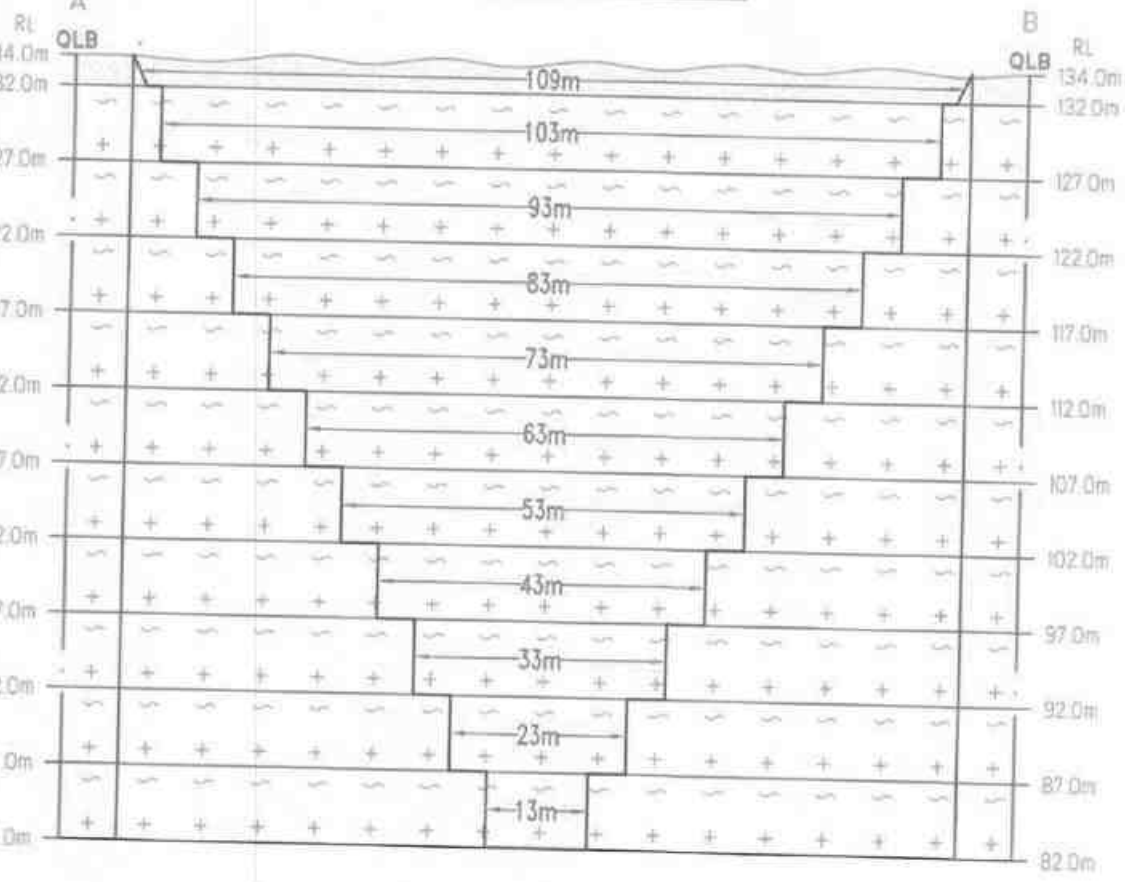


PLATE NO-IV
DATE OF SURVEY : 11.04.2025

APPLICANT:
THIRU.D.BALAJI,
S/O.S.DEVENDIRAN
NO. 25, IAS NAGAR,
THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT-620 001

QUARRY LEASE APPLIED AREA:
S.F.NO's : 124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 124/4B
EXTENT : 2.75.00 Ha,
VILLAGE : PADALUR (EAST),
TALUK : ALATHUR,
DISTRICT : PERAMBALUR.

INDEX

Q.LEASE APPLIED BOUNDARY

7.5m&10m SAFETY DISTANCE

TEMPORARY BENCH MARK

APPROACH ROAD

CONTOUR

SCRUB

GRAVEL

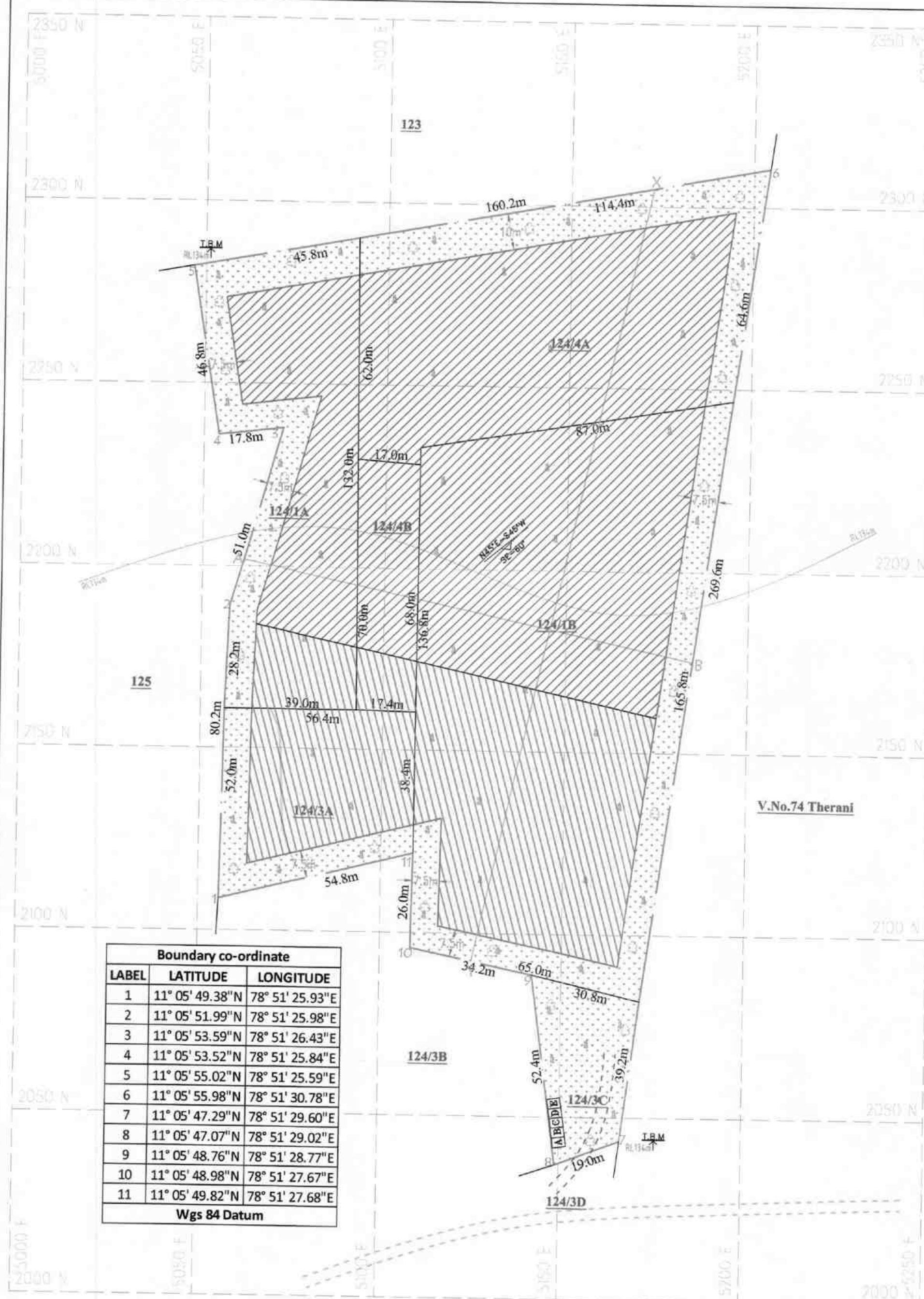
ROUGH STONE

STRIKE&DIP

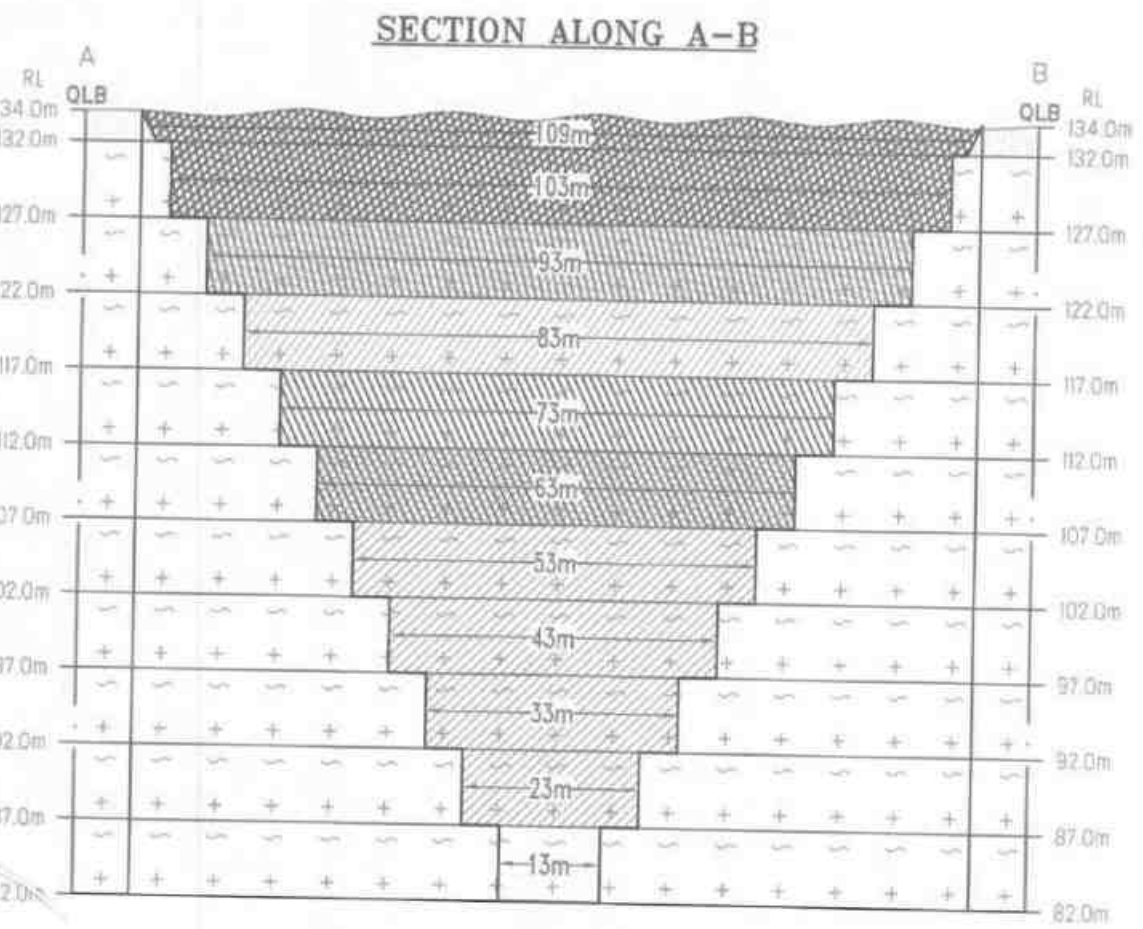
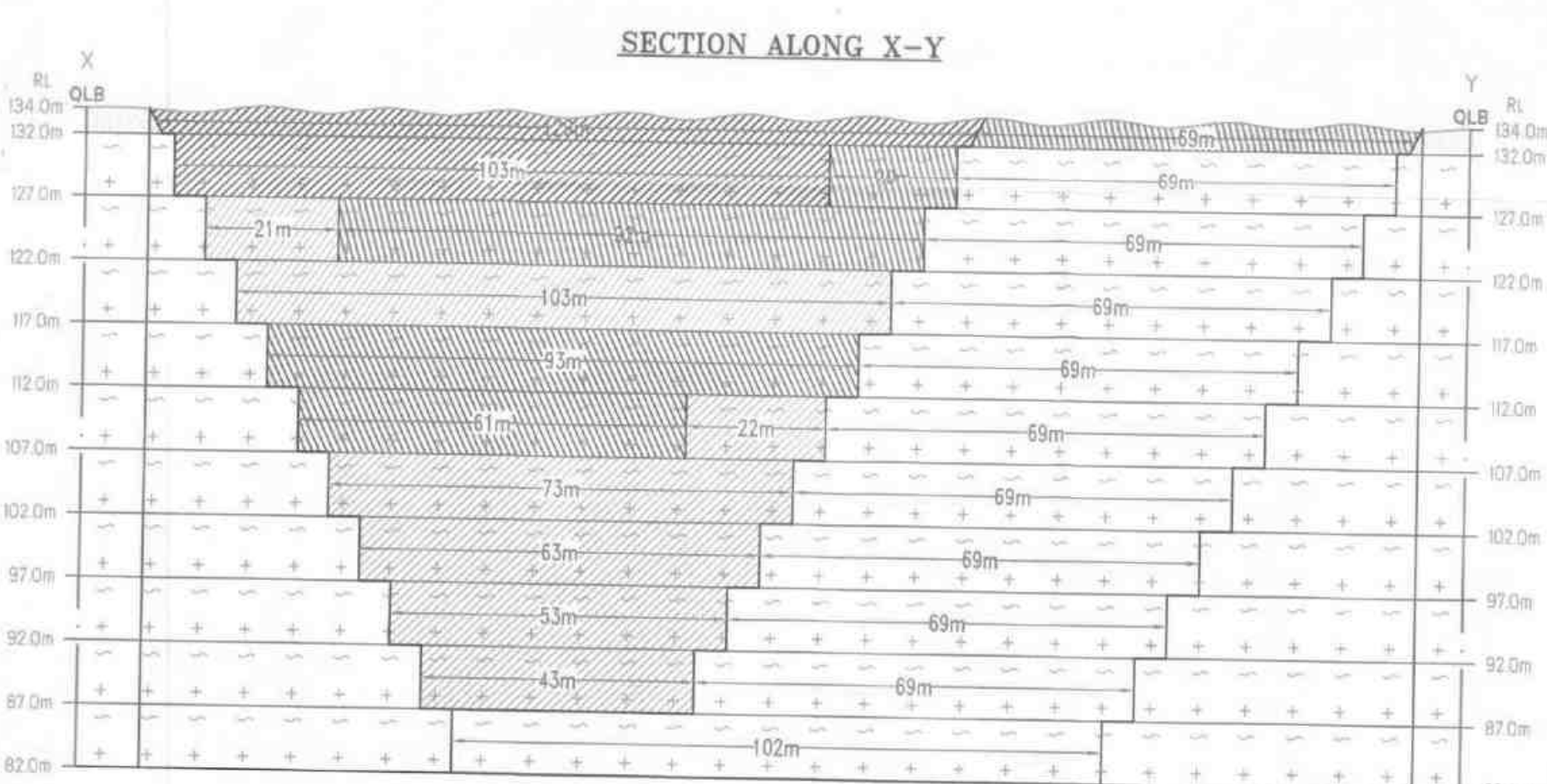
**MINEABLE
PLAN & SECTION**
SCALE 1 : 1000
SECTION HOR 1 : 1000, VER 1: 500

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



Boundary co-ordinate		
LABEL	LATITUDE	LONGITUDE
1	11° 05' 49.38"N	78° 51' 25.93"E
2	11° 05' 51.99"N	78° 51' 25.98"E
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11	11° 05' 49.82"N	78° 51' 27.68"E
Wgs 84 Datum		



PROPOSED SITE SERVICES
A - OFFICE
B - STORE ROOM
C - FIRST AID ROOM
D - REST SHELTER
E - TOILET
M - MAGAZINE

- Proposed area to be Planted
- 1st yr Proposed area to be Quarried
 - 2nd yr Proposed area to be Quarried
 - 3rd yr Proposed area to be Quarried
 - 4th yr Proposed area to be Quarried
 - 5th yr Proposed area to be Quarried

PLATE NO-V
DATE OF SURVEY : 11.04.2022

APPLICANT:
THIRU.D.BALAJI,
S/O.S.DEVENDIRAN
NO. 25, IAS NAGAR,
THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT-620 006

QUARRY LEASE APPLIED AREA:
S.F.NO's : 124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 124/4B,
EXTENT : 2.75.00 Ha,
VILLAGE : PADALUR (EAST),
TALUK : ALATHUR,
DISTRICT : PERAMBALUR.

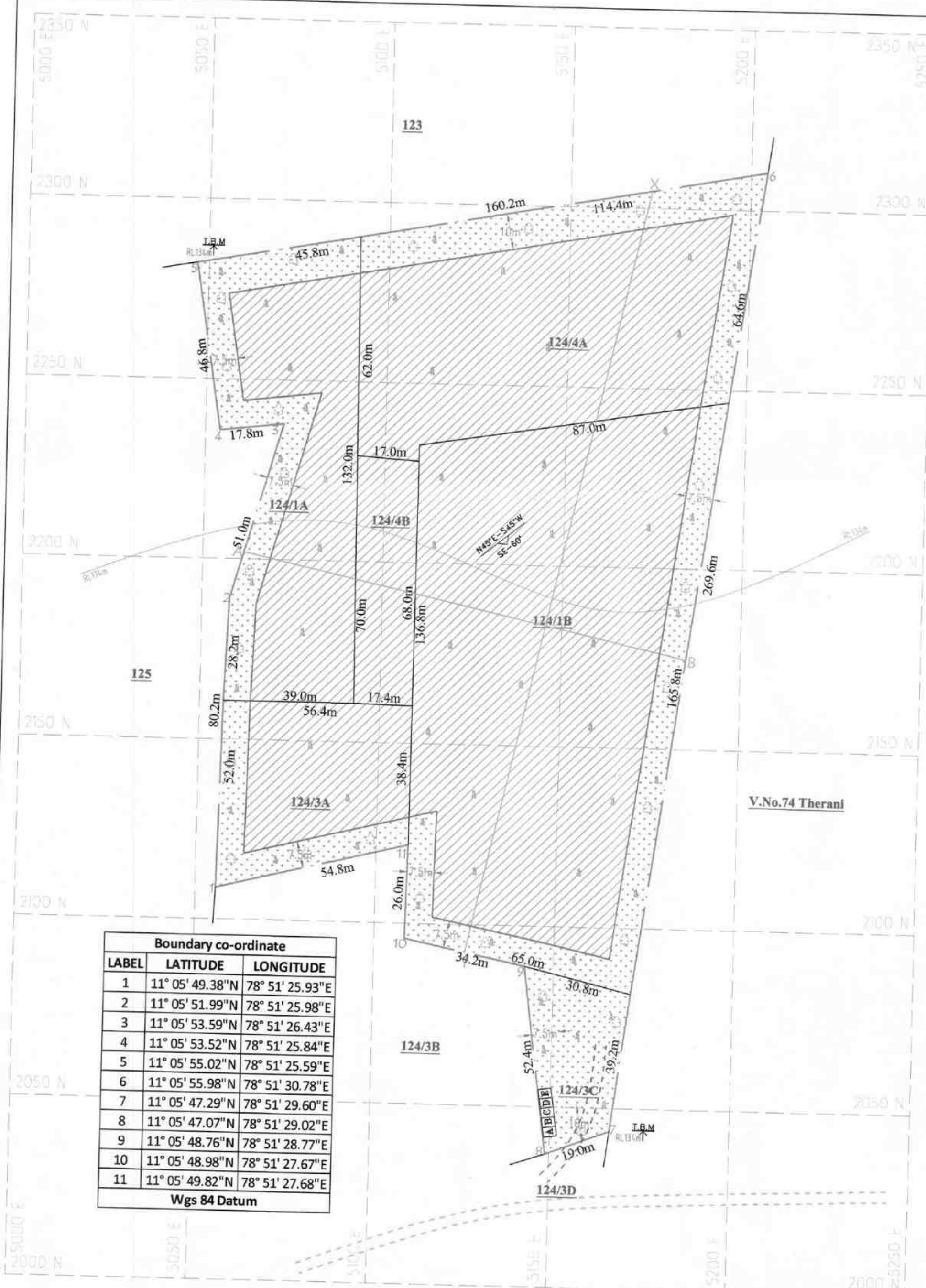
INDEX

- Q.LEASE APPLIED BOUNDARY
- 7.5m&10m SAFETY DISTANCE
- TEMPORARY BENCH MARK
- APPROACH ROAD
- CONTOUR
- SCRUB
- GRAVEL
- ROUGH STONE
- STRIKE&DIP

YEARWISE DEVELOPMENT & PRODUCTION PLAN & SECTION
SCALE 1 : 1000
SECTION 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

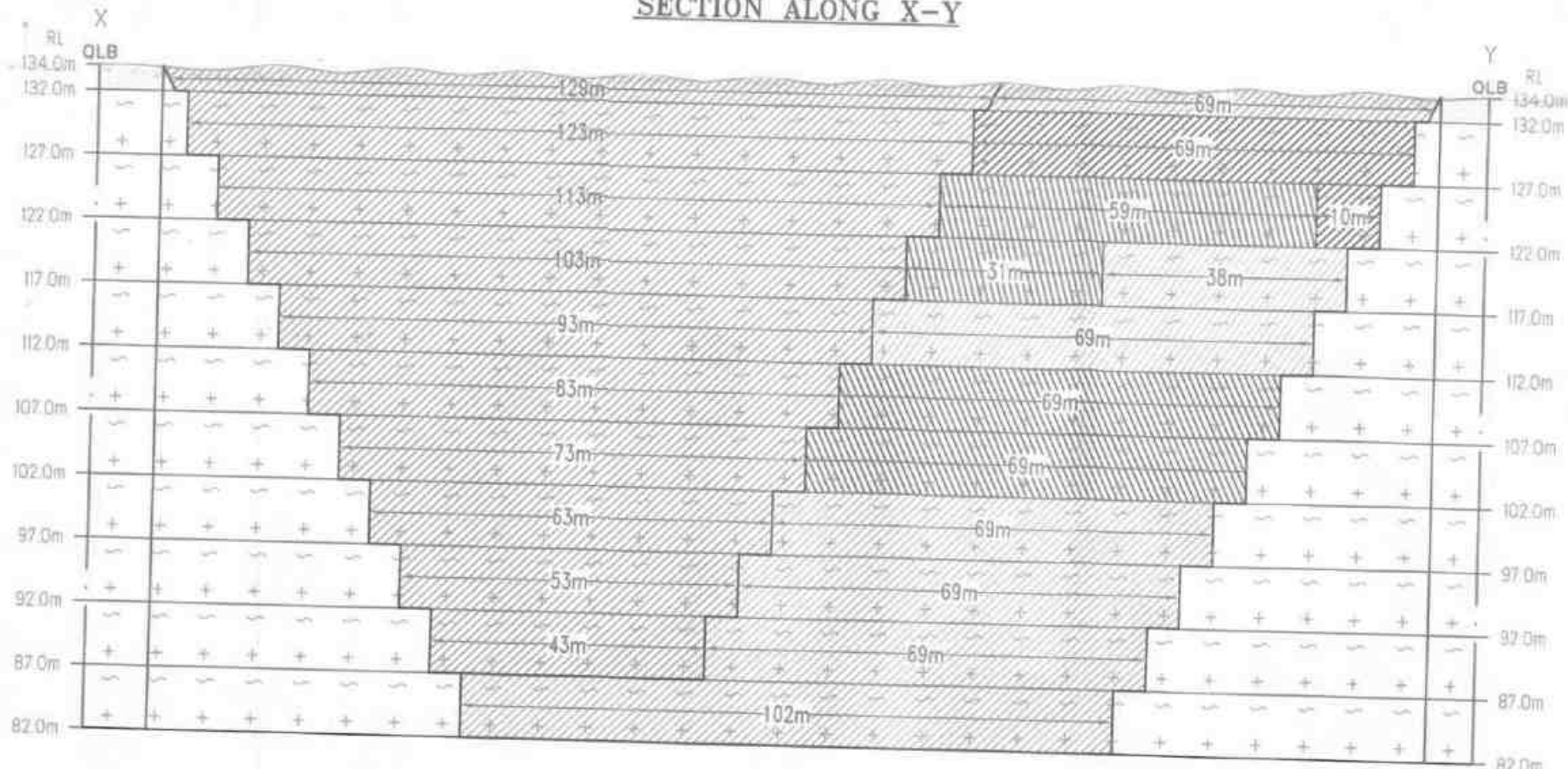
C.NATARAJAN.M.Sc,M.Phil.,
QUALIFIED PERSON



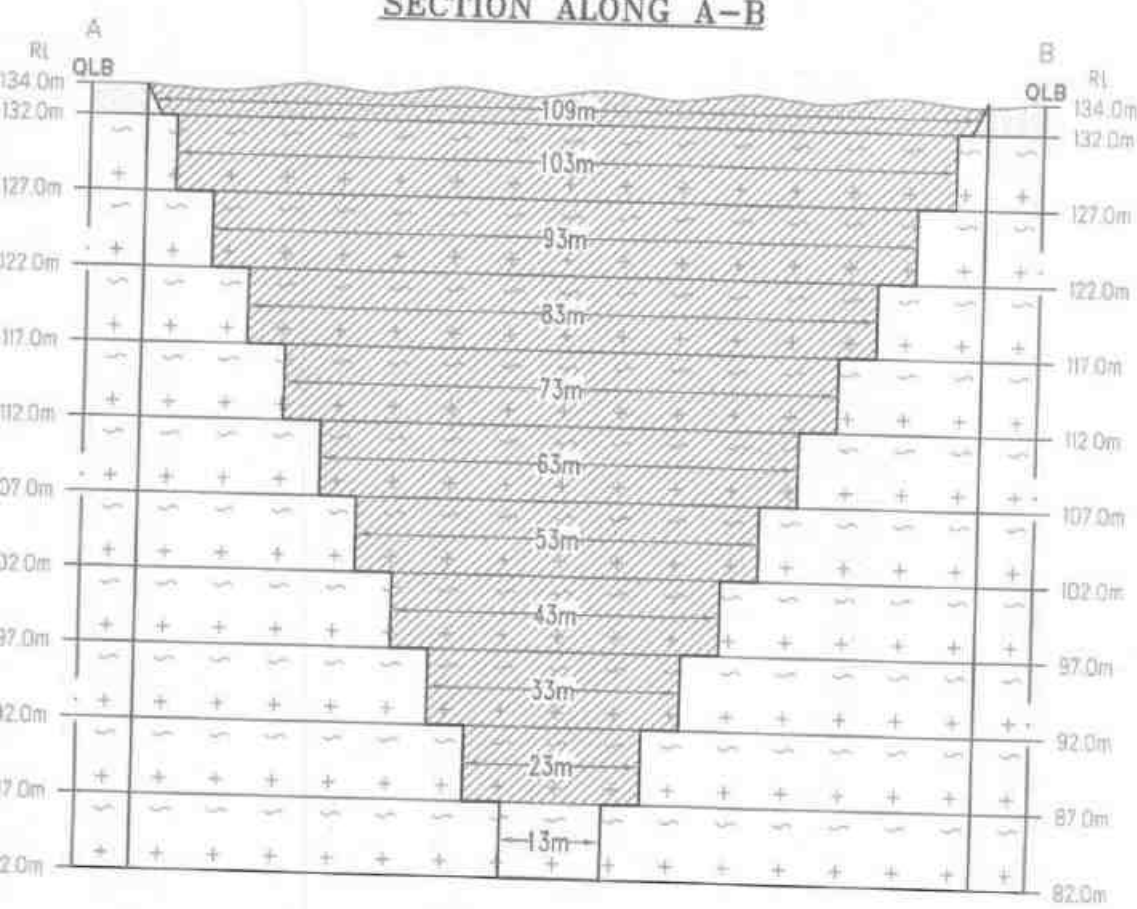
Boundary co-ordinate		
LABEL	LATITUDE	LONGITUDE
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10	11° 05' 48.98"N	78° 51' 27.67"E
11	11° 05' 49.82"N	78° 51' 27.68"E

Wgs 84 Datum

SECTION ALONG X-Y



SECTION ALONG A-B



PROPOSED SITE SERVICES
A - OFFICE
B - STORE ROOM
C - FIRST AID ROOM
D - REST SHELTER
E - TOILET

Proposed area to be Planted

1st Five Year Proposed area to be Quarried

6th yr Proposed area to be Quarried
7th yr Proposed area to be Quarried
8th yr Proposed area to be Quarried
9th yr Proposed area to be Quarried
10th yr Proposed area to be Quarried

PLATE NO-V-A

DATE OF SURVEY : 11.04.2025

APPLICANT:

THIRU.D.BALAJI,
S/O.S.DEVENDIRAN
NO. 25, IAS NAGAR,
THIRUVURUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT-620 015.



QUARRY LEASE APPLIED AREA:

S.F.NO's : 124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 124/4B.
EXTENT : 2.75.00 Ha.
VILLAGE : PADALUR (EAST).
TALUK : ALATHUR.
DISTRICT : PERAMBALUR.

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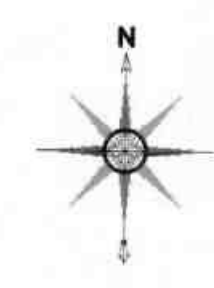
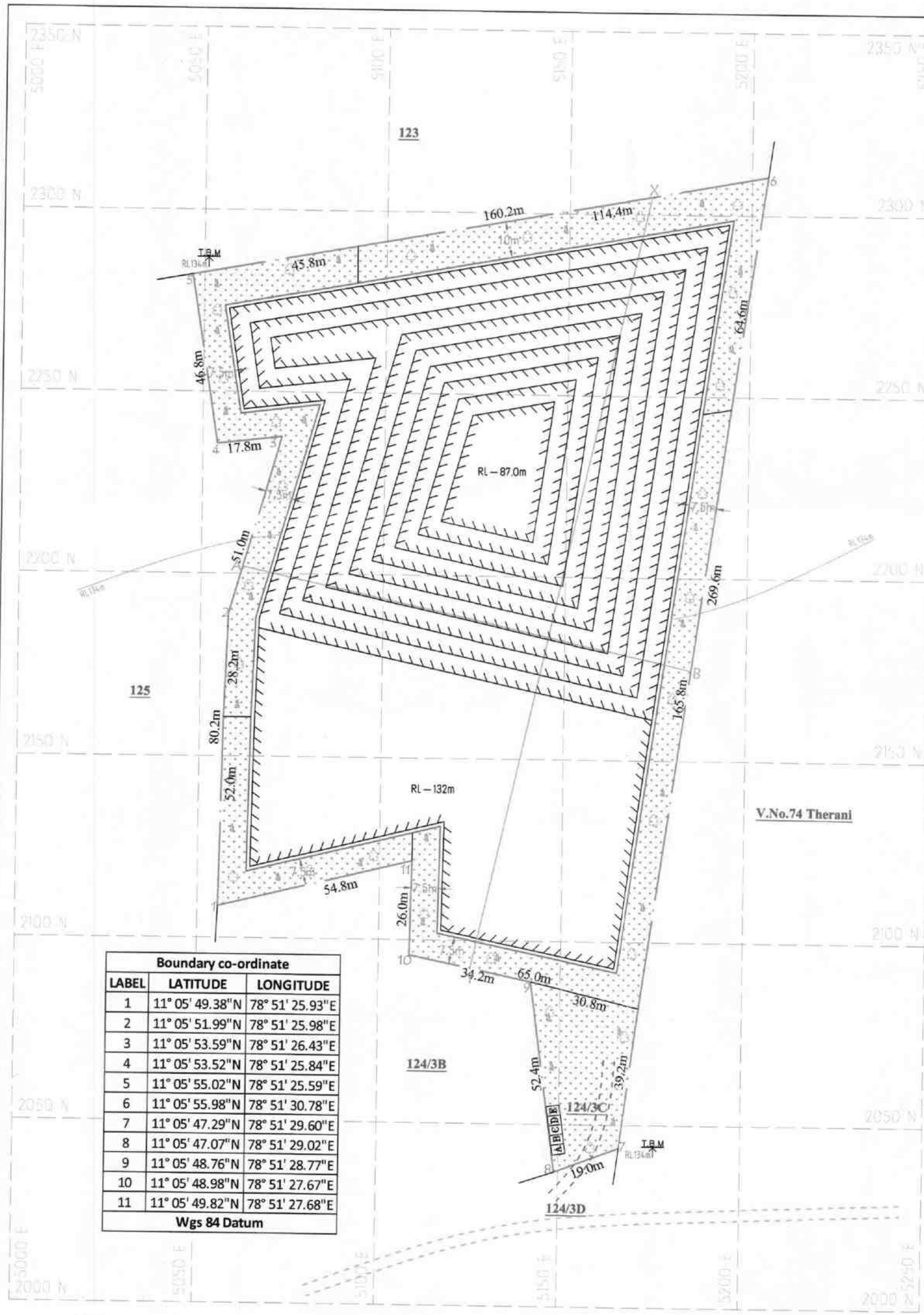
- Q.LEASE APPLIED BOUNDARY
- 7.5m&10m SAFETY DISTANCE
- TEMPORARY BENCH MARK
- APPROACH ROAD
- CONTOUR
- SCRUB
- GRAVEL
- ROUGH STONE
- STRIKE&DIP

SECOND FIVE YEARWISE DEVELOPMENT & PRODUCTION PLAN & SECTION
SCALE 1 : 1000
SECTION HOR 1 : 1000, VER 1: 500

PREPARED BY:

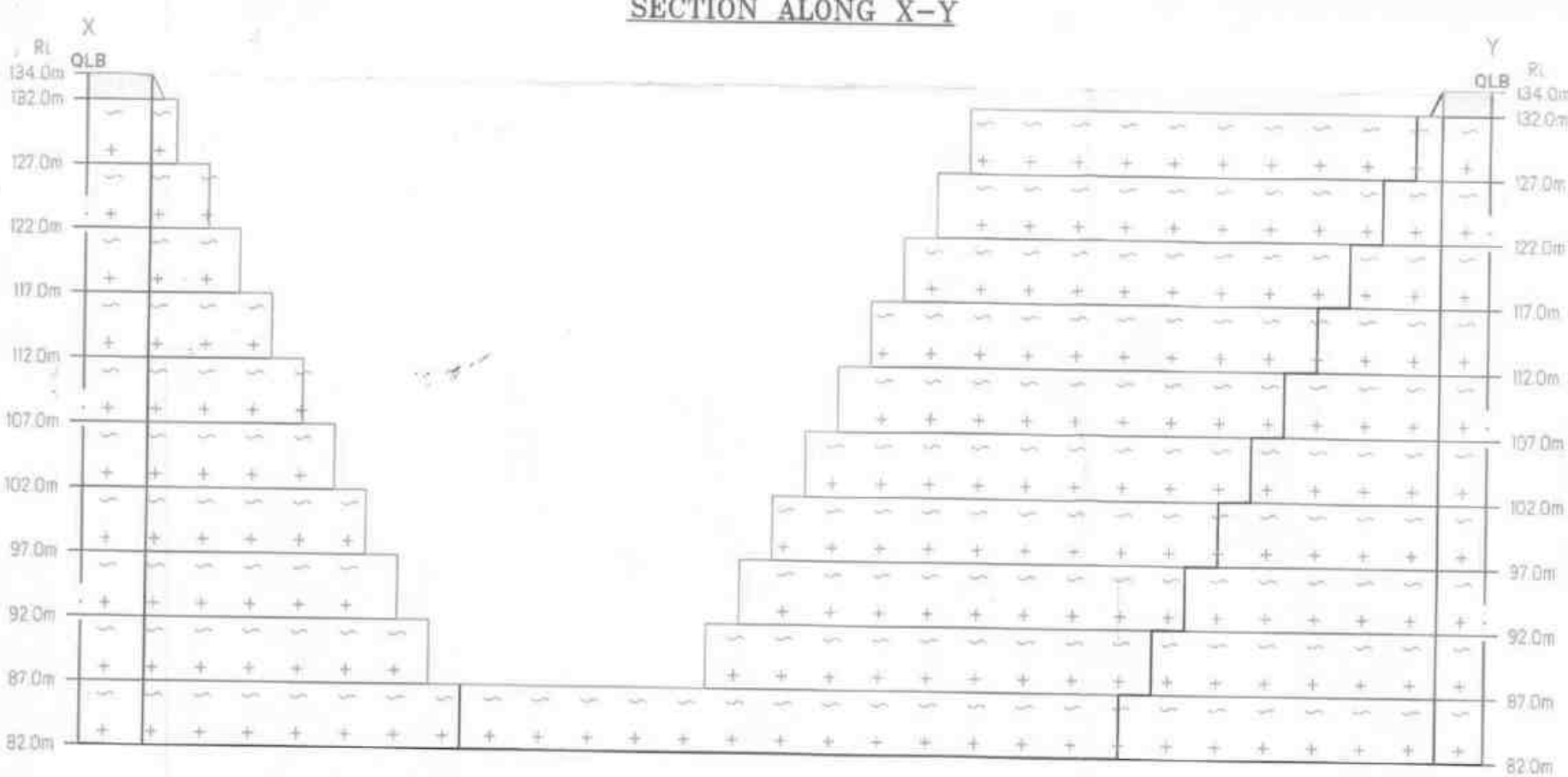
THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE BASED UPON THE LEASE MAP AUTHENTICATED BY STATE GOVERNMENT

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

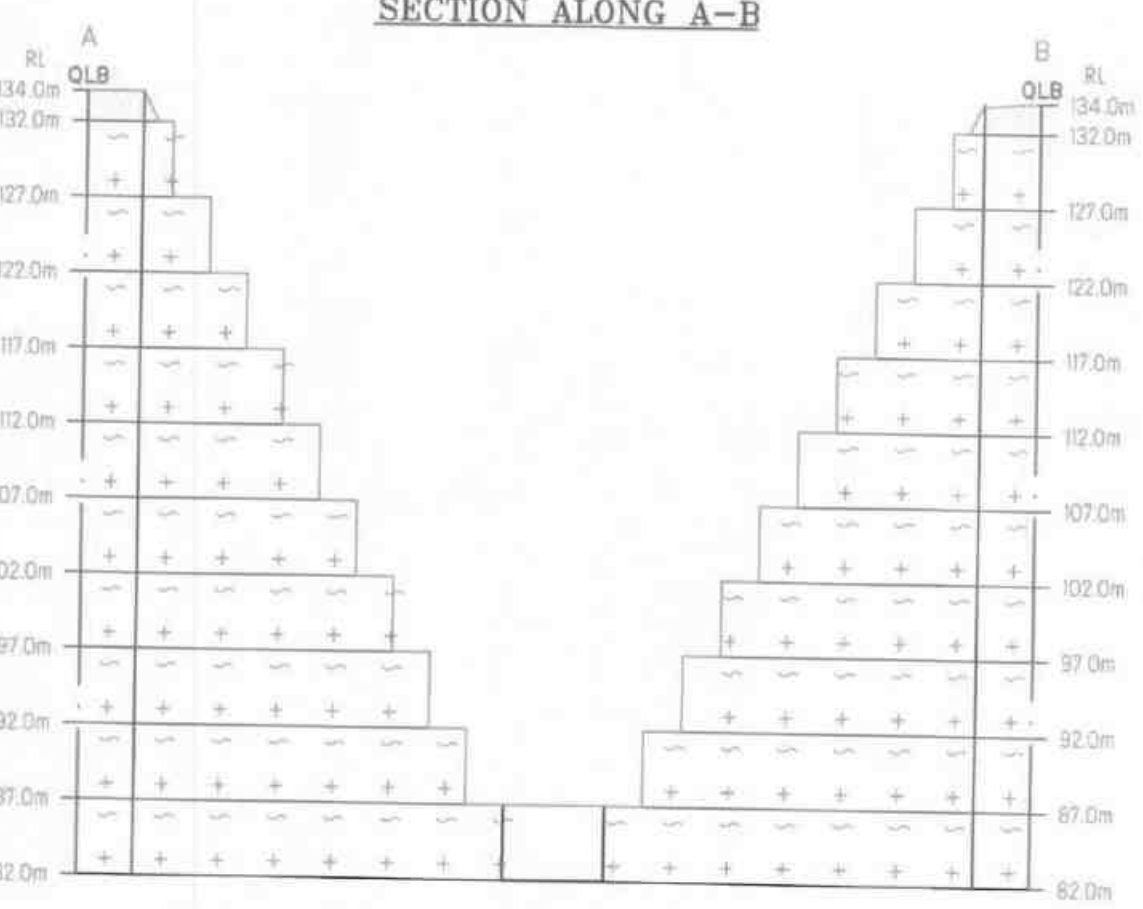


Boundary co-ordinate		
LABEL	LATITUDE	LONGITUDE
1	11° 05' 49.38"N	78° 51' 25.93"E
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10	11° 05' 48.98"N	78° 51' 27.67"E
11	11° 05' 49.82"N	78° 51' 27.68"E
Wgs 84 Datum		

SECTION ALONG X-Y



SECTION ALONG A-B



PROPOSED SITE SERVICES
A - OFFICE
B - STORE ROOM
C - FIRST AID ROOM
D - REST SHELTER
E - TOILET

PRESENT & POST LAND USE PATTERN		
DESCRIPTION	PRESENT AREA (Ha)	AREA AT THE END OF THIS QUARRYING PERIOD (Ha)
AREA UNDER QUARRYING	NII	2.15.8
INFRASTRUCTURE	NII	0.01.0
ROADS	NII	0.01.0
GREEN BELT	NII	0.57.2
UN-UTILIZED AREA	2.75.0	NII
GRAND TOTAL	2.75.0	2.75.0

ULTIMATE PIT DIMENSION OF END OF MINING PLAN PERIOD
L198m(MAX)XW109m(Avg)X47m(d)(Max)

PLATE NO-VI
DATE OF SURVEY :11.04.2025

APPLICANT:
THIRU.D.BALAJI,
S/O.S.DEVENDIRAN
NO. 25, IAS NAGAR,
THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT-600 013.

QUARRY LEASE APPLIED AREA:
S.F.NO's :124/1A,124/1B,124/3A,124/3C,124/4A&124/4B,
EXTENT : 2.75.00 Ha,
VILLAGE : PADALUR (EAST),
TALUK : ALATHUR,
DISTRICT : PERAMBALUR.

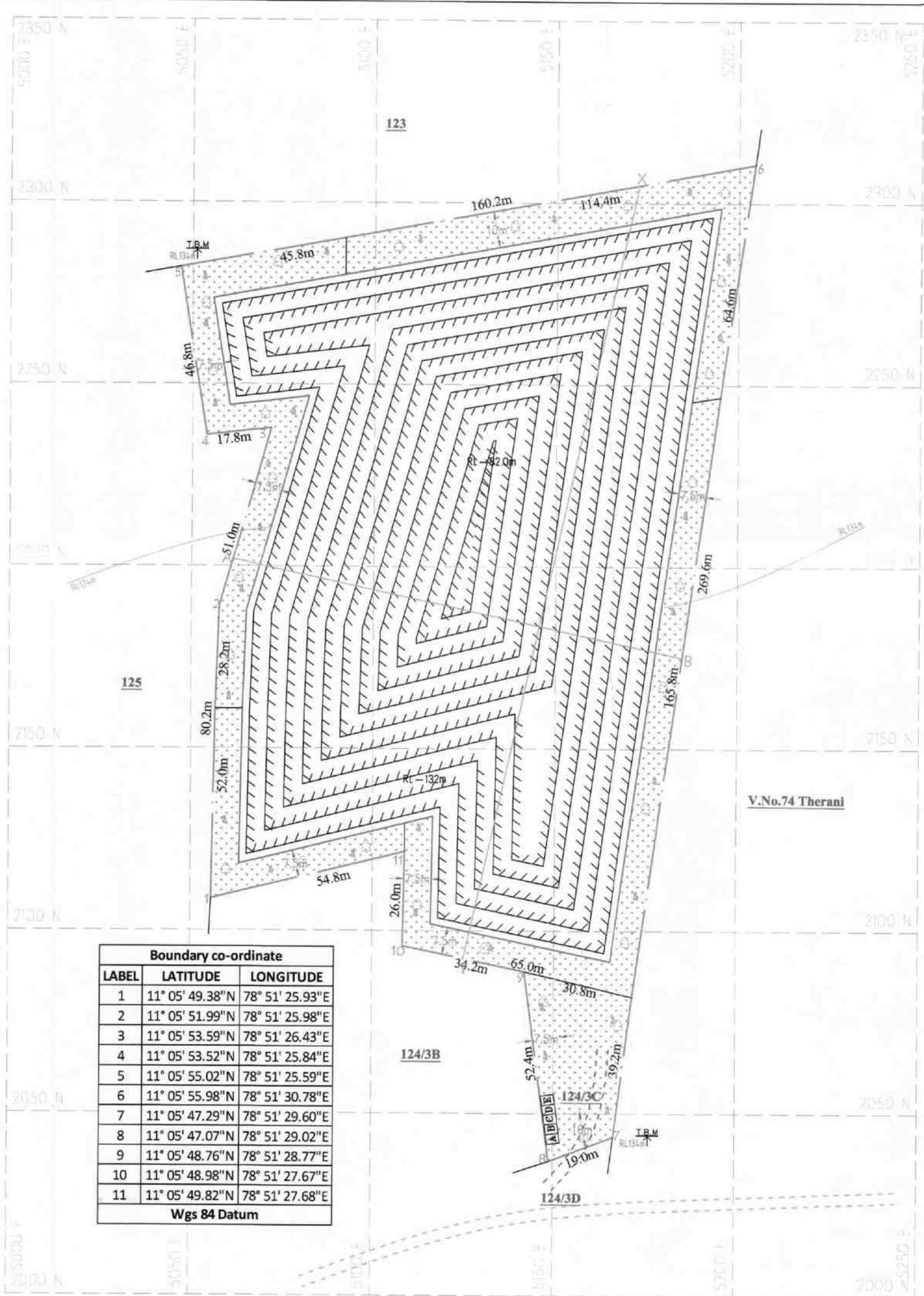
INDEX

Q.LEASE APPLIED BOUNDARY	
7.5m&10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
CONTOUR	
SCRUB	
GRAVEL	
ROUGH STONE	
STRIKE&DIP	
PROPOSED QUARRY PIT	

PROGRESSIVE QUARRY CLOSER
PLAN & SECTION
SCALE 1 : 1000
SECTION HOR 1: 1000, VER 1: 500

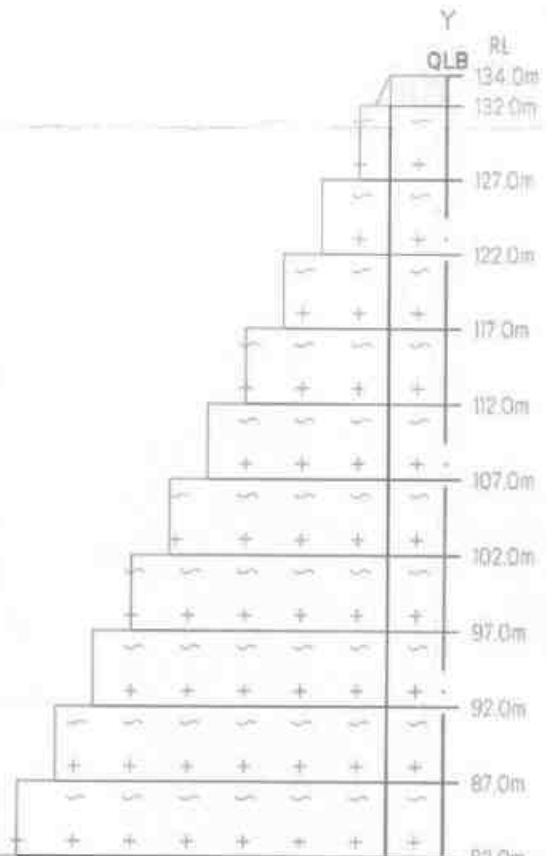
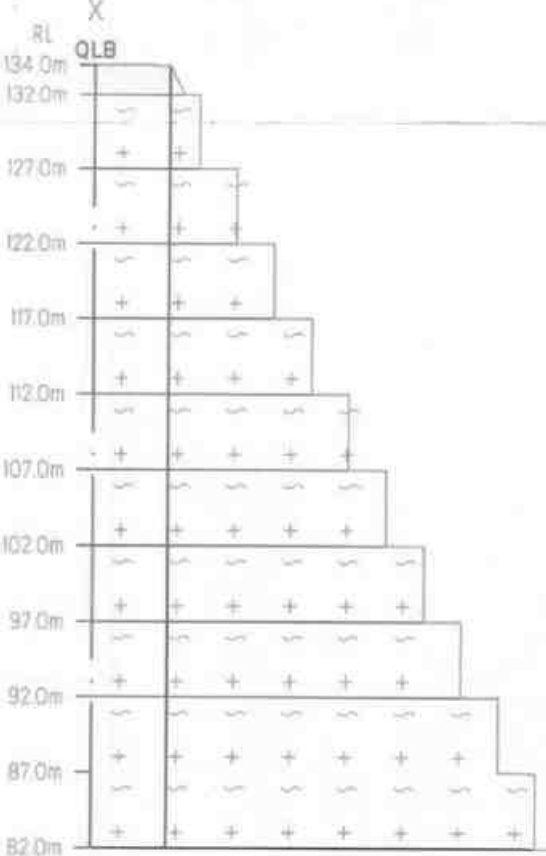
PREPARED BY:
THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

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

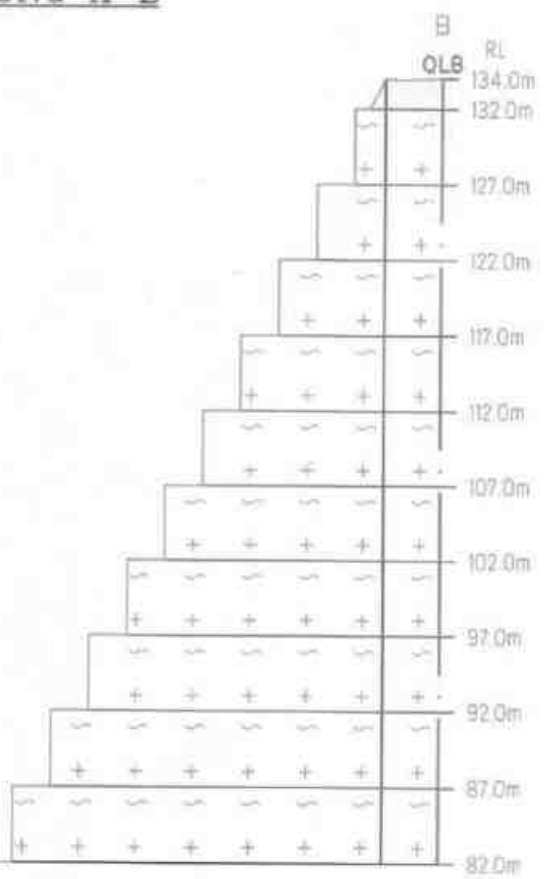
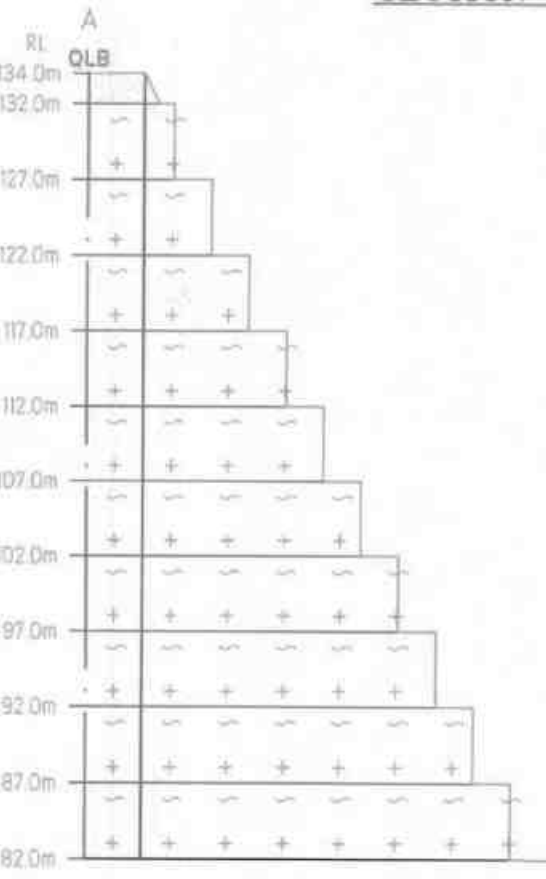


Boundary co-ordinate		
LABEL	LATITUDE	LONGITUDE
1	11° 05' 49.38"N	78° 51' 25.93"E
2	11° 05' 51.99"N	78° 51' 25.98"E
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4	11° 05' 53.52"N	78° 51' 25.84"E
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6	11° 05' 55.98"N	78° 51' 30.78"E
7	11° 05' 47.29"N	78° 51' 29.60"E
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9	11° 05' 48.76"N	78° 51' 28.77"E
10	11° 05' 48.98"N	78° 51' 27.67"E
11	11° 05' 49.82"N	78° 51' 27.68"E
Wgs 84 Datum		

SECTION ALONG X-Y



SECTION ALONG A-B



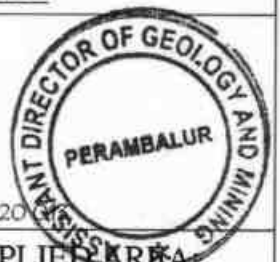
- PROPOSED SITE SERVICES**
- A - OFFICE
 - B - STORE ROOM
 - C - FIRST AID ROOM
 - D - REST SHELTER
 - E - TOILET

Proposed area to be Planted

ULTIMATE PIT DIMENSION OF END OF THE QUARRY LEASE PERIOD
L198m(MAX)XW109m(Avg)X52m(d)(Max)

PLATE NO-VII
DATE OF SURVEY :11.04.2025

APPLICANT:
THIRU.D.BALAJI,
S/O.S.DEVENDIRAN
NO. 25,IAS NAGAR,
THIRUVERUMBUR TALUK,
TIRUCHIRAPALLI DISTRICT-620 002



QUARRY LEASE APPLIED AREA:
S.F.NO's :124/1A,124/1B,124/3A,124/3C,124/4A&124/4B,
EXTENT : 2.75.00 Ha,
VILLAGE : PADALUR (EAST),
TALUK : ALATHUR,
DISTRICT : PERAMBALUR.

INDEX

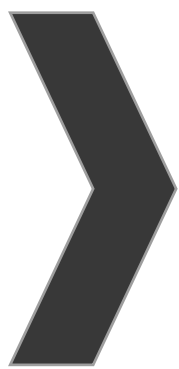
- Q.LEASE APPLIED BOUNDARY
- 7.5m&10m SAFETY DISTANCE
- TEMPORARY BENCH MARK
- APPROACH ROAD
- CONTOUR
- SCRUB
- GRAVEL
- ROUGH STONE
- STRIKE&DIP
- PROPOSED QUARRY PIT

CONCEPTUAL PLAN & SECTION

SCALE 1 : 1000
SECTION 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

Thiru D.Bernard, M.Sc.,
Assistant Director,
Dept of Geology and Mining,
Perambalur.

To

Thiru.D.Balaji,
S/o.S.Devendiran,
No. 25, I A S Nagar,
Thiruverumbur Taluk,
Tiruchirapalli District-620 013.

Rc.No.147/G&M/2024 **Dated: /4.05.2024**

Sir,

Sub: Mines and Minerals - Minor Mineral - Rough Stone & Gravel- Perambalur District - Alathur Taluk -Padalur (East) Village -S.F.Nos.124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 124/4B - OAE of 2.75.00 hectares of Patta land - Quarry Lease application preferred by Thiru.D.Balaji - Recommendations received - Precise Area communicated - Draft Mining Plan submitted for approval- Approved -Details of quarries situated within 500 mts radial distance requested - furnished - Reg.

- Ref:
1. Thiru.D.Balaji, S/o.S.Devendiran application, dated 11.11.2024.
 2. The Sub Collector, Perambalur letter Rc.No. A1/4199/2024dated: 24.02.2025.
 3. Inspection report of the Assistant Geologist, O/o.the Assistant Director of Geology and Mining, Perambalur dated: 10.03.2025.
 4. The Assistant Director, Geology and Mining, Peraambalur letter Rc.No.147/G&M/2024, dated 11.04.2025.
 5. Thiru.D.Balaji, S/o.S.Devendiran letter dated.15.04.2025.
 6. Thiru.D.Balaji, S/o.S.Devendiran letter dated.07.05.2025.

The applicant Thiru.D.Balaji, S/o.S.Devendiran in the reference 6th cited has requested to provide the details of quarries situated within 500 mts radius distance from the proposed lease area.

Hence the details of existing quarries situated within 500 mts radial distance from the subject area are furnished as follows,

1)Existing quarries:

Sl. No	Name of the Owner	Taluk / Village	S.F.Nos	Extent	Proc. No.	Lease Period
1	Thiru.D.Manjunath, S/o.Devendiran, No.25, I.A.S. Nagar, Thiruverumbur, Trichy District 620 013	Therani, Alathur Taluk	122/1 (Block-5)	1.00.0	Rc.No.149/G&M /2019 dated 17.08.2022	17.08.2022 to 16.08.2027
2	Tmt.P.Dhanalakshmi, W/o. G.R.perumal pillai,1/24, sivan kovil street, (kaliyamman kovil street), Therani (po), Alathur (Tk), Perambalur.	Padalur (E) Alathur	125/3A, 124/3B	1.00.0	Rc.No.88/G&M/ 2019 dated 29.04.2022	29.04.2022 to 28.04.2027

3	Thiru.S.Pitchai, S/o.Thiru. Subbaiya, No.3/173, West Street, Koothanur Village, 85, seedevimangalam, Alathur Taluk, Perambalur District-04	Therani, Alathur	122/1 (Block- 5A	1.00.0	R.C.No.150/G& M/2019 dated:10.12.202 0	18.12.2020 to 17.12.2025

2)Proposed quarries:

Sl. No	Name of the Owner	Taluk / Village	S.F.Nos.	Extent	Lease Period	Remarks
1	Thiru.D.Balaji, S/o.S.Devendiran, No. 25, I A S Nagar, Thiruverumbur Taluk, Tiruchirapalli District-620 013.	Alathur / Padalur (East)	124/1A, 124/1B, 124/3A, 124/3C, 124/4A & 4B	2.75.0	-	Presently proposed

3) Expired quarries

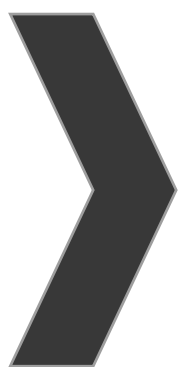
Sl. No	Name of the Owner	Taluk / Village	S.F.Nos.	Extent	Lease Period
1	Nil				

4) Abandoned quarries:

Sl. No	Name of the Owner	Taluk /Village	S.F.Nos.	Extent	Lease period
1	T.S.Chandramohan, S/o. Subramaniyan, 11, Raja Colony, Collector's Road, Tiruchirappalli.	Alathur / Padalur (E),	123 Part Block 2 ,	1.00.0	29.03.2006 to 28.03.2016
2	N.Mahamurthy, S/o.Thiru Narayanasamy, Door No.1/166, Middle Street, Kanakiliya Nallur Post, Lagudi Taluk, Trichy.	Padalur(East), Alathur	125/1,125/2A, 125/2B, 126/2,129/1B, 129/5A2,129/ 5B1	2.95.5	28.11.2018 to 27.11.2023
3	Thiru.P.S.Jayaraman S/o.Sivasamy, No.32, periyar nagar, 1 st street, Ariyalur District.	Padalur(East), Alathur	122/1,122/2B	2.10.5	28.11.2018 to 27.11.2023

[Signature]
Assistant Director,
Geology and Mining,
Perambalur.

[Signature]
14/5/25



ANNEXURE-5

Chuvashin bawis, Jathin Sur, 73 - Unlugin Basi
Bura nakhara Jafarani 2020s Daring:

1. 25. 09. 2023
 2. 26. 09. 2023
 3. 27. 09. 2023
 4. 28. 09. 2023
 5. 29. 09. 2023
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 7. 01. 10. 2023
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 38. 01. 11. 2023
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 63. 26. 11. 2023
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 65. 28. 11. 2023
 66. 29. 11. 2023
 67. 30. 11. 2023
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 71. 04. 12. 2023
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 186. 27. 03. 2024
 187. 28. 03. 2024
 188. 29. 03. 2024
 189. 30. 03. 2024
 190. 31. 03. 2024
 191. 01. 04. 2024

RFJ J.
21425

கிராம நிர்வாக அலுவலர்
73 - பாடாறுநீர் (கிழக்கு),
ஆலத்தூர் வட்டம்,
செரப்பள்ளி மாவட்டம்

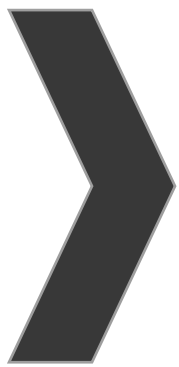
TOPOGRAPHICAL VIEW OF PADALUR (EAST) VILLAGE,
ROUGH STONE AND GRAVEL QUARRY



Name of the applicant	: Thiru.D.Balaji
S.F.Nos	: 124/1A, 124/1B, 124/3A, 124/3C, 124/4A AND 124/4B
Extent	: 2.75.0Ha
Name of the Village	: Padalur (East)
Taluk	: Alathur
District	: Perambalur

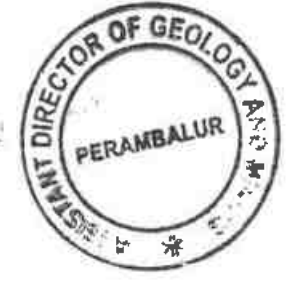
Place: Padalur East
Date: 21.04.2025


VAO SIVAN & SIBAL
கிராம நிர்வாக அலுவலர்
73 - பாலமுனி (கிழக்கு),
அலத்தூர் வட்டம்,
பெரம்பலூர் மாவட்டம்.



ANNEXURE-6

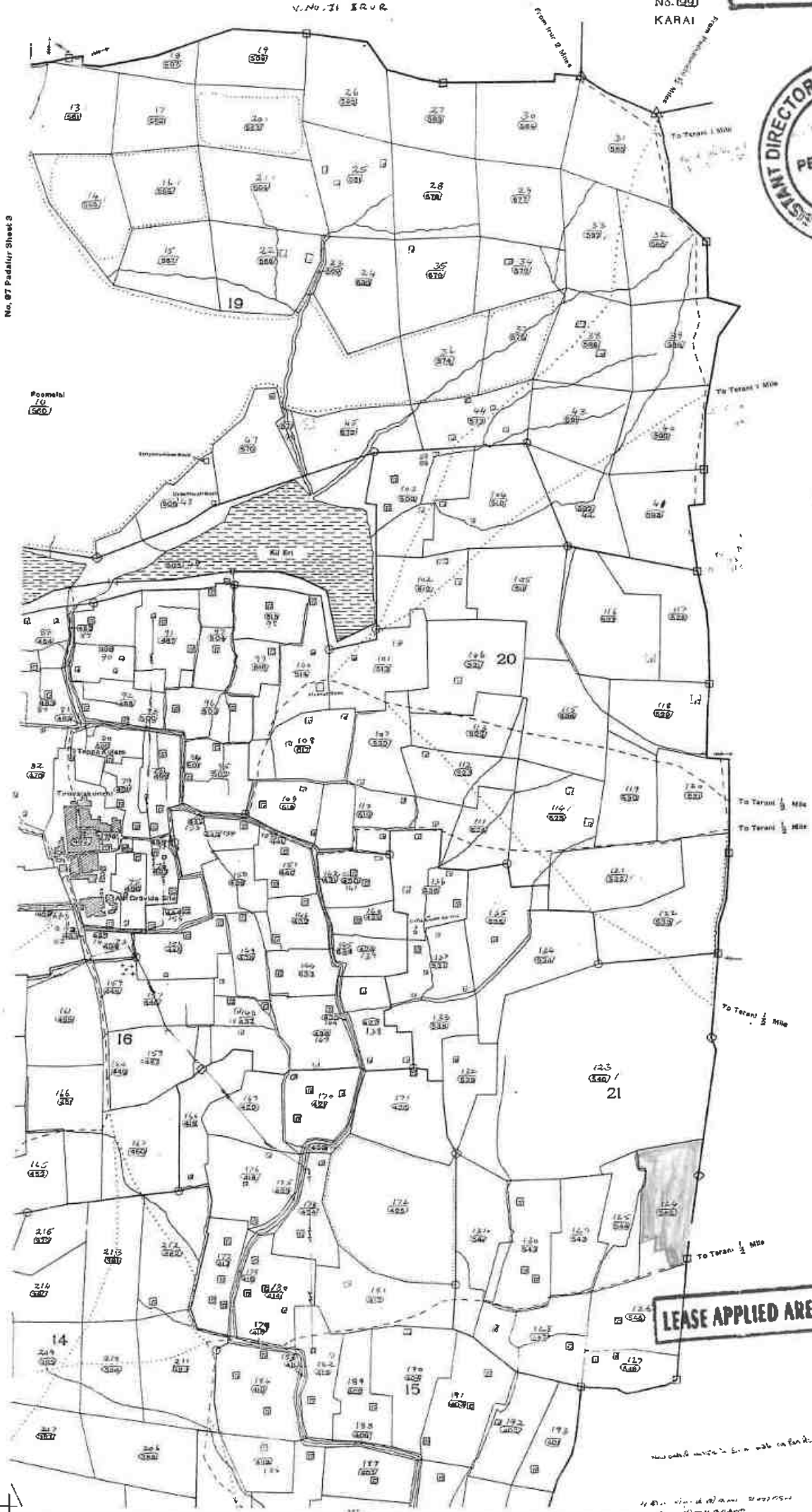
No. 69 KARAI



No. 87 Padalur Sheet 3

Poomalai 16

Perambalur Taluk



74
No. 69
TERANI

LEASE APPLIED AREA

Handwritten notes at the bottom right of the map.



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு



மாவட்டம் : பெரம்பலூர்

வட்டம் : ஆலத்தூர்

வருவாய் கிராமம் : பாடாலூர் (கி)

பட்டா எண் : 1603

உரிமையாளர்கள் பெயர்

1. சீனிவாசன்

மகன்

நேதாஜி

2. தேவேந்திரன்

மகன்

மஞ்சுநாத்

3. தேவேந்திரன்

மகன்

பாலாஜி

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
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		0 - 46.00	0.64					

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 16/07/972/01603/30200 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 19-12-2024 அன்று 06:03:47 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : பெரம்பலூர்

வட்டம் : ஆலத்தூர்

வருவாய் கிராமம் : பாடாலூர் (கி)

பட்டா எண் : 1572

உரிமையாளர்கள் பெயர்

1.	சீனிவாசன்	மகன்	நேதாஜி.
2.	தேவேந்திரன்	மகன்	மஞ்சநாத்
3.	தேவேந்திரன்	மகன்	பாலாஜி

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
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124	3C	0 - 10.00	0.14	--	--	--	--	2024/0103/16/227649- Digitally signed: Geetha P Zonal Deputy Tahsildar 16/03/2024 06:52:10:PM
124	4A	0 - 69.00	0.95	--	--	--	--	2024/0103/16/227649- Digitally signed: Geetha P Zonal Deputy Tahsildar 16/03/2024 06:52:10:PM
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		2 - 29.00	3.17					



1937 ஆம் பசனியில்

மாண்புமிகு மாண்புமிகு

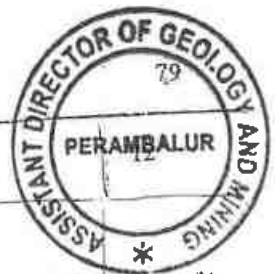
John

வயது

73

[illegible]

சென்னை 97/2 பாடாலூர் (கிழக்கு)



1	2	3	4	5	6	7	8	9	10	11
123	...	54C	அ	தி.ஏ.த	...	...	...	...	...	...
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	2	-2	அ	புற	...	...	...	...	0 09.5	...
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	3B	-3பா	ர	பு	...	8-3	14	1 38	0 70.5	0 98
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									3 72.5	5 02
125	1	544-1	ர	பு	...	8-3	14	1 38	0 30.0	0 41
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	5	-5	அ	புற	...	...	...	...	0 08.5	...
									67.5	6 07

தலைவர்
குத்து
தரிசு

வண்டிப்
பாதை,

469 செ.பொம்மக்
கவுண்டர்.

207 வெ.சிங்கன்.

345 கெ.துரைச்சாமி
கவுண்டர்.

469 செ.பொம்மக்
கவுண்டர்.

712 கெ.துரை
சாமி(1),
செ.பொம்மக்
கவுண்டர்(2).

344 கெ.துரைச்சாமி
ரெட்டி.

207 வெ.சிங்கன்.

151 ம.கோவிந்தன்
கவுண்டர்.

611 வெ.நெடுங்க
சாமி.

207 வெ.சிங்கன்.

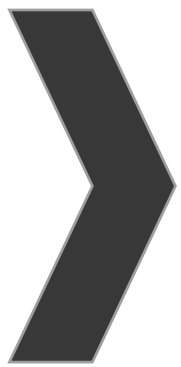
345 கெ.துரைச்சாமி
கவுண்டர்.

345 கெ.துரைச்சாமி
கவுண்டர்.

909 செ.மருத
முத்து(1),
செ.கோவிந்
தன்(2).

வண்டிப்
பாதை.

சிறுமநிலவாக அலுவலர்
73 - பாடாலூர் (கிழக்கு)
அலுவலர் வட்டம்
பெரும்பாளையம்



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/25/1537	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1537	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	µg/m ³	67.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	32.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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Please Contact:

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TEST REPORT

Report No.	SARL/25/1538	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1538	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	µg/m ³	53.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1539	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1539	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	µg/m ³	70.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	33.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1540	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

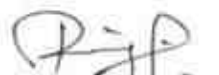
Sample Location	A2-Otathur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1540	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	µg/m ³	50.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1541	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1541	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	µg/m ³	48.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1542	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

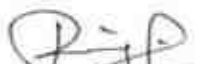
Sample Location	A4-Padalur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1542	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		

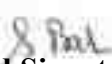
S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1543	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

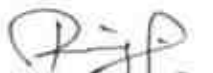
Sample Location	A3-Nedungur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1543	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	µg/m ³	49.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1544	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1544	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	µg/m ³	54.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1545	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1545	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	µg/m ³	43.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1546	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1546	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	µg/m ³	47.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	6.0	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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1547	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1547	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	µg/m ³	42.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1548	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

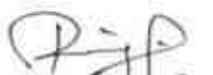
Sample Location	A5-Thiruvankurichi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1548	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	µg/m ³	46.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1549	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

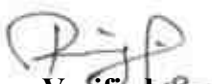
Sample Location	A6-Therani village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1549	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	µg/m ³	50.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1550	Report Date.	17.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1550	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	µg/m ³	44.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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TEST REPORT

Report No.	SARL/25/1565	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1565	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	µg/m ³	41.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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TEST REPORT

Report No.	SARL/25/1566	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1566	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	µg/m ³	52.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1567	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1567	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	µg/m ³	46.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1568	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1568	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	µg/m ³	44.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1569	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1569	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	µg/m ³	48.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1570	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1570	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	µg/m ³	44.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1571	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

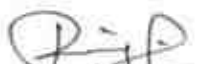
Sample Location	A3-Nedungur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1571	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	µg/m ³	45.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1572	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1572	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	µg/m ³	55.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1573	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1573	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	µg/m ³	49.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	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/25/1574	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

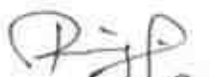
Sample Location	A4-Padalur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1574	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	µg/m ³	52.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1575	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1575	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	µg/m ³	65.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1576	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1576	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	µg/m ³	57.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/25/1577	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

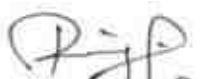
Sample Location	A1-Within Mine Lease area
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1577	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	µg/m ³	52.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1578	Report Date.	24.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1578	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	µg/m ³	52.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1593	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1593	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	µg/m ³	59.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1594	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1594	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	µg/m ³	58.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1595	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1595	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	µg/m ³	64.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1596	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

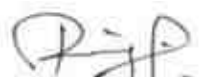
Sample Location	A2-Otathur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1596	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	µg/m ³	54.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1597	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1597	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	µg/m ³	46.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1598	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

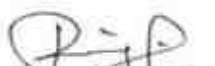
Sample Location	A4-Padalur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1598	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	µg/m ³	48.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1599	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

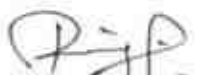
Sample Location	A3-Nedungur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1599	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	µg/m ³	45.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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Please Contact:

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TEST REPORT

Report No.	SARL/25/1600	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1600	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	µg/m ³	52.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1601	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1601	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	µg/m ³	48.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1602	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1602	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	µg/m ³	50.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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Report No.	SARL/25/1603	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1603	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	µg/m ³	42.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1604	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1604	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	µg/m ³	42.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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TEST REPORT

Report No.	SARL/25/1605	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1605	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	µg/m ³	46.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	5.8	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

For Shrient Analytical and Research Labs Pvt. Ltd


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END OF THE REPORT


S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1606	Report Date.	31.03.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1606	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	µg/m ³	44.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1621	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1621	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	µg/m ³	40.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1622	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1622	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	µg/m ³	44.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	5.4	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

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/25/1623	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1623	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	µg/m ³	51.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1624	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

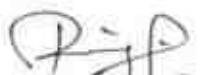
Sample Location	A5-Thiruvankurichi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1624	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	µg/m ³	43.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1625	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1625	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	µg/m ³	48.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	6.3	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/25/1626	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1626	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	µg/m ³	48.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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TEST REPORT

Report No.	SARL/25/1627	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1627	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	µg/m ³	48.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1628	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1628	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	µg/m ³	47.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



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Authorized Signatory
S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1629	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1629	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	µg/m ³	46.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1630	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1630	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	µg/m ³	50.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

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TEST REPORT

Report No.	SARL/25/1631	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1631	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	µg/m ³	72.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	35.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1632	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1632	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	µg/m ³	49.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
Asst. Technical Manager

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/25/1633	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1633	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	µg/m ³	68.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	32.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1634	Report Date.	07.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1634	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	µg/m ³	46.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1649	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1649	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	µg/m ³	55.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1650	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1650	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	µg/m ³	57.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1651	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1651	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	µg/m ³	60.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1652	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

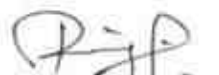
Sample Location	A2-Otathur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1652	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	µg/m ³	55.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1653	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1653	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	µg/m ³	49.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1654	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

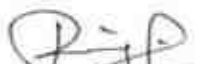
Sample Location	A4-Padalur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1654	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		

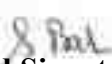
S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1655	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

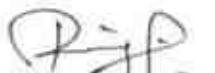
Sample Location	A3-Nedungur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1655	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	µg/m ³	46.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1656	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1656	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	µg/m ³	49.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1657	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1657	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	µg/m ³	42.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1658	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1658	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	µg/m ³	43.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	5.2	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/25/1659	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1659	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	µg/m ³	42.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1660	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvankurichi 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-1660	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	µg/m ³	47.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1661	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1661	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	µg/m ³	46.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1662	Report Date.	14.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1662	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	µg/m ³	45.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

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Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
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TEST REPORT

Report No.	SARL/25/1677	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1677	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	µg/m ³	40.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1678	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1678	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	µg/m ³	49.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1679	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1679	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	µg/m ³	48.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1680	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvankurichi 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-1680	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	µg/m ³	44.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1681	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1681	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	µg/m ³	45.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	5.6	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

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1682	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1682	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	µg/m ³	49.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.
CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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Report No.	SARL/25/1683	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1683	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	µg/m ³	45.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1684	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1684	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	µg/m ³	56.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
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Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1685	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

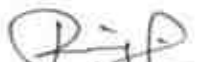
Sample Location	A3-Nedungur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1685	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	µg/m ³	47.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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Please Contact:

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TEST REPORT

Report No.	SARL/25/1686	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1686	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	µg/m ³	53.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1687	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1687	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	µg/m ³	53.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1688	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1688	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	µg/m ³	46.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1689	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1689	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	µg/m ³	59.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1690	Report Date.	21.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1690	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	µg/m ³	50.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1705	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1705	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	µg/m ³	66.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1706	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1706	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	µg/m ³	53.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1707	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1707	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	µg/m ³	71.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	34.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For 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/25/1708	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

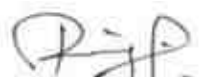
Sample Location	A2-Otathur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1708	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	µg/m ³	56.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1709	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1709	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	µg/m ³	50.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.0	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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1710	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

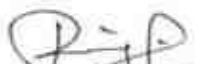
Sample Location	A4-Padalur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1710	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		

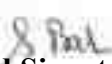
S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1711	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

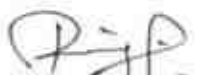
Sample Location	A3-Nedungur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1711	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	µg/m ³	46.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1712	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1712	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	µg/m ³	50.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1713	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1713	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	µg/m ³	48.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1714	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1714	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	µg/m ³	44.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	5.3	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

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/25/1715	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1715	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	µg/m ³	41.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1716	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvankurichi 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-1716	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	µg/m ³	46.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

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TEST REPORT

Report No.	SARL/25/1717	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1717	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	µg/m ³	46.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1718	Report Date.	28.04.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

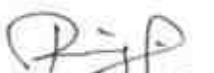
Sample Location	A7-Karai West Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1718	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	µg/m ³	45.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1733	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1733	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	µg/m ³	48.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1734	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1734	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	µg/m ³	47.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1735	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1735	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	µg/m ³	52.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1736	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvankurichi 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-1736	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	µg/m ³	44.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1737	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1737	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	µg/m ³	52.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1738	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1738	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	µg/m ³	49.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1739	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1739	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	µg/m ³	54.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.7	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

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/25/1740	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1740	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	µg/m ³	57.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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TEST REPORT

Report No.	SARL/25/1741	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1741	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	µg/m ³	53.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1742	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1742	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	µg/m ³	54.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1743	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

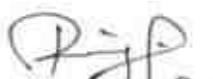
Sample Location	A1-Within Mine Lease area
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1743	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	µg/m ³	57.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1744	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1744	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	µg/m ³	49.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1745	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1745	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	µg/m ³	62.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1746	Report Date.	05.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1746	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	µg/m ³	47.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1761	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1761	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	µg/m ³	68.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	32.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.0	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

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/25/1762	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1762	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	µg/m ³	47.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/25/1763	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1763	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	µg/m ³	74.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	35.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1764	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

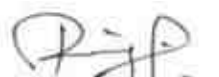
Sample Location	A2-Otathur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1764	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	µg/m ³	51.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1765	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1765	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	µg/m ³	48.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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
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TEST REPORT

Report No.	SARL/25/1766	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

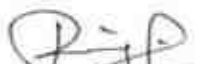
Sample Location	A4-Padalur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1766	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		

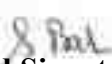
S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	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/25/1767	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

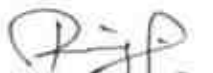
Sample Location	A3-Nedungur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1767	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	µg/m ³	49.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1768	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1768	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	µg/m ³	54.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1769	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1769	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	µg/m ³	50.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1770	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1770	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	µg/m ³	54.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1771	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1771	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	µg/m ³	43.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1772	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1772	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	µg/m ³	46.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1773	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1773	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	µg/m ³	45.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	5.5	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/25/1774	Report Date.	12.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1774	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	µg/m ³	47.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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TEST REPORT

Report No.	SARL/25/1789	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1789	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	µg/m ³	41.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1790	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1790	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	µg/m ³	56.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1791	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

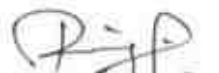
Sample Location	A7-Karai West Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1791	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	µg/m ³	46.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1792	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvankurichi 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-1792	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	µg/m ³	45.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1793	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1793	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	µg/m ³	53.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1794	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1794	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	µg/m ³	43.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	6.3	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

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/25/1795	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1795	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	µg/m ³	47.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.0	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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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1796	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1796	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	µg/m ³	48.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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)	-

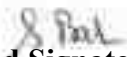
Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1797	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1797	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	µg/m ³	50.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1798	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1798	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	µg/m ³	49.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1799	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1799	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	µg/m ³	69.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	33.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1800	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1800	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	µg/m ³	55.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1801	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1801	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	µg/m ³	58.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1802	Report Date.	19.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1802	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	µg/m ³	52.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

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TEST REPORT

Report No.	SARL/25/1817	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1817	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	µg/m ³	61.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1818	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1818	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	µg/m ³	58.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1819	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1819	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	µg/m ³	56.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1820	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

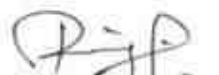
Sample Location	A2-Otathur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1820	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	µg/m ³	56.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.0	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

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/25/1821	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1821	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	µg/m ³	55.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.8	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

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/25/1822	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

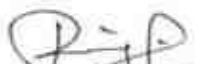
Sample Location	A4-Padalur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1822	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		

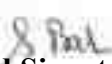
S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1823	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

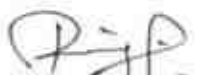
Sample Location	A3-Nedungur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1823	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	µg/m ³	51.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1824	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1824	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	µg/m ³	51.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1825	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1825	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	µg/m ³	45.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1826	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1826	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	µg/m ³	49.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1827	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1827	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	µg/m ³	47.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1828	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

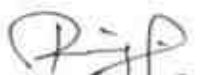
Sample Location	A5-Thiruvallankurichi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1828	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	µg/m ³	42.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1829	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

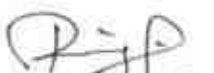
Sample Location	A6-Therani village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1829	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	µg/m ³	54.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1830	Report Date.	26.05.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1830	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	µg/m ³	50.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1845	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvallankurichi 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-1845	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	µg/m ³	49.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.0	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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1846	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1846	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	µg/m ³	53.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1847	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1847	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	µg/m ³	48.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1848	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Thiruvankurichi 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-1848	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	µg/m ³	47.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1849	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Therani 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-1849	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	µg/m ³	55.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1850	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Karai West 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-1850	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	µg/m ³	46.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1851	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1851	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	µg/m ³	54.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1852	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1852	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	µg/m ³	56.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1853	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Nedungur 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-1853	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	µg/m ³	51.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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/25/1854	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Padalur 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-1854	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	µg/m ³	53.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1855	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1855	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	µg/m ³	75.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	36.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1856	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1856	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	µg/m ³	54.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/25/1857	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-1857	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	µg/m ³	72.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	34.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1858	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. 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-Otathur 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-1858	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	µg/m ³	51.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/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

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/25/1859

Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	WATER
Sample Mark	W1-Near Mine Lease Area

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1859	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	8.01	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	509.3	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	310	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	171	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	43.2	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	15.1	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	108	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	63.0	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	152	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	72.6	1000



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TEST REPORT

Report No.	SARL/25/1859

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	53.4	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.08	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	BDL(D.L-1.0)	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.13	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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END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/25/1860	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	WATER
Sample Mark	W2-Otathur village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1860	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.95	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1656	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	1002	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	352	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	65.2	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	45.4	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	163	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	189	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	325	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	344	1000



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TEST REPORT

Report No.	SARL/25/1860

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ 2-)	APHA 24th Edition 4500 SO ₄ 2- E: 2023	mg/L	272	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.15	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	2.36	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.45	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/25/1861

Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	WATER
Sample Mark	W3-Nedungur village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1861	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.29	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1964.0	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	1190	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	389	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	84.8	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	42.5	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	212	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	177	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	379	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	367	1000

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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TEST REPORT

Report No.	SARL/25/1861

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ 2-)	APHA 24th Edition 4500 SO ₄ 2- E: 2023	mg/L	345	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.12	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	5.78	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.56	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/25/1862

Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	WATER
Sample Mark	W4-Padalur Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1862	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	8.11	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	2062.0	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	1250	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	422	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	98	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	42.5	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	245	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	177	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	397	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	382	1000



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TEST REPORT

Report No.	SARL/25/1862

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	358	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.14	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	6.24	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.59	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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END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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416/15, Dhargas Road, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: - info@shrientanalytical.com
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TEST REPORT

Report No.	SARL/25/1863

Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	WATER
Sample Mark	W5-Thiruvalankurichi Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1863	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.56	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1278.0	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	780	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	58.4	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	146	-
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	258	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	242	1000



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TEST REPORT

Report No.	SARL/25/1863

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	210	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.05	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	4.62	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.39	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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END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1864

Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	WATER
Sample Mark	W6-Therani village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1864	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.87	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1975.0	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	1180	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	382	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	84	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	41.3	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	210	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	172	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	374	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	365	1000



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TEST REPORT

Report No.	SARL/25/1864

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ 2-)	APHA 24th Edition 4500 SO ₄ 2- E: 2023	mg/L	342	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(D.L-0.01)	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	6.45	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.61	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/25/1865

Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	WATER
Sample Mark	W7-Karai West Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1865	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.46	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	2134.0	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	1286	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	451	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	104	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	46.1	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	259	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	192	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	386	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	512	1000



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TEST REPORT

Report No.	SARL/25/1865

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	216	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.04	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	6.57	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).

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/25/1866	Report Date.	02.06.2025

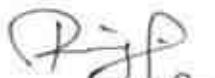
Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	SOIL
Sample Mark	S1-Within Mine Lease area

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1866	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	-	7.32
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	182.8
3	Dry matter content	IS 15106: 2002	%	96.85
4	Water Content	IS 15106: 2002	%	3.15
5	Organic Matter	IS 2720: Part 22: 1972	%	0.72
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	252
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty Clay loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	15.47
	i. Sand			
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	45.32
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	39.21
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.35
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	290
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	566
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	%	18.4
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	42

BDL – Below Detectable limit (DL - Detectable limit).

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1867	Report Date.	02.06.2025

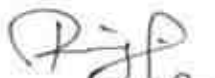
Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	SOIL
Sample Mark	S2-Otathur village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1867	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	8.14
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	286.6
3	Dry matter content	IS 15106: 2002	%	96.80
4	Water Content	IS 15106: 2002	%	3.20
5	Organic Matter	IS 2720: Part 22: 1972	%	0.92
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	390
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Clay Clay
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	10.34
	i. Sand			
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	44.23
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	45.4
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.58
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	312
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	654
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	%	19.2
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	36

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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CIN : U74999TN2017PTC116807 / **GST No :** 33AAYCS7325R1ZA / **PAN No:** AAYCS7325R

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TEST REPORT

Report No.	SARL/25/1868	Report Date.	02.06.2025

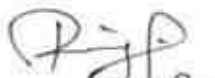
Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	SOIL
Sample Mark	S3-Nedungur village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1868	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	8.26
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	216.6
3	Dry matter content	IS 15106: 2002	%	97.40
4	Water Content	IS 15106: 2002	%	2.60
5	Organic Matter	IS 2720: Part 22: 1972	%	0.78
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	136
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty Clay
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	8.47
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	42.67
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	48.86
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.21
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	335
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	136
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	%	17.60
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


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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Shrient Analytical and Research Labs Pvt. Ltd

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Phone Number +91 82208 36377 Email: - info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1869	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	SOIL
Sample Mark	S4-Padalur Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1869	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	8.23
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	265.4
3	Dry matter content	IS 15106: 2002	%	87.08
4	Water Content	IS 15106: 2002	%	12.92
5	Organic Matter	IS 2720: Part 22: 1972	%	1.21
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	198
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Clay
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	16.24
	i. Sand			
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	38.0
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	45.78
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.65
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	489
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	894
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	%	16.5
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




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

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TEST REPORT

Report No.	SARL/25/1870	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	SOIL
Sample Mark	S5-Thiruvankurichi Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1870	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	8.26
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	188
3	Dry matter content	IS 15106: 2002	%	98.88
4	Water Content	IS 15106: 2002	%	1.12
5	Organic Matter	IS 2720: Part 22: 1972	%	0.67
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	234
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty Clay
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	12.47
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	42.78
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	44.75
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.32
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	520
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	1020
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	19.2
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


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1871	Report Date.	02.06.2025

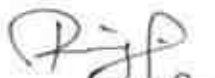
Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	SOIL
Sample Mark	S6-Therani village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1871	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	8.37
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	298.3
3	Dry matter content	IS 15106: 2002	%	94.35
4	Water Content	IS 15106: 2002	%	5.65
5	Organic Matter	IS 2720: Part 22: 1972	%	0.75
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	294
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty Clay
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	10.66
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	45.55
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	43.79
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.57
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	412
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	624
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	%	17.6
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




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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TEST REPORT

Report No.	SARL/25/1872	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur District. Tamil Nadu State
Sample Description	SOIL
Sample Mark	S7-Karai West Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1872	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	8.12
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	267.5
3	Dry matter content	IS 15106: 2002	%	91.48
4	Water Content	IS 15106: 2002	%	8.52
5	Organic Matter	IS 2720: Part 22: 1972	%	0.97
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	154
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty Clay
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	7.65
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	41.02
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	51.33
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.69
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	387
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	642
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	%	16.5
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	39

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory

S. BALAMURUGAN
Asst. Technical Manager

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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 1 of 1



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TEST REPORT

Report No.	SARL/25/1873	Report Date.	02.06.2025

Customer Name & Address	ROUGH STONE AND GRAVEL QUARRY Of Thiru.D.Balaji At Over an extent of 2.75.0hectares S.F. Nos. 124/1A,124/1B,124/3A,124/3C,124/4A, And 124/4B Of Padalur(East) Village, Alathur Taluk, Perambalur 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-1873	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	40.3	38.0	40.9	41.8	39.4	48.5	48.5
07.00	41.8	39.4	38.6	44.4	41.9	50.8	52.2
08.00	43.6	42.5	41.9	42.8	42.5	49.3	53.0
09.00	47.0	44.5	43.3	46.4	46.3	49.1	51.6
10.00	48.9	46.9	50.3	48.5	44.1	48.1	52.1
11.00	50.6	48.8	49.4	51.3	43.5	47.3	50.3
12.00	51.5	53.2	46.1	52.5	42.3	45.1	46.8
13.00	53.3	54.6	47.0	48.8	46.8	47.4	46.2
14.00	54.6	52.3	52.6	46.4	44.0	53.0	49.1
15.00	52.0	53.5	52.4	44.3	47.4	46.8	52.3
16.00	57.5	50.4	51.0	48.4	45.3	48.8	53.2
17.00	55.6	49.6	52.4	47.4	44.3	48.1	53.0
18.00	50.4	50.4	49.1	45.5	47.5	49.5	48.4
19.00	49.2	44.3	45.5	46.1	46.6	51.2	43.1
20.00	48.4	40.4	44.9	43.5	39.5	45.8	40.7
21.00	45.3	39.4	43.0	41.8	38.4	46.2	37.0
22.00	42.4	38.8	44.5	42.4	37.3	50.2	38.7
23.00	38.9	38.5	42.6	40.8	35.6	39.2	39.3
24.00	37.8	38.1	40.4	39.9	37.1	39.3	38.3
01.00	37.0	37.1	41.9	41.3	35.8	37.6	38.6
02.00	38.2	36.8	40.9	40.5	34.6	38.2	37.8
03.00	36.1	37.3	39.9	40.6	37.0	36.9	39.1
04.00	39.0	37.0	39.1	39.2	37.8	38.1	39.4
05.00	40.2	38.4	38.5	38.8	39.2	37.6	38.1

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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TEST REPORT

Report No.	SARL/25/1873

Report Date.	02.06.2025

	N1	N2	N3	N4	N5	N6	N7
DAY EQUIVALENT	51.6	49.5	48.6	47.4	44.6	48.9	50.3
NIGHT EQUIVALENT	39.1	37.8	41.4	40.6	37.0	42.8	38.7
DAY & NIGHT EQUIVALENT	50.0	47.9	47.3	46.0	43.2	47.7	48.7

Remarks:

LOCATIONS:

N1-Near Mine Lease Area

N2-Otathur village

N3-Nedungur village

N4-Padalur Village

N5-Thiruvallankurichi Village

N6-Therani village

N7-Karai West Village

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT

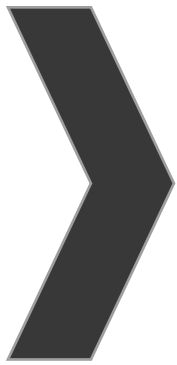

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ANNEXURE-8



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.

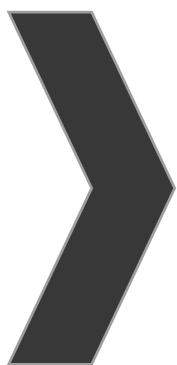
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: SHRIENT ANALYTICAL AND RESEARCH LABS PRIVATE LIMITED

Signed for and on behalf of NABL

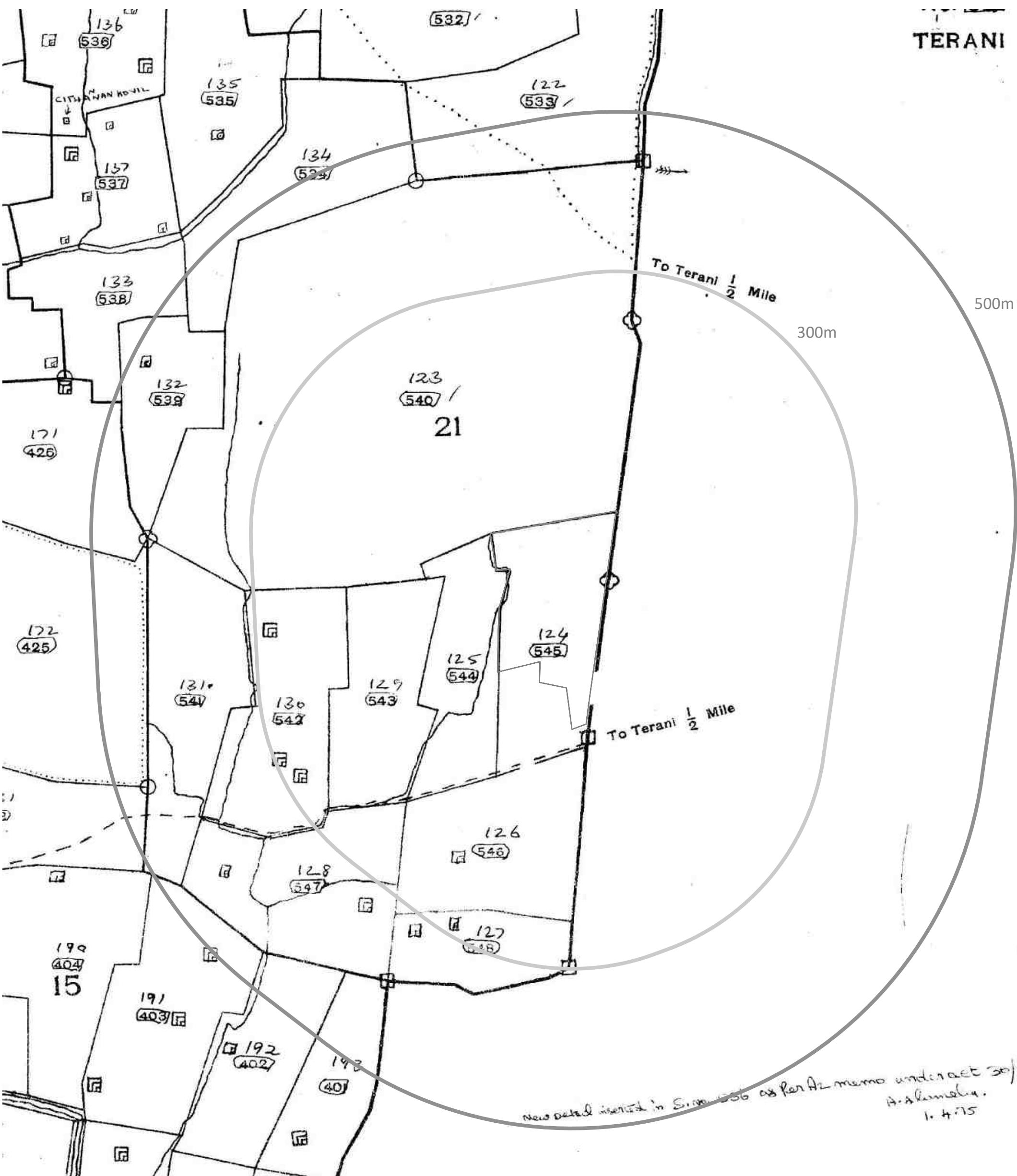


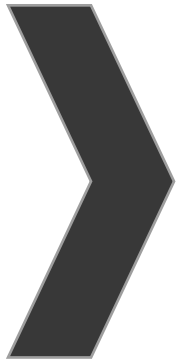
N. Venkateswaran
Chief Executive Officer



ANNEXURE-9

TERANI





ANNEXURE-10

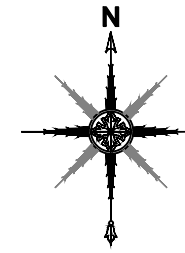
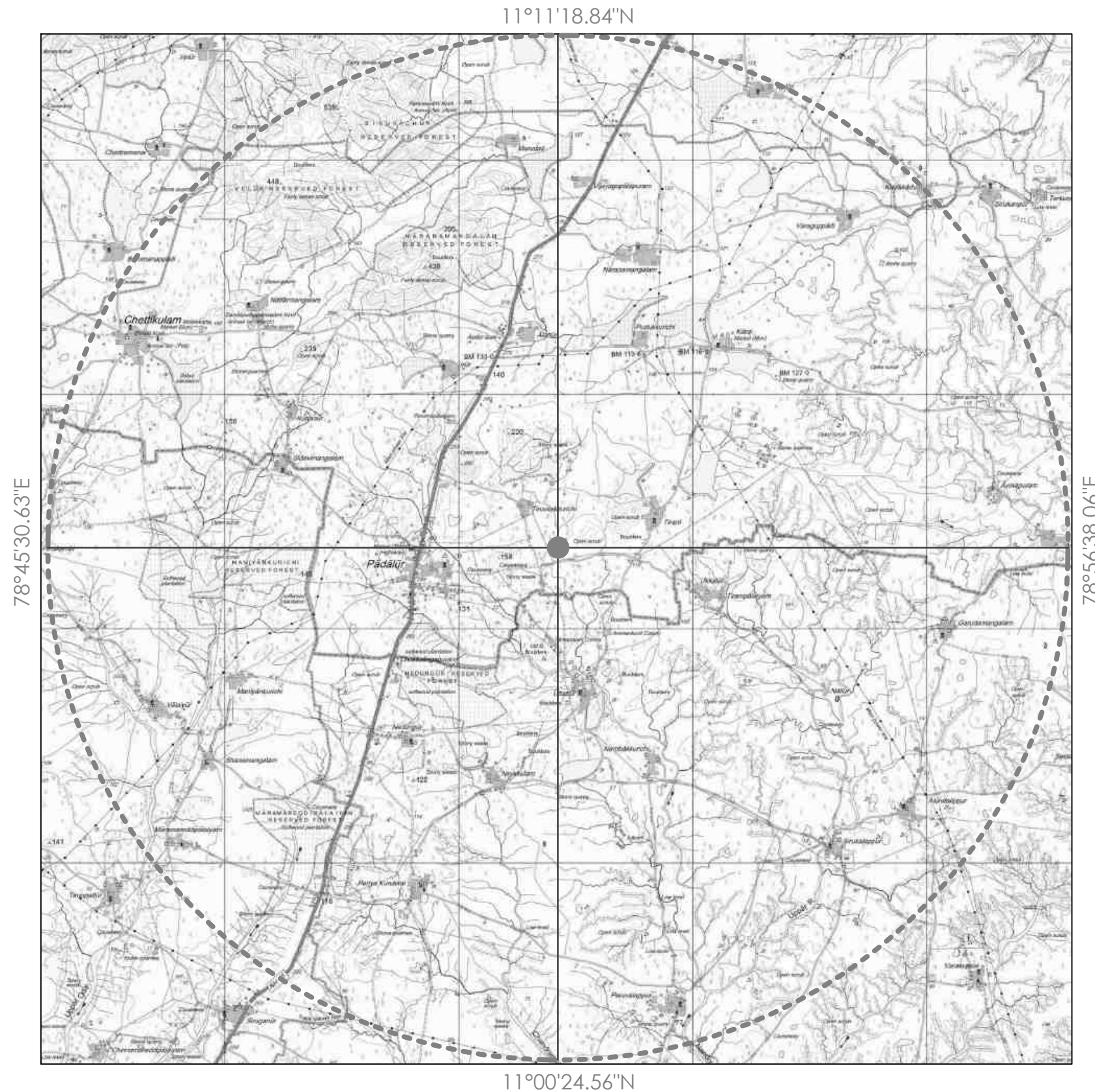


PLATE NO-I C

DATE OF SURVEY : 07.05.2025

APPLICANT:

M/S.V.S .CONSTRUCTION,
NO.9/A,SAVITHIRI ILLAM,
AMBIKAI NAGAR, 4th CROSS, MILL ROAD,
GOBICHETTIPALAYAM, ERODE-638 476.

QUARRY LEASE APPLIED AREA:

S.F.NO : 172 (BLOCK-3),

EXTENT : 1.50.0Ha,

VILLAGE : PADALUR (EAST),

TALUK : ALATHUR,

DISTRICT : PERAMBALUR.

INDEX

TOPO SHEET NO : 581/16

LATITUDE : 11°05'48.68"N to 11°05'54.11"N

LONGITUDE:78°51'02.59"E to 78°51'05.57"E

Q.L.APPLIED AREA



10KM RADIUS



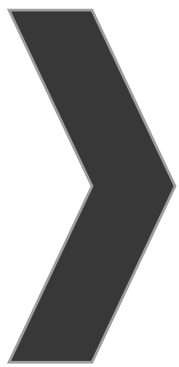
TOPO SKETCH OF QUARRY
LEASE APPLIED AREA FOR 10Km RADIUS

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

விடுநர் : தலைமை ஆசிரியர்,
அரசு மாதிரி மேல்நிலைப் பள்ளி,
பாடலூர் (PO),
ஆலத்தூர் (TK),
பெரம்பலூர் (DT) - 621109.

உபநாயகர் : திரு. D. பாலாஜி,
3/0 A. இதேவந்திரன்,
No: 25 - IAS NAGAR,
திருவையூர்,
தருச்சி - 620013.

உபநாயகர் : பாடலூர் - அ.மா. மே.நி. பள்ளியில் பீரோ,
தலைப் பலகை, நாற்காலி, தாணியியங்கி மணி
வயங்கி உய்க்குதல் - காட்டி.

மேற்கண்ட பள்ளியில் அலுவலக

மற்றும் மாணவர்கள் பயன்பாட்டிற்காக கீழ்க்கண்ட
தளவாட உபகருகளை (பள்ளிக்) வயங்குமாறு
அனுப்பும் உய்க்குகிறோம்.

— நன்றி. —

- 1.) பீரோ - 2.
- 2.) தலைப் பலகை - 1
- 3.) S-TYPE நாற்காலிகள் - 20.
- 4.) தாணியியங்கி மணி - 1

— மிக நன்றி. —



21/4/25
தலைமை ஆசிரியர்
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