

**DRAFT EIA / EMP FOR  
PROPOSED ROUGH STONE QUARRY  
CATEGORY B1 - CLUSTER (CLUSTER AREA – 5.27.50 Ha.)**

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

**APPROVED TOR vide TO25B0108TN5292193N/2025 Dated: 25.07.2025 (File No – 12270)**

PROPOSED QUARRY LEASE DETAILS	
<b>SURVEY NOS</b>	<b>1432/3(PART)</b>
<b>VILLAGE</b>	<b>THIMMARASANAICKANUR BIT-2</b>
<b>TALUK</b>	<b>ANDIPATTI</b>
<b>DISTRICT</b>	<b>THENI</b>
<b>EXTENT</b>	<b>1.60.0 Ha</b>
<b>PROPOSED PRODUCTION FOR FIVE YEARS</b>	<b>1,52,260m3 OF ROUGH STONE</b>
<b>LAND</b>	<b>GOVERNMENT LAND</b>

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

Category of the Project: B1 Cluster Mining, Total Cluster Area – 5.27.50 Ha  
Baseline Monitoring Period – March to May 2025

**APPLICANT**

**TVL.VANNATHIPARAI KALIESWARI KALLUDAIKUM MAGALIR  
SANGAM Tmt.M.PARIMALA (PRESIDENT)  
(REGISTER NO.61/2021), SOUTH STREET, RAJAGOPALANPATTI,  
ANDIPATTI TALUK, THENI – 625 536.**

ENVIRONMENTAL CONSULTANT	LABORATORY
<b>M/s. GLOBAL MINING SOLUTIONS</b> <i>(NABET Accredited &amp; ISO 9001 Certified Consultant)</i> 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 Until - January 4, 2026 Contact: 97502 23535 & 94446 54520 Email: infoglobalmining@gmail.com, globalminingsolutionssalem@gmail.com	<b>M/s. SHRIENT ANALYTICAL &amp; RESEARCH LABS PRIVATE LIMITED</b> <i>(NABL Accredited Testing Laboratory)</i> Valid Until -29.09.2025 #416/15, Dhargas Road, Perungalathur, West Tambaram, Chennai, Tamil Nadu, India.



**September -2025**



**DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE QUARRY OF TVL.VANNATHIPARAI KALIESWARI KALLUDAIKUM MAGALIR SANGAM, TMT.M.PARIMALA (PRESIDENT) AT S.F.NO. 1432/3 (PART) OVER AN EXTENT OF 1.60.0 HA IN THIMMARASANAICKANUR BIT-2 VILLAGE, ANDIPATTI TALUK, THENI DISTRICT, TAMIL NADU**

**AMENDMENT PAGE**

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

*M/s. Global Mining Solutions, Salem is very much thankful to TMT. M. Parimala, (President of TVL.Vannathiparai Kalieswari Kalludaikum Magalir Sangam) for the confidence and trust placed on our organization for carrying out Environmental Impact Assessment (EIA) study for the proposed Rough Stone Quarry over a lease extent of 1.60.00 Ha and cluster extent of 5.27.50 Ha at Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu 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 EIA/EMP report. Our sincere thanks to the local people Thimmarasanaickanur Bit-2 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*



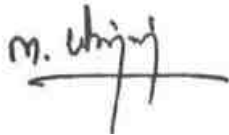
(M.Prabhu)

Managing Director

## UNDERTAKING

*In Line with MoEFCC OM no. J – 11013/41/2006-IA.II (I) dated 5<sup>th</sup> October 2011, we hereby give our undertaking for owning the content and information in the EIA/EMP report submitted for EC of the proposed Rough Stone Quarry over a lease extent of 1.60.00 Ha and cluster area of 5.27.50 Ha at Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu.*

*For M/s. Global Mining Solutions*



*Name: Manikandan Manickam*

*EIA Coordinator – Mining of Minerals*

*Global Mining Solutions*

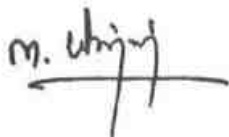


## **UNDERTAKING**

*In Line with MOEF OM no. J-11013/41/2006-IA.II (1) dated 4<sup>th</sup> Aug 2009 and its Amendments, we hereby confirm that all Terms of Reference issued by Ministry of Environment, Forest and Climate Change vide TOR Identification No. TO25B0108TN5292193N, Dated: 25.07.2025 for preparation of EIA/EMP report for the proposed Rough Stone Quarry over a lease extent of 1.60.00 Ha and cluster area of 5.27.50 Ha at Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu, for the production of 1,52,260 m<sup>3</sup> of Rough Stone from the proposed lease area and the details has been complied in the EIA/EMP report is factually correct.*

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

*For M/s. Global Mining Solutions*



*Name: Manikandan Manickam*


*EIA Coordinator – Mining of Minerals*

*Global Mining Solutions*

**DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE QUARRY OF TVL.VANNATHIPARAI KALIESWARI KALLUDAIKUM MAGALIR SANGAM, TMT.M.PARIMALA (PRESIDENT) AT S.F.NO. 1432/3 (PART) OVER AN EXTENT OF 1.60.0 HA IN THIMMARASANAICKANUR BIT-2 VILLAGE, ANDIPATTI TALUK, THENI DISTRICT, TAMIL NADU**



**भारतीय गुणवत्ता परिषद्**  
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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-*

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		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.*

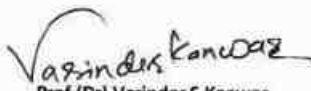
*The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACO/25/3638 dated May 30, 2025. The accreditation needs to be renewed before the expiry date Eco Chem Sales and Services, Surat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

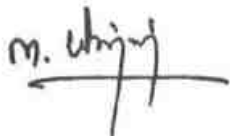
For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to QCI-NABET website.

## **DECLARATION BY EXPERTS**

*Declaration by Experts contributing to the proposed Rough Stone Quarry over a lease extent of 1.60.00 Ha and cluster area of 5.27.50 Ha at Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni 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 to May 2025.*


### **Contact information:**

**M/s Global Mining Solutions**

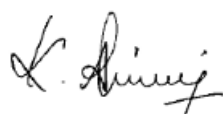


**Plot No.6, SF No. 13/2, A2, VS City, RC Chettypatty,**

**Kottamettupatty, Omalur,**





**Salem, Tamil Nadu – 636 455**

<b>S. No.</b>	<b>Functional areas</b>	<b>Name of the expert/s</b>	<b>Involvement (period and task**)</b>	<b>Signature and Date</b>
1	AP	Dhanalakshmi Ramanathan	Assessment of existing air quality, Impact of the project on ambient air and suggested mitigation	

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			measures for air pollution.  <u>Period: March to May 2025.</u>	
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 to May 2025.</u>	
3	SHW	Ramadoss N	Assessment of waste generated from the project, suggested waste management practices.  <u>Period: March to May 2025</u>	
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 to May 2025</u>	

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5	EB	Saravanan S	Baseline data collection of related to ecology of the area.  <u>Period: March to 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 to 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 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 to May 2025</u>	

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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: March to May 2025</u>	T. Srilatha
10	RH	S.V. Prashant	Identification of the Risk related to the mining activities. Preparation of emergency disaster management plan. Plan for supply of safety equipment for the worker.  <u>Period: March to May 2025</u>	S. Prashant
11	SC	Shisupal Sing	Soil monitoring, secondary data collection on soil type, soil management practices, utilization of topsoil.  <u>Period: March to May 2025</u>	Shisupal Sing
12	GEO	Valliappan Meyyappan	Geological map, stability of quarry and dump, management plan for mine stability, after use	Valliappan

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			<p><i>of mining quarry and geological feature of the area.</i></p> <p><u>Period: March to May 2025</u></p>	
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### **List of Annexures**

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Annexure No - 2	Precise Area Communication Letter
Annexure No - 3	Mine Plan Approval Letter Copy, approval book with annexures
Annexure No - 4	500 m Cluster Certificate
Annexure No -5	VAO Letter for features within 500 m radius
Annexure No -6	Land Documents
Annexure No -7	Monitoring Report
Annexure No -8	Lab NABL Certificate
Annexure No -9	The Copy of CER Letter

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

## **POINT WISE COMPLIANCE OF TOR CONDITIONS**

<b>S.No</b>	<b>TOR Points</b>	<b>Reply</b>	<b>Page No</b>												
<b>SEAC Conditions - Standard</b>															
1	In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following: (i) Original pit dimension (ii) Quantity achieved Vs EC Approved Quantity (iii) Balance Quantity as per Mineable Reserve calculated. (iv) Mined out Depth as on date Vs EC Permitted depth (v) Details of illegal/illicit mining (vi) Violation in the quarry during the past working. (vii) Quantity of material mined out outside the mine lease area (viii) Condition of Safety zone/benches (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.	<p>The applied lease area was previously operated by another lessee before 2015. The dimension of existing pits in the area applied for leases as per approved mining plan is given below.</p> <table border="1"> <thead> <tr> <th></th><th>Length (Max) (m)</th><th>Width (Max) (m)</th><th>Depth (Max) (m)</th></tr> </thead> <tbody> <tr> <td>Pit I</td><td>96</td><td>38</td><td>15 m BGL</td></tr> <tr> <td>Pit II</td><td>85</td><td>70</td><td>15 m BGL</td></tr> </tbody> </table>		Length (Max) (m)	Width (Max) (m)	Depth (Max) (m)	Pit I	96	38	15 m BGL	Pit II	85	70	15 m BGL	
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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.	VAO certificate regarding the location of habitations within 300m radius from the periphery of the site is attached as Annexure. There are no approved Structures within 300 m Radius.	
3	The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.	A Site survey has been conducted to identify and list structures located within a 300 m radius from the Proposed Quarry and structures located within 300 m radius are given in section 3.5 of Chapter 3.	111
4	The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc located within 1 km of the proposed quarry.	A detailed hydro-geological report of the proposed project will be incorporated in the Final EIA/EMP Report.	-

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5	The Proponent shall carry out Bio diversity study through Department of Ecology and Environmental Sciences. Pondicherry University and the same shall be included in EIA Report.	The bio diversity study has been carried out by our FAE is given in section 3.7.7 of Chapter 3.	147												
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.	Andipatti Northern Block R.F. – 1.4 km (E), Andipatti Southern Block R.F. – 3.8 km (SE), Rajadani R.F. – 8.5 km (E). There is no R.F within 1 km radius.													
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,	<p>The applied lease area was previously operated by another lessee before 2015. The dimension of existing pits in the area applied for leases as per approved mining plan is given below.</p> <table border="1"> <thead> <tr> <th></th><th>Length (Max) (m)</th><th>Width (Max) (m)</th><th>Depth (Max) (m)</th></tr> </thead> <tbody> <tr> <td>Pit I</td><td>96</td><td>38</td><td>15 m BGL</td></tr> <tr> <td>Pit II</td><td>85</td><td>70</td><td>15 m BGL</td></tr> </tbody> </table> <p>Slope stability study through reputed institute will be</p>		Length (Max) (m)	Width (Max) (m)	Depth (Max) (m)	Pit I	96	38	15 m BGL	Pit II	85	70	15 m BGL	
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	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.	conducted once the depth reached 25 m BGL.	
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.	The existing pit depth is 15 m as per approved mining plan. However, a slope stability study through a reputed institute will be conducted once the quarry depth reaches 25 m BGL.	
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.	This proposal will adopt the opencast manual mining method without blasting.	
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	This proposal will adopt the opencast manual mining method without blasting.	

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	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.	Prior to this project, the PP had not carried out any quarrying operations.									
12	If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,	The applied lease area was previously operated by another lessee before 2015. The dimension of existing pits in the area applied for leases as per approved mining plan is given below.									
13	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?	<table border="1"> <thead> <tr> <th></th><th>Length (Max) (m)</th><th>Width (Max) (m)</th><th>Depth (Max) (m)</th></tr> </thead> <tbody> <tr> <td>Pit I</td><td>96</td><td>38</td><td>15 m BGL</td></tr> </tbody> </table>		Length (Max) (m)	Width (Max) (m)	Depth (Max) (m)	Pit I	96	38	15 m BGL	
	Length (Max) (m)	Width (Max) (m)	Depth (Max) (m)								
Pit I	96	38	15 m BGL								
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	<table border="1"> <tbody> <tr> <td>Pit II</td><td>85</td><td>70</td><td>15 m BGL</td></tr> </tbody> </table>	Pit II	85	70	15 m BGL					
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	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 topo map given as Figure No – 3.4 and Figure 3.5. Geology and Geomorphology map are provided in 3.19 and 3.18 Chapter 3. 10km Radius Index plan showing buffer zone is given in Fig 3.5 of Chapter – 3.	120 & 121  154 & 155
16	The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,	It will be complied after commencement of the mining operation.	
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.	Photographs of the site are provided in Figure 2.5 of Chapter-2. There is no water bodies within 50 m radius from the project site. Green belt is being developed over an area of 0.41.0 Ha. The work of the same is under process.	92

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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.	Geological reserves - Rough stone 3,42,645 m <sup>3</sup> and the mineable reserves: Rough stone 1,52,260m <sup>3</sup> . The proposed production is Rough stone 1,52,260 m <sup>3</sup> of Rough Stone by Opencast manual method of mining. The anticipated impact and its mitigation measures are detailed in Chapter 4.	
19	The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of 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.	Complied. Please refer figure 10.1 of Chapter 10.	223
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.	Hydro-geological study report will be incorporated in the Final EIA / EMP report.	

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	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.	The baseline data were collected (March 2025 to May 2025) for the environmental components including land, soil, water, air, noise, biology, socio-economy, and the results have been discussed in Chapter 3.	110
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	Detailed cumulative impact study has been carried and the same is incorporated in the Chapter 7. Accordingly, a detailed Environment Management Plan is prepared considering air, water, noise and soil environment and the details are given in Chapter 10.	206 & 223

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	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.	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. Rain water harvesting Plan is given in section 4.2.3.4 of chapter 4. The water balance is given in chapter 4.	168
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	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 has been discussed in Section 3.7.6 of Chapter 3. The land use plan of the project area showing pre-operational, operational and post-operational phases are	145

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	change of land use should be given.	discussed in section 2.4 of Chapter 2.	
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.	As per the mining plan, there is no overburden anticipated during the entire Rough Stone quarrying operation. The excavated rough stone will be directly loaded into a tipper to the needy other buyers.	
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.	Not applicable. The project is not located in any of the said areas mentioned in the condition.	
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.	Rain water falling in the quarry will be harvested in the sump at the lowest level of the quarry. This sump will act as a settling pond to prevent solids escaping along with discharge, before outlet. etc. Towards surface runoff	168

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		management, a garland drain will be constructed around the quarry and will be connected to a settling pond with silt traps. The supernatant clear water from the settling pond will be flow to the downstream users. Rain water harvesting plan is given in section 4.2.3.4 of Chapter 4.	
28	Impact on local transport infrastructure due to the Project should be indicated.	There is no significant impact on the local traffic due to the proposed project. The traffic density study is given in Chapter 4, Sec 2.11.5.	105
29	A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity.	Flora species within 300 m radius is given in section 3.7.7.	147
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 2, sec 2.10.	103
31	As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to	Accepted. It will be done.	

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	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.	The Greenbelt plan is detailed in Chapter 4, Sec 4.4.5.4.	191
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	Accepted. Green belt development work is in progress. Proof photographs on green belt will be incorporated in the Final EIA / EMP report.	

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	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.	A disaster management plan is prepared and details are given in Chapter 7, Sec 7.3.	203
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.	A Risk Assessment and management Plan is prepared and given in Chapter 7, Sec 7.2.	200
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.	Anticipated Occupational Health impacts of the project is given detailed in Chapter 4. Sec 4.4.7	193
37	Public health implications of the Project and related activities for	No major impact on public health will be there since the	



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	the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	villages are located more than 1km from the lease area. Details of CER and CSR are discussed under Chapter No. 8	
38	The Socio-economic studies should be carried out within a 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.	Detailed Socio Economic study is carried out and it is given in Chapter 3, Sec 3.7.12	155
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.	There is no litigation pending against the project.	
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.	The project benefits are given in Chapter 8.	221
41	If any quarrying operations were carried out in the proposed	The applied lease was previously operated by other	

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	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.	lessees before 2015.CCR is not applicable	
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.	Affidavit for considering EMP for the entire life will be incorporated in the Final EIA/ EMP Report.	
43	Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.	Noted and Agreed.	
<b>SEAC Conditions - Site Specific</b>			
1	A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the	A cluster management committee including all the proponents of the rough stone quarrying projects within the cluster of 500 m	

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	<p>effective management of the mining operation in the cluster through systematic &amp; 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.</p>	<p>radius will be constituted for the effective implementation of appropriate environmental management plan. Affidavit in this regard will be submitted during final EIA/EMP Report.</p>	
2	<p>The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report.</p>	<p>Agreed. Proof photographs for erected pillars will be submitted in the Final EIA / EMP Report.</p>	
3	<p>Since waterbodies are situated nearby, the PP shall carry out the hydrological study including the details of waterflow pattern to determine the impacts of the mining operation in the waterbodies.</p>	<p>Nearest Waterbodies: Odai-92m (N), Odai-198m (N), Odai-224m (SW), Odai 294m (SE), Vaigai River-1.8km (N), Periyar Main Canal-2.0km (N),</p>	

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		Mavuttu Odai-3.5km (NW), Varaha River-4.4km (N), Vaigai Dam-6.2km (NW) Detailed Hydrogeological study is in progress and it will be incorporated in the Final EIA / EMP Report.	
4	The details of enumeration of structures including schools, colleges, primary health centers should be submitted along with the EIA report.	There are no School and College and health centers within 300 m radius from the proposed project site. Kannimar Temple is situated at 285m (NW)	
5	The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m & up to 1km shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc. and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations.	A Site survey has been conducted to identify and list structures located within a 300 m radius from the proposed Quarry and structures located within 300 m radius.	
6	The proponent shall furnish photographs of adequate fencing; garland drainage built with siltation tank & green belt along the periphery including	The green belt, fencing, garland drain work are in process and the proof photographs of the same will be submitted in the Final	

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	replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	EIA/EMP Report. There are no permanent structures within a 50-meter radius of the proposed project site. As per Precise Order Condition No. 1, A safety distance of 7.5m to the adjacent Patta lands and 10m to the adjacent Government lands has been provided as per the AMP and the same will be complied during the quarrying operations. There is two seasonal odai passing on Northeastern and western side and is 100 m and 230 m away from the applied lease area.	
7	The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report.	The detailed Bio diversity study details are given in Chapter – 3, Sec 3.7.7.	147
8	The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	A detailed Environmental Management Plan considering entire life has been prepared and are detailed in chapter 10. Affidavit stating to abide the EMP for the entire life of mine	

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		will be submitted in the Final EIA / EMP report.	
9	The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding village and structures.	cumulative impact study due to mining operations in cluster are given in Section 7.4 of Chapter 7. Anticipated impacts and its mitigation measures for various attributes are detailed in Chapter 4.	162 & 206
10	The PP shall prepare a conceptual action plan accommodating the inclusion of haul road accessibility keeping the benches intact, by ensuring the slope stability of the working benches to be constructed and existing quarry wall.	The conceptual plan are detailed in chapter 2.	104
11	The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic/videographic evidence along with the EIA report.	We will install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic / videographic evidence along with the Final EIA report.	
<b>SEIAA Standard Conditions:</b>			
<b>Cluster Management Committee</b>			
1	Cluster Management Committee shall be framed which must include all the proponents in the	There are three proposed quarries including this proposal, within a 500-metre	-

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	cluster as members including the existing as well as proposed quarry.	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 and will be complied.	-
3	The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.	Agreed. The list of members of the committee formed will be submitted to ad/mines after obtaining Environmental Clearance.	-
4	Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.	Agreed. Details of the Operation plan for cluster mining operations will be submitted once we get environmental clearance for all three quarries proposed in the cluster area.	-
5	The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural	Risk management plan for the individual quarry is given in this report. As far as cluster working condition is	

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	calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.	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 committee in implementing the environmental policy devised shall be given in detail.	Environmental policy for the cluster will be framed by the cluster management committee and the policy will be in accordance with EPA Act, 1986 and its amendments, guidelines by MoEFCC/SEIAA and other regulatory bodies. This policy will be displayed in the quarry.	-
7	The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.	Agreed. It will be complied as mentioned in the Point No.4	-
8	The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public in the vicinity.	Agreed. It will be complied as mentioned in the Point No.4	-



<b>Agriculture &amp; Agrobiodiversity</b>			
9	impacts on surrounding agricultural fields around the proposed mining Area.	There are no Agriculture, forest area and traditional practices within the project area. However, there are some agricultural land around the project site. It may be affected due to the quarry operation as such dust particles sedimentation in the agricultural land. It will be controlled at the source level by proper dust suppression as such wet drilling, water sprinkling on the project roads and project surrounding roads. As per Air Quality Modelling, the impact of the air quality limited to 400m radius. So, there is no impact for the Agriculture, Forestry & Traditional practices located within 10km radius.	-
10	impacts on soil flora & vegetation around the project site.	The chemical and physical characteristics of the soil is given in Chapter 3. The anticipated impact and its mitigation measures for soil environment and biological environment are	144  165 & 185

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		detailed in section 4.2.2 and 4.4.5 of Chapter 4 respectively.	
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.	The details on flora have been provided in Section 3.7.7.1 under Chapter 3. 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	147
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 Section 3.7.7 under Chapter 3 and measures have been provided in Section 4.4.5 under Chapter 4.	147
13	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	All the essential environmental protective measures will be followed by the proponent to manage the surrounding environment and restore the ecosystem, as discussed in Chapter 4.	162

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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.	163
<b>Forests</b>			
15	The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife	Andipatti Northern Block R.F. – 1.4 km (E), Andipatti Southern Block R.F. – 3.8 km (SE), Rajadani R.F. – 8.5 km (E). There is no R.F within 1 km radius. The anticipated impact and its mitigation measures for biological environment are detailed in section 4.4.5 of Chapter 4. The project proponent shall do barbed wire fencing work and develop a green belt around the lease area to prevent wildlife from entering the site.	
16	The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna	The impacts of the project on ecology and biodiversity have been discussed in Section 4.4.5 under Chapter 4.	185
17	The Environmental Impact Assessment should study impact on standing trees and the existing	Not Applicable.	-

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	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.	Srivilliputhur Megamalai Tiger Reserve- 8.7km (S). Impact and its mitigation measures are detailed in Chapter 4.	-
<b>Water Environment</b>			
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 I 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.	A detailed hydrogeological report will be included in the final EIA/EMP report.	-
20	Erosion Control measures.	There is no waste generation (OB) in this quarry has been envisaged. However, there may be erosion due the rainy season and that is limited	

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		within quarry area. The control measures are explained in Chapter 4.	
21	Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas	Complied. The study details are incorporated in Chapter 3. Anticipated impacts and its mitigation measures are detailed in Chapter 4.	162
22	The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.	There is no wastewater generation from this Quarry, so this is not applicable.	
23	The project proponent shall study and furnish the details on potential fragmentation impact on natural environment by the activities.	Fragmentation impact on the environment may be due to drilling. The anticipated impacts and mitigation measures are discussed in Chapter 4.	
24	The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts	The Flora and Fauna study covering 10 km radius are detailed in section 3.7.7 of chapter 3. The impacts anticipated with respect to the environment of the project area is very negligible and it will be minimized within the project area. Greenbelt / Plantation will be carried out to enhance the	147

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		vegetative growth and aesthetic in the safety zone area.	
25	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	The impact of mining on soil environment has been discussed in Section 4.2.2 under Chapter 4.	165
26	The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.	The anticipated impact and its mitigation measures for Water Environment are detailed in section 4.2.3 of Chapter 4.	166
27	The EIA shall include the impact of mining activity on the following: a) Hydrothermal/Geothermal effect due to destruction in the Environment. b) Bio-geochemical processes and its foot prints including Environmental stress. c) Sediment geochemistry in the surface streams.	The proposed quarry operation is Opencast method of manual method of mining with 5m height and 5m width of the bench. So, the effect of Hydrothermal/Geothermal is not envisaged.	
<b>Energy</b>			
28	The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilize the Energy shall be furnished	The measures taken to control noise, air, water, and dust have been given under Chapter 4.	162
<b>Climate Change</b>			

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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. To further reduce carbon emissions, a good greenbelt plan has been planned.	-
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.		
<b>Mine Closure Plan</b>			
32	Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.	Detailed mine closure plan is given in section 7.5 of Chapter 7. Post mining land use pattern is shown in section 2.10 of Chapter 2.	219 & 103
<b>EMP</b>			
33	Detailed Environment Management Plan along with adaptation, mitigation & remedial	Complied. The details are described in Chapter 10.	223

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	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.	The capital cost of Rs. 8.58 Lakhs and the recurring cost of Rs. 11.0 Lakhs for five years have been allocated under the EMP budget. The breakup of the same is given in Table 10.5 of Chapter 10.	230
<b>Risk Assessment</b>			
35	To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.	Risk assessment and Management plan are detailed in section 7.2, chapter 7.	200
<b>Disaster Management Plan</b>			
36	To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid,/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine	Disaster Management plan are detailed in section 7.3, Chapter 7.	203



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	lease period as per precise area communication order issued.		
<b>Others</b>			
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.	Compiled. There are no historical places, schools, cemeteries, bird sanctuaries, and wildlife sanctuaries within 300 meters of the proposed project area.	-
38	As per the MoEF& cc office memorandum F.No.z2-6512017-tA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management plan.	The concerns raised during the public consultation and all the activities proposed will be updated in the final EIA report.	-
39	The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.	Complied. The PP has framed detail solid waste management system for the project are and the same will be executed by proper awareness and sign boards. The sign boards will be in two language i.e., Vernacular language (Tamil) and common language (English).	-

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		The plastic waste generation is very negligible and it will be collected from the source level in specific dustbin and disposed through the municipal bins.	
<b>C. Standard ToR</b>			
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	Not applicable.	-
2	A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.	This proposed project area is classified as Government land and the applicant has obtained tender from the Government Please refer Annexure 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	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,	-

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	etc. and should be in the name of the lessee.	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).	Project area is superimposed on Satellite imagery is enclosed in Figure No. 3.4. Project area boundary coordinates superimposed on Toposheet & Surface Features around the project area covering 10km radius. Geology map of the project area covering 10km radius. Geomorphology Map of the Study Area covering 10 km radius is given in section 3.7.10 in Chapter 3.	120, 121, 154 & 155
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. Geomorphology Map of the Study Area covering 10 km radius of section 3.7.10 in Chapter 3.	154 & 155
6	Details about the land proposed for mining activities should be given with information as to	Not Applicable. The proposed land is Government land, The	-

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	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.	copy of the land document is attached as Annexure – 5.	
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 proposed quarry is small scale magnitude operation and controlled by the lessee individually by engaging optimum statutory personals.  Based on the magnitude of the operation, the PP has framed Environmental Policy and the same is incorporated in section 10.4 of Chapter 10. The Mines Manager 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 program, social development schemes, etc in the mine. The organizational chart for the same has been	223

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		provided in Figure No.10.1, 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.	Various risks likely to arise due to mining activities are detailed under section 7.2, Chapter-7. This being an of manual method of mining without blasting. subsidence and ground vibration is not applicable.	200
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	Satellite imagery has been used to study land use and the details of land use in the core and buffer zone is given in section 3.7.6 of Chapter 3.	145

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	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.	There is no waste generation anticipated in this quarry operation since the entire excavated material will be utilized. The top soil generated will be utilized for afforestation purpose. Hence, there is no external overburden dump involved.	-
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 Expert Appraisal Committees.	There is no Forest Land involved in the proposed project area. The proposed project area is a government land. Approved Mining Plan is enclosed in Annexure – 3.	-

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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.	Andipatti Northern Block R.F. – 1.4 km (E), Andipatti Southern Block R.F. – 3.8 km (SE), Rajadani R.F. – 8.5 km (E). There is no R.F within 1 km radius.	-
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	Srivilliputhur Megamalai Tiger Reserve- 8.7km (S). Anticipated impact and mitigation measures is given in Chapter 4.	-

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	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.	Srivilliputhur Megamalai Tiger Reserve- 8.7km (S). Anticipated impact and mitigation measures is given in Chapter 4.	-
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	Flora and fauna composition in the core and buffer zone of the project has been studied through primary field surveys. The details are furnished in section 3.7.7 of Chapter 3.	147



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	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.		
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	Not Applicable	-

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	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.	The mining activities will be carried out within the mine lease area only. The entire mine lease area of 1.60.0 Ha is a Government Land. There is no population within the ML area. Hence, the question of R& R does not arise.	

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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 PM <sub>10</sub> , particularly for free silica, should be given.	Baseline Data were collected for One Season (Non-Monsoon) March to May 2025 as per CPCB Notification and MoEF & CC Guidelines and Detailed in Chapter - 3.	
23	Air quality modeling should be carried out for prediction of impact of the project on the air	Modelling is done using AERMOD and the projected values are found to be within	173 - 181

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	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.	the norms. Hence, there is no major impact due to this mining project. The cumulative impact of mining is also studied and the same is found to be within norms. The details are given in section 4.8 of Chapter 4 and for cluster - 7.4.1 of Chapter 7.	
24	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.	The entire water requirement for the project is 4 KLD which will be sourced from outside agencies. The water balance diagram is shown in Chapter 4	
25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.	Not Applicable. The required water will be outsourced from the nearby village.	-
26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting	Details of the water conservation plan are given in chapter 10. Rainwater harvesting plan are detailed	168

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	proposed in the Project, if any, should be provided.	in section 4.2.3.4 of Chapter 4.	
27	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.	Impact Studies and Mitigation Measures of Water Environment including Surface Water and Ground Water are discussed in Section 4.2.3.	166
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.	As per the mining plan, the ground water table of the project surrounding area is 60.0 m BGL and proposed depth of the quarry operation is 35 m BGL. So, the proposed mine working will not intersect the ground water table.	-
29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and	Not Applicable No stream passing through the mine lease area.	-

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	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.	Altitude of the area	284 m from MSL	-
		Ultimate Depth	35 m BGL	
		Ground water	60 m 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 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	Greenbelt Development Plan & Recommended Species proposed for Greenbelt Development are detailed in Section 4.4.5.4.  0.41.0 hectares of land are allotted for greenbelt development.		191

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	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.	The Traffic density survey was carried out to analyze 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.	105
33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.	Temporary Infrastructure & other facilities will be provided to the Mine Workers after the grant of quarry lease and the same has been discussed in Section 2.11.6 of Chapter 2.	109
34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of	At the conceptual stage the quarried-out land will be fenced and lower benches will be allowed to collect rain	103

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	sections) should be given in the EIA report.	water to act as a temporary reservoir and Greenbelt development will be carried out on the top bench, unutilized areas and haul roads. Mine closure plan is detailed in Section 2.10 of Chapter 2.	
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 under the Section 4.4.7 & Section 10.4.	193
36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	No major impact on public health will be there since the villages are located more than 1km from the lease area.	
37	Measures of socio-economic significance and influence to the	This project provides employment to 20 people	-



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	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.	directly. Local people will be hired for unskilled labour. Through CSR, nearby schools, hospitals will be benefitted. For CSR, INR 3.0 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.	223
39	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.	During public hearing process, the opinions and demands of the people will be noted. The replies and commitment made by the proponent along with time bound action plan wherever applicable will be provided in Final EIA/EMP report.	-

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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.	<b>Project Cost</b> is Rs. 79.08/- lakhs <b>CER Cost</b> is Rs.3.0/- lakhs <b>EMP Cost</b> Capital Cost is Rs. 8.58 Lakhs Recurring Cost is Rs. 11.0 Lakhs for five years.	-
42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	Disaster management plan are provided under section 7.3 of Chapter-7.	203
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.	Detailed in Chapter 8.	221
44	Besides the above, the below mentioned general points are also to be followed.		
A	Executive Summary of the EIA/EMP Report	Yes, Complied.	-
B	All documents to be properly referenced with index and continuous page numbering.	Yes, Complied.	-

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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,	Yes, Complied.	-
E	Where the documents provided are in a language other than English, an English translation should be provided.	Yes, Complied.	-
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	-

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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.	Yes, Complied.	-
I	As per the circular no. J-11011/1618/2010-IA.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	Yes, Complied.	-

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	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.		
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## **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 existing & proposed quarries located within 500 m radius of the project area.

TMT. M. Parimala proposes to operate Rough Stone Quarry over an extent of 1.60.0 Ha. Government land in S.F.No. 1432/3(Part) of Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu and ToR obtained vide TOR Identification No. TO25B0108TN5292193N Dated: 25.07.2025 and this proposed mining is planned to adopt open cast Manual method of mining with 5m height and 5 m width of the bench.

The applied lease area was previously operated by other lessee before 2015. The dimension of existing pits in the area applied for leases as per approved mining plan is given below.

Description	Length (Max) (m)	Width (Max) (m)	Depth (Max) (m)
Pit I	96	38	15 m BGL
Pit II	85	70	15 m BGL

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

<b>Table – 1.1 Cluster Mines Details</b>			
<b>Sl. No</b>	<b>Extent</b>	<b>Proponent</b>	<b>Status of lease</b>
1	1.60.0 Ha	Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President) (Register No.61/2021), No.2, North Street, Rajagopalanpatti, Thimmarasanayakkanur, Andipatti Taluk, Theni District.	Proposed
2	2.50.0 Ha	Tvl.Vannathiparai Nagammal Kalludaikum Magalir Sangam, Tmt.T.Thavamani (President) (Register No.62/2021), No.2, North Street, Rajagopalanpatti, Thimmarasanayakkanur, Andipatti Taluk, Theni District – 625 536.	Proposed
3	1.17.5	Thiru.R.Murugan, S/o. Rengasamy, North Street, T.Rajagopalapantti, Andipatti Taluk, Theni District.	Proposed
Total extent is 5.27.5 Ha including this proposed project			

As such Common EIA for the 3 projects falling in the cluster with assessment of impacts and EMP separately is carried out. Cluster area calculated as per MoEFCC 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 common 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/539887/2025, Dated: 31/05/2025. The ToR proposal was placed in 585th SEAC-II meeting held on 03.07.2025 and 856th SEIAA meeting held on 21.07.2025. Then ToR has been issued by the SEIAA vide TOR Identification No. TO25B0108TN5292193N/2025 Dated: 25.07.2025 to

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prepare the 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	Proposed Rough Stone Quarry of Tmt. M. Parimala – President of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam
S.F No.	1432/3(Part)
Location of the Project	Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu
Extent	1.60.0 Ha.
Type of Land	Government Land

### **1.2.2 IDENTIFICATION OF PROJECT PROPONENT**

**Table -1.3- Details of Project PropONENT**

Name of the Project PropONENT	Tmt. M. Parimala – President of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam
Communication address	TVL.VANNATHIPARAINAGAMMALKALLUDAIKUMMAGALIRSANGAM TMT. M. PARIMALA (PRESIDENT) (REGISTERNO.61/2021),SOUTHSTREET,RAJAGOPALANPATTI, ANDIPATTITALUK,THENI – 625 536.
Mail id	manikandan978772@gmail.com
Mobile No.	97871 58214

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

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

The quarrying operation will be conducted using the Opencast Manual method, forming benches with a height and width of 5.0 meters each. A jackhammer will be used for drilling, and loading will be done manually with a JCB.

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

Name of the Quarry	Tmt.M. Parimala Rough Stone Quarry	
Toposheet No	58 F /12	
Latitude between	10°01'31.08"N to 10°01'37.17"N	
Longitude between	77°38'22.55"E to 77°38'27.31"E	
The altitude of the area	284m (MSL)	
Proposed Depth of Mining	35 m BGL	
	Rough Stone	
Geological Resources	3,42,645m <sup>3</sup>	
Mineable Reserves	1,52,260m <sup>3</sup>	
Proposed Production	1,52,260m <sup>3</sup>	
Ultimate pit Depth	35m (below ground level)	
Water Level in the area	60 m bgl	
Method of Mining	Opencast Manual method of mining without blasting	
Topography	The area applied for quarry lease exhibits almost plain topography covered by rough stone formation. The massive Gneissic Rock formation is noticed right from the surface and sloping towards Southeastern side of the area, the altitude of the area is above 284m (maximum) from MSL.	
Machinery Proposed	Jack Hammer	1 No
	Compressor	1 No
	Excavator	1 No
	Tipper (5/10 T)	2 Nos
Proposed Manpower Development	20 Nos	
Water Requirement	4 KLD	

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Greenbelt Development	The safety zone of 0.41.0 ha will be developed with about 410 nos of plantation.
Fuel Requirement	1,21,808 liters of HSD (Entire Project Life)
Project Cost	Rs.78.19 Lakhs
EMP Cost	Rs. 16.69 Lakhs
CER Cost	Rs.3.0 Lakhs will be spent as CER Cost.

### **1.3.2 NATURE OF THE PROJECT**

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

### **1.3.3 LOCATION OF PROJECT**

The proposed Quarry lease area is situated at S.F.No. 1432/3(Part), Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu. The area lies in the north latitude of 10°01'31.08"N to 10°01'37.17"N and eastern longitude of 77°38'22.55"E to 77°38'27.31"E. Location of the proposed project is shown in Figure 2.1 and the satellite imagery of the project site is shown in Figure 2.2.

### **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 MoEFCC (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

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**1.5.1PRESENT LEGAL STATUS**

**Table 1.5 – Present Legal Status**

<b>Description</b>	<b>Issuing Authority</b>	<b>Status</b>	<b>Letter number</b>	<b>Date</b>	<b>Reference</b>
Precise Area Communication	District Collector, Theni	Received	R0c.No.104/Kanimam/2024	09.12.2024	Annexure - 1
Mine Plan Approval Letter	Assistant Director, Dept. of Geology and Mining, Theni	Approved	Roc.No.104/Mines/2024	02.04.2025	Annexure-2
District Survey Report	Collector, Assistant Director, Geology & Mining Theni	Authenticated	As per S.O. 3611(E) dated 25.07.2018	10.06.2019	-
500m radius Cluster Letter	Assistant Director, Geology & Mining, Theni	Obtained	Roc.No. 104/Mines/2023	22.05.2025	Annexure-3
VAO NOC for features within 300m radius	VAO, Thimmarasanaickanur Bit-2 Village	obtained	-	17.04.2025	Annexure-4

### **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 (MoEFCC) requirements.

### **1.5.3 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, Tamil Nadu vide TOR Identification No. TO25B0108TN5292193N/2025 (F.No.12270), Dated: 25.07.2025. 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 to 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 MoEFCC the report has been divided into the following chapters and presented as follows:

### **1. Introduction**

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

### **2. Project Description**

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

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

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

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

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

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

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



## **6. Environmental Monitoring Program**

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

## **7. Additional Studies**

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

## **8. Project Benefits**

This chapter presents the benefits from this project

## **9. Environmental Management Plan**

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

## **10. Summary and Conclusion**

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

## **11. Disclosure of Consultant**

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

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## **2.0 PROJECT DESCRIPTION**

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

The proposed activity is the extraction of Rough Stone by open cast manual method of mining without blasting.

This project proposed to produce 1,52,260m<sup>3</sup> of Rough Stone and for the period of first 5 years with ultimate depth up to 35 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 Quarry located in Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu State. The area lies in the north latitude of 10°01'31.08"N to 10°01'37.17"N and eastern longitude of 77°38'22.55"E to 77°38'27.31"E and Toposheet number 58F/12. Location of the proposed project is shown in Figure 2.1 the satellite imagery of the project site is shown in Figure 2.2.

This proposed project area is classified as Government land and the applicant has obtained tender from the Government. The M.L area details are presented in below Table.

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**Table 2.1 Boundary Coordinates of the Project**

Corners	Co- ordinates	
	Latitude	Longitude
1	10° 01' 32.29"N	77° 38' 22.55"E
2	10° 01' 35.08"N	77° 38' 23.22"E
3	10° 01' 36.29"N	77° 38' 23.37"E
4	10° 01' 37.08"N	77° 38' 23.78"E
5	10° 01' 37.17"N	77° 38' 24.34"E
6	10° 01' 35.67"N	77° 38' 27.31"E
7	10° 01' 31.08"N	77° 38' 25.39"E
8	10° 01' 31.17"N	77° 38' 25.01"E
9	10° 01' 32.49"N	77° 38' 23.68"E

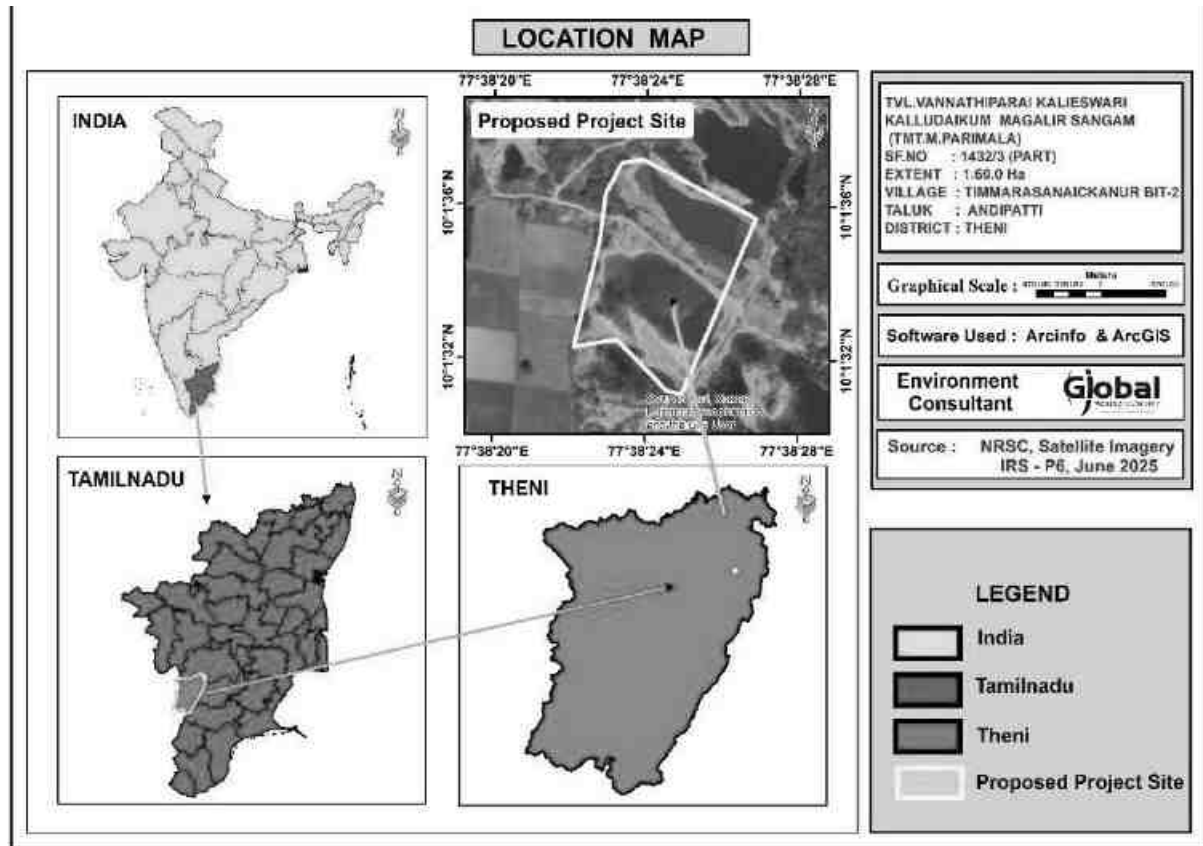
**Table 2.2 Mine Lease Area and its Ownership**

Location	S.F. No	Area in Ha	Name of the owner	Govt land	Remarks
Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu	1432/3 (Part)	1.60.0	Government Land	Yes	It is Government land the applicant has obtained tender from the Government Please refer Annexure -I.,
<b>Total</b>	<b>-</b>	<b>1.60.0</b>	<b>-</b>	<b>-</b>	

**Table 2.3 Site Connectivity**

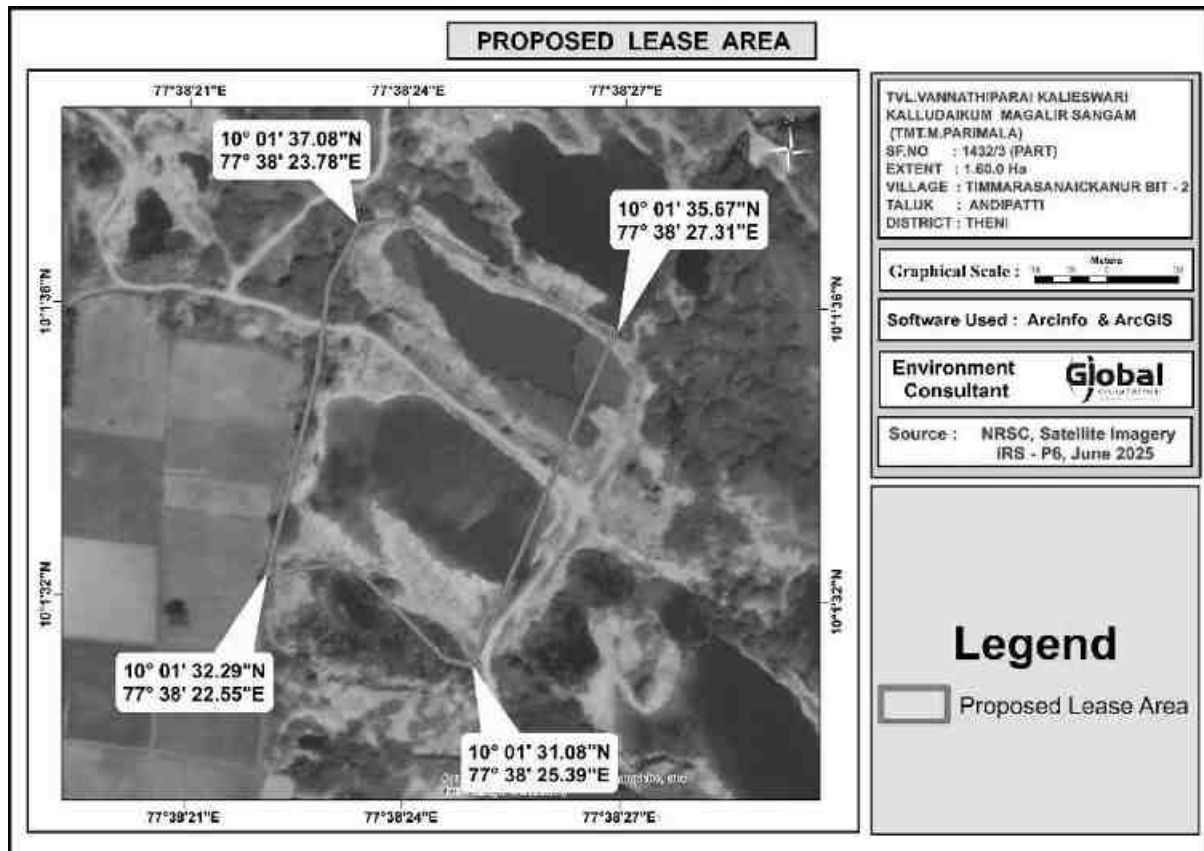
Nearest Roadway	The project site is approachable from Anaikaraipatti-Shelkarpatti village road- (SE). The National Highway (NH-85) Madurai- Bodinaickanur Road- 2.3 Km (S) The State Highway (SH-101) Devathanapatti-Varusanadu Road- 4.8Km (NW)
Nearest Village	Rajagopalanpatti Habitation – 388m, (NE)
Nearest Railway	Andipatti Railway Station 3.6km (S)
Nearest Airport	Madurai International Airport – 53 km (SE)

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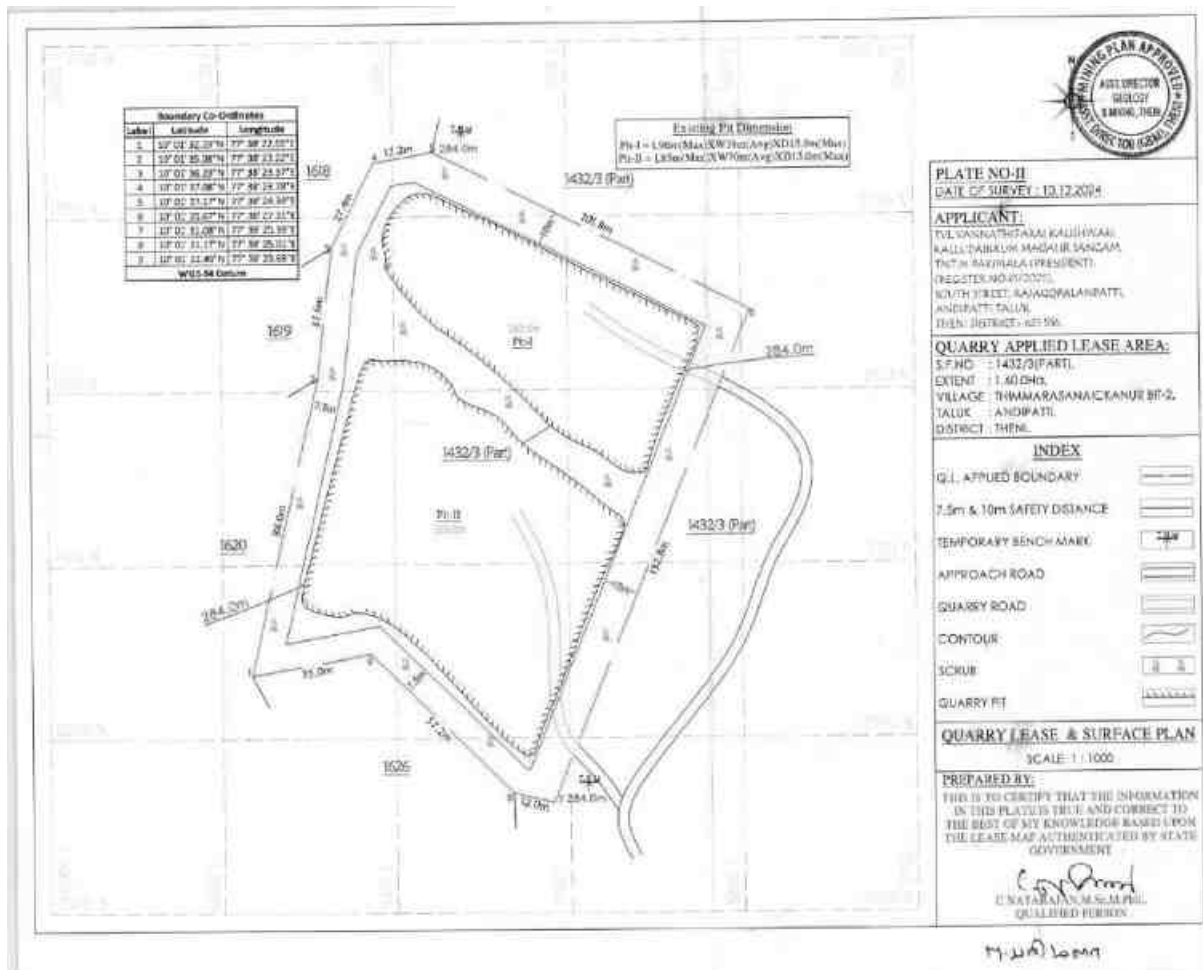
**Figure 2.1 Location Map**

**DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE QUARRY OF TVL.VANNATHIPARAI KALIESWARI KALLUDAIKUM MAGALIR SANGAM, TMT.M.PARIMALA (PRESIDENT) AT S.F.NO. 1432/3 (PART) OVER AN EXTENT OF 1.60.0 HA IN THIMMARASANAICKANUR BIT-2 VILLAGE, ANDIPATTI TALUK, THENI DISTRICT, TAMIL NADU**



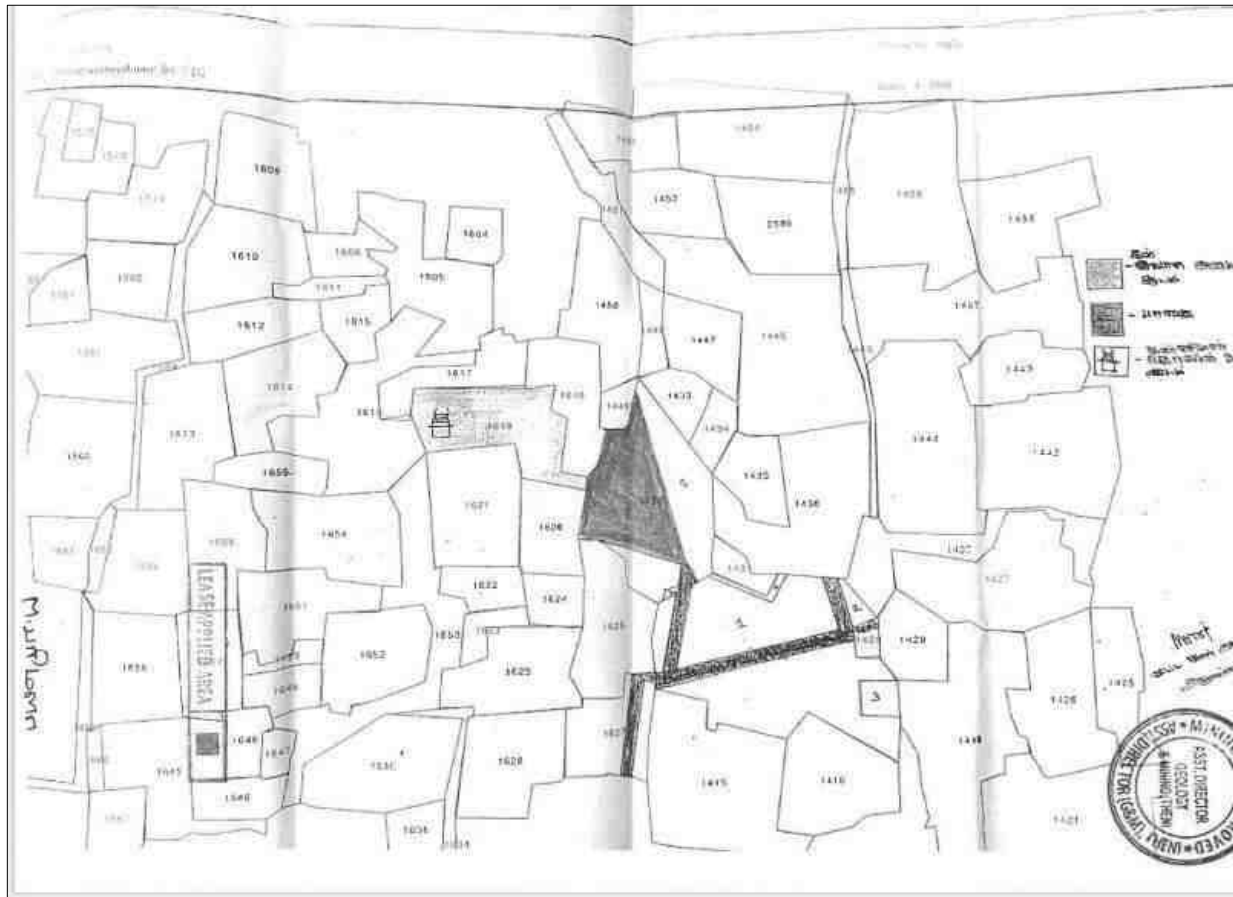
**Figure 2.2 Google Image of the project site**

**DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE QUARRY OF TVL.VANNATHIPARAI KALIESWARI KALLUDAIKUM MAGALIR SANGAM, TMT.M.PARIMALA (PRESIDENT) AT S.F.NO. 1432/3 (PART) OVER AN EXTENT OF 1.60.0 HA IN THIMMARASANAICKANUR BIT-2 VILLAGE, ANDIPATTI TALUK, THENI DISTRICT, TAMIL NADU**



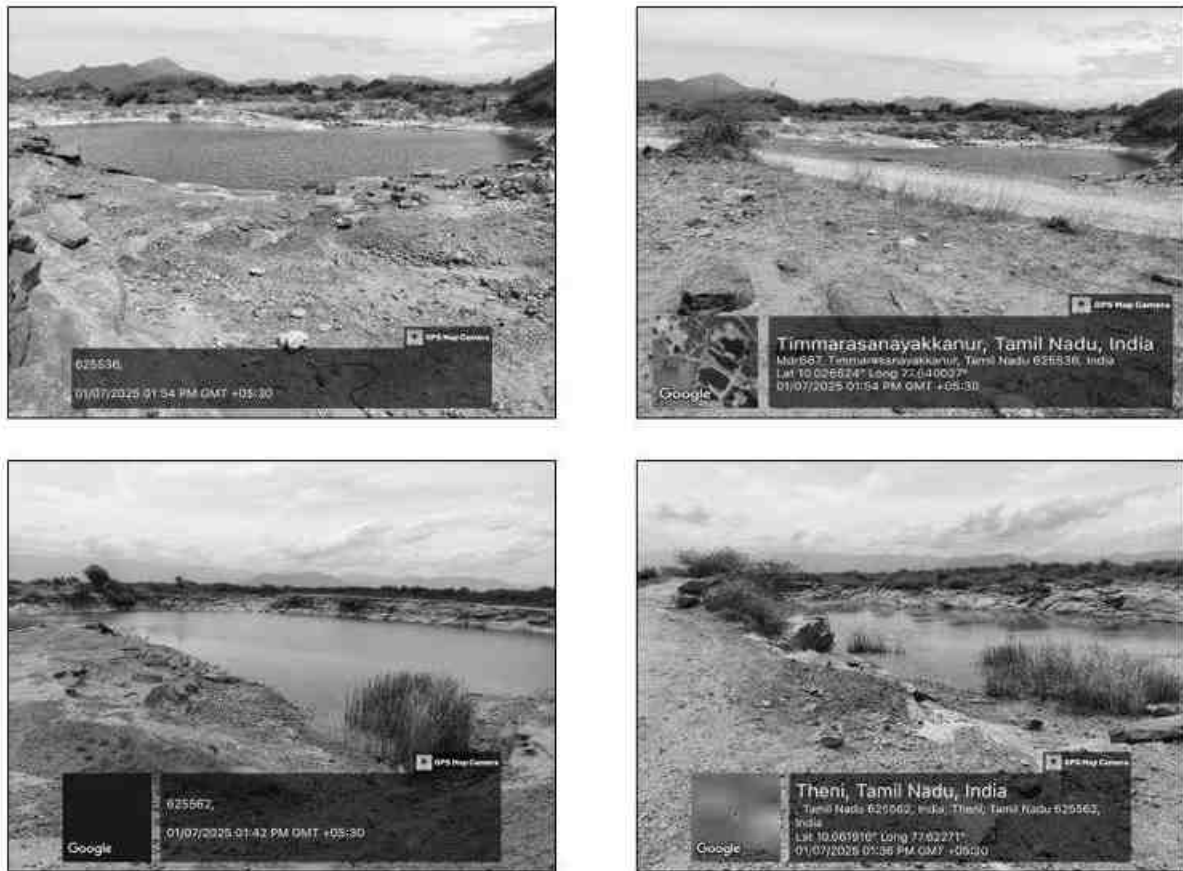
**Figure 2.3 Lease Plan**

**DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE QUARRY OF TVL.VANNATHIPARAI KALIESWARI KALLUDAIKUM MAGALIR SANGAM, TMT.M.PARIMALA (PRESIDENT) AT S.F.NO. 1432/3 (PART) OVER AN EXTENT OF 1.60.0 HA IN THIMMARASANAICKANUR BIT-2 VILLAGE, ANDIPATTI TALUK, THENI DISTRICT, TAMIL NADU**



**Figure 2.4 Village Map**

**DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE QUARRY OF TVL.VANNATHIPARAI KALIESWARI KALLUDAIKUM MAGALIR SANGAM, TMT.M.PARIMALA (PRESIDENT) AT S.F.NO. 1432/3 (PART) OVER AN EXTENT OF 1.60.0 HA IN THIMMARASANAICKANUR BIT-2 VILLAGE, ANDIPATTI TALUK, THENI DISTRICT, TAMIL NADU**



**Figure 2.5 Site Photographs**

## 2.4 LAND USE PATTERN OF THE PROJECT AREA

The entire project site is Government land and the allotted to PP for rough stone quarry operation by Government of Tamil Nadu through tender. The land use pattern of the mine lease area as of today and conceptual stage given in Table No. 2.4.

**Table 2.4 Land use pattern of the Project area**

Description	Present Area in Ha.	Area at the end of life of Quarry in Ha.
Quarrying pit	0.96.0	1.17.0
Infrastructure	Nil	0.01.0



Roads	0.01.0	0.01.0
Greenbelt	Nil	0.41.0
Unutilized	0.63.0	Nil
<b>Total</b>	<b>1.60.0</b>	<b>1.60.0</b>

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

The proposed activity is the extraction of Rough Stone by open cast mechanized mining method over an extent of 1.60.0 Ha and to produce 1,52,260m<sup>3</sup> of Rough Stone for the period of 5 years with ultimate depth upto 35 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 rough stone formation. The massive Gneissic Rock formation is noticed right from the surface and sloping towards southeastern side of the area, the altitude of the area is above 284m (maximum) from MSL. No major river is found nearby the lease applied area.

## **2.7 GEOLOGY**

### **2.7.1 REGIONAL GEOLOGY**

The Western Ghats comprises Charnockite Group of rocks while the plains are underlain by hornblende – biotite gneiss, silimanite- garnet-biotite gneiss. Alluvium quaternary sediments are spread almost in central part of the district. Around 70% of the total area is covered with charnockite followed by migmatite and khondalite. The high grade metamorphic rocks are well exposed in the Theni district on the moderate to steeply sloping hills. These rocks are characterized into three Groups viz. i. Khondalite Group comprising of quartzite, pyroxene granulite, calc gneiss / spinel gneiss, crystalline limestone, minor garnet-cordierite gneiss and garnetiferous quartzo feldspathic gneiss (leptynite). ii. Charnockite Group

consisting of acid charnockite and pyroxene granulite. iii. Migmatite Complex represented by hornblende-biotite gneiss, grey granitic gneiss and pink migmatite.

### **2.7.2 LOCAL GEOLOGY**

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

The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Charnockite is part of peninsular Gneisses, a high-grade metamorphic rock.

The strike of the Charnockite formation is N40°E– S40°W with vertical dipping. The general geological succession of the area is given as under.

<b>AGE</b>		<b>ROCK TYPE</b>
Recent	-	Topsoil
	Unconformity	
Archaean	-	Dolerite dyke, Charnockite.
		Peninsular Gneissic complex and Calc Gneiss

## 2.8 RESOURCES AND RESERVES

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

**Table 2.5 Available Geological Resources**

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m <sup>3</sup>	Geological Resources of Rough stone in m <sup>3</sup>
XY-AB	I	10	18	5	900	900
	II	10	18	5	900	900
	III	10	18	5	900	900
	IV	57	120	5	34200	34200
	V	57	120	5	34200	34200
	VI	57	120	5	34200	34200
	VII	57	120	5	34200	34200
	Total					139500
XY-CD	I	9	119	5	5355	5355
	II	9	119	5	5355	5355
	III	9	119	5	5355	5355
	IV	9	119	5	5355	5355
	V	9	119	5	5355	5355
	VI	9	119	5	5355	5355
	VII	9	119	5	5355	5355
	Total					37485
XY-EF	I	8	18	5	720	720
	II	8	18	5	720	720
	III	8	18	5	720	720
	IV	75	109	5	40875	40875
	V	75	109	5	40875	40875
	VI	75	109	5	40875	40875
	VII	75	109	5	40875	40875
	Total					165660
Grand Total						342645

The Geological Resource of Rough Stone: 3,42,645m<sup>3</sup>

### 2.8.1 MINEABLE RESERVES

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

**Table 2.6 – Available Mineable Reserves**

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m <sup>3</sup>	Mineable Reserves of Rough stone in m <sup>3</sup>
XY-AB	IV	42	93	5	19530	19530
	V	37	83	5	15355	15355
	VI	32	73	5	11680	11680
	VII	27	63	5	8505	8505
	Total					55070
XY-CD	I	9	102	5	4590	4590
	II	9	92	5	4140	4140
	III	9	82	5	3690	3690
	IV	9	72	5	3240	3240
	V	9	62	5	2790	2790
	VI	9	52	5	2340	2340
	VII	9	42	5	1890	1890
	Total					22680
XY-EF	IV	63	81	5	25515	25515
	V	58	71	5	20590	20590
	VI	53	61	5	16165	16165
	VII	48	51	5	12240	12240
	Total					74510
Grand Total						152260

The Available mineable reserve is computed as 1,52,260m<sup>3</sup> of Rough stone upto a depth of 35m (below ground level) only.

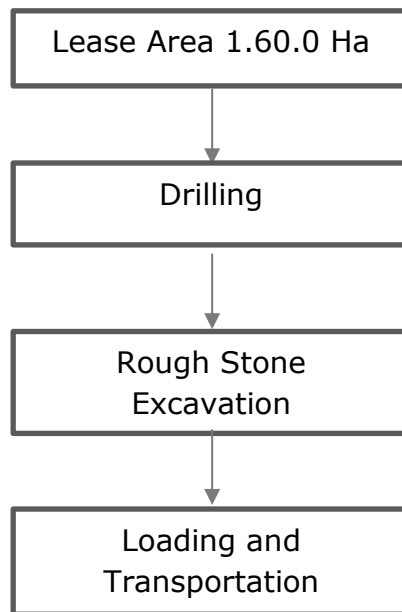
## **2.9 PROCESS DESCRIPTION AND TECHNOLOGY**

### **2.9.1 PROCESS DESCRIPTON**

The quarry operation involves jack hammer drilling, JCB excavation and manual loading/ by using JCB. The excavated Rough stone will be transported directly 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.

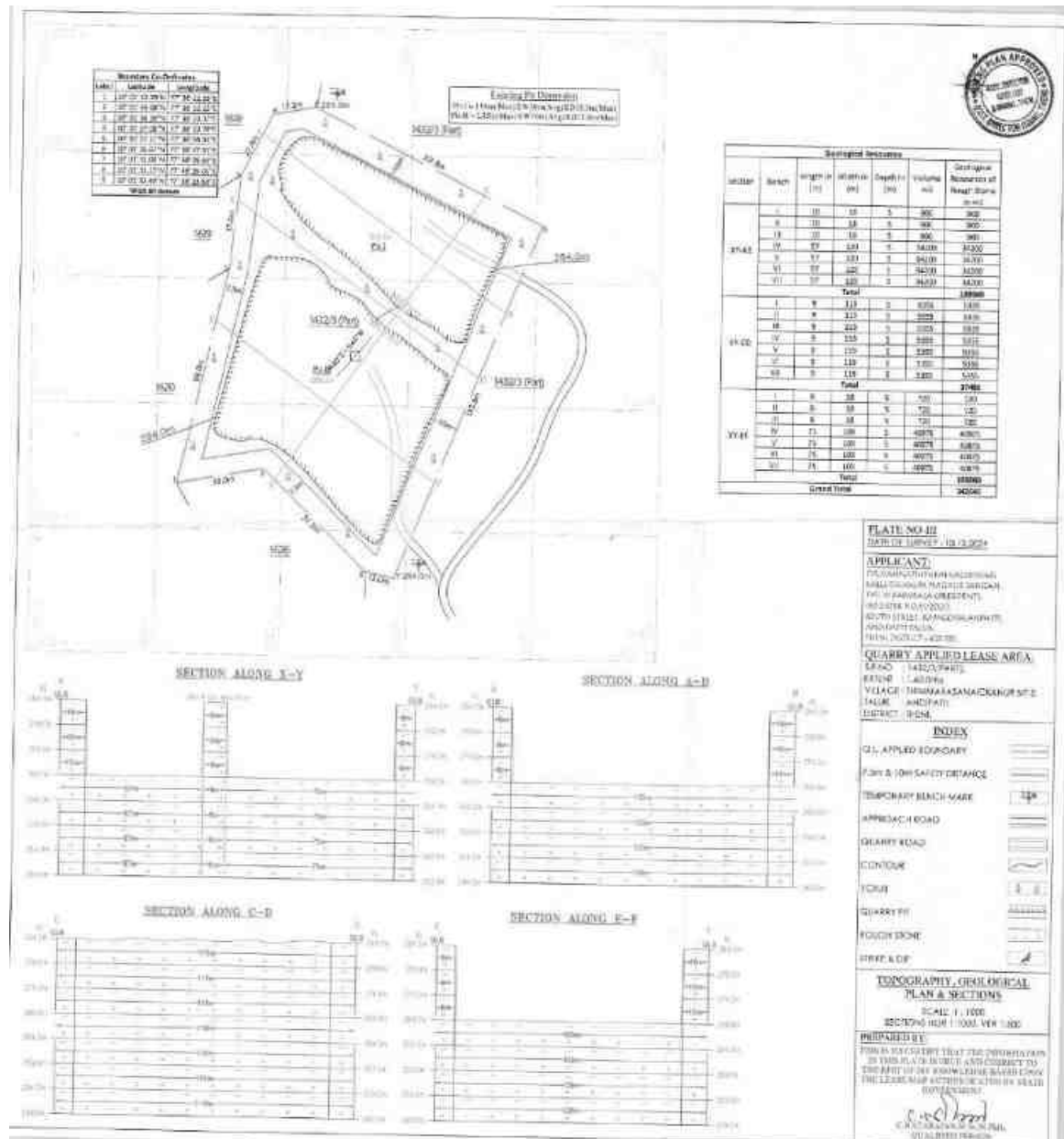
- Splitting of rock mass of considerable volume from the parent rock mass by jackhammer drilling, JCB excavators are used for loading the Rough Stone from pithead to the needy buyers.

The process diagram is provided in Figure 2.6. The production plan and cross section for the 5 years period and conceptual plan and conceptual cross section is given in Figure No. 2.9 and Figure No. 2.10.



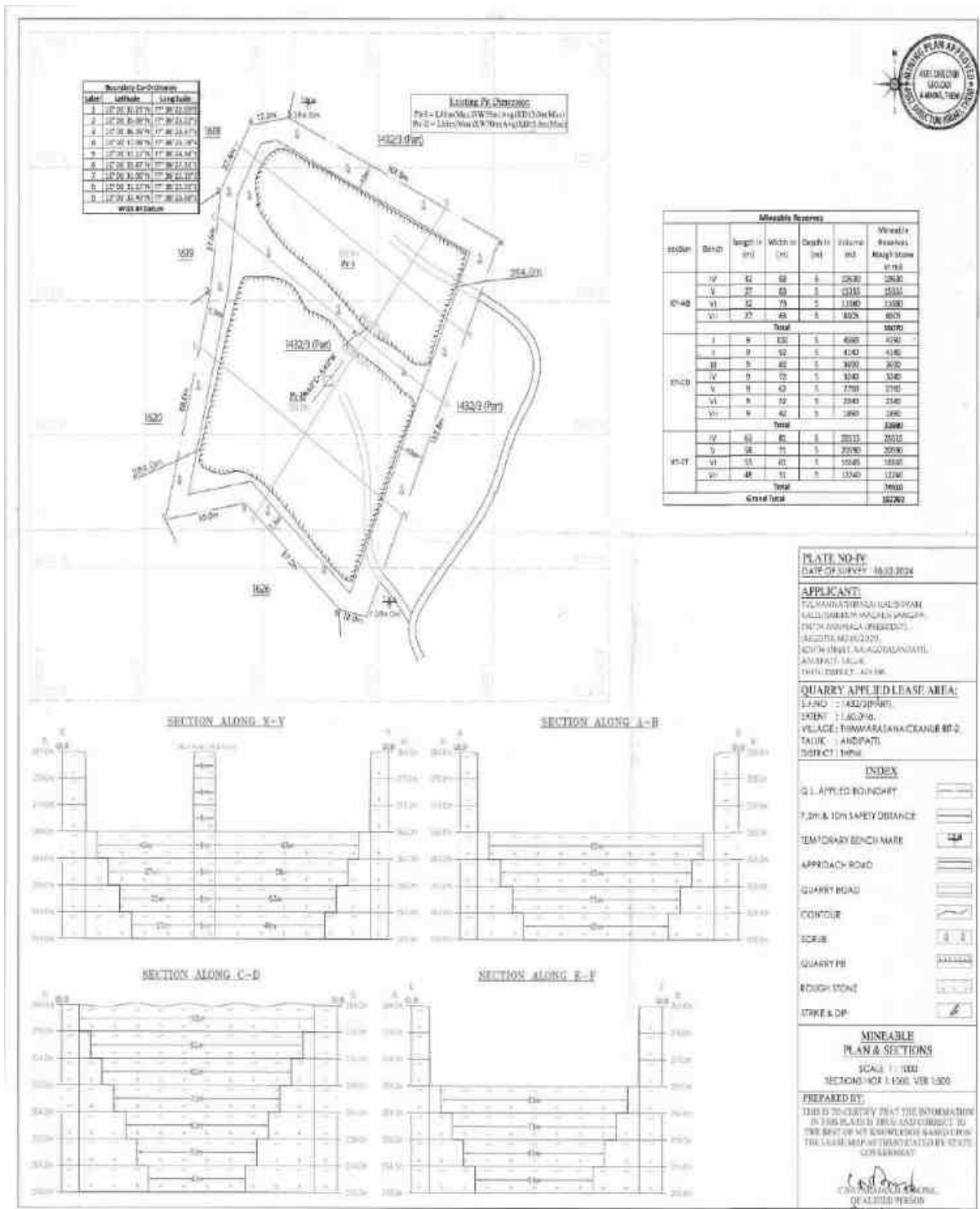
**Figure 2.6 Process Flow Diagram**

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**Figure 2.7 Topography and Geological, Plan & Sections**

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**Figure 2.8 Mineable Plan & Sections**

**Table 2.7 – Machinery Details**

S.NO	Name of the Equipment	Capacity	Requirement
1	Jack hammer	32 mm Dia	1
2	Compressor	-	1
3	JCB Excavator		1
4	Tippers	5 / 10 T	2

### 2.9.2 TYPE OF EXPLOSIVE AND STORAGE

Not applicable. There is no blasting proposed for the rough stone operation. Slurry explosive is proposed for shattering and heaving effect for removal of rough stone. No deep hole drilling or primary blasting is proposed.

### 2.9.3 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 2.9.

**Table 2.8 Year wise Production Plan**

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m3	Rough stone in m3
I	XY-AB	IV	42	93	5	19530	19530
	XY-CD	I	9	102	5	4590	4590
		II	9	92	5	4140	4140
		III	5	82	5	2050	2050
	Total						30310
II	XY-CD	III	4	82	5	1640	1640
		IV	9	72	5	3240	3240
	XY-EF	IV	63	81	5	25515	25515
	Total						30395
III	XY-EF	V	58	71	5	20590	20590
	XY-CD	V	9	62	5	2790	2790

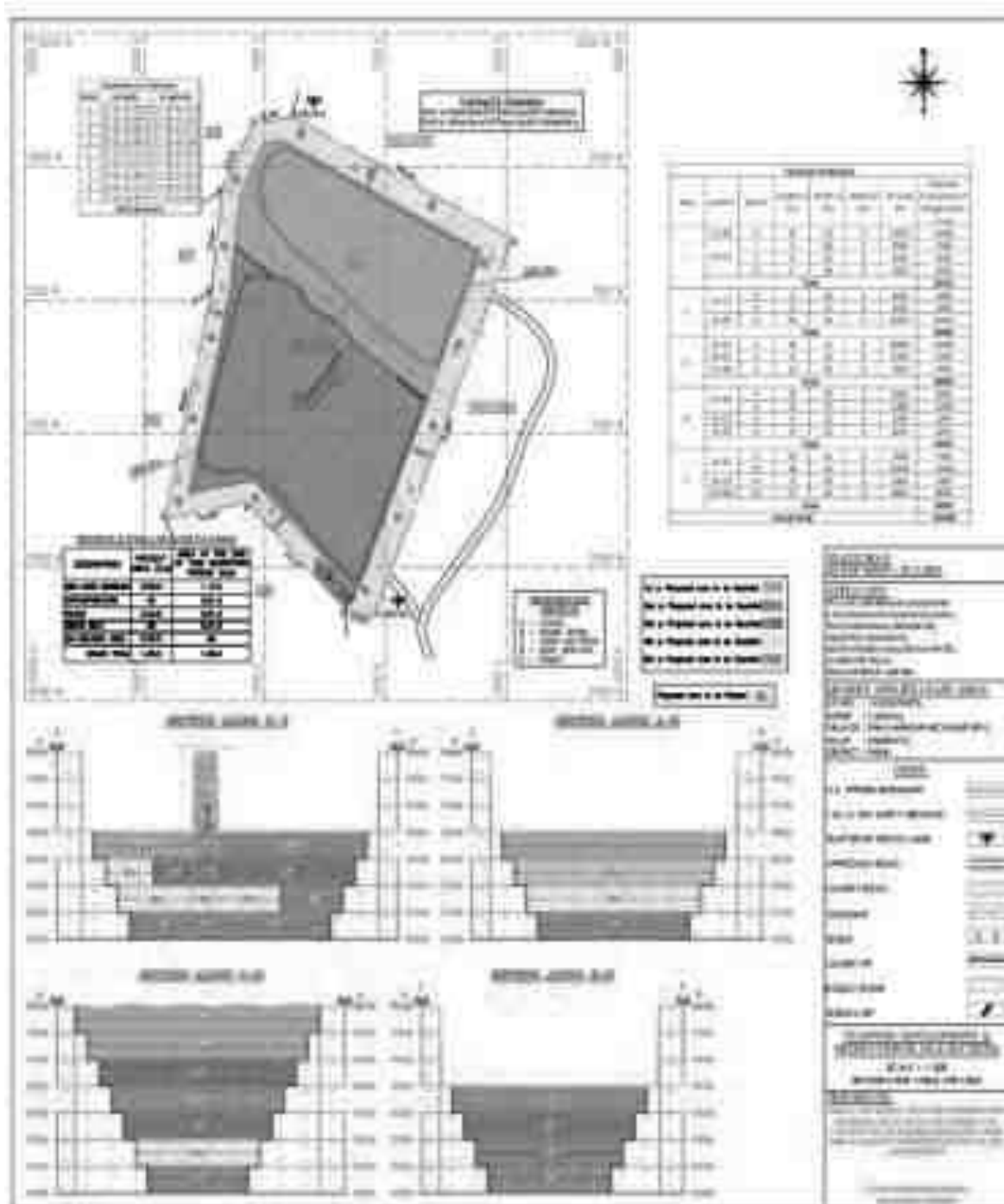


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	XY-AB	V	17	83	5	7055	7055
	Total						30435
IV	XY-AB	V	20	83	5	8300	8300
		VI	32	73	5	11680	11680
	XY-CD	VI	9	52	5	2340	2340
	XY-EF	VI	27	61	5	8235	8235
	Total						30555
V	XY-EF	VI	26	61	5	7930	7930
		VII	48	51	5	12240	12240
	XY-CD	VII	9	42	5	1890	1890
	XY-AB	VII	27	63	5	8505	8505
	Total						30565
Grand Total							152260

The Peak production quantity of Rough Stone - 1,52,260 m<sup>3</sup>

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**Figure 2.9 Year wise Production plan and sections**

#### **2.9.4 DISPOSAL OF WASTE**

There is no waste anticipated in this rough stone Quarry. The entire quarried minerals will be utilized. The topsoil generated will be preserved in the safety zone, later will be utilized for afforestation purpose.

#### **2.10 CONCEPTUAL MINING PLAN / FINAL MINE CLOSURE PLAN**

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

The ultimate pit size is designed based on certain practical parameters such as economical depth of mining, safety zones, permissible area, etc. Conceptual cross section and mine closure plan is given in Figure 2.10.

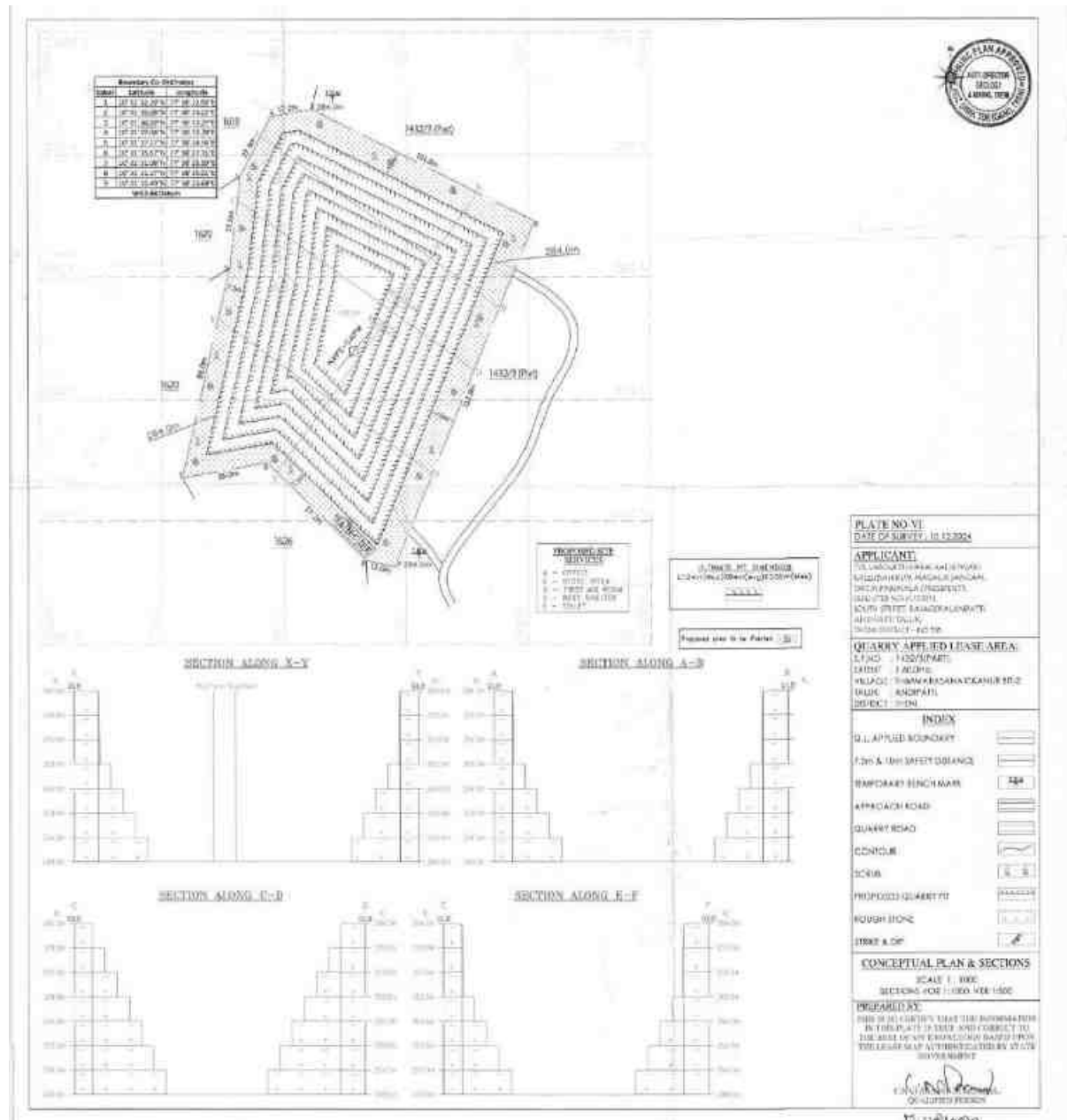
**Table 2.9 - Ultimate Pit Dimension**

Ultimate Pit dimension (M) end of Mining plan Period			
Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in (m)
I	124	94	35m (below ground level)

#### **Land use pattern of the Project area**

Description	Present Area in Ha.	Area at the end of life of Quarry in Ha.
Quarrying pit	0.96.0	1.17.0
Infrastructure	Nil	0.01.0
Roads	0.01.0	0.01.0
Greenbelt	Nil	0.41.0
Unutilized	0.63.0	Nil
<b>Total</b>	<b>1.60.0</b>	<b>1.60.0</b>

- At the end of life of mine, the excavated mine pit / void of 1.17.0 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 (0.41.0 Ha.) will be developed along the safety barrier and top benches and 0.02 ha are approach road and Infrastructure.



### Figure 2.10 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 4.0 KLD. The required water will be procured from outside agencies initially and later rainwater harvested in the mine pit shall be used other than drinking purpose.

**Table 2.10 Details of Water requirement**

<b>Activity</b>	<b>Water Requirement in KLD</b>
Drinking & Domestic	1.0
Dust Suppression	1.5
Greenbelt Development	1.5
<b>Total</b>	<b>4.0</b>

#### **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. The Total fuel consumption is around 1,21,808 litres of HSD for the entire period of life (5 years).

#### **2.11.4 EMPLOYMENT GENERATION**

The project will provide employment opportunities totally to 20 persons directly and 20 indirectly.

Skilled	Operator	2 Nos
	Mechanic	1 No
	Mines Manager	1 No
	Fore Man / Mate	2 Nos
Semi-Skilled	Driver	2 Nos
Unskilled	Labours	12 Nos
<b>Total</b>		<b>20 Nos</b>

#### **2.11.5 VEHICULAR TRAFFIC DENSITY**

The final product from the Quarry will be transported through the Anaikaraipatti – Shellkarpatti village road located at 150 m in southeastern side of the area.

## **Mineral Transportation**

<b>Table 2.11 Proposed Mineral Transportation</b>		
<b>Production Per day in tons</b>		
<b>Quarry</b>	<b>Total Mineral in tons per day</b>	<b>No. of Lorry Load per day</b>
P1 (Proposed)	280.17	28
P2 (Proposed)	438	44
P3 (Proposed)	77.08	8
<b>Total</b>	<b>795.25</b>	<b>80</b>

The proposed projects will bring 80 trips per day.

## **METHODOLOGY**

### **Vehicle Count**

The vehicles passing through the road (in both ways) were counted separately for 24 hours at the one selected 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.

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**Figure 2.11 Mineral Transport Route**

**OPERATING CONDITION OF ROAD IN TERMS OF V/C AS PER INDIAN ROADS CONGRESS (IRC) 106 - 1990**

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	0.69 – 0.88

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	weekday, or a functional urban highway during rush hour)	
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 2.12 Existing Traffic Flow**

Station Code	HMV		LMV		2/3 Wheelers		Total PCU
	No	PCU	No	PCU	NO	PCU	
1	52	156	43	43	154	77	276

**PCU conversion factor: HMV (Trucks and Bus) = 3, LMV (Car, Jeep and Auto) = 1 and 2/3 Wheelers = 0.5**

**Table 2.13 – Mineral Hourly Transportation Requirement**

Capacity of trucks	No Trips per day Cumulatively	Volume in PCU	PCU Per hour considering 8 HOURS
10 tonnes	80	240	30

**Table 2.14 - Summary of Traffic Volume**

Route	Existing Traffic Survey in PCU	Incremental Traffic Survey due to project	Total Traffic Survey Volume	Hourly capacity in PCU as per IRC -1960 guidelines
Anaikaraipatti – Shellkarpatti village road	276	30	306	1500



- Due to this project the existing traffic volume will not exceed
- As per the IRC 1960 this existing village road can handle 1500 PCU in hour hence there will not be any conjunction due to this proposed transportation.

**Table 2.15 - Modified Level of Service**

Sampling Location	Existing Volume (PCU/hr)	Existing Volume/ Capacity ratio	Additional Volume (PCU/hr)	Modified Volume (PCU/hr)	Modified Volume/ Capacity ratio	Modified LOS
Anaikaraipatti – Shellkarpatti village road	276	0.18	30	0.02	0.20	A*

(\* A – Free Flow)

#### **2.11.6 INFRASTRUCTURE REQUIREMENT**

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

#### **2.11.7 PROJECT COST**

The total project cost of this rough stone Quarry is **Rs.79.08 Lakhs**.

#### **2.11.8 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 the 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.
- Water quality analysis in 9 different locations (7 Ground Water + 2 Surface Water)
- Noise levels monitoring in 7 different locations

- Soil quality analysis in 7 locations.
- Flora & Fauna status.
- 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 to May 2025.

### **3.4 MONITORING LAB**

The baseline information for air, water, noise, and soil was analysed 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 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**

S. No	Name of the Structure	Distance and Direction	Ownership	Occupant	Type	Age
S1	Labourer's shed	63m (S)	Does not belong to the PP	Nil	Masonry with GI Sheet	More than 5 years

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S2	Abandoned Structure	103m (SE)		Nil	Masonry	> 8 years
S3	Abandoned Structure	107m (SE)		Nil	Masonry	> 5 years
S4	Abandoned Structure	122m (SE)		Nil	Masonry	> 8 years
S5	Farm House	139m (SE)		2	Masonry	> 8 years
S6	Agricultural shed	174m (SW)		Nil	GI Sheet	> 8 years
S7	Temple	175m (SE)		Nil	Masonry with GI Sheet	> 8 years
S8	Farm House	210 (NW)		Nil	Masonry	> 5 years
S9	Kannimar Temple	285m (NW)		Nil	Masonry with GI Sheet	> 5 years



**I1- Kannimar Temple - 285m (NW)**



**Figure 3.1 Google Image showing structures located within 300 m radius**

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**S1- Labourer's Shed - 63m (S)**



**S2- Abandoned Structure - 103m (SE)**



**S3- Abandoned Structure - 107m (SE)**



**S4- Abandoned Structure - 122m (SE)**



**S5- Farm House- 139m (SE)**



**S6- Agricultural Shed - 174m (SW)**



**S7- Temple -175m (SE)**



**S8- Farm House - 210m (NW)**

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**S9- Kannimar Temple - 285m (NW)**

**Figure 3.2 Photographs of the structures located within 300 m radius**



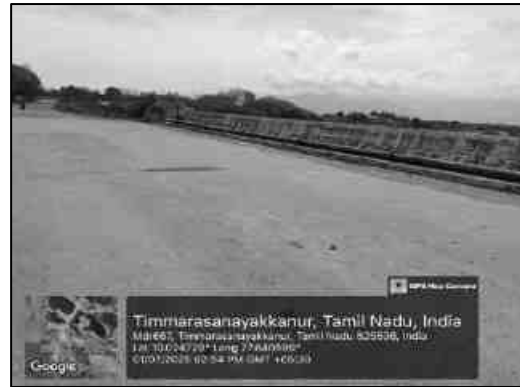
**Figure 3.3 Environmental Features Within 500m Radius**



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**E1- Canal (58) - 92m (N)**



**E2- (MDR 667) Andipatty - Pullimancombai 112m (S)**



**E3- Odai - 205m (N)**



**E4- Odai - 211m (E)**



**E5- Odai - 238m (W)**

### 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**

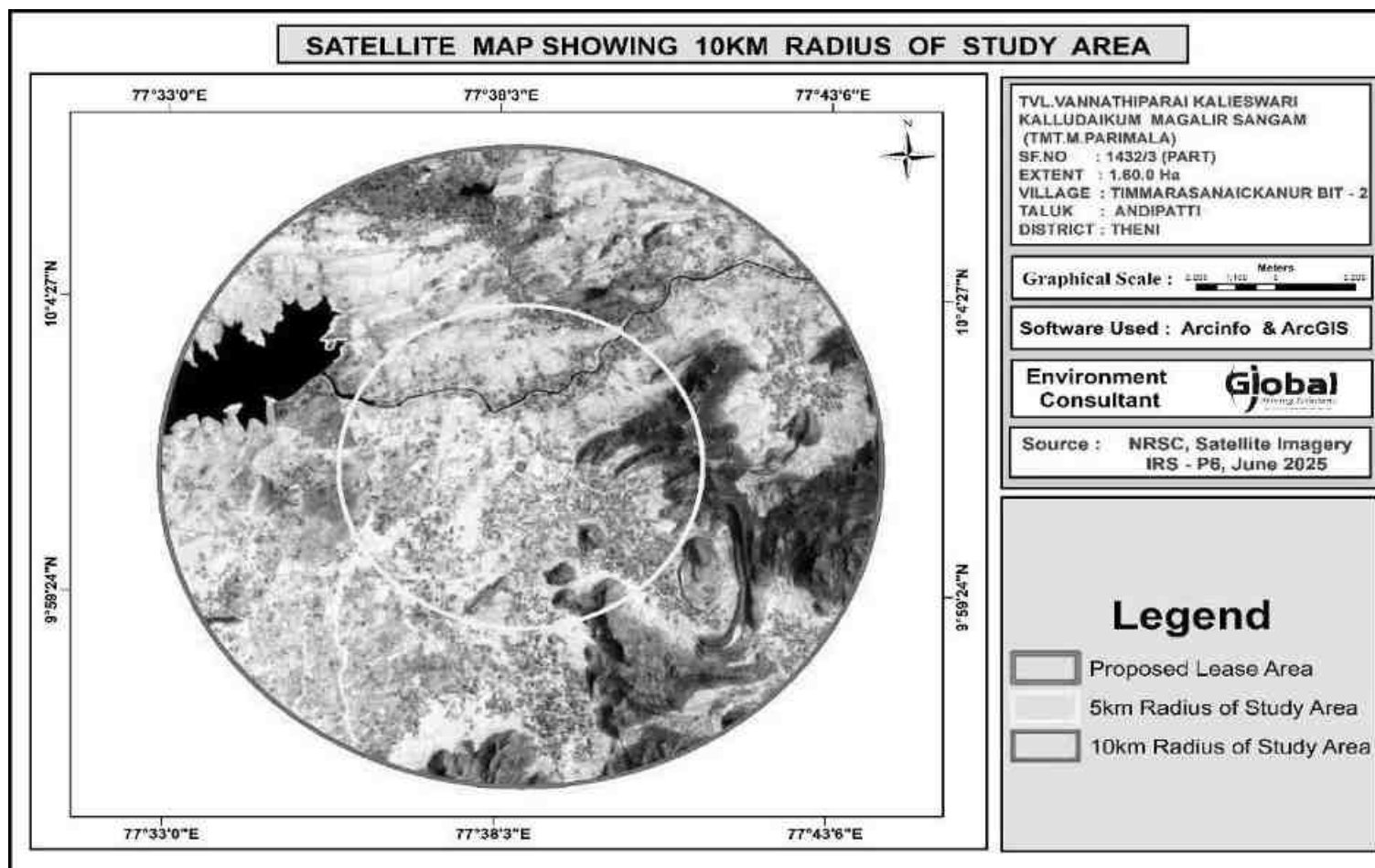
S.NO	Particulars	Description
1.	Latitude & Longitude	Latitude: 10°01'31.08"N to 10°01'37.17"N Longitude: 77°38'22.55"E to 77°38'27.31"E
2.	The altitude of the area	284 m from MSL
3.	Topography	Plain Terrain
4.	Land use of M.L. area	Government Land
5.	Extent of the Lease area	1.60.0 Ha.
6.	Nearest Highway	NH-85 - Madurai - Bodinaickanur Road- 2.3km, (S) SH-101 - Devathanapatti - Varusanadu Road- 4.8km, (NW)
7.	Nearest Railway Station	Andipatti Railway Station, 3.6km (S)
8.	Nearest airport	Madurai International Airport, 53km (SE)
9.	Nearest Village	Rajagopalanpatti Habitation, 388m (NE)
10.	Nearest Town	Andipatti 2.1km, SW
11.	Water Bodies	Odai 92m(N) Odai 198m(N) Odai 224m(SW) Odai 294m(SE) Vaigai River 1.8km(N) Periyar Main Canal 2.0km(N) Mavuttu Odai 3.5km(NW) Varaha River 4.4km(N) Vaigai Dam 6.2km(NW)

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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)	Srivilliputhur Megamalai Tiger Reserve, 8.7km (S)
14	Reserved / Protected Forests	Andipatti Northern Block R.F. – 1.4 km (E) Andipatti Southern Block R.F. – 3.8 km (SE) Rajadani R.F. – 8.5 km (E)
15	Defense Installations	NIL within 10 km radius
16	Seismic Zone	Zone – II (Least Active)
17	Other Industries in the study area	NIL within 10 km radius
18	Interstate boundary	NIL

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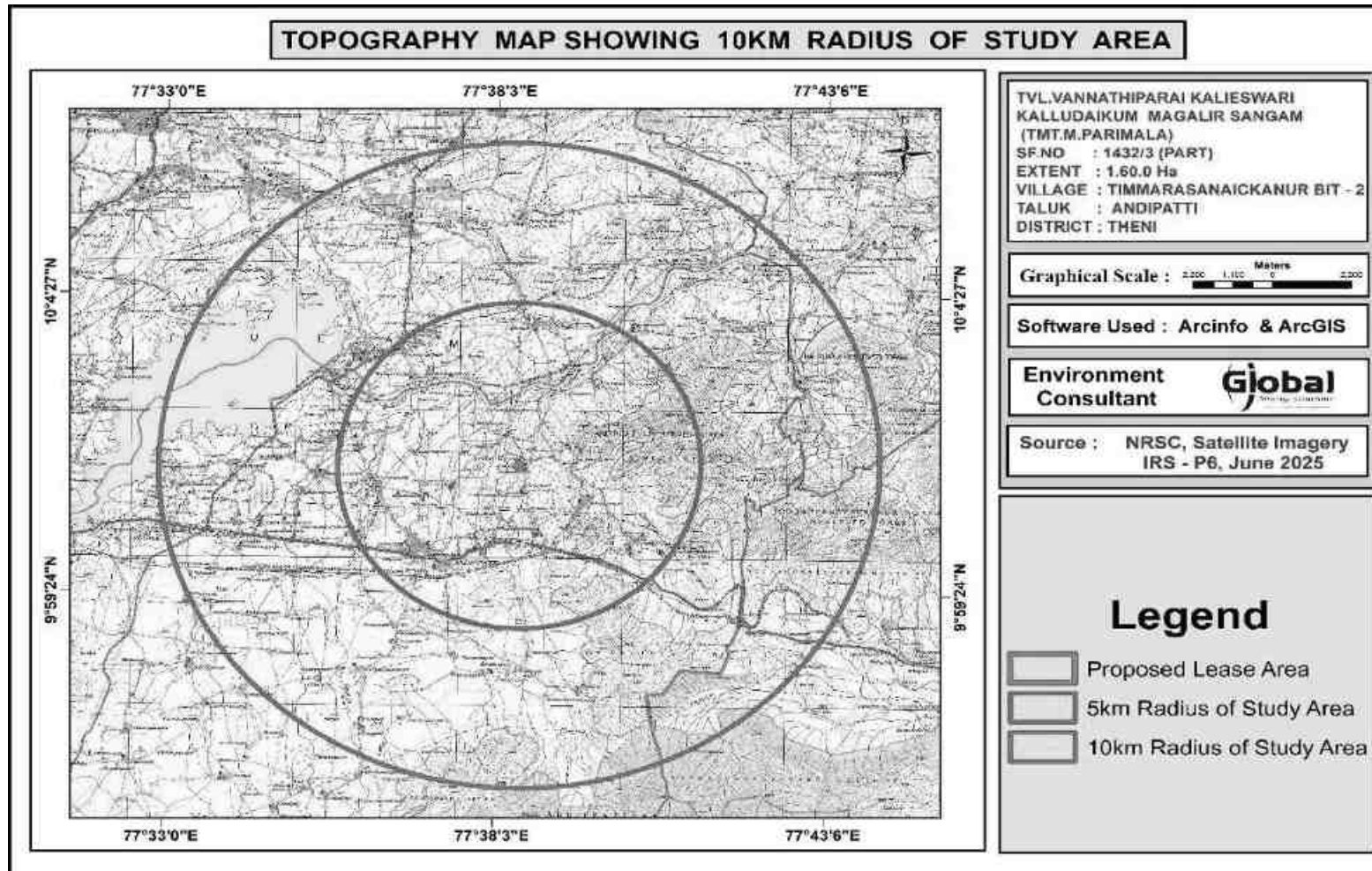
**Figure**



### 3.4 Satellite Image of the Study Area

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**Figure**



**3.5 Topo map Showing Study Area**

### **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**

The climate of Theni district in the plains, the temperatures range from a minimum of 13° C to a maximum of 39.5° C. In the hills, the temperature varies as low as from 4-5° C to 25° C. The district is known for its salubrious climate, hills and lakes. Since the district is situated on the foot of the Western Ghats and adjoining Kerala State, the district experience cool climate. However, from March to July, the temperature increases.

The district receives rainfall under the influence of both the southwest and northeast monsoons. The rainfall data from 3 stations viz. Periyakulam, Bodinaikanur and Uthanapalayam for the period 99 years (1901-1999) have been considered for the analysis. Normal annual rainfall is of the order of 791.2 mm out of which 47% (375.5) received during NE Monsoon and 22% (172.7) is received during SW monsoon. (Source: cgwb 2008)

**Table 3.3 Rainfall Data**

<b>Actual Rainfall in mm</b>					<b>Average rainfall for 5 years in mm</b>
<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	
1105.4	786.1	922.3	1264.2	1280.2	1071.64

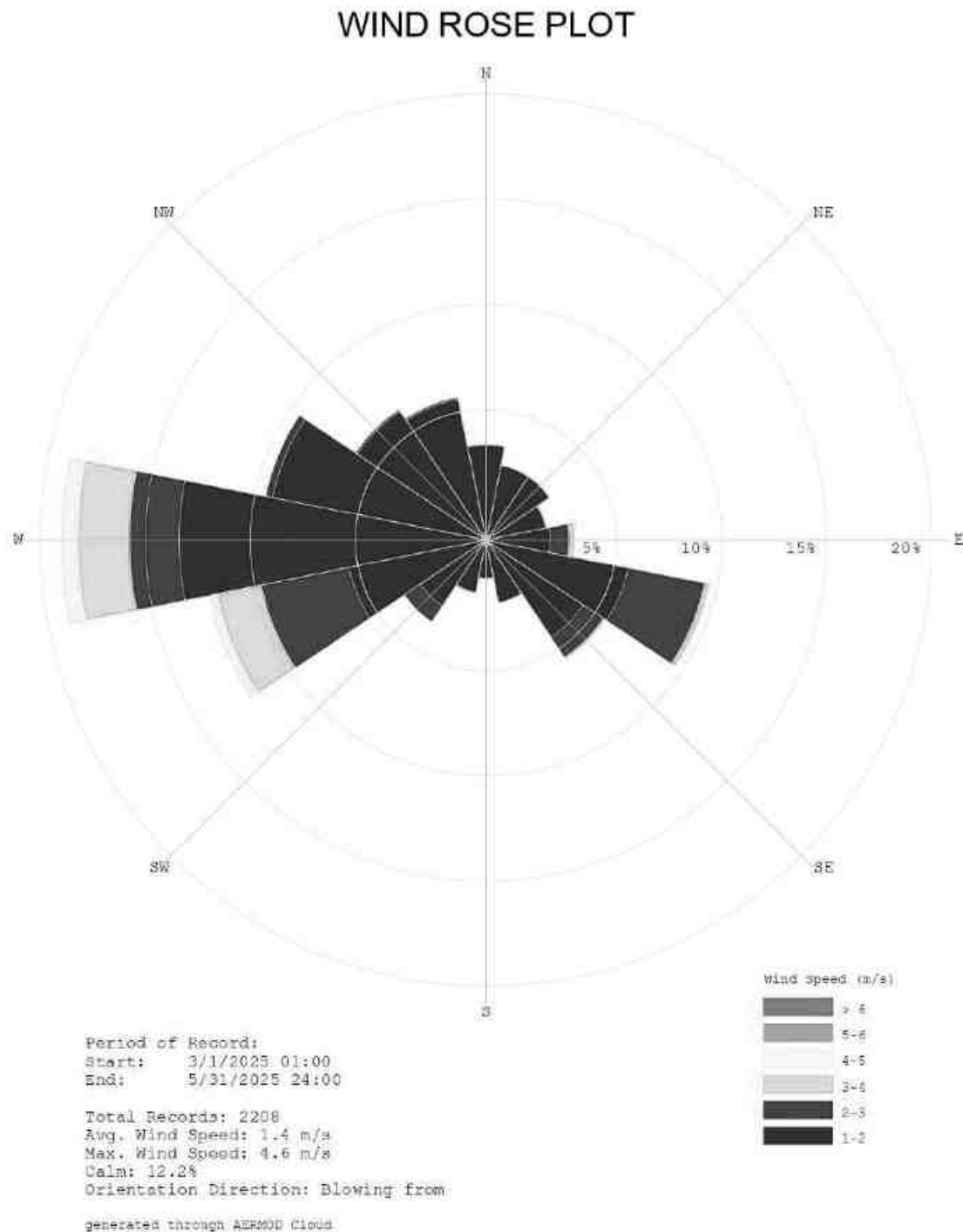
Source: <https://hydro.imd.gov.in>

#### **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 (0C)	Min 37.47
		Max. 39
		Avg 38.24
2.	Relative Humidity (%)	Min 16
		Max 63.08
		Avg 39.54
3.	Wind Speed (km/h)	Min 4
		Max 10
		Avg 7
4.	Predominant Wind Direction	W



**Figure 3.6 Wind Rose Diagram – Blowing From (March to 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**

<b>Air Quality Monitoring</b>		
1.	Monitoring Period	Pre Monsoon (March to May 2025)
2.	Monitoring Location	The monitoring locations for ambient air study is given in Table – 3.6 and Figure 3.8.
<b>Methodology</b>		
3.	A. Sampling	(IS-5182:Part 1:2018)
	B. Analysis	
<b>Parameters</b>		<b>Protocol</b>
4.	Particulate Matter (PM <sub>10</sub> )	Gravimetric (IS 5182: Part 23:2017)
	Particulate Matter (PM <sub>2.5</sub> )	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 to May 2025. The baseline data of ambient air has been generated for PM<sub>10</sub>, PM<sub>2.5</sub>, Sulphur Dioxide (SO<sub>2</sub>), Nitrogen Dioxide (NO<sub>2</sub>) 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 1.8 to 2.2 m 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.

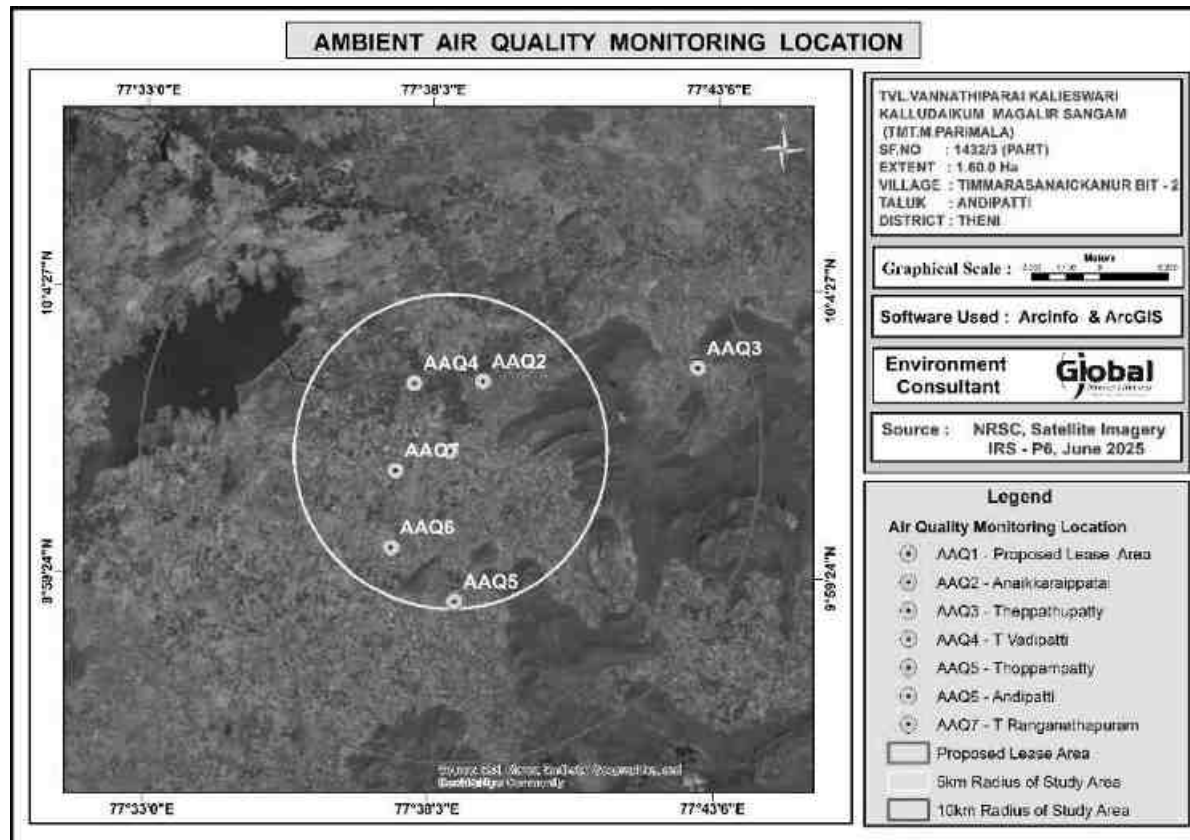
### **3.7.2.3 AMBIENT AIR QUALITY MONITORING STATIONS**

Seven (7) monitoring stations were set up in the study area as depicted in Figure 3.7 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	Code	Project Location	Latitude	Longitude
1	AQ1	Project Site 1 (Parimala)	10° 1'35.05"N	77°38'23.99"E
2	AQ2	Anaikaraipatti	10° 2'44.84"N	77°38'54.67"E
3	AQ3	Theppathupatty	10° 3'4.52"N	77°42'45.72"E
4	AQ4	T. Vadipatty	10° 2'45.76"N	77°37'44.37"E
5	AQ5	Thoppampatti	9°58'56.14"N	77°38'29.37"E
6	AQ6	Andipatti	10° 0'5.12"N	77°37'6.84"E
7	AQ7	T.Renganavaram	10° 1'12.50"N	77°37'25.58"E

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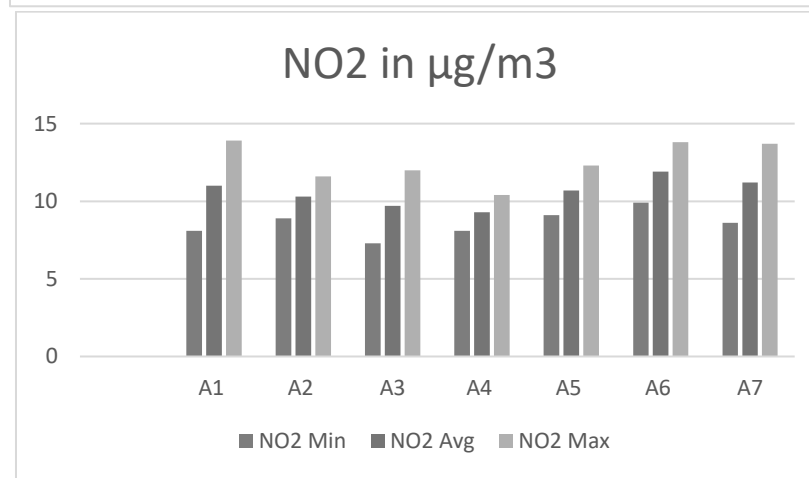
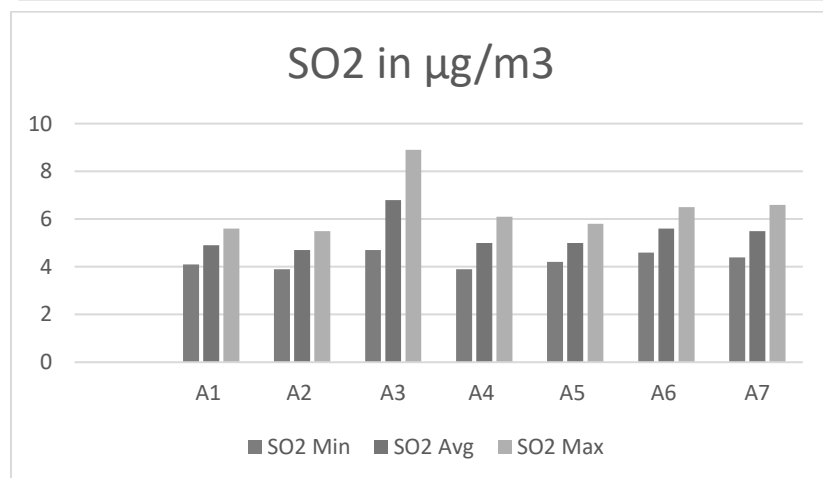
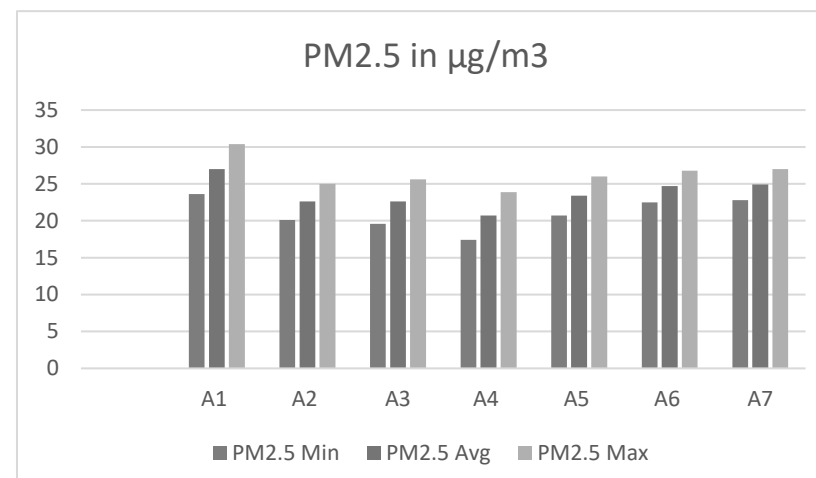
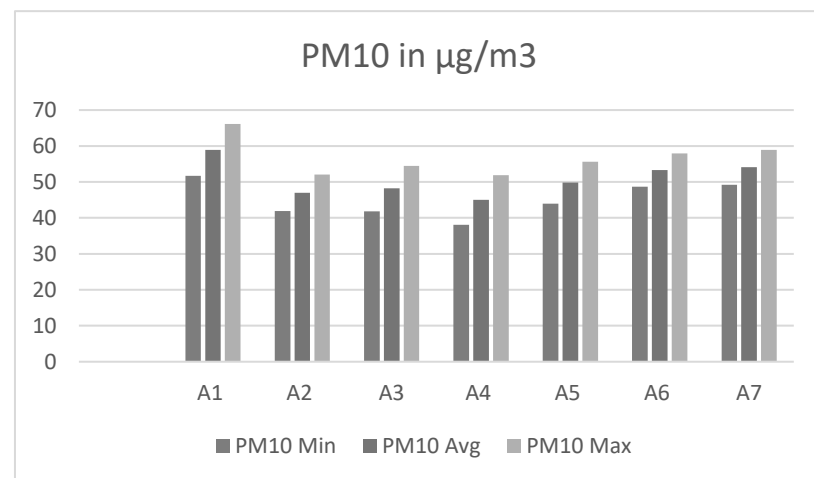
**Figure 3.7 Ambient Air Quality Monitoring Locations**

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**Table 3.7 Ambient Air Quality Data**

Ambient Air Quality											All Value in µg/m3		
S.NO	Parameters	PM10			PM2.5			SO2			NO2		
	Locations	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
1	A1 - Mine Lease Area	51.7	58.9	66.1	23.6	27.0	30.4	4.1	4.9	5.6	8.1	11.0	13.9
2	A2 - Anaikaraipatti	41.9	47.0	52.1	20.1	22.6	25.0	3.9	4.7	5.5	8.9	10.3	11.6
3	A3 - Theppathupatty	41.8	48.2	54.5	19.6	22.6	25.6	4.7	6.8	8.9	7.3	9.7	12.0
4	A4 - T. Vadipatty	38.1	45.0	51.9	17.4	20.7	23.9	3.9	5.0	6.1	8.1	9.3	10.4
5	A5 - Thoppampatti	44.0	49.8	55.6	20.7	23.4	26.0	4.2	5.0	5.8	9.1	10.7	12.3
6	A6 - Andipatti	48.7	53.3	57.9	22.5	24.7	26.8	4.6	5.6	6.5	9.9	11.9	13.8
7	A7 -T.Renganavaram	49.2	54.1	58.9	22.8	24.9	27.0	4.4	5.5	6.6	8.6	11.2	13.7
8	<b>CPCB NAAQS 2009</b>	<b>100</b>			<b>60</b>			<b>80</b>			<b>80</b>		

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**Figure –3.8 - Graphical Representation of Air Quality Data**

#### **3.7.2.4 DISCUSSION**

From the table it is seen that, in the ambient air, the PM<sub>10</sub> values were in the range of 45.0 – 58.9 µg/m<sup>3</sup>. PM<sub>2.5</sub> values were in the range of 20.7 – 27.0 µg/m<sup>3</sup>. SO<sub>2</sub> levels were ranging from 4.7 – 6.8 µg/m<sup>3</sup>. NO<sub>2</sub> levels were ranging from 9.3 – 11.9 µg/m<sup>3</sup>. While comparing with the NAAQ Norms laid by MoEFCC, all monitored values of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub> & CO were found to be well within the prescribed standards. The CO values in the all locations found to be below detectable limit (DL – 1144 µg/m<sup>3</sup>).

#### **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 SURFACE WATER**

The important rivers in the district are Periyar and Vaigai. These rivers are contiguous by the natural formation of the several hills and valleys. Other

important rivers are Kottagudi river in Bodinayakanur Block, Manjalar in Periyakulam Block and Shanmuganathi in Uthamapalayam taluk, all originates from western ghats. Vaigai and Periyar originate from the Western Ghats at the Kambam Valley. These rivers run a distance of about 20 miles in the district, flows towards southeast direction through Nilakkottai taluk in Dindigul district and Madurai taluk. Before entering into the Bay of Bengal, these rivers pass through Ramanathapuram district irrigating some parts in different taluks. Vaigai Dam is built across Vaigai river near Andipatti, with a height of 111 feet and storage of 71 feet of water. It is 7 kms from Andipatti, 14 kms from Theni and 70 kms from Madurai. Sothuparai dam is located at 12 kms from Periyakulam. This dam was built across the Varaha river. It is a beautiful picnic spot. Kumbakkarai falls on the foothills of Kodaikkanal hills, 8 kms from Periyakulam, is yet another water source. Comparatively less known, these falls offer a breath-taking view and help farmers cultivate their lands with different crops.

### **3.7.3.3 GROUND WATER**

Ground water occurs under unconfined condition in weathered residium and in colluvium while it is under semi confined to confined condition in deeper fractures. The thickness of weathered residium varies from 5 to 45 m. It is very thick around Thevaram, Kombai, Odapatti abd Gudalur. In general, it varies from 5 to 15 m. The exploration has revealed that there are a maximum of 6 saturated fractures occurring down to a depth range of 140 m. The weathered residuum is tapped by dug wells which even as deep as 40 m when tapping colluvium. The yield of dug wells are of the order of 150 – 350 lpm which can sustain the continuous pumping for 4 – 6 hours a day. The bore wells tapping deeper fractures have the yield of 150 – 420 lpm. The depth to water level in the district varied from 1.22 to 19.18 m bgl during premonsoon (May 2006) while it varied from 2.68 to 16.08 m bgl during post monsoon (Jan 2007). The depth to piezometric surface in the deeper fractures varied from 3.87 to 39.67 m bgl during premonsoon (May 2006) while it varied from 3.57 to 4.55 m bgl during post monsoon (January 2007)

Source: CGWB, 2008.

Rainfall is the main source for the availability of water both on surface and sub surface. The quantum of rainfall varies every year depending on the monsoon. However, the extraction of surface and sub-surface water is increasing year by year. It leads to environmental impact on the water sources like depletion of water level, deterioration of water quality. It makes the demand for the quantification of available water and also its quality for various purposes, like agriculture, industries, drinking and domestic purposes. Total Seven (07) ground water monitoring locations were identified for assessment in different villages around the project site based on the usage of sub surface water by the settlements/ villages in the study area. The groundwater results are compared with the acceptable and permissible water quality standards as per IS: 10500 (2012) for drinking water. Groundwater quality monitoring locations and results are given in Table 3.7 and Table 3.9.

#### **3.7.3.4 SAMPLING LOCATIONS**

Two (2) surface water samples and Seven (7) ground water samples were collected from the study area and were analysed for physio-chemical, heavy metals and bacteriological parameters in order to assess the effect of mining and other activities on ground water. The samples were analysed as per the procedures specified by CPCB, IS-10500:2012. The water sampling locations are given in Table 3.8 and shown as Figure 3.9 – 3.10.

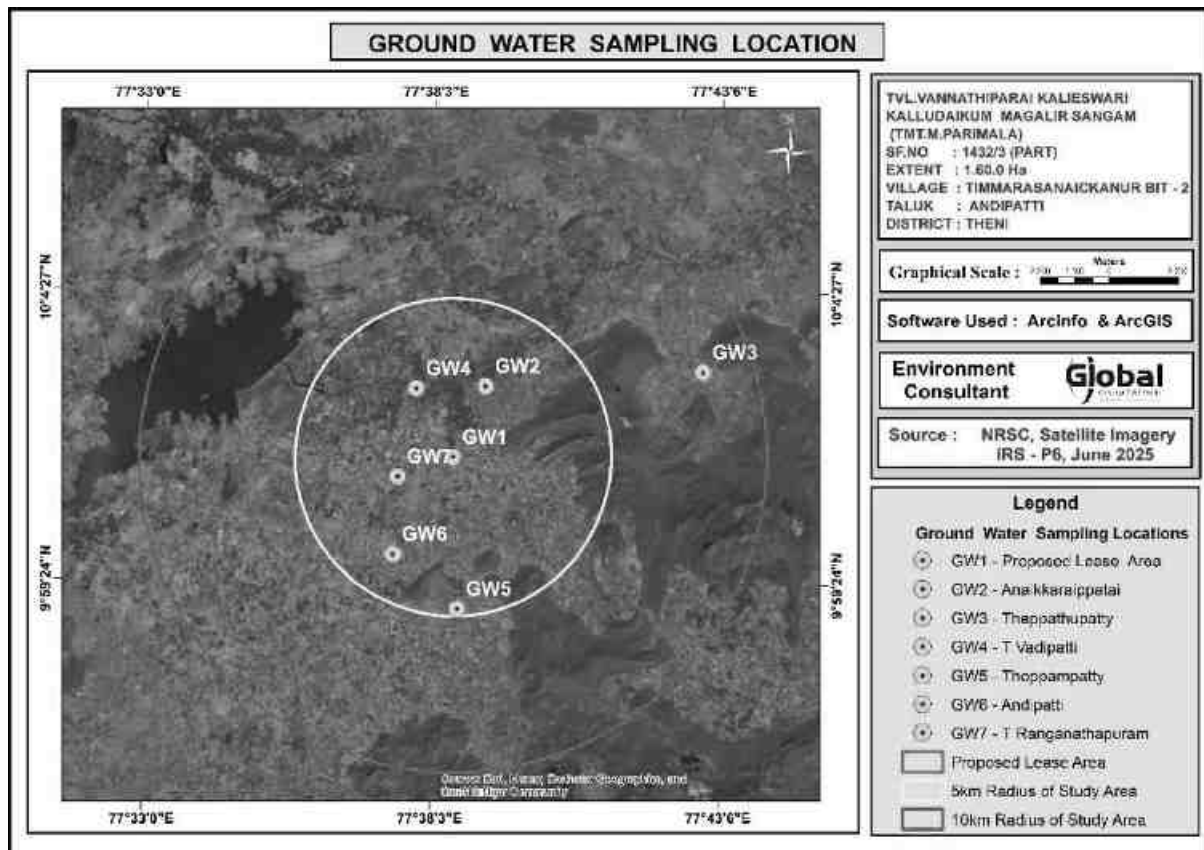
**Table 3.8 Water Sampling Locations**

<b>S. No</b>	<b>Code</b>	<b>Project Location</b>	<b>Latitude</b>	<b>Longitude</b>
<b>Ground Water</b>				
1	GWQ1	Project Site 1 (Parimala)	10° 1'35.05"N	77°38'23.99"E
2	GWQ2	Anaikaraipatti	10° 2'44.84"N	77°38'54.67"E
3	GWQ3	Theppathupatty	10° 3'4.52"N	77°42'45.72"E
4	GWQ4	T. Vadipatty	10° 2'45.76"N	77°37'44.37"E
5	GWQ5	Thoppampatti	9°58'56.14"N	77°38'29.37"E
6	GWQ6	Andipatti	10° 0'5.12"N	77°37'6.84"E
7	GWQ7	T.Renganavaram	10°1'12.50"N	77°37'25.58"E
<b>Surface Water</b>				



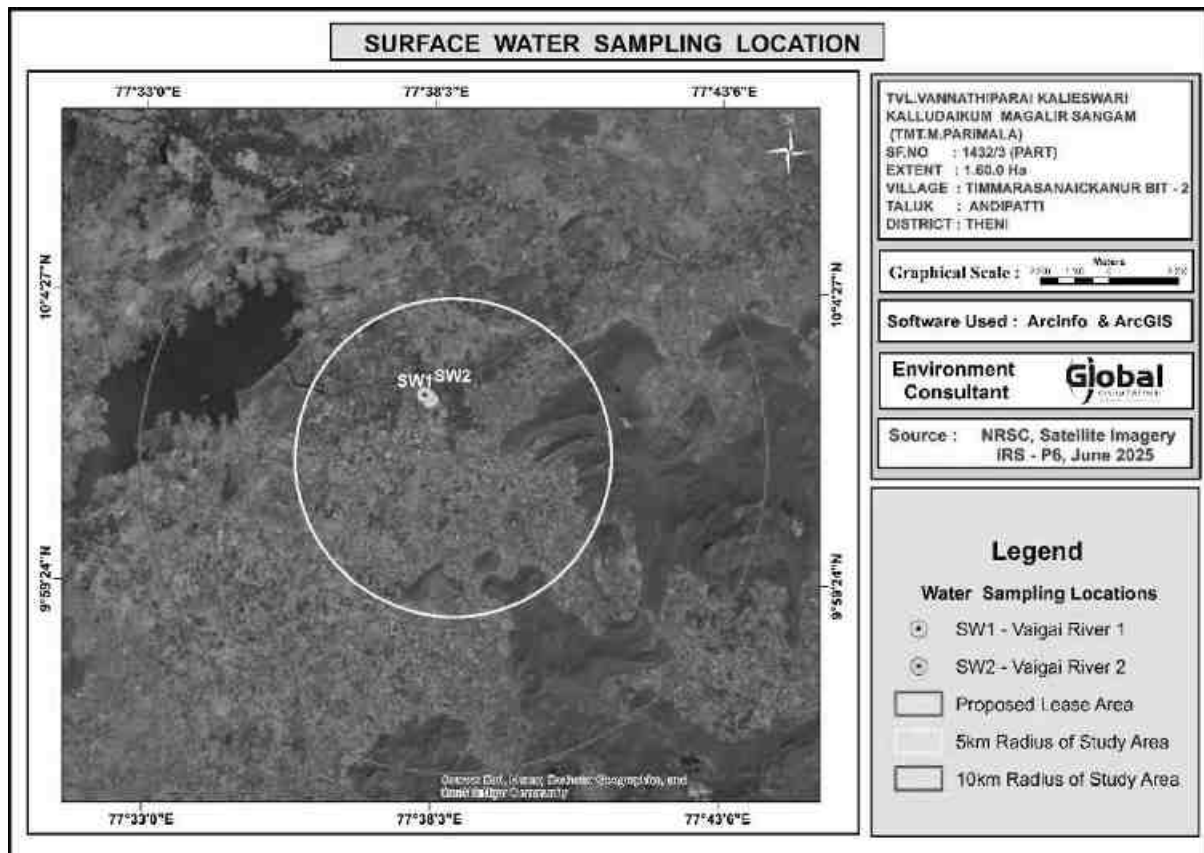
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8	SWQ1	Vaigai River 1 – Up Stream	10° 2'32.47"N	77°37'59.32"E
9	SWQ2	Vaigai River 2 – Down Stream	10° 2'33.62"N	77°37'59.55"E



**Figure 3.9 Ground Water Monitoring Locations**

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**Figure 3.10 Surface Water Monitoring Locations**

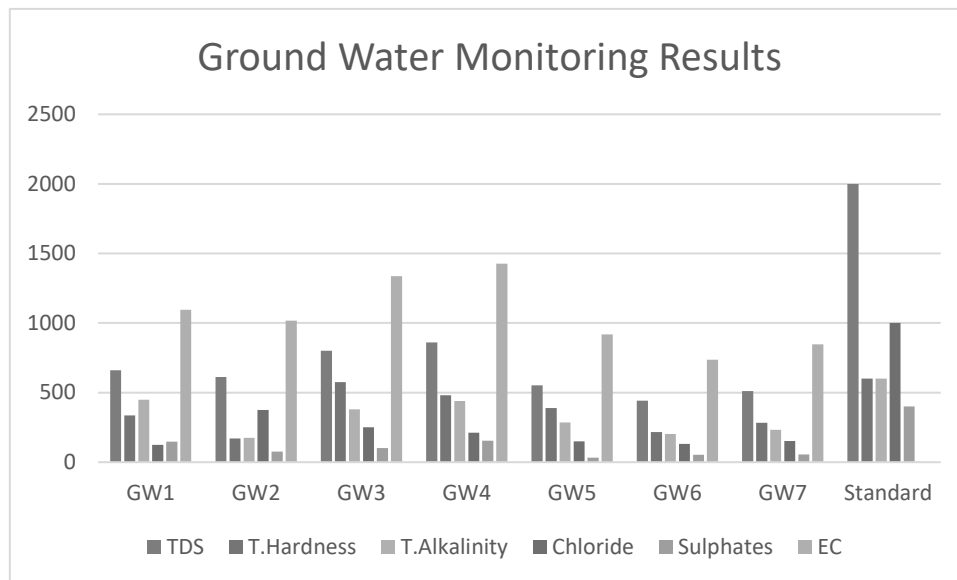
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**Table 3.9 – Ground Water Analysis Results**

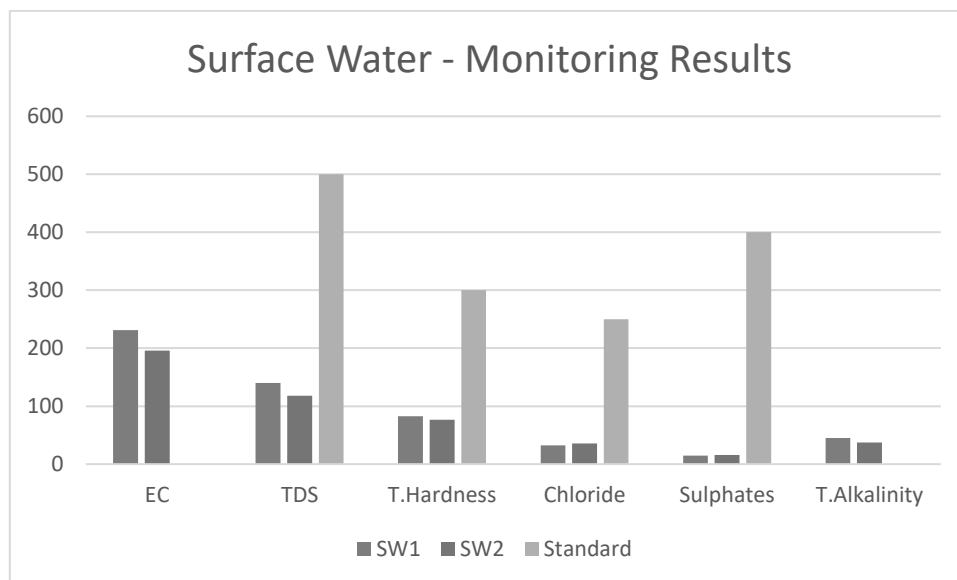
Parameter	GW1	GW2	GW3	GW4	GW5	GW6	GW7	Permissible Limits
Odour	AGREEABLE	AGREEABLE	AGREEABLE	AGREEABLE	AGREEABLE	AGREEABLE	AGREEABLE	<b>Agreeable</b>
Turbidity	<1	<1	<1	<1	<1	<1	<1	<b>5</b>
pH at 25 °C	7.28	7.75	7.22	7.31	7.21	7.93	7.24	<b>6.5- 8.5</b>
Electrical Conductivity	1095	1017	1336	1426	918.5	736.6	845.8	<b>-</b>
Total Dissolved Solids	660	612	802	860	552	442	510	<b>2000</b>
Total hardness as CaCO <sub>3</sub>	336	171	576	480	389	216	284	<b>600</b>
Calcium as Ca	82.0	42.4	133	109	106	48.0	71.6	<b>200</b>
Magnesium as Mg	31.4	15.6	58.6	49.9	29.8	23.0	25.2	<b>100</b>
Calcium as CaCO <sub>3</sub>	205	106	332	272	265	120	179	<b>-</b>
Magnesium as CaCO <sub>3</sub>	131	65.0	244	208	124	96.0	105	<b>-</b>
Total alkalinity as CaCO <sub>3</sub>	449	175	380	440	286	202	232	<b>600</b>
Chloride as Cl <sup>-</sup>	125	375	252	213	149	132	151	<b>1000</b>
Free Residual chlorine as Cl <sup>-</sup>	BDL (D.L - 0.2)	BDL(D.L- 0.2)	BDL(D.L- 0.2)	BDL (D.L- 0.2)	BDL(D.L- 0.2)	BDL (D.L - 0.2)	BDL (D.L - 0.2)	<b>1</b>
Sulphates as SO <sub>4</sub> <sup>2-</sup>	148	75.9	102	154	32.0	52.4	56.6	<b>400</b>
Iron as Fe	BDL(D.L - 0.01)	BDL(D.L - 0.01)	BDL(D.L - 0.01)	BDL(D.L - 0.01)	BDL(D.L - 0.01)	0.05	0.05	<b>0.3</b>
Nitrate as NO <sub>3</sub>	3.58	1.65	3.06	2.75	2.69	1.54	2.89	<b>45</b>
Fluoride as F	0.35	0.29	0.52	0.35	0.32	0.47	0.47	<b>1.5</b>
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)	<b>0.3</b>

**Table 3.10 Surface Water Analysis Results**

Parameter	SW1	SW2	Surface water standards (IS 2296 Class-A)
Odour	Agreeable	Agreeable	Agreeable
Turbidity, NTU	<1	<1	1
pH at 25 °C	7.92	7.86	6.5- 8.5
Electrical Conductivity, $\mu\text{S}/\text{cm}$	231	196	-
Total Dissolved Solids, mg/l	140	118	500
Total Suspended Solids, mg/l	BDL(DL-2.0)	BDL(DL-2.0)	-
Total hardness as $\text{CaCO}_3$ mg/l	82.7	77	300
Calcium as Ca, mg/l	16.8	16.0	-
Magnesium as Mg mg/l	9.7	8.8	-
Calcium as $\text{CaCO}_3$ mg/l	42.1	39.9	-
Magnesium as $\text{CaCO}_3$ mg/l	40.6	36.6	-
Total alkalinity as $\text{CaCO}_3$ , mg/l	44.9	37.6	-
Chloride as $\text{Cl}^-$ mg/l	32.4	35.7	250
Free Residual chlorine as $\text{Cl}^-$ mg/l	BDL (D.L - 0.2)	BDL(D.L-0.2)	0.2
Sulphates as $\text{SO}_4^{2-}$ , mg/l	14.8	15.9	400
Iron as Fe, mg/l	BDL(D.L - 0.01)	BDL(D.L - 0.01)	0.3
Nitrate as $\text{NO}_3$ , mg/l	BDL(DL-1.0)	1.65	20
Fluoride as , mg/l	BDL(DL-0.1)	BDL(DL-0.1)	1.56
Manganese as Mn, mg/l	BDL (D.L-0.05)	BDL(D.L-0.05)	0.1
COD as $\text{O}_2$ , mg/l	BDL(DL-4.0)	BDL(DL-4.0)	-
BOD, 3 days @ 27°C, mg/l	BDL(DL-2.0)	BDL(DL-2.0)	2
DO, mg/l	6.2	6.1	6



**Figure 3. 11 Ground Water - Monitoring Results**



**Figure 3. 12 Surface Water - Monitoring Results**

### **3.7.3.5 DISCUSSION**

#### **Surface Water**

The pH varied from 7.86 to 7.92 while turbidity found within the standards (Optimal pH range for sustainable aquatic life is 6.5 to 8.5 pH). Total Dissolved Solids varied from 118 to 140 mg/l. Chloride varied between 32.4 mg/l and 35.7 mg/l. Nitrates varied from BDL(DL-1.0) to 1.65 mg/l, while sulphates varied from 14.8 to 15.9 mg/l.

#### **Ground Water**

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

As Per the data it has been observed that the pH value varies from 7.21 to 7.93, Chlorides Ranges From 125 - 375 mg/l, Sulphates value found to be between 32.0 - 154 mg/l, Fluoride Ranges low in lease area i.e. 0.29 - 0.52, Hardness varies from 171 - 576 mg/l, and Total dissolved solid 442 - 860 mg/l. The ground water has been analyzed as per IS10500: 2012 and found to be suitable for drinking purpose. So the results of chemical and bacteriological analysis of water samples are classified under good class for drinking purpose with respect to total dissolved solids. Total hardness of the samples ranged from soft to moderately hard waters and can be fairly used for drinking. Regular ground water monitoring is suggested as the quality of ground water may fluctuate with groundwater consumption and seasonal variations.

### **3.7.4 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.

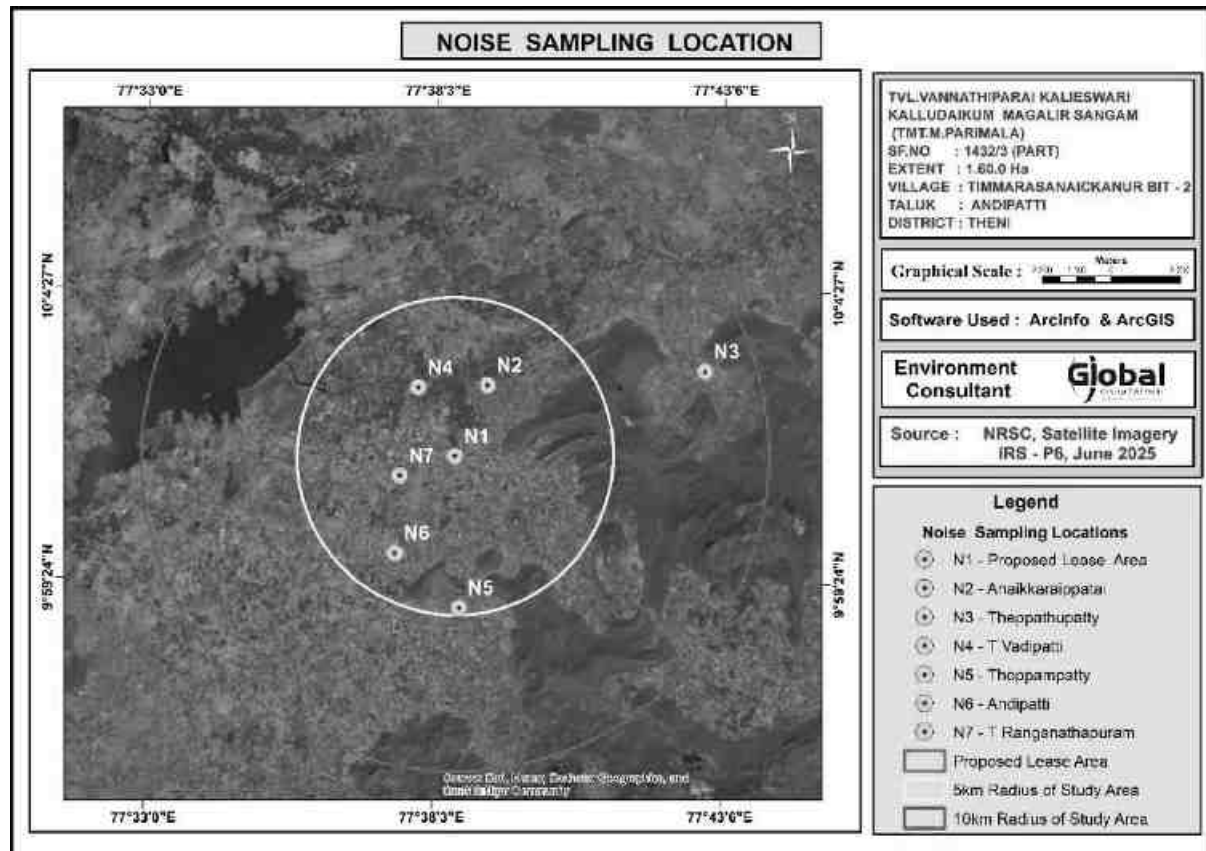
### **3.7.4.1 SAMPLING LOCATIONS**

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 3.11 Noise Monitoring Locations**

<b>S. No</b>	<b>Code</b>	<b>Project Location</b>	<b>Latitude</b>	<b>Longitude</b>
1	NQ1	Project Site 1 (Parimala)	10° 1'35.05"N	77°38'23.99"E
2	NQ2	Anaikaraipatti	10° 2'44.84"N	77°38'54.67"E
3	NQ3	Theppathupatty	10° 3'4.52"N	77°42'45.72"E
4	NQ4	T. Vadipatty	10° 2'45.76"N	77°37'44.37"E
5	NQ5	Thoppampatti	9°58'56.14"N	77°38'29.37"E
6	NQ6	Andipatti	10° 0'5.12"N	77°37'6.84"E
7	NQ7	T.Renganavaram	10° 1'12.50"N	77°37'25.58"E

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**Figure 3.13 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.

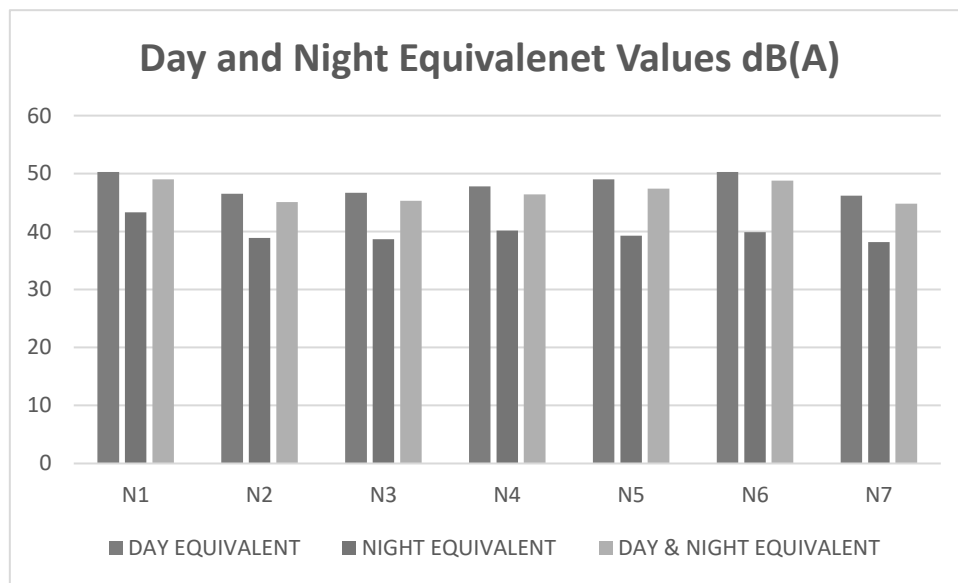
### 3.7.4.3 NOISE MONITORING RESULT

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 3.12 Noise Monitoring Result**

Monitoring Location	N1	N2	N3	N4	N5	N6	N7
DAY EQUIVALENT	50.3	46.5	46.7	47.8	49.0	50.3	46.2
NIGHT EQUIVALENT	43.3	38.9	38.7	40.2	39.3	39.9	38.2
DAY & NIGHT EQUIVALENT	49	45.1	45.3	46.4	47.4	48.8	44.8
Limits as per MoEFCC							
Day equivalent - 55 dB (A); Night equivalent - 45 dB (A); Work zone Exposure in 8 hr - 90 dB (A)							



**Figure 3.14 Noise Monitoring Results**

#### **3.7.4.4 DISCUSSION**

From the table it is observed that the day Equivalent Noise (Leq-d) level were ranging from 46.2 to 50.3 dB(A) and Night Equivalent Noise (Leq-n) level were ranging from 38.2 to 43.3 dB(A). Day and Night Equivalent Noise (Leq-n) level were ranging from 45.1 to 49.0 dB(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.

After commencement of mine operation the anticipated noise level will be 43.3 dB – 50.3 dB in the N1 location. (Project Site). It is very negligible and within the prescribed standards of MoEFCC and DGMS.

### **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 3.15.

#### **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 3.13 – Soil Sampling Locations**

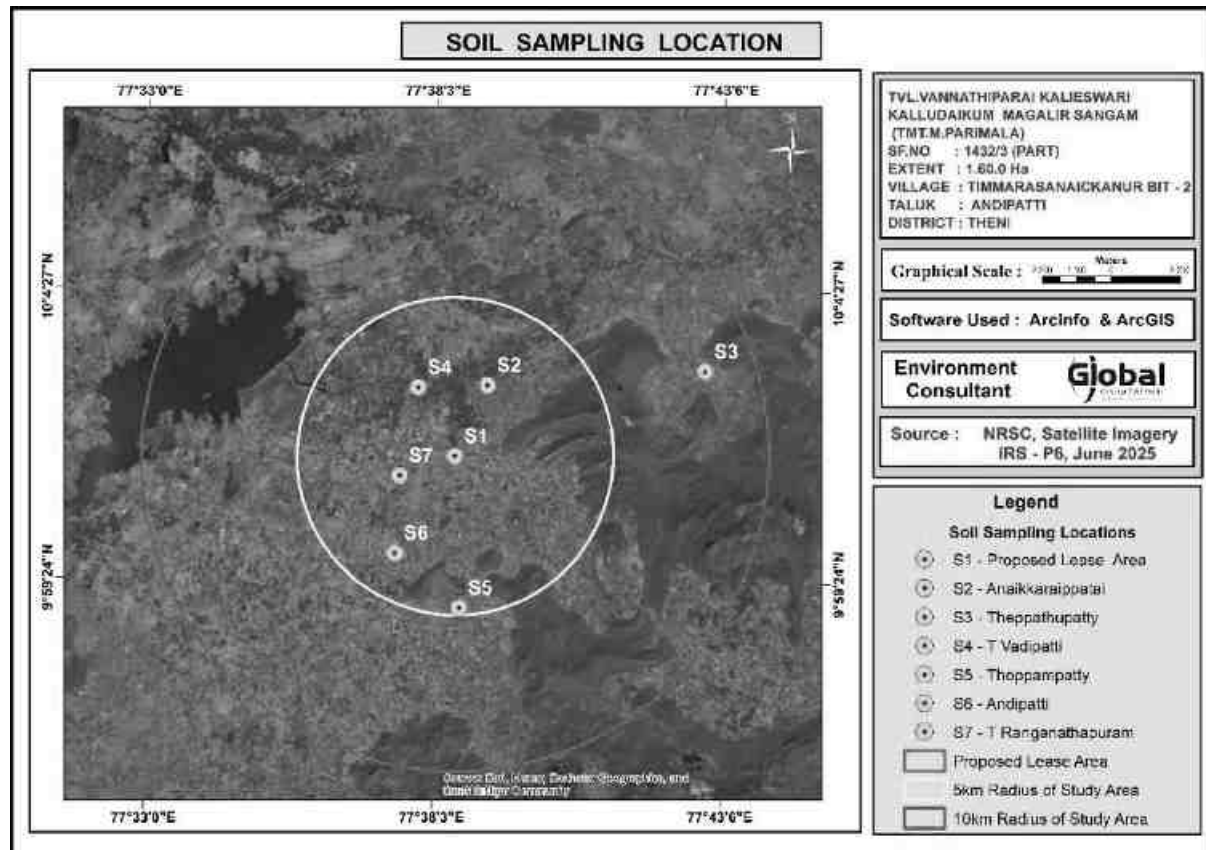
<b>S. No</b>	<b>Code</b>	<b>Project Location</b>	<b>Latitude</b>	<b>Longitude</b>
1	SQ1	Project Site 1 (Parimala)	10° 1'35.05"N	77°38'23.99"E
2	SQ2	Anaikaraipatti	10° 2'44.84"N	77°38'54.67"E
3	SQ3	Theppathupatty	10° 3'4.52"N	77°42'45.72"E
4	SQ4	T. Vadipatty	10° 2'45.76"N	77°37'44.37"E
5	SQ5	Thoppampatti	9° 58'56.14"N	77°38'29.37"E
6	SQ6	Andipatti	10° 0'5.12"N	77°37'6.84"E
7	SQ7	T.Renganavaram	10° 1'12.50"N	77°37'25.58"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.

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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 6.57 to 7.86 and Electrical Conductivity values were ranging between 72.64 – 162.7  $\mu\text{mhos/cm}$ . Soils are generally Silt Loam. Organic matter values were ranging between 0.64 – 1.39 %. Total Nitrogen values were ranging between 226– 632 mg/kg. Phosphorus values were ranging between 0.92 – 2.11  $\mu\text{g/g}$ . Potassium values were ranging between 524 – 890 mg/kg. Sodium values were ranging between 355 – 1070 mg/kg. Total Sulphate values were observed to be BDL. The soil quality data for the 3 samples collected and analyzed are provided in Table no – 3.14.

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**Table 3.14 Soil Testing Result**

PARAMETER	S1	S2	S3	S4	S3	S5	S6	S7
pH	7.86	6.59	6.84	6.69	6.82	6.57	6.96	6.74
EC	102.5	72.64	151.4	86.59	162.7	85.92	92.47	102.4
Dry Content	90.31	94.25	93.22	95.47	94.12	96.56	93.42	94.58
Water Content	9.69	5.75	6.78	4.53	5.88	3.44	6.58	5.42
Organic Matter	0.64	1.32	1.12	0.84	1.12	0.96	1.39	1.02
Total Soluble Sulphate	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)	BDL(D.L.0.02)
Phosphorous	0.92	1.65	2.11	1.37	1.76	1.92	1.41	1.56
Texture	SILT LOAM	silty clay	silty clay loam	silt loam	silty clay loam	silt loam	loam	silt loam
Sand	26.52	8.91	13.53	24.73	13.63	29.12	33.46	29.51
Silt	58.61	47.45	47.48	68.35	48.12	53.11	49.22	52.48
Clay	14.87	43.64	38.99	6.92	38.25	17.77	17.32	18.01
Nitrogen & Nitrogenous Compounds	346	265	286	632	312	226	445	230
Sodium	775	420	1045	589	1070	364	412	355
Potassium	524	660	890	789	872	702	614	726
Water Holding Capacity	42	39	41	42	44	42	40	40
Porosity	19.4	18.6	19.5	18.2	19.1	19.5	19.6	18.9

### **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 3.15 Land use pattern of the project site**

<b>Description</b>	<b>Present Area in Ha.</b>	<b>Area at the end of life of Quarry in Ha.</b>
Quarrying pit	0.96.0	1.17.0
Infrastructure	Nil	0.01.0
Roads	0.01.0	0.01.0
Greenbelt	Nil	0.41.0
Unutilized	0.63.0	Nil
<b>Total</b>	<b>1.60.0</b>	<b>1.60.0</b>

- At the end of life of mine, the excavated mine pit / void of 1.17.0 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 (0.41.0 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 3.16.

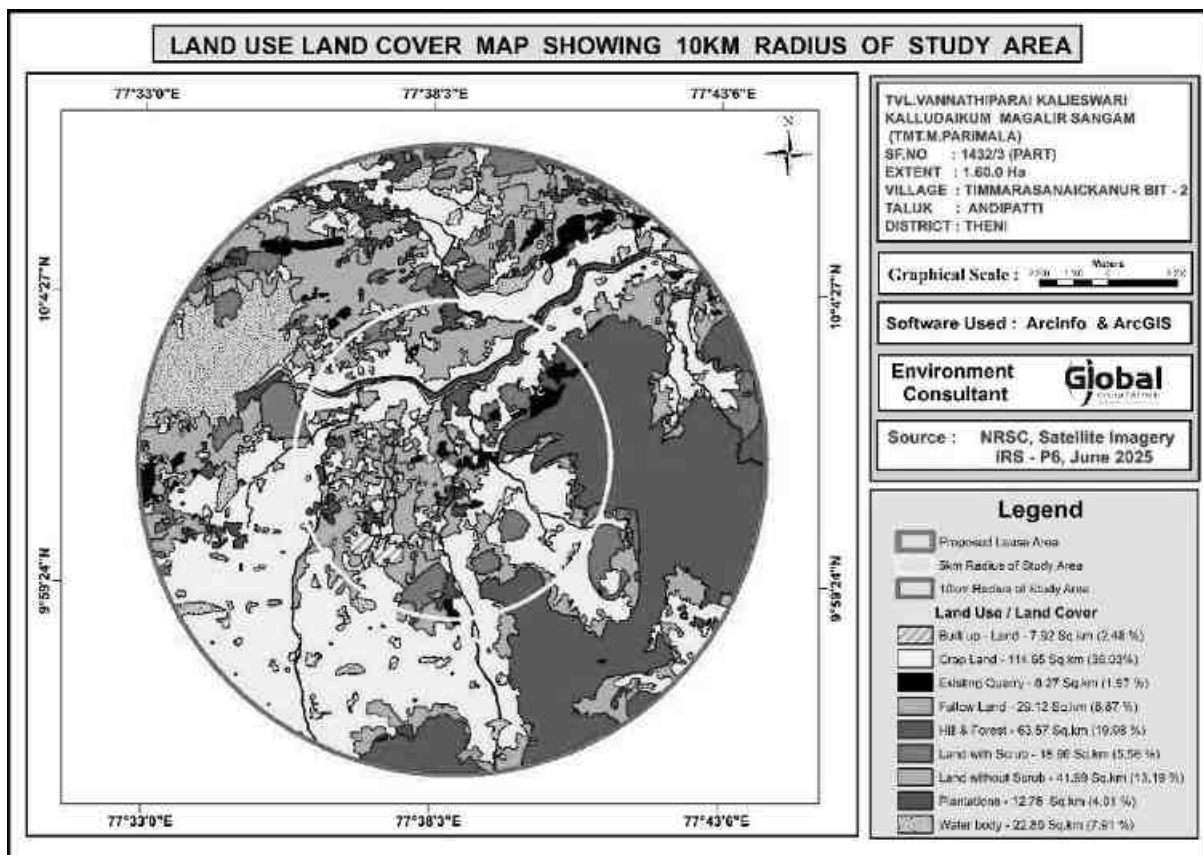
**Table 3.16 Land use pattern of the Study area of 10 km radius**

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Sl.No.	LAND USE / LAND COVER	Area in Sq.Km	Area in Percentage
1	Built-up land	7.92	2.48
2	Crop land	114.65	36.03
3	Fallow land	29.12	8.87
4	Land with scrub	18.96	5.56
5	Land without scrub	41.99	13.19
6	Existing Quarry	6.27	1.97
7	Plantations	12.78	4.01
8	Hill & Forest	63.57	19.98
9	Plantations	12.78	4.01
10	Water bodies	22.86	7.91
	<b>Total Area</b>	<b>330.9</b>	<b>100.0</b>

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 Plantations (4.01 %) followed by Fallow Land (8.87).



**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 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 to 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.

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**Table 3.17 List of Flora**

S.NO	Scientific Name	Family Name	Local Name
<b>GRASS</b>			
1	<i>Arundo donax</i>	Poaceae	Common needle, grass
2	<i>Dendrocalamus strictus</i>	Poaceae	Kalamungil
3	<i>Heteropogon contortus</i>	Poaceae	Oosipullu
<b>TREES</b>			
1	<i>Terminalia Bellirica</i>	Combretaceae	Thaan-Dri Kaai
2	<i>Schefflera Stellata</i>	Peymiratti	Araliaceae
3	<i>Citrus Limon</i>	Rutaceae	Lemon
4	<i>Ficus Benghalensis</i>	Moraceae	Krishna Fig, Krishna's
5	<i>Musa Paradisiaca</i>	Musaceae	Plantain, Vazhai
6	<i>Azadirachta Indica</i>	Meliaceae	Veppai,
7	<i>Syzygium Cumini</i>	Myrtaceae	Nagai
8	<i>Thespesia Lampas</i>	Malvaceae	Common Mallow, Kattupparuthi
9	<i>Psidium Gujava</i>	Myrtaceae	Guava
10	<i>Erythrina Indica</i>	Fabaceae	Mullu Murungai
11	<i>Adina Cordifolia</i>	Rubiaceae	Manjakadambu
12	<i>Acacia Nilotica</i>	Fabaceae	Karuvelam
13	<i>Musa Paradisiaca</i>	Musaceae	Plantain, Vazhai
14	<i>Delonix Regia</i>	Caesalpiniaceae	Flame Tree, Royal Poinciana
15	<i>Tamarindus Indica</i>	Caesalpiniaceae	Puli
16	<i>Cocus Nucifera</i>	Arecaceae	Coconut, Thennai
17	<i>Ailanthus Excelsa</i>	Simaroubaceae	Perumaram
18	<i>Pongamia Pinnata</i>	Fabaceae	Indian Beech, Pungam
19	<i>Acacia Leucophloea</i>	Mimosaceae	Velvelam
20	<i>Morinda Tinctorial</i>	Rubiaceae	Nuna
21	<i>Dalbergia Sissoo</i>	Fabaceae	Nukkam Totakatti
22	<i>Erythrina Variegata</i>	Fabaceae	Kalyana Murungai
23	<i>Borassus Flabellifer</i>	Arecaceae	Palmyra Palm
24	<i>Thespesia Lampas</i>	Malvaceae	Common Mallow, Kattupparuthi
25	<i>Lannea Coromandelica</i>	Anacardiaceae	Indian Ash Tree, Moya, Wodier
26	<i>Samanea Saman</i>	Mimosodeae	Thoongumoonjj Maram
27	<i>Prosopis Juliflora</i>	Fabaceae	Algaroba, Mesquite



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28	<i>Eucalyptus Globulus</i>	Mytaceae	Blue Gum
<b>HERBS</b>			
1	<i>Aloe Vera</i>	Agavaceae	Katthaalai
2	<i>Acalypha Indica</i>	Euphorbiaceae	Koli-P-Puntu, Kuppai-Meni
3	<i>Partheniumhysterophorus</i>	Asteraceae	Congress Grass
4	<i>Chloris Dolichostachya</i>	Poaceae	Finger Grass, Kuruthupillu
5	<i>Aerva Persica</i>	Amaranthaceae	Perumpeelai
6	<i>Zea Mays</i>	Poaceae	Maize, Corn
7	<i>Thespesia Populnea</i>	Malvaceae	Indian Tulip Tree Poovarasu
8	<i>Vernonia Cinereal</i>	Asteraceae	Purplefleabane, Mookuthipoondur
9	<i>Ocimum Americanum</i>	Lamiaceae	Hoary Basil, Nai Thulasi
10	<i>Tribulus Terrestris</i>	Zygophyllaceae	Puncture Vine, Nerunji
11	<i>Cynodon Dactylon</i>	Poaceae	Bermuda, Grass, Arugampul
12	<i>Ocimum Sanctum</i>	Lamiaceae	Holy Basil, Thulasi
13	<i>Amaranthus Viridis</i>	Amaranthaceae	Kuppai-K-Kirai
<b>SHRUBS</b>			
1	<i>Anisomeles Malabarica</i>	Lamiaceae	Peyimarutti
2	<i>Vitex Negundo.</i>	Verbenaceae	Nocchi
3	<i>Carissa Spinorum</i>	Apocynaceae	Sirukilaa
4	<i>Cassia Auriculate</i>	Fabaceae	Aavarampoo
5	<i>Indigofera Longiracemosa</i>	Fabaceae	Karuppu Avuri
6	<i>Lantana Camara</i>	Verbenaceae	Unnichi
7	<i>Triumfetta Pentandra</i>	Tiliaceae	Ottu Pullu
8	<i>Carica Papaya</i>	Caricaceae	Pappali
9	<i>Cassia Auriculate</i>	Fabaceae	Aavarampoo
10	<i>Calotropis Gigantea R.Br.</i>	Fabaceae	Tuvarai
11	<i>Lawsonia Inermis</i>	Lythraceae	Henna, Maruthondri
<b>CLIMBERS</b>			
1	<i>Cucurbita Pepo</i>	Cucurbitaceae	Parangi
2	<i>Cissus Quadrangularis</i>	Vitaceae	Perandai
3	<i>Pergularia Daemia</i>	Asclepiadaceae	Uttamani
4	<i>Cardiospermum Halicacabum</i>	Sapin	Mudakathan
5	<i>Cayratia Trifoliata</i>	Vitaceae	Kattuppirantai
6	<i>Coccinia Indica</i>	Cucurbitaceae	Kovai

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7	<i>Ipomoea Pescarpae</i>	Convolvulaceae	Adambu
8	<i>Diplocyclos Palmatus</i>	Cucurbitaceae	Iviralkovai

### 3.7.7.4 LIST OF FAUNA

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

**Table 3.18 List of Fauna**

S.No	Common name	Scientific name	Family	IUCN / WPA schedule
<b>MAMMALS</b>				
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 johnei	Boidae	-
5	Indian Grey Mongoose	Herpestes edwardsii	Mongoose	IV
6	Field mouse	Rattus norvegicus	Murids	IV
7	Rusty spotted Cat	Felis rubiginosa	Felidae	IV
<b>REPTILES</b>				
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
<b>BIRDS</b>				
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

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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
<b>FISH</b>				
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 Government 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.

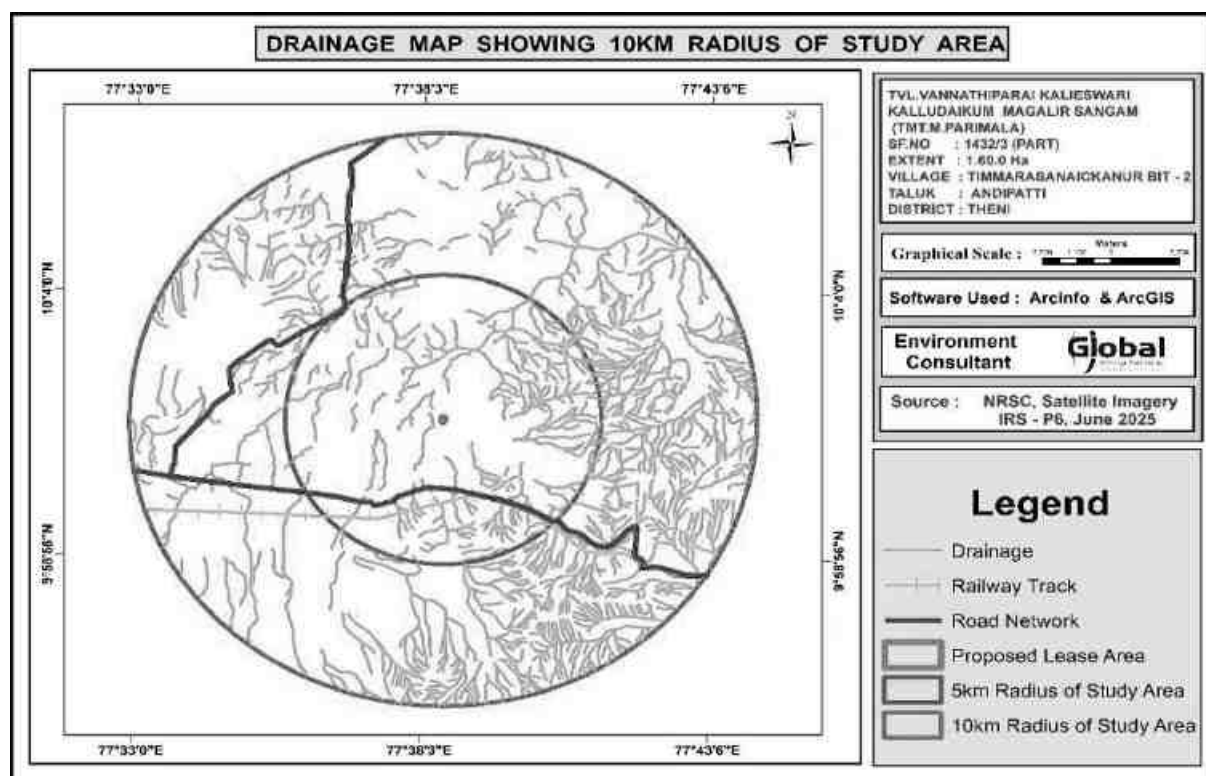
### **3.7.8 TOPOGRAPHY**

The area applied for quarry lease is exhibits almost plain topography covered by rough stone formation. The massive Gneissic Rock formation is noticed right from the surface and sloping towards Southeastern side of the area, the altitude of the area is above 284m (maximum) from MSL. No major river is found nearby the lease applied area. Water table is found at a depth of 60m in summer and 57m in rainy seasons. Temperature of the area is reported to be 180C to a maximum of 420C 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

The ground water table is reported as 60m below ground level. In the proposed mining plan only 35m (below ground level) depth has been envisaged as workable depth for safe & economic quarrying for the entire lease period. Hence the quarrying operation may not affect the ground water. Drainage map of the study area is shown in then Figure 3.17.

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 300 lpm and it shall be pumped about periodically by a stand by diesel powered Centrifugal pump motivated with 7.5 HP 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.



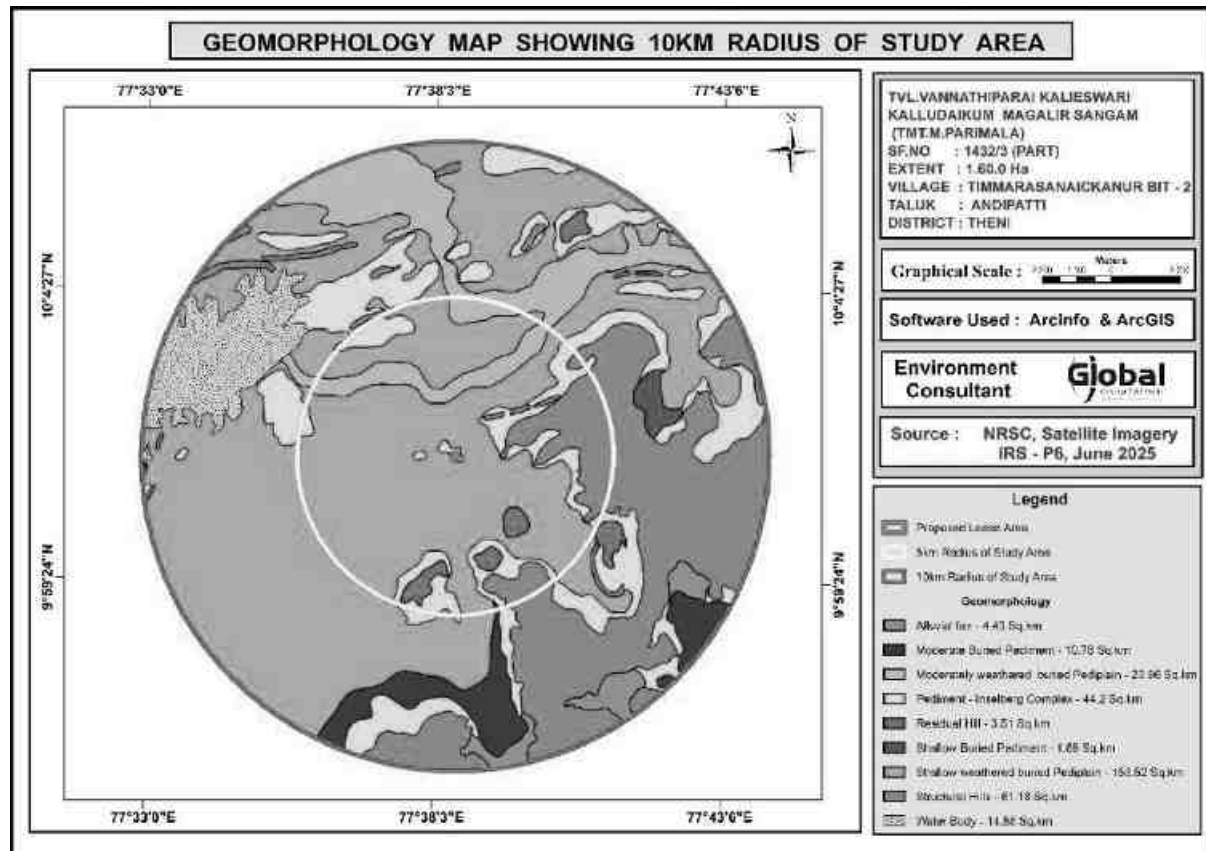
**Figure 3.17 Drainage map of the study area**

### **3.7.10 GEOMORPHOLOGY**

Predominantly the buffer zone is dominated by Shallow & Moderately Buried Pediplan, and the lease area falls under pediment – Inselberg Complex. Geomorphology of the study area is detailed below. The geomorphology of the study area is given in Figure 3.18.

<b>Sl.No</b>	<b>GEOMORPHOLOGY</b>	<b>Area in Sq.Km</b>	<b>Area in Percentage</b>
1	Alluvial Fan	4.43	1.71
2	Moderate Buried Pediment	10.76	4.15
3	Moderately Weathered Buried Pediplain	23.96	9.25
4	Pediment – Inselberg Complex	44.2	
5	Residual Hill	3.51	1.36
6	Shallow Buried Pediment	1.68	0.65
7	Shallow Weathered Buried Pediplain	153.52	59.26
8	Structural Hills	61.18	23.62
9	Water Body	14.88	5.74
	<b>Total Area</b>	<b>318.12</b>	<b>100.00</b>

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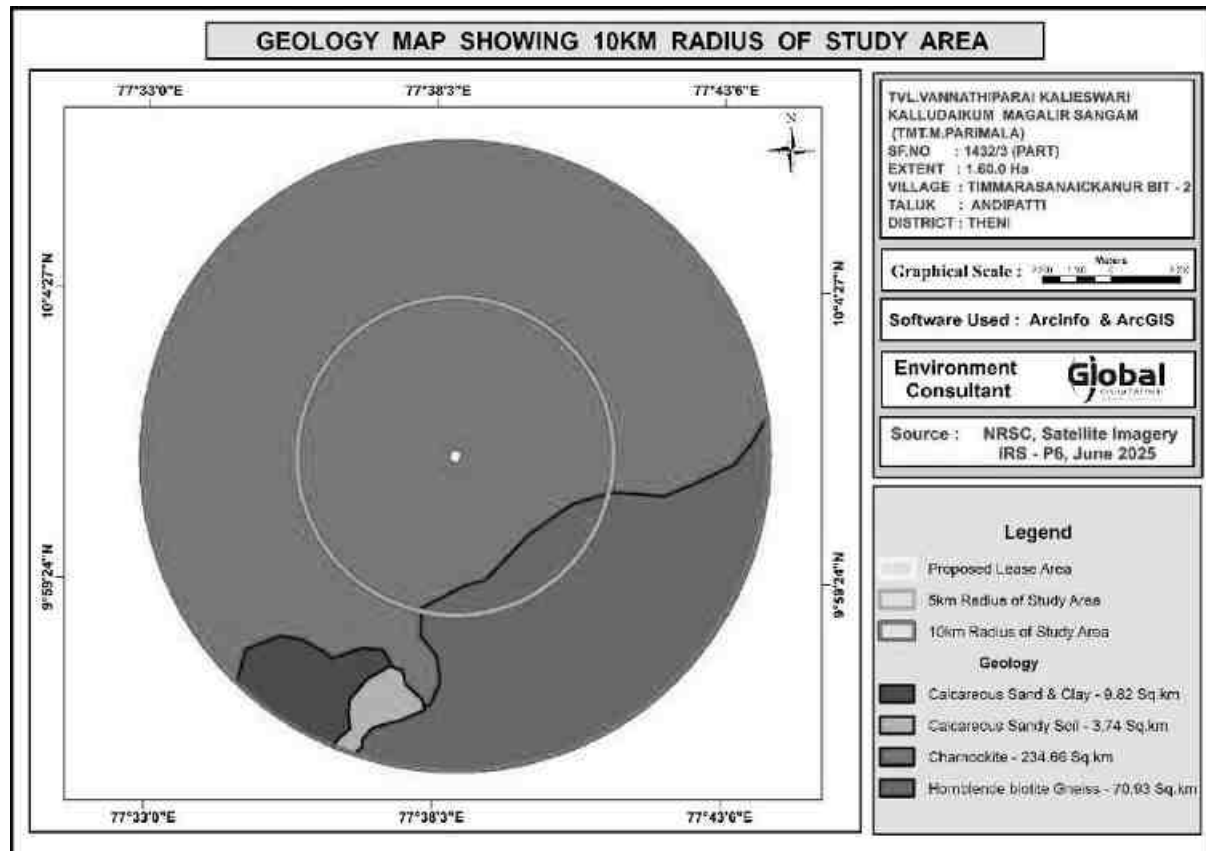
**Figure 3.18 Geomorphology map of the study area**

### 3.7.11 GEOLOGY

The regional geology of the study area is shown below in Figure 3.19. The type of rock formation in the core and buffer zone is composed of Charnockite Gneissic complex, Calcareous Sand, Calcareous Sand Soil & Hornblende Biotite Gnesis. The geology of the study area is detailed below.

Sl.No.	GEOLOGY	Area in Sq.Km	Area in Percentage
1	Charnockite	234.66	73.53
2	Calcareous Sand & Clay	9.82	3.08
3	Calcareous Sand Soil	3.74	1.17
4	Hornblende Biotite Gnesis	70.93	22.22
	<b>Total Area</b>	<b>319.15</b>	<b>100.00</b>

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**Figure 3.19 Geology map of the study area**

### 3.7.12 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.

### **3.7.12.1 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.

### **3.7.12.2 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

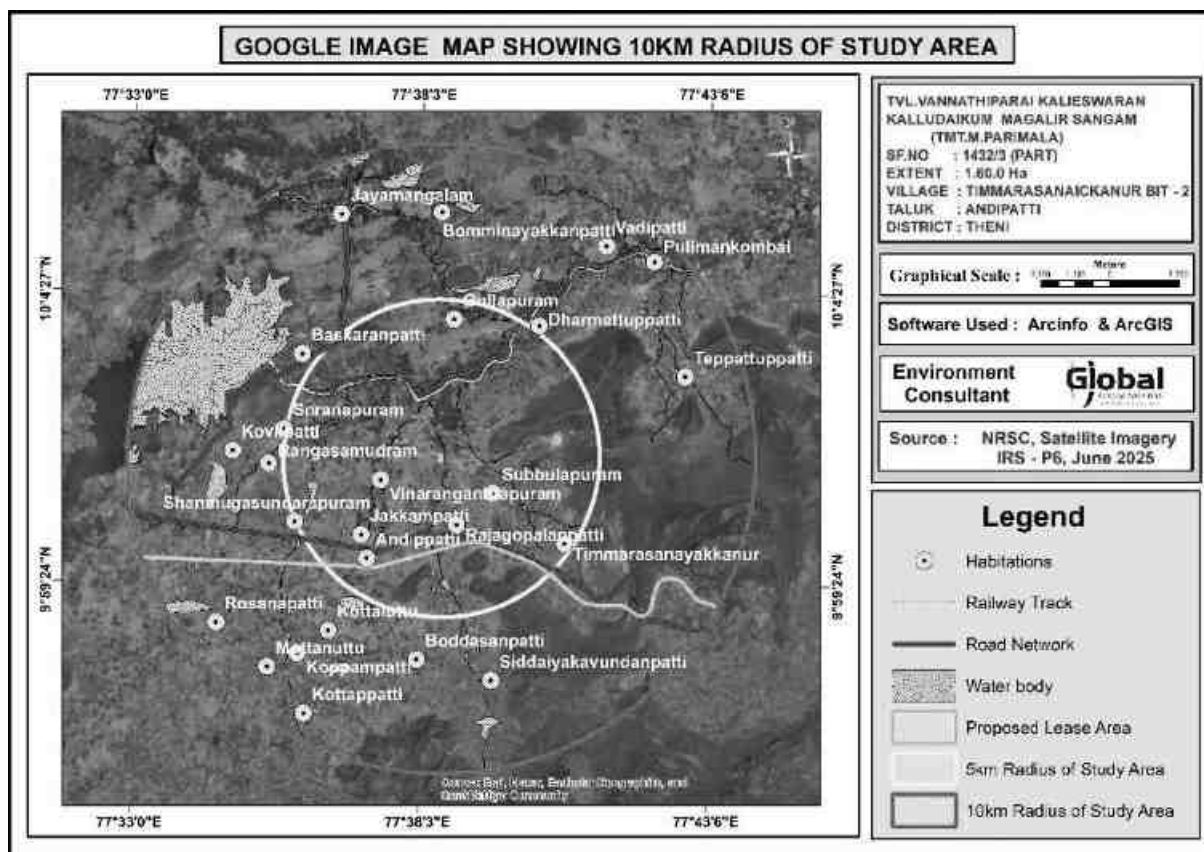
### **SUMMARY OF VILLAGES IN BUFFER ZONE**

Village/ Town Name	Radius	Taluk Name	District Name
Subbulapuram	0-5 Km	Theni and Andipatti	Theni
Vinaranganthapuram			
Jakkampatti			
Andipatti			
Rajagopalanpatti			
Timmarasanayakkanur			
Shanmugasundarapuram			
Gullapuram			
Dharmattuppatti	5-10 Km	Theni and Andipatti	
Bomminayakkanpatti			
Vadipatti			
Jayamangalam			
Pulimankombai			
Teppattuppatti			



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Baskaranpatti			
Kovilpatti			
Rangasamudram			
Rosanapatti			
Mottanuttu			
Koppampatti			
Kattappatti			
Boddasanpatti			
siddaiyakavundanpatti			
kottaluttu			



**Figure 3.20 Village Map of the Study Area**

**Table 3.19 - Population profile of the study area**

<b>Population profile of the study area</b>		
<b>Particulars</b>	<b>No of Population</b>	<b>Percentage (%)</b>
<b>A. Population break-up by Gender</b>		
Male Population	56040	50.48
Female Population	54960	49.52
Total	111000	100
<b>B. Population break-up by Caste</b>		
Scheduled Caste	30103	27.12
Scheduled Tribes	72	0.06
Others	80,825	72.82
Total	111000	100
<b>C. Literacy Level</b>		
Male Population	40901	57.07
Female Population	30769	42.93
Others	39330	
Total Literate Population	111000	100
<b>D. Occupational structure</b>		
Main Workers	33506	24.43
Marginal Workers	6174	4.64
Total Workers	32354	29.06
Total Non-Workers	28073	23.12
Other Workers	10893	18.75
Total	111000	100

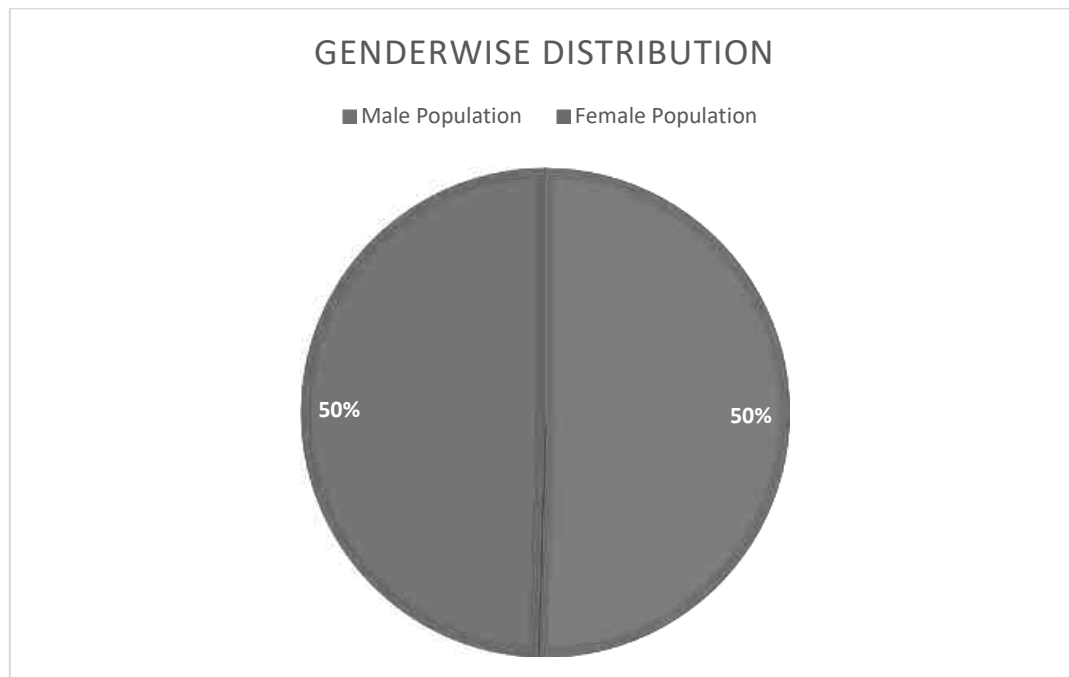
<b>Table 3.20 Population profile - Timmarasanayakkanur Village</b>		
<b>Particulars</b>	<b>No of Population</b>	<b>Percentage (%)</b>
<b>A. Population break-up by Gender</b>		
Male Population	10354	51.21
Female Population	9864	48.79
Total	20218	100
<b>B. Population break-up by Caste</b>		
Scheduled Caste	4769	23.58

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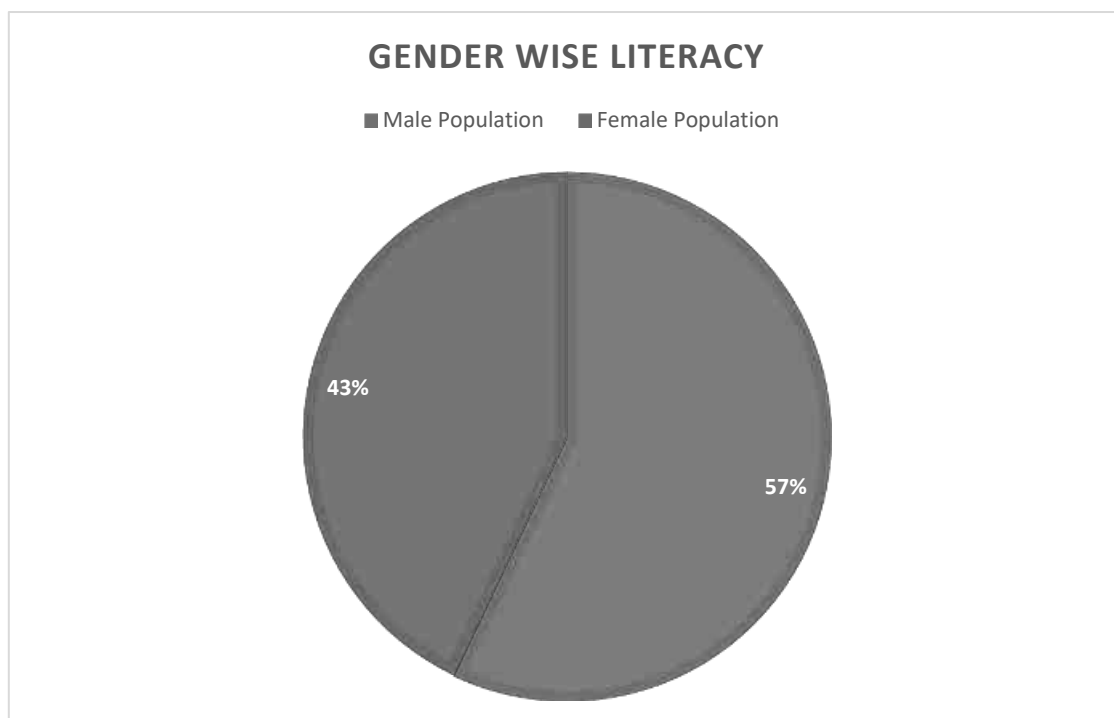
Scheduled Tribes	-	-
Others	15449	76.42
Total	20218	100
C. Literacy Level		
Male Population	7718	57.46
Female Population	5713	42.54
Others	6787	
Total Literate Population	20218	100
D. Occupational structure		
Main workers	7580	30.68
Marginal workers	1436	4.59
Total Workers	1082	35.26
Total Non-workers	6502	29.47
Others	3618	
Total	20218	100

### **Basic Amenities**

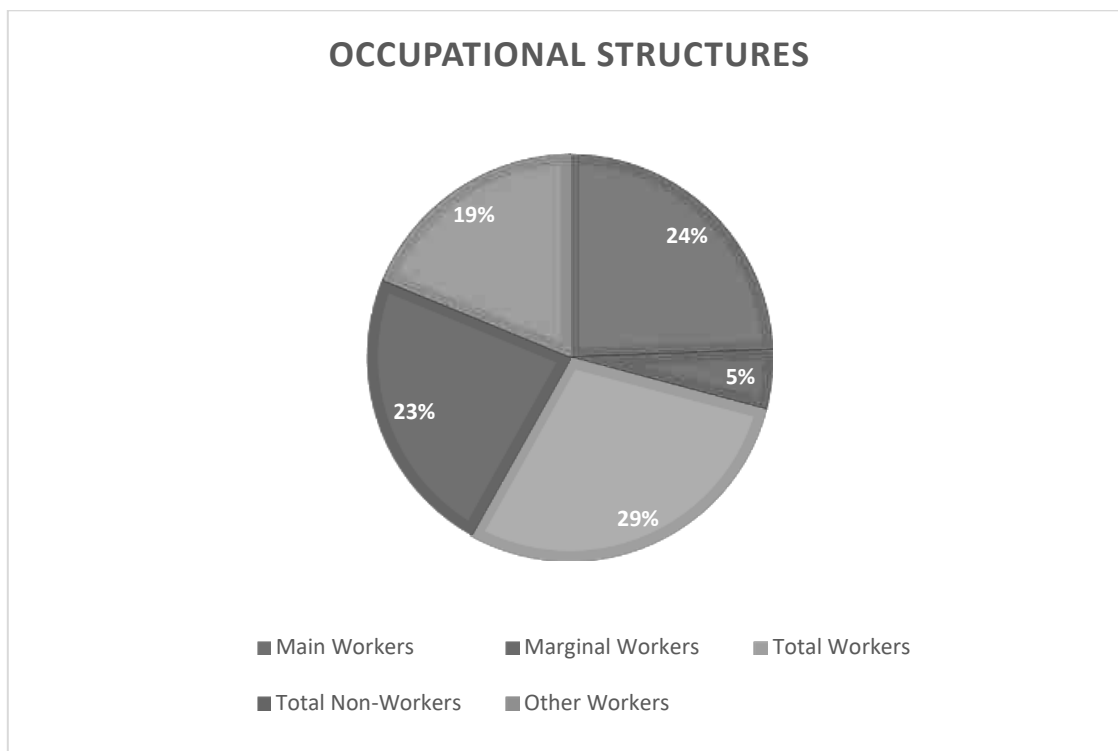
A better network of physical infrastructure facilities (well-built roads, rail links, irrigation, power and telecommunication, information technology, market-network and social infrastructure support, viz. health and education, water and sanitation, veterinary services and co-operative) is essential for development of the rural economy. All basic amenities Education (higher education, colleges, universities, Medical college, Transport facilities, Railway station, Bus station are available.



**FIG 3.21 GENDER-WISE POPULATION DISTRIBUTION**



**FIG 3.22 GENDER WISE LITERACY DISTRIBUTION**



**FIG 3.23 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 Open Cast manual method of mining will be carried out to quarry out Rough Stone. The identified impacts during mining and associated activities have been studied in relation to various environmental components like Air, water, noise, 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 1.60.00 Ha. is Government land. The project area of 1.60.00 Ha is proposed to be altered by effective quarrying operation such as excavation (1.17.0 Ha), Infrastructure (0.01.0 Ha), Road (0.01.0 Ha) and greenbelt (0.41.0 Ha). The ultimate depth of quarrying is proposed by formation of 1 pit with maximum depth of 35 m below the ground level and will not intersect the ground water table. The mine closure plan is given in 2.10. 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**

<b>Description</b>	<b>Present Area in Ha.</b>	<b>Area at the end of life of Quarry in Ha.</b>
Quarrying pit	0.96.0	1.17.0
Infrastructure	Nil	0.01.0
Roads	0.01.0	0.01.0

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Greenbelt	Nil	0.41.0
Unutilized	0.63.0	Nil
<b>Total</b>	<b>1.60.0</b>	<b>1.60.0</b>

- 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 1.17.0 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 (0.41.0 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.

#### **4.2.1.2 MITIGATION MEASURES**

In the rough stone 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. There is no overburden generation from this quarry operation, entire mined out mineral will be dispatched to needy customer directly. 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 (0.41.00 Ha.) all along the periphery of the project area (i.e., 7.5 m and 10 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 upto a depth of 35 BGL and the water table is found at a depth of 60m in summer and 57m in rainy seasons.

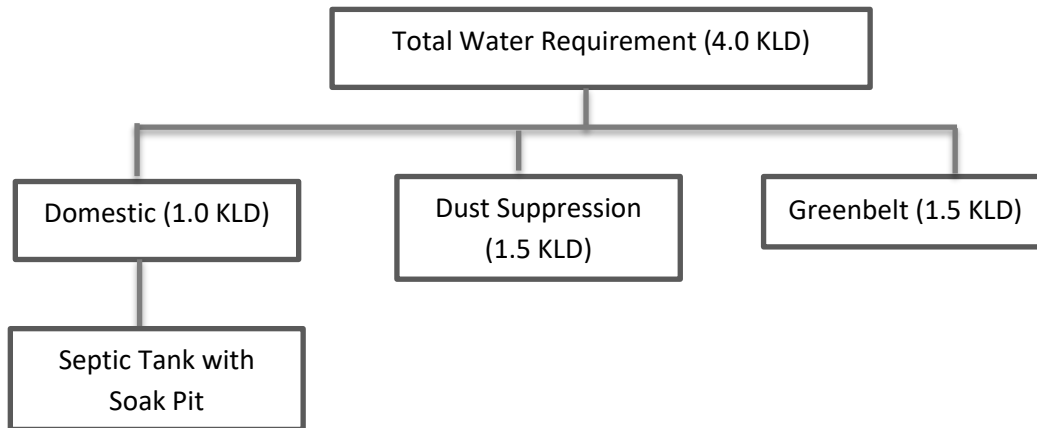
No major river is found nearby the lease-applied area. Odai passing at 92m in North direction, Odai passing at 198m in North Direction, Odai passing at 224m in South West Direction, Odai passing at 294m in South East Direction, Vaigai River is situated at a distance of 1.8km in North Direction, Periyar Main Canal is situated at a distance of 2.0km in North Direction, Mavuttu Odai passing at 3.5km in North West Direction, Varaha River is situated at a distance of 4.4km in North Direction, Vaigai Dam is situated at a distance of 6.2km in North West 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.

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 4.0 KLD comprising Drinking 1.0 KLD, Dust suppression 1.5 KLD and Greenbelt 1.5 KLD. The water will be sourced initially from outside agencies. Later the rainwater collected in the mine

pit sump will be used for this purpose. The water balance diagram for the same is shown in Figure No 4.1.



**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 setting tank 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 1000 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	11700	1.0	4095
2	Unutilized Area	Nil	1.0	-
<b>Total Harvested Rainfall</b>				<b>4095</b>

Total surface water runoff is 4095 Cum per Annum. 10% of this amount will be evaporated and rest 3686 m<sup>3</sup> will be recharged in the rain water harvesting pit.

Two settling tanks with each capacity 2500 Cu.m will be provided to harvest the rain water. 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**

##### **4.2.4.1 IMPACT DUE TO MINING OPERATION**

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

##### **4.2.4.2 IMPACT ON AIR ENVIRONMENT**

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

##### **4.2.4.3 AIR EMISSIONS**

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

##### **4.2.4.4 QUANTITATIVE ESTIMATION OF IMPACTS ON AIR ENVIRONMENT**

An attempt has been made to predict the incremental rise of various ground level concentrations above the baseline status in respect of air pollution due to proposed is 1,52,260 m<sup>3</sup> of rough stone for a period of five years by the open-cast semi-mechanised

mining method.

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

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

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

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

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

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

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

The AERMAP is a terrain preprocessor designed to simplify and standardize the input of terrain data for the AERMOD. Input data include receptor terrain elevation

data. Output includes, for each receptor, location and height scale, which are elevations used for the computation of airflow around hills.

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

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

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

#### **4.2.4.5 SOURCES OF DUST EMISSION**

The proposed mining is carried out by opencast manual method of mining. The air borne particulate matter generated by ore handling operations, transportation and screening of ore is the main air pollutant. The emissions of sulphur dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>) contributed by diesel operated excavation/loading equipment and vehicles plying on haul roads are marginal. Prediction of impacts on air environment has been carried out taking into consideration proposed production and net increase in emissions. Based on the various operations involved in the production of minerals, the various emission sources has been identified as given below.

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

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

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

#### **4.2.4.6 EMISSION DETAILS**

All the emissions discussed above are quantified for proposed maximum production of 1,52,260 m<sup>3</sup> of rough stone for a period of five years by the open-cast semi-mechanised mining method. The existing air quality levels are covered in the baseline scenario.

Excavation, loading and transportation through tippers are the major sources, which are of significance. Therefore, the emissions considered for modeling are from excavation & transportation rough stone.

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

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

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

#### **4.2.4.7 METEOROLOGICAL DATA**

The meteorological data recorded continuously during the month of March 2025 – May 2025 on hourly basis on wind speed, wind direction and temperature has been processed to extract the 24- hourly mean meteorological data as per the guidelines of IMD and MoEF for application of AERMOD model.



Stability classes computed for the mean hours is based on guidelines issued by CPCB on modeling. Mixing heights representative of the region have been taken from the available published literature.

#### **4.2.4.8 SUMMARY OF PREDICTED GROUND LEVEL CONCENTRATIONS**

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

The maximum ground level concentration is estimated to be about 1.92  $\mu\text{g}/\text{m}^3$  of PM 2.5 & 3.65  $\mu\text{g}/\text{m}^3$  of PM10 within the mine area, where mining operations are being carried out. The impact of mining operations would be negligible beyond 0.4 km.

Figure – 4.2 – 4.5 represents the spatial distribution of the predicted ground level concentrations of PM10 due to emissions from mine.

#### **4.2.4.9 EMISSION SOURCES & QUANTIFICATION**

Various point and non-point sources of emissions from Proposed Rough Stone Quarry of Tmt. M. Parimala is quantified and presented below:

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

Quantity, TPA	Rough Stone: 1,52,260 m <sup>3</sup> (Five Years)
Operational Hours Per Year	2400
Activity Rate, t/hr.	400.5416667
Emission of dust, g/t.	0.14
Emission of dust, g /hr.	52.56464
Area of influence, m <sup>2</sup>	622
Uncontrolled emission rate g/s/m <sup>2</sup>	0.000022181
Controlled emission rate, PM10 g/s/m <sup>2</sup>	0.000002218
Controlled emission rate, PM2.5 g/s/m <sup>2</sup>	0.0000014787

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

Quantity, TPA	Rough Stone: 1,52,260 m <sup>3</sup> (Five Years)
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	834
Lead length/trip, Km	0.6
Total VKT/Year	72323
Emission Kg/VKT	0.20
Total emission Kg/Year	19932.55
Uncontrolled emission rate g/s/m	1.3308
Controlled emission rate, PM10 g/s/m	0.13308
Controlled emission rate, PM2.5 g/s/m	0.03697

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

Quantity, m <sup>3</sup>	<b>Proposed Quarries:</b> Tmt. M.Parimala Rough Stone: 1,52,260 m <sup>3</sup> Thiru.R.Murugan: 35,525 m <sup>3</sup> of Rough Stone, 3,360 m <sup>3</sup> of gravel Tmt.Thavamani: 2,38,149 m <sup>3</sup> of Rough Stone.
Operational Hours Per Year	2400
Activity Rate, t/hr.	354.34
Emission of dust, g/t.	0.25
Emission of dust, g /hr.	63.4543
Area of influence, m <sup>2</sup>	625
Uncontrolled emission rate g/s/m <sup>2</sup>	0.00062538
Controlled emission rate, PM10 g/s/m <sup>2</sup>	0.0006253
Controlled emission rate, PM2.5 g/s/m <sup>2</sup>	0.000041692

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

Quantity, m <sup>3</sup>	<b>Proposed Quarries:</b> Tmt. Parimala Rough Stone: 1,52,260 m <sup>3</sup> Thiru.R.Murugan: 35,525m <sup>3</sup> of Rough Stone, 3,360m <sup>3</sup> of gravel Tmt.Thavamani: 2,38,149 m <sup>3</sup> of Rough Stone.
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	8685
Lead length/trip, Km	0.17

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Total VKT/Year	624353
Emission Kg/VKT	0.25
Total emission Kg/Year	16543.56
Uncontrolled emission rate g/s/m	3.7523
Controlled emission rate, PM10 g/s/m	0.37523
Controlled emission rate, PM2.5 g/s/m	0.10424

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









## **PREDICTED AMBIENT AIR QUALITY:**

The post project Concentrations of PM10, PM2.5, (GLC) (base line + incremental) after adopting necessary control measures is given in Table No - 4.3 to 4.3C.

Table 4.3 Concentrations of PM2.5 after Project Implementation					
SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Project site(Parimala)	30.4	1.92	32.32	60
2	Anaikaraipatti	25.0	1.73	26.73	
3	Theppathupatty	25.6	1.53	27.13	
4	T. Vadipatty	23.9	1.34	25.24	
5	Thoppampatti	26.0	1.15	27.15	
6	Andipatti	26.8	<1.0	27.80	
7	T.Renganavaram	27.0	<1.0	28.0	
Table 4.3a Cluster Concentrations of PM2.5 after Project Implementation					
SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Project site(Parimala)	30.4	3.20	33.60	60
2	Anaikaraipatti	25.0	2.88	27.88	
3	Theppathupatty	25.6	2.56	28.16	
4	T. Vadipatty	23.9	2.24	26.14	
5	Thoppampatti	26.0	1.92	27.92	
6	Andipatti	26.8	1.60	28.40	
7	T.Renganavaram	27.0	1.28	28.28	
Table 4.3b Concentrations of PM10 after Project Implementation					
SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Project site(Parimala)	66.1	3.65	69.75	100
2	Anaikaraipatti	52.1	3.28	55.38	



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3	Theppathupatty	54.5	2.92	57.42
4	T. Vadipatty	51.9	2.55	54.45
5	Thoppampatti	55.6	2.19	57.79
6	Andipatti	57.9	1.82	59.72
7	T.Renganavaram	58.9	1.46	60.36

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

SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Project site(Parimala)	66.1	5.14	71.24	100
2	Anaikaraipatti	52.1	4.63	56.73	
3	Theppathupatty	54.5	4.11	58.61	
4	T. Vadipatty	51.9	3.60	55.50	
5	Thoppampatti	55.6	3.09	58.69	
6	Andipatti	57.9	2.57	60.47	
7	T.Renganavaram	58.9	2.06	60.96	

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 PM10 are in the range of 54.45  $\mu\text{g}/\text{m}^3$  to 69.75  $\mu\text{g}/\text{m}^3$  and for PM2.5 are in the range of 25.24  $\mu\text{g}/\text{m}^3$  to 32.32  $\mu\text{g}/\text{m}^3$  and PM10 are surrounding area range of 55.50  $\mu\text{g}/\text{m}^3$  to 71.24  $\mu\text{g}/\text{m}^3$  and for PM2.5 are in the range of 26.14  $\mu\text{g}/\text{m}^3$  to 33.60  $\mu\text{g}/\text{m}^3$  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.

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**Table 4.4 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	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.
			Avoiding overloading of dumpers.
3	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

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			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.
4	Greenbelt	Dust emission, Gaseous Emission	Development of greenbelt / barriers around mine in the safety zone and carrying out plantation within the lease area.
5	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.

#### **4.4.4 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:

##### **4.4.4.3 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 4.5 - The likely noise level in the lease area**

SL.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

##### **4.4.4.4 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;
- 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

#### **4.4.4.5 GROUND VIBRATION**

The proposed quarry operation plans to use an opencast manual method of mining without blasting. Therefore, ground vibration will not arise from this proposed quarry.

#### **4.4.5 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. 6 Ecological Impact Assessments and Its Mitigations -Part 1**

<b>S.NO</b>	<b>Issues</b>	<b>Assessment</b>	<b>Mitigations</b>
1	Proximity to national park/ wildlife sanctuary / reserve forest / mangroves / coastline/estuary/se a	Andipatti Northern Block R.F. (1.4km - E), Andipatti Southern Block R.F (3.8km - SE) and Rajadani R.F (8.5km - E). No forests are situated within 1.0 km radius. The proposed project does not attract Forest	The fugitive dust generated by the mining activity will be suppressed by frequent sprinkling of water based on evaporation rate in the site specific.

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		Conservation Act, 1980. There is wild life sanctuaries found around 10km radius i.e., Srivilliputhur Megamalai Tiger Reserve-8.7km(S) and the area does not attract Wildlife Protection Act, 1972 and C.R.Z. Notification, 1991.	
2	Activities of the project affects the breeding/nesting sites of birds and animals	No breeding and nesting site was identified in mining lease site. The fauna sighted mostly migrated from buffer area. The fauna in the buffer zone may be affected by noise generated due to mining activity.	The noise due to the mining activity will be controlled by developing green belt all along the lease boundary, regular maintenance of tippers, excavators, transporting the tippers within speed limits.
3	Located near an area populated by rare or endangered species	No endangered, critically endangered, vulnerable species sighted in core mining lease area and also in buffer zone.	NIL
4	Proposed project restricts access to waterholes for wildlife	No waterholes are in core zone. No Wild life sanctuary within 10km radius.	NIL
5	Proposed mining project impact surface water quality that also provide water to wildlife	„NO“ scheduled or threatened wildlife animal sighted regularly in core area. There is no proposal for discharge of wastewater to nearby water bodies.	NIL
6	Proposed mining project increase siltation that would affect nearby Biodiversity area.	Surface runoff management structures like garland drain, settling pond etc. as explained above will be constructed and as such there will not be any appreciable impact on surface water quality which in turn can affect the bio diversity of the area.	
7	Risk of fall/slip or cause death to wild animals due to project activities	In the post mining stage, wire fencing is proposed all around the mined-out void to prevent falling of animals in the mine pits.	

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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 production which local livelihood depended	Two reserved forest located beyond 1 km radius. So, the proposed mining activity does not affect forest and forest products.	NIL
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)**

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**Table 4.7 Ecological Impact Assessments and Its Mitigations -Part 2**

<b>Identified Impacts</b>	<b>Ecological Significance of impact</b>	<b>Magnitude</b>	<b>Phase / duration</b>	<b>Reversibility</b>	<b>Mitigation</b>
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, 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	-	-	-
Ecological Impact on Surrounding / Eco sensitive habitat due to Noise generated	During drilling, 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, operation and	NO	Avenue trees will be planted along the lease area to minimize the noise level. Milli second detonators shall be



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from the project activity.			transportation period. (5 years)		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 and 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.

#### **4.4.5.3 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 217 kg per day, 79,205 kg per year and 3,96,025 kg over five years, as provided in below Table.

<b>Description</b>	<b>Per Day</b>	<b>Per year</b>	<b>For Five Years</b>
Total fuel consumption in liters	81	24,362	1,21,808
Co2 emission in kg	217	79,205	3,96,025

#### ***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.

#### **4.4.5.4 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 – 4.8 GREENBELT DEVELOPMENT PLAN**

<b>Year</b>	<b>No. of trees proposed to be planted</b>	<b>Survival %</b>	<b>Name of the Species</b>	<b>No. of trees expected to be grown</b>
I	410	80%	Pongamia pinnata, Syzigium cumini, Albizia lebbeck, Thespesia populnea, Bauhinia racemose, Cassia siamea, Azadirachta indica	335
II	-	80%		-
III	-	80%		-
IV	-	80%		-
V	-	80%		-
Total	410	-	-	335

Nearly 0.41 Ha. of area is proposed for Greenbelt development by planting 410 Nos of trees during every year and expected growth is around 335 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.

#### **4.4.6 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 20 persons directly and 20 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, etc,
- Various trading services for consumer goods, spare parts, sundry items, etc.
- Contractual services connected with the project.
- Green belt and horticultural works in the project.
- Casual labor needs for various activities.

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

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

From above details, it is clear that the project operations will have highly beneficial positive impact in the area. However, towards the socio economic development of

the surrounding area, the proponent has earmarked an amount of Rs.3.0 Lakhs under Corporate Environmental Responsibility.

#### **4.4.7 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 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 12<sup>th</sup> 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.

### **4.4.8 WASTE MANAGEMENT**

#### **4.4.8.3 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.

#### **4.4.8.4 LIQUID WASTE**

There is no process effluent generation from this mine. Hence no liquid waste is generated. Domestic wastewater i.e 0.3 KLD will be discharged in soak pit via septic tank.

#### **4.4.8.5 HAZARDOUS WASTE MANAGEMENT**

In this project the following management practices will be followed:

In the quarrying operation, the source of hazardous waste is from machinery maintenance activities that are waste oil/ Waste lubricants / Used filters / Used Hydraulic hoses. The said hazardous waste are very negligible quantity , it will be properly collected in the source level, stored in impervious storage yards and

disposed off as per the Hazardous waste (Trans-boundary Movement) Management Rules, 2016.

#### **4.4.8.6 PLASTIC WASTE**

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

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## **5.0 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) is site-specific, the chosen location is the only site to carry out Rough Stone quarry.

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## **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 OBJECTIVES OF ENVIRONMENTAL MONITORING**

The objectives of Environmental Monitoring are as follows.

- ❖ Monitoring and analysis of air and water samples
- ❖ Implementing control and protective measures.

❖ Coordinating the environmental related activities within the project as well as with outside agencies. Collecting statistics of health of workers and the population of the surrounding villages. Green belt development etc.

❖ Monitoring the progress of the implementation of the Environmental Management Programme.

❖ Monitoring the noise generation in and around the project areas.

❖ Monitoring of wastewater treatment and disposal of solid waste.

❖ The laboratory will be suitably equipped for sampling/testing for various environmental pollutants.

#### **6.4 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**

<b>S.NO</b>	<b>Environmental Attribute</b>	<b>Parameters to be monitored</b>	<b>Frequency</b>
1	Air Quality	Air Quality for SPM, PM-10, PM 2.5, SO <sub>2</sub> and NO <sub>x</sub>	24 hour average samples once every 3 months
2	Water Quality	General, Physical, and chemical parameters	Once in season
3	Noise	Leq. Lmax Lmin, Leq Day & Leq Night dB (A)	8 hour average samples once every 3 months
4	Soil	Physical and Chemical Characteristics	Once in Season.

## **6.5 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 19.58 lakhs i.e., Rs. 8.58 Lakhs of Capital + Recurring cost Rs. 11.00 lakhs for Five years. The breakup of EMP cost is elaborated in Table 10.2 of Chapter 10.

## **6.6 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: -**

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

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## **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.

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**Table 7.1 Risk Assessment and Control Measures**

<b>S.N O</b>	<b>Risk Factor</b>	<b>Causes of risk</b>	<b>Control Measures</b>
1	Accidents due to explosives and heavy mining machineries	Improper handling and unsafe working practice	<p>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.</p> <p>Entry of unauthorized persons will be prohibited.</p> <p>Fire-fighting and first-aid provisions in the mine office complex and mining area.</p> <p>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.</p> <p>Quarry operation will be done as per approved mining plan and other applicable statutory guidelines issued by DGMS, Dept. of Mining &amp; Geology-Tamil Nadu.</p> <p>Handling of explosives, charging and firing shall be carried out under competent statutory persons.</p> <p>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.</p>
2	Drilling	Improper and unsafe practices. Due to high pressure of compressed air, hoses may burst. Drill Rod may break.	<p>Safe operating procedure established for drilling (SOP) will be strictly followed.</p> <p>Only trained operators will be deployed.</p> <p>Drilling shall not be carried on simultaneously on the benches at places directly one above the other.</p> <p>Periodical preventive maintenance and replacement of worn-out accessories in the compressor and drill equipment as per operator manual.</p>

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			Drills unit shall be provided with wet drilling to ensure efficient working.
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.

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- 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.
- 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.
- 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**

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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 CUMULATIVE IMPACT STUDY**

There are no existing Quarry and this proposed quarry are located within a radius of 500 m from this proposed project area. The existing and proposed quarries situated within 500 m radius are presented in below Table 7.2 and the letter received from Dept. of Geology and Mining, Theni stating the quarries detail within 500m radius is enclosed in Annexure – 3.

**Table 7.2 Details of Quarries within 500m radius**

<b>S.No</b>	<b>Name of the Quarry Owner</b>	<b>S.F. Nos &amp; Village</b>	<b>Lease Period</b>	<b>Area</b>
a.	Abandoned Quarry-	Nil		
b.	Existing Quarry-	Nil		
c.	Proposed Quarry			

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1.	Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President) (Register No.61/2021), South Street, Rajagopalanpatti, Andipatti Taluk, Theni District – 625 536.	1432/3(Part) Thimmarasanaickanu r Bit-2 Village	-	1.60.0 Ha
2.	Tvl.Vannathiparai Nagammal Kalludaikum Magalir Sangam, Tmt.T.Thavamani (President) (Register No.62/2021), South Street, Rajagopalanpatti, Andipatti Taluk, Theni District – 625 536.	1619 (Part) Thimmarasanaickanu r Bit-2 Village	-	2.50.0 Ha
3.	Thiru.Murugan, S/o. Rengasamy, North Street, T.Rajagopalapantti, Andipatti Taluk, Theni District	1613/3C, 1655/2 Thimmarasanaickanu r Bit-2 Village	-	1.17.5
<b>Total Area Under Cluster</b>		<b>5.27.5Ha</b>		

As seen above, although the individual lease area of this project is less than 5 hectares, the no existing Quarry within a 500-meter radius, along with this subject project, add up to more than 5 hectares i.e. 5.27.5 Ha. A map showing the proposed quarry located within 500m radius is given in Figure 1.1. The cumulative production load of existing and proposed Rough stone quarries within cluster is shown in below table.

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**Table 7. 3 Salient Features of Existing & Proposed Quarries**

Description		P1	P2	P3
Name of the Quarry		Tmt.M.Parimala	Tmt.T. Thavamani	Thiru.Murugan
Geological Resources in Cu.m	Rough stone	3,42,645	6,96,273	2,92,500
	Gravel	-	-	11,700
Mineable Reserves in Cu.m	Rough stone	1,52,260	2,38,149	35,525
	Gravel	-	-	3,360
Production in Tons per day	Rough stone	280.17	438	67
	Gravel	-	-	10.08
Total Production per day in tons		280.17	438	77.08
Lorry Loads per day in Nos	-	28	44	7
Employment in Nos		20	20	21
Proposed Depth in meters		35 m BGL	35 m BGL	26 m BGL
Status of the quarry		Proposed	Proposed	Proposed

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**Emission Calculation:**

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

Quantity, TPA	Rough Stone: 1,52,260 m3 (Five Years)
Operational Hours Per Year	2400
Activity Rate, t/hr.	400.5416667
Emission of dust, g/t.	0.14
Emission of dust, g /hr.	52.56464
Area of influence, m <sup>2</sup>	622
Uncontrolled emission rate g/s/m <sup>2</sup>	0.000022181
Controlled emission rate, PM10 g/s/m <sup>2</sup>	0.000002218
Controlled emission rate, PM2.5 g/s/m <sup>2</sup>	0.0000014787

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

Quantity, TPA	Rough Stone: 1,52,260 m3 (Five Years)
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	834
Lead length/trip, Km	0.6
Total VKT/Year	72323
Emission Kg/VKT	0.20
Total emission Kg/Year	19932.55
Uncontrolled emission rate g/s/m	1.3308
Controlled emission rate, PM10 g/s/m	0. 13308
Controlled emission rate, PM2.5 g/s/m	0. 03697

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

Quantity, m <sup>3</sup>	<b>Proposed Quarries:</b> Tmt. Parimala Rough Stone: 1,52,260 m <sup>3</sup> Thiru.R.Murugan: 35,525 m <sup>3</sup> of Rough Stone, 3,360 m <sup>3</sup> of gravel Tmt.Thavamani: 2,38,149 m <sup>3</sup> of Rough Stone.
Operational Hours Per Year	2400
Activity Rate, t/hr.	354.34
Emission of dust, g/t.	0.25
Emission of dust, g /hr.	63.4543
Area of influence, m <sup>2</sup>	625
Uncontrolled emission rate g/s/m <sup>2</sup>	0.00062538
Controlled emission rate, PM10 g/s/m <sup>2</sup>	0.0006253
Controlled emission rate, PM2.5 g/s/m <sup>2</sup>	0.000041692

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

Quantity, m <sup>3</sup>	<b>Proposed Quarries:</b> Tmt. Parimala Rough Stone: 1,52,260 m <sup>3</sup> Thiru.R.Murugan: 35,525m <sup>3</sup> of Rough Stone, 3,360m <sup>3</sup> of gravel Tmt.Thavamani: 2,38,149 m <sup>3</sup> of Rough Stone.
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	8685
Lead length/trip, Km	0.17
Total VKT/Year	624353
Emission Kg/VKT	0.25
Total emission Kg/Year	16543.56
Uncontrolled emission rate g/s/m	3.7523
Controlled emission rate, PM10 g/s/m	0.37523
Controlled emission rate, PM2.5 g/s/m	0.10424

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

#### **7.4.1 PREDICTED EMISSION ESTIMATION FROM CLUSTER**

Predicted maximum ground level concentrations considering micro meteorological data of March to May 2025 are superimposed on the maximum baseline concentrations obtained during the study period to estimate the post project scenario, which would prevail at the post operational phase. The overall scenario with predicted concentrations over the maximum baseline concentrations is shown in the following table along with isopleths Figures 7.2 & 7.3. Various predicted emission levels in the villages surrounding site are presented in Table 7.6 and 7.7 below.

<b>Table 7.4 Concentrations of PM2.5 after Project Implementation</b>					
<b>SL. No</b>	<b>Location</b>	<b>Background Concentration</b>	<b>Predicted incremental Concentration</b>	<b>Post Project Concentration</b>	<b>Statutory Limits in <math>\mu\text{g}/\text{m}^3</math></b>
1	Project site(Parimala)	30.4	1.92	32.32	60
2	Anaikaraipatti	25.0	1.73	26.73	
3	Theppathupatty	25.6	1.53	27.13	
4	T. Vadipatty	23.9	1.34	25.24	
5	Thoppampatti	26.0	1.15	27.15	
6	Andipatti	26.8	<1.0	27.80	
7	T.Renganavaram	27.0	<1.0	28.0	

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**Table 7.4 a Cluster Concentrations of PM2.5 after Project Implementation**

<b>SL. No</b>	<b>Location</b>	<b>Background Concentration</b>	<b>Predicted incremental Concentration</b>	<b>Post Project Concentration</b>	<b>Statutory Limits in <math>\mu\text{g}/\text{m}^3</math></b>
1	Project site(Parimala)	30.4	3.20	33.60	60
2	Anaikaraipatti	25.0	2.88	27.88	
3	Theppathupatty	25.6	2.56	28.16	
4	T. Vadipatty	23.9	2.24	26.14	
5	Thoppampatti	26.0	1.92	27.92	
6	Andipatti	26.8	1.60	28.40	
7	T.Renganavaram	27.0	1.28	28.28	

**Table 7.4 b Concentrations of PM10 after Project Implementation**

<b>SL. No</b>	<b>Location</b>	<b>Background Concentration</b>	<b>Predicted incremental Concentration</b>	<b>Post Project Concentration</b>	<b>Statutory Limits in <math>\mu\text{g}/\text{m}^3</math></b>
1	Project site(Parimala)	66.1	3.65	69.75	100
2	Anaikaraipatti	52.1	3.28	55.38	
3	Theppathupatty	54.5	2.92	57.42	
4	T. Vadipatty	51.9	2.55	54.45	
5	Thoppampatti	55.6	2.19	57.79	
6	Andipatti	57.9	1.82	59.72	



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7	T.Renganavaram	58.9	1.46	60.36	
<b>Table 7.4c Cluster Concentrations of PM10 after Project Implementation</b>					
<b>SL. No</b>	<b>Location</b>	<b>Background Concentration</b>	<b>Predicted incremental Concentration</b>	<b>Post Project Concentration</b>	<b>Statutory Limits in <math>\mu\text{g}/\text{m}^3</math></b>
1	Project site(Parimala)	66.1	5.14	71.24	100
2	Anaikaraipatti	52.1	4.63	56.73	
3	Theppathupatty	54.5	4.11	58.61	
4	T. Vadipatty	51.9	3.60	55.50	
5	Thoppampatti	55.6	3.09	58.69	
6	Andipatti	57.9	2.57	60.47	
7	T.Renganavaram	58.9	2.06	60.96	

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 surrounding area range of 55.50  $\mu\text{g}/\text{m}^3$  to 71.24  $\mu\text{g}/\text{m}^3$  and for PM2.5 are in the range of 26.14  $\mu\text{g}/\text{m}^3$  to 33.60  $\mu\text{g}/\text{m}^3$  which are within the statutory limits in each case.

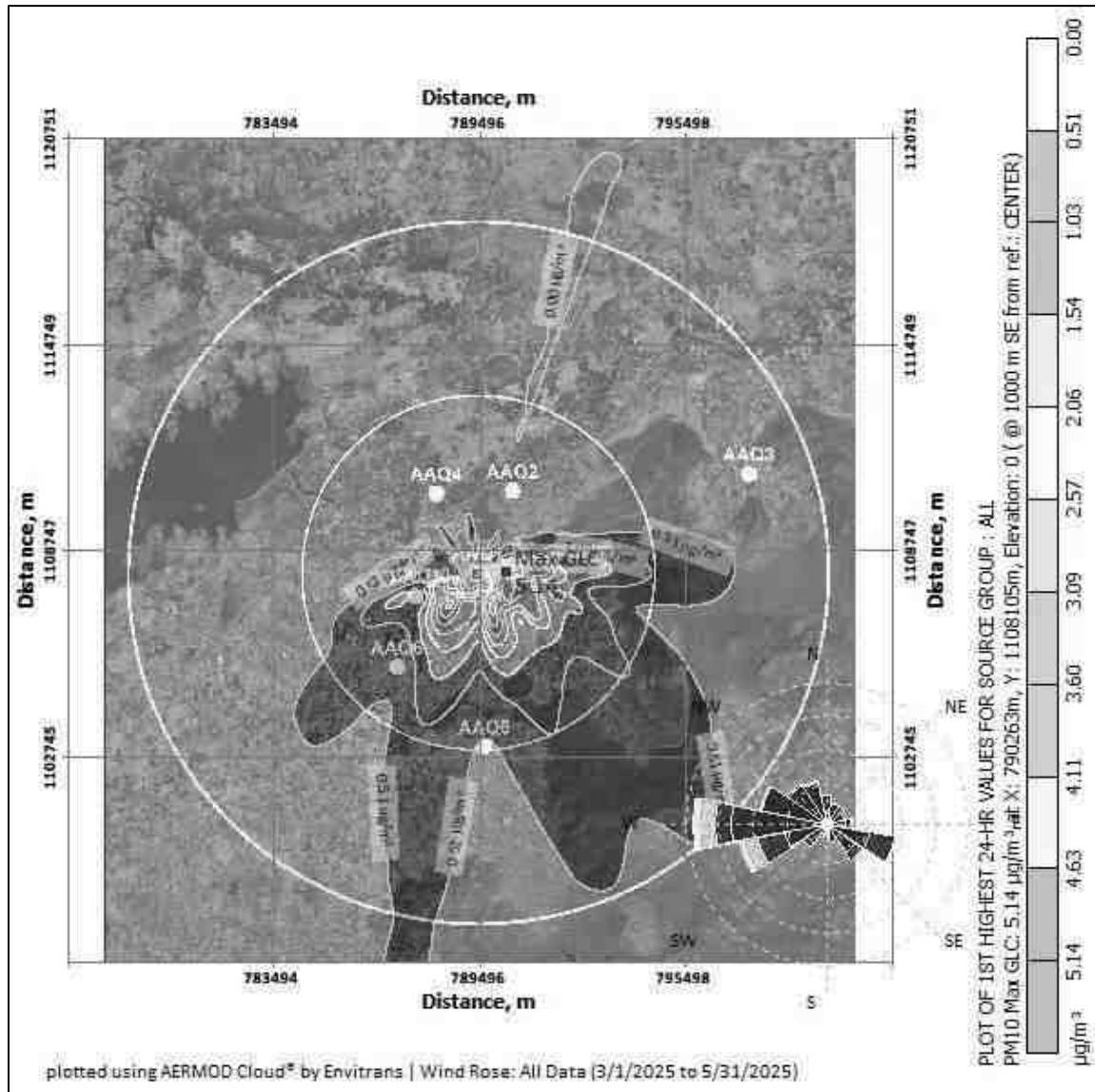






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**FIG 7.4 Isopleth of GLC Prediction –Cumulative for PM<sub>10</sub>**



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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<sub>10</sub> are in the range of 54.45 µg/m<sup>3</sup> to 69.75 µg/m<sup>3</sup> and for PM<sub>2.5</sub> are in the range of 25.24 µg/m<sup>3</sup> to 32.32 µg/m<sup>3</sup> and PM<sub>10</sub> are surrounding area range of 55.50 µg/m<sup>3</sup> to 71.24 µg/m<sup>3</sup> and for PM<sub>2.5</sub> are in the range of 26.14 µg/m<sup>3</sup> to 33.60 µg/m<sup>3</sup> 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.

#### **7.4.2 CUMULATIVE IMPACT ON SOCIO-ECONOMIC ENVIRONMENT**

The mining operations in the 3 mines will provide direct employment opportunity and indirect employment opportunity for scores of people through allied opportunities in logistics, contract workers, trading, repairing works etc. Various mitigative measures suggested in this report will be properly implemented to ensure that no adverse impact is felt on the socio economic and ecological front in the area.

**Table 7.5 SOCIO ECONOMIC BENEFITS FROM 3 MINES**

	Employment	Project Cost	CER
P1	20	Rs. 79.08 Lakhs	Rs.3.0 Lakhs
P2	20	Rs.96.26 Lakhs	Rs.3.0 Lakhs
P3	21	Rs.41.05 Lakhs	Rs.2.0 Lakhs
<b>Total</b>	<b>61</b>	<b>Rs. 216.39 Lakhs</b>	<b>Rs.8.0 Lakhs</b>

### **7.5 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 2.10.

### **7.6 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**

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

The mining activity at proposed Rough Stone Quarry of Tmt. M. Parimala will create direct employment opportunity for 20 local people. The PP has proposed CER amount of Rs. 3.0 Lakhs for surrounding schools' development.

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## **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 vide TOR identification No. TO25B0108TN5292193N/2025 Dated: 25.07.2025. 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 – TMT. M. Parimala 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**

<b>Environmental Parameter</b>	<b>Mitigation Measures</b>
Air	Wet drilling to suppress the dust emission from drill machine
	Regular water sprinkling on haulage road through fixed water sprinkler.
	1.5 m <sup>3</sup> /day of water will be used for dust suppression.
	Regular grading of haul road to clear accumulation of loose material.
	It will be ensured that vehicles are properly maintained to comply with exhaust emission requirements
	Maintenance as per operator manual of the equipment and machinery in the mines to minimizing air pollution
	Ambient Air Quality Monitoring carried out in the project area and in surrounding villages to access the impact due to the mining activities and the efficacy of the adopted air pollution control measures.
	Afforestation for control of dust.

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Water	
Surface water	<p>No major river is found nearby the lease-applied area. Odai passing at 92m in North direction, Odai passing at 198m in North Direction, Odai passing at 224m in South West Direction, Odai passing at 294m in South East Direction, Vaigai River is situated at a distance of 1.8km in North Direction, Periyar Main Canal is situated at a distance of 2.0km in North Direction, Mavuttu Odai passing at 3.5km in North West Direction, Varaha River is situated at a distance of 4.4km in North Direction, Vaigai Dam is situated at a distance of 6.2km in North West Direction. There is no effluent discharge from this proposed Quarry. So, no impact is anticipated.</p> <p>Surface runoff management structures like garland drain of required length which is connected to a settling pond will be constructed around the quarry to collect the rain water.</p> <p>Monthly or after rainfall, inspection for performance of water management structures and systems.</p> <p>There is no discharge of any effluent into nearby water bodies.</p>
Ground Water	<p>The quarrying operation is proposed upto a depth of 35 m maximum below ground level, the water table in the area is 60 m below ground level, hence the project will not intersect the ground water table during entire quarry period.</p>
Water Consumption and Wastewater generation	<p>The required water of 4.0 KLD will be procured from outside agencies initially and later rainwater harvested in the mine pit shall be used other than drinking purpose.</p> <p>Domestic wastewater generation of 1.0 KLD will be discharged in soak pit via septic tank.</p>

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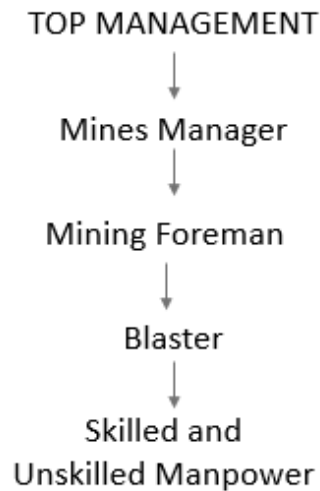
	Conduct ground water and surface water monitoring for parameters specified by CPCB
Noise	The workers employed are provided with personal protective equipment (PPE) as such, earmuffs and ear- plugs for the protection from high noise level generated at the mine site wherever required.
	Noise levels are 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 access the impact due to the mining activities and the efficacy of the adopted noise control measures.
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.

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	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 programme
- Compliance to statutory provisions, norms of State Pollution Control Board, Ministry of Environment and Forests and the conditions of the environmental clearance as well as the consents to establish and consents to operate.

#### **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

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environmental safeguards and recurring expenditure for successful monitoring and implementation of control measures.

**Table 10.2 Environmental Management Plan Budget**

<b>Activities</b>	<b>Mitigation Measure</b>	<b>Capital cost</b>	<b>Recurring Cost per Annum</b>
<b>Air Environment</b>	Compaction, gradation and drainage on both sides for Haulage Road	0.08	0.08
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	5.00	0.25
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	0.10	0.02
	No overloading of trucks/tippers/tractors	0.00	0.05
	Stone carrying trucks will be covered by tarpaulin	0.00	0.10
	Enforcing speed limits of 20 km/hr within ML area	0.04	0.00
	Regular monitoring of exhaust fumes as per RTO norms	0.00	0.05

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	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	0.00	0.50
	<b>Installing wheel wash system near gate of quarry</b>	2.00	0.05
<b>Sub-Total (A)</b>		<b>7.22</b>	<b>1.10</b>
<b>Waste Management</b>	vision for domestic waste collection and disposal through authorized agency	0.20	0.10
	Installation of dust bins	0.05	0.02
<b>Sub-Total (B)</b>		<b>0.25</b>	<b>0.12</b>
<b>Mine Closure</b>	Plantation inside ML area (410 Nos.)	0.41	0.08
<b>Sub-Total (C)</b>		<b>0.41</b>	<b>0.08</b>
<b>Implementation of EC, Mining Plan &amp; DGMS Condition</b>	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

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Workers will be provided with Personal Protective Equipment's	0.20	0.02
Health checkup for workers will be provisioned	0.00	0.10
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. Flaggers will be deployed for traffic management	0.25	0.01
Installation of CCTV cameras in the mines and mine entrance	0.15	0.02
<b>Sub-Total (D)</b>	<b>0.70</b>	<b>0.70</b>
<b>Grant Total (A+B+C+D)</b>	<b>8.58</b>	<b>1.99</b>
<b>Total EMP Cost for 5 years is 19.58 lakhs</b> i.e., Rs.8.58 Lakhs of Capital Cost + Rs.11.00 Lakhs of Recurring Cost <b>(For 5 Years)</b>		

## 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

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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.

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## **11. SUMMARY AND CONCLUSION**

### **11.1 INTRODUCTION**

This EIA Report is prepared for TMT. M. Parimala Rough Stone Quarry over an extent of 1.60.0 Ha. Government land in S. F. No. 1432/3 (Part) of Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu in compliance with ToR obtained vide TOR Identification no. TO25B0108TN5292193N, Dated: 25.07.2025.

Although the individual lease area of this project is less than 5 hectares, no existing Quarry within a 500-meter radius, along with this subject project, add up to more than 5 hectares i.e. 5.27.5 Ha. A map showing the existing and proposed quarry located within 500m radius is given in Figure 1.1.

<b>S.No</b>	<b>Name of the Quarry Owner</b>	<b>S.F. Nos &amp; Village</b>	<b>Lease Period</b>	<b>Area</b>
a. Abandoned Quarry- Nil				
b. Existing Quarry- Nil				
c. Proposed Quarry				
1.	Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President) (Register No.61/2021), South Street, Rajagopalanpatti, Andipatti Taluk, Theni District – 625 536.	1432/3(Part) Thimmarasanaickanur Bit-2 Village	-	1.60.0 Ha

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2.	Tvl.Vannathiparai Nagammal Kalludaikum Magalir Sangam, Tmt.T.Thavamani (President) (Register No.62/2021), South Street, Rajagopalanpatti, Andipatti Taluk,Theni District – 625 536.	1619 (Part) Thimmarasanaickanur Bit-2 Village	-	2.50.0 Ha
3.	Thiru.Murugan, S/o. Rengasamy, North Street, T.Rajagopalapantti, Andipatti Taluk, Theni District	1613/3C, 1655/2 Thimmarasanaickanur Bit-2 Village	-	1.17.5
Total Area Under Cluster		5.27.5Ha		

## 11.2 PROJECT DESCRIPTION

**Table 11.1 Salient Features of the Project**

Description	Salient Feature
Name of the Project	Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala(President)
Location of the Project	S. F. No. 1432/3(Part) of ThimmarasanaickanurBit-2 Village, Andipatti Taluk, Theni District.
Latitude & Longitude	Latitude: 10°01'31.08"N to 10°01'37.17"N Longitude: 77°38'22.55"E to 77°38'27.31"E
Toposheet No.	58F/12

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ML Area	1.60.0Ha
Type of Land	Government Land
Geological Resource	Rough Stone – 3,42,645 m <sup>3</sup>
Mineable Reserves	Rough Stone – 1,52,260 m <sup>3</sup>
Proposed Production for first Five years	1,52,260m <sup>3</sup> of Rough Stone upto a depth of 35m below ground level
Life of the mine	First 5 years
Proposed depth of mining	35 m bgl
Method of Mining	Opencast manual method of mining without blasting.
Proposed bench height and width	Bench Height & Width – 5m.
Waste Generated & its management	There is no overburden anticipated during the entire Rough Stone quarrying operation. The excavated rough stone will be manually dressed into small building stones for foundation purpose.
Bench parameters	The proposed bench height & width is 5.0m respectively and the number of proposed benches is 7.
Water Requirement & source	Total – 4.0 KLD. The required water will be procured from outside agencies initially. Later, water collected in the mine pit will be used to meet the needs.
Proposed Manpower Deployment	20 Nos
Total Project Cost	Rs.79.08 Lakhs
EMP cost (in Lakhs).	Rs.19.58 Lakhs



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CER cost (in Lakhs).	Rs.3.00 Lakhs
Nearest Highway	NH-85: Madurai – Bodinaickanur Road – 2.3 km S SH-101: Devathanapatti – Varusanadu Road – 4.8 km NW
Nearest Railway Station	The Nearest Railway line is Andipatti which is about 3.6 Km on Southern side of the area.
Nearest Airport	Madurai International Airport – 53 km SE
Nearest Major Water bodies	Odai-92m(N), Odai-198m (N), Odai-224m(SW), Odai 294m(SE), VaigaiRiver-1.8km (N), PeriyarMainCanal-2.0km (N), MavuttuOdai-3.5km(NW), VarahaRiver-4.4km(N), Vaigai Dam-6.2km(NW)
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
NBWL Clearance / Conservation Measures	Applicable Srivilliputhur Megamalai Tiger Reserve - 8.7 km (S)
Reserved / Protected Forests	Andipatti Northern Block R.F. – 1.4 km (E) Andipatti Southern Block R.F. – 3.8 km (SE)

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	Rajadani R.F. – 8.5 km (E)
Nearest Village	Nallakaruppathevanpatti – 400 m NE, T.Sedapatti – 700 m SE, Vegavadiashramam – 1.6 km NW, T.Renganavaram – 1.8 km SW Thimmarasanaickanur Bit-2 – 3.6 km SE
Seismic Zone	Zone II

### **11.3 DESCRIPTION OF THE ENVIRONMENT**

The baseline monitoring study was carried out during March to 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 - 11.2 Land use Pattern of the study area**

<b>Sl.No.</b>	<b>LAND USE / LAND COVER</b>	<b>Area in Sq.Km</b>	<b>Area in Percentage</b>
1	Built-up land	7.92	2.48
2	Crop land	114.65	36.03
3	Fallow land	29.12	8.87
4	Land with scrub	18.96	5.56
5	Land without scrub	41.99	13.19
6	Existing Quarry	6.27	1.97
7	Plantations	12.78	4.01
8	Hill & Forest	63.57	19.98
9	Plantations	12.78	4.01
10	Water bodies	22.86	7.91
	<b>Total Area</b>	<b>330.9</b>	<b>100.0</b>

*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 6.57 to 7.86 and Electrical Conductivity values were ranging between 72.64 – 162.7  $\mu$ mhos/cm. Soils are generally Silt Loam. Organic matter values were ranging between 0.64 – 1.39 %. Total Nitrogen values were ranging between 226– 632 mg/kg. Phosphorus values were ranging between 0.92 – 2.11  $\mu$ g/g. Potassium values were ranging between 524 – 890 mg/kg. Sodium values were ranging between 355 – 1070 mg/kg. Total Sulphate values were observed to be BDL. The soil quality data for the 3 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 to May 2025) are presented in Chapter 3. The ambient air quality data for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub>, CO studied at 5 locations as per prescribed guidelines/ methods. As per the monitoring data, the PM<sub>10</sub> values were in the range of 45.0 – 58.9 µg/m<sup>3</sup>. PM<sub>2.5</sub> values were in the range of 20.7 – 27.0 µg/m<sup>3</sup>. SO<sub>2</sub> levels were ranging from 4.7 – 6.8 µg/m<sup>3</sup>. NO<sub>2</sub> levels were ranging from 9.3 – 11.9 µg/m<sup>3</sup>. While comparing with the NAAQ Norms laid by MoEF, all monitored values of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub> & CO were found to be well within the prescribed standards. The CO values in the all locations found to be below detectable limit (DL – 1144 µg/m<sup>3</sup>).

### **11.3.4 WATER ENVIRONMENT**

#### **Surface Water**

The pH varied from 7.86 to 7.92 while turbidity found within the standards (Optimal pH range for sustainable aquatic life is 6.5 to 8.5 pH. Total Dissolved Solids varied from 118 to 140 mg/l. Chloride varied between 32.4 mg/l and 35.7 mg/l. Nitrates varied from BDL(DL-1.0) to 1.65 mg/l, while sulphates varied from 14.8 to 15.9 mg/l.

#### **Ground Water**

Suitability of ground water for drinking/irrigation/industrial purposes is determined keeping in view the effects of various chemical constituents present in water as required human use, plant use. Though many ions are very essential for the growth

of plants and human body but when present in excess, have an adverse effect on health and growth.

As Per the data it has been observed that the pH value varies from 7.21 to 7.93, Chlorides Ranges From 125 - 375 mg/l, Sulphates value found to be between 32.0 - 154 mg/l, Fluoride Ranges low in lease area i.e. 0.29 – 0.52, Hardness varies from 171 – 576 mg/l, and Total dissolved solid 442 – 860 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 it is observed that the day Equivalent Noise (Leq-d) level were ranging from 46.2 to 50.3 dB(A) and Night Equivalent Noise (Leq-n) level were ranging from 38.2 to 43.3 dB(A). Day and Night Equivalent Noise (Leq-n) level were ranging from 45.1 to 49.0 dB(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 Thimmarasanaickanur Bit-2 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.

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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**

<b>Impact</b>	<b>Mitigation Measures</b>
<b>Land Environment</b>	
<ul style="list-style-type: none"> <li>❖ Destruction of natural landscapes</li> <li>❖ Changes in soil characteristics</li> <li>❖ Soil erosion and slope instability</li> <li>❖ Problems to agricultural land and human habitations due to dust, and noise caused by movement of heavy vehicles.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Rough stone does not produce any toxic effluents in the form of solids, liquids, or gases.</li> <li>❖ At the end of life of mine, the excavated mine pit / void of 1.17.0 Ha. will act as artificial reservoir for collecting rain water and helps to meet out the demand or crises during drought season.</li> <li>❖ After mine closure the greenbelt (0.41.0 Ha.) will be developed along the safety barrier and top benches and 0.02 ha are approach road and Infrastructure.</li> <li>❖ The periphery of the mining lease area will be converted to a greenbelt to prevent Noise and sound propagation to the nearby lands.</li> <li>❖ Entire mined out area will be properly fenced to prevent inadvertent entry of human and animals.</li> <li>❖ 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</li> </ul>

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	runoff during rainfall and also to collect the storm water for various uses within the proposed area.
Water Environment	
<ul style="list-style-type: none"> <li>❖ Impact due to Usage of Water in mines</li> <li>❖ Generation of waste water from vehicle washing</li> <li>❖ Domestic sewage</li> <li>❖ Washouts from surface exposure or working areas</li> <li>❖ Impact on Surface Water Resources</li> <li>❖ Impact on Ground water</li> <li>❖ Impact on Water Quality</li> <li>❖</li> </ul>	<ul style="list-style-type: none"> <li>❖ Odai-92m(N), Odai-198m (N), Odai-224m(SW), Odai 294m(SE),VaigaiRiver-1.8km (N), PeriyarMainCanal-2.0km (N),MavuttuOdai-3.5km(NW), Varaha River-4.4km(N),Vaigai Dam-6.2km(NW)</li> <li>❖ There is no proposal for a rough stone processing or workshop within the project area, so no effluent is anticipated in the mine.</li> <li>❖ The required water (4.0 KLD) will be sourced initially from outside agencies. Later the rainwater collected in the mine pit sump will be used for this purpose.</li> <li>❖ Regular water quality will be carried in nearby villages to ensure the water quality is not affected due to the quarrying activities.</li> <li>❖ Domestic sewage from site office &amp; urinals/latrines provided in project area will be discharged through septic tank followed by soak pit system.</li> <li>❖ Only clear and settled water free from silt content will be used for dust suppression and greenbelt development.</li> </ul>



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	<ul style="list-style-type: none"> <li>❖ 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.</li> <li>❖ Two sump with each capacity 2500 Cu.m proposed to harvest rain water. The rain water stored in the pond will be utilized for plantation, dust suppression activities.</li> </ul>
Air Environment	
<ul style="list-style-type: none"> <li>❖ Generation of Fugitive Dust</li> <li>❖ Dust will be generated mainly during excavation, loading &amp; unloading activities.</li> <li>❖ Reduction in visibility due to dust plumes.</li> <li>❖ Coating of vegetation leading to reduced photosynthesis.</li> <li>❖ Inhibited growth, destroying of foliage, degradation of crops;</li> <li>❖ Increase in health hazards due to inhalation of dust.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Using Wet drilling methods, Allowing drilling only with PPE,</li> <li>❖ 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.</li> <li>❖ Speed restrictions will be imposed to avoid spillage of loaded materials upon the road and to reduce wear and tear of the road.</li> <li>❖ 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.</li> <li>❖ Development of greenbelt is proposed in the safety zone of 10m and 7.5m barriers in the lease area.</li> <li>❖ Personal Protective Equipment's will be provided to all workers</li> </ul>
Noise & Vibration	

**DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE QUARRY OF TVL.VANNATHIPARAI KALIESWARI KALLUDAIKUM MAGALIR SANGAM, TMT.M.PARIMALA (PRESIDENT) AT S.F.NO. 1432/3 (PART) OVER AN EXTENT OF 1.60.0 HA IN THIMMARASANAICKANUR BIT-2 VILLAGE, ANDIPATTI TALUK, THENI DISTRICT, TAMIL NADU**

<ul style="list-style-type: none"> <li>❖ The main noise generating source during mining operation and related activities are drilling, excavation, loading, unloading and transportation.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Usage of sharp drill bits while drilling which will help in reducing noise;</li> <li>❖ Proper maintenance, oiling and greasing of machines will be done every week to reduce generation of noise;</li> <li>❖ Provision of sound insulated chambers for the workers working on machines (HEMM) producing higher levels of noise;</li> <li>❖ Green Belt will be developed around the project areas and along the haul roads. The plantation minimizes propagation of noise;</li> <li>❖ 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.</li> <li>❖ Regular medical check-up and proper training to personnel to create awareness about adverse noise level effects.</li> </ul>
Biological Environment	
<ul style="list-style-type: none"> <li>❖ Direct impacts include land clearance and excavation causing destruction of flora and fauna and loss of habitats.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Only some common herbs, shrubs and grass will be cleared. So, there will be no impact on the biodiversity.</li> <li>❖ Green belt development with suitable species will enhance the biodiversity of the project area.</li> </ul>

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❖ Indirect impacts include habitat degradation due to noise, dust, and human activity.	❖ The core zone or buffer zone does not encompass any threatened flora or fauna species.
<b>Socio-Economic Environment</b>	
<ul style="list-style-type: none"> <li>❖ Health and safety of workers and the general public.</li> <li>❖ Increase in traffic volumes and sizes of road vehicles.</li> <li>❖ Economic issues, including the increase in employment opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Around 20 local workers will get employment opportunities along with periodical training to generate local skills.</li> <li>❖ 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.</li> </ul>
<b>Occupational Health &amp; Safety</b>	
<ul style="list-style-type: none"> <li>❖ Exposure to Dust</li> <li>❖ Noise and Vibration Exposure</li> <li>❖ Physical Hazards</li> <li>❖ Respiratory hazards due to Dust exposure</li> </ul>	<ul style="list-style-type: none"> <li>❖ Provision of rest shelters for mine workers with amenities like drinking water etc.</li> <li>❖ All safety measures like use of safety appliances, such as dust masks, helmets, shoes, safety awareness programs, awards, posters, slogans related to safety etc.</li> <li>❖ Training of employees for use of safety appliances and first aid in vocational training centre.</li> </ul>

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	<ul style="list-style-type: none"> <li>❖ Weekly maintenance and testing of all equipment as per manufacturers' guidelines.</li> <li>❖ Pre placement and Yearly Medical Examination of all workers by a medical Officer.</li> <li>❖ First Aid facility will be provided at the mine site.</li> <li>❖ 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.</li> <li>❖ Working of mine as per approved mining plan and environmental plans.</li> </ul>
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### **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. 8.58 Lakhs and the recurring cost of Rs. 11.0 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

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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 TO25B0108TN5292193N/2025 Dated: 25.07.2025. 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 one existing and this proposed quarries within the 500m radius along with this subject project 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 proposed project will bring 79 trips per day. The existing road can absorb this additional traffic due to this project.

The proposed Quarries (3 Nos) will provide direct employment opportunities for 61 people.

The proposed Quarries (3 Nos) has allocated Rs. 8.0 Lakhs as the CER budget and this proposed project has allocated Rs.3.0 Lakhs.

## **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**

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- This project provides employment to 20 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.

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## 12 DISCLOSURE OF CONSULTANTS

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

*Declaration by Experts contributing to the proposed Rough Stone Quarry over an extent of 1.60.0 Ha Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni 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 to May 2025.*

### **Contact information:**


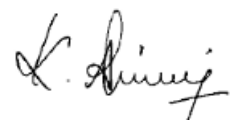

***M/s Global Mining Solutions***

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





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**Kottamettupatty, Omalur,**

**Salem, Tamil Nadu – 636 455.**

<b>S. No.</b>	<b>Functional areas</b>	<b>Name of the expert/s</b>	<b>Involvement (period and task**)</b>	<b>Signature and Date</b>
1	AP	Dhanalakshmi Ramanathan	Assessment of existing air quality, Impact of the project on ambient air and suggested mitigation measures for air pollution.  <u>Period: March to May 2025</u>	
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 to May 2025</u>	
3	SHW	Ramados N	Assessment of waste generated from the project, suggested waste management practices.  <u>Period: March to May 2025</u>	


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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 to May 2025</u>	
5	EB	Saravanan S	Baseline data collection of related to ecology of the area.  <u>Period: March to 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 to 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 to May 2025</u>	

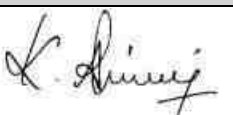


**DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE QUARRY OF TVL.VANNATHIPARAI KALIESWARI KALLUDAIKUM MAGALIR SANGAM, TMT.M.PARIMALA (PRESIDENT) AT S.F.NO. 1432/3 (PART) OVER AN EXTENT OF 1.60.0 HA IN THIMMARASANAICKANUR BIT-2 VILLAGE, ANDIPATTI TALUK, THENI DISTRICT, TAMIL NADU**

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 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: March to May 2025.</u>	T. Srilatha
10	RH	S.V. Prashant	Identification of the Risk related to the mining activities. Preparation of emergency disaster management plan. Plan for supply of safety equipment for the worker.  <u>Period: March to May 2025.</u>	S. Prashanth
11	SC	Shisupal Sing	Soil monitoring, secondary data collection on soil type, soil management	Shisupal Sing

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			<p><i>practices, utilization of topsoil.</i></p> <p><u>Period: March to May 2025.</u></p>	
12	GEO	Valliappan Meyyappan	<p><i>Geological map, stability of quarry and dump, management plan for mine stability, after use of mining quarry and geological feature of the area.</i></p> <p><u>Period: March to May 2025.</u></p>	

**DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE QUARRY OF TVL.VANNATHIPARAI KALIESWARI KALLUDAIKUM MAGALIR SANGAM, TMT.M.PARIMALA (PRESIDENT) AT S.F.NO. 1432/3 (PART) OVER AN EXTENT OF 1.60.0 HA IN THIMMARASANAICKANUR BIT-2 VILLAGE, ANDIPATTI TALUK, THENI DISTRICT, TAMIL NADU**

TM- EC						
S.No	Name of TM (EC)	Sector(s) proposed	Approved (to work under)	Period of involvement	Type of work	Signature
1.	Dhanalakshmi Ramanathan	1(a)	Manikandan Manickam	Period: March to May 2025.	Associated with EIA Coordinator in overall preparation of Draft EIA/EMP report.	
TM- FAE:						
S. No	Name of TM (FAE)	Functional Area	Approved FAE (to work under)	Period of involvement	Type of work	Signature
	Kamaraj S	HG	Ashok Kumar Rajagopal	Period: March to May 2025.	Associated with Experts in studying hydrogeological pattern of study area, Studying ground water and the impact of the project on ground water	
2	B.J.Sampatkkumar	SE	Saraswathy K	Period: March to May 2025.	Assisted by the Expert in preparation of socio-economic report.	
		SC	Shishupal Singh	Period: March to May 2025.	Assisted by the Expert in interpretation of soil sampling and their quality involved in the project.	
3	Mownica Balaji	NV	Dhanalakshmi Ramanathan		Associated with the expert team in suggesting control	

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				<i>Period: March to May 2025.</i>	measures for noise and Ground Vibration.	
		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	Mounica.B
4	Balasubramani G	NV	Dhanalakshmi Ramanathan	<i>Period: March to May 2025.</i>	Associated with the expert in selection of base line monitoring stations, Review of Noise quality results, Review of emission sources – drilling, blasting, excavation and transportation, Identification of impacts on environment, identification of remedial measures and input to EIA preparation	
		Geo	Valliappan Meyyappan		Associated with the expert in preparing Geological map.	
5	Suresh Mani	LU	Srilatha Thiruveedhula	<i>Period: March to May 2025.</i>	Associated with Experts in preparing Land use map based on satellite imagery, Land use classification and analysis, Impact prediction on surrounding land environment.	
		HG	Ashok Kumar Rajagopal		Associated with Experts in studying hydro-geology pattern of study area, studying	

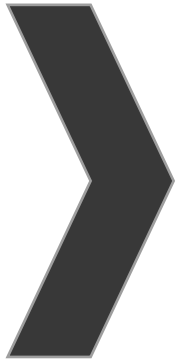
**DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE QUARRY OF TVL.VANNATHIPARAI KALIESWARI KALLUDAIKUM MAGALIR SANGAM, TMT.M.PARIMALA (PRESIDENT) AT S.F.NO. 1432/3 (PART) OVER AN EXTENT OF 1.60.0 HA IN THIMMARASANAICKANUR BIT-2 VILLAGE, ANDIPATTI TALUK, THENI DISTRICT, TAMIL NADU**

					water and the impact of the project on ground water.	
6	Asan Ali S	NV	Srilatha Thiruveedhula	<i>Period: March to May 2025.</i>	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
		Geo	Valliappan Meyyappan		Associated with the Qualified Person & Experts in preparing Geological map, assessing stability of quarry slope faces and dump, management plan for mine stability and after use of mining quarry and geological features of the area during mine plan preparation.	
7	Prabu M	Geo	Valliappan Meyyappan	<i>Period: March to May 2025.</i>	Associated with Experts and involved in Field Investigations, Mapping /Geo-referencing	H. Prabu
8	Abirami Kaliyaperumal	RH	S V Prashant	<i>Period: March to May 2025.</i>	Associated with experts and involved in the identification risk and hazard, suggesting safeguard measures.	K. Abirami



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



# ANNEXURE-1



**File No: 12270**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(Issued by the State Environment Impact Assessment Authority(SEIAA),**  
**TAMIL NADU)**

\*\*\*



Dated 25/07/2025



To,

Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam  
Tmt.M.Parimala (President), (Register No.61/2021), South Street, Rajagopalanpatti, Andipatti Taluk,  
Theni District , TAMIL NADU- 625536  
manikandan978772@gmail.com

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

**Sir/Madam,**

**Sub:** SEIAA, Tamil Nadu – Terms of Reference along with Public Hearing (ToR) for the Proposed Rough Stone Quarry over an extent of 1.60.0Ha of S.F. No. 1432/3 (Part) of Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu by Tvl. Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President) – “B1” and Schedule S.No. 1 (a) – ToR issued along with Public Hearing- preparation of EIA report – Regarding.

**Ref:** 1. Online proposal No. SIA/TN/MIN/539887/2025, Dated: 31.05.2025.

2. Your application submitted for Terms of Reference dated: 05.06.2025.

3. Minutes of the 585th Meeting of SEAC held on 03.07.2025.

4. Minutes of the 856th Meeting of Authority held on 21.07.2025.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO25B0108TN5292193N
(ii) File No.	12270
(iii) Clearance Type	TOR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vii) Name of Project	Proposed Rough stone Quarry of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President)
(viii) Name of Company/Organization	VANNATHIPARAI KALEESWARI KALUDAIKKUM WOMEN SHG
(ix) Location of Project (District, State)	THENI, TAMIL NADU

<b>(x) Issuing Authority</b>	SEIAA
<b>(xi) Applicability of General Conditions</b>	no
<b>(xii) Applicability of Specific Conditions</b>	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 21.07.2025. The minutes of the meeting and all the Application and documents submitted [(viz. Form-1 Part A, Part B,)] are available on PARIVESH portal which can be accessed by scanning the QR Code above.

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

4. The SEIAA has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the SEAC hereby decided to issue the following Terms of Reference with public hearing for instant proposal of Tvl. Vannathiparai Kalieswari Kalludaikum Magalir Sangam 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 OM No. J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.

#### **Copy To**

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. The Additional Chief Secretary to Government, Environment and Forests Department, Tamil Nadu.
3. The Additional Chief Secretary to Government, Natural Resources Department, Tamil Nadu.
4. The Additional Principal Chief Conservator of Forests, Regional Office (SZ), 34, HEPC Building, 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai – 34.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
6. The Chair Person, TNPC Board, 76, Mount Salai, Guindy, Chennai-32
7. The District Collector, Theni District,
8. The Commissioner of Geology and Mines, Guindy, Chennai-32
9. Assistant Director, Department of Geology & Mining, Theni District,
10. EI Division, Ministry of Environment & Forests, Paravaran Bhawan, New Delhi.
11. File Copy.

#### **Annexure 1**

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

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

S. No	Terms of Reference
1.1	The authority noted that the subject was placed in the 585th SEAC-II meeting held on 03.07.2025. After detailed discussions, <b>the Authority accepts the recommendation of SEAC-II and decided to grant Terms of Reference (ToR) along with Public Hearing for the quantity of 1,52,260m<sup>3</sup> of Rough Stone up to the depth of 35m BGL. The annual peak production is 30,565m<sup>3</sup> of Rough Stone as per the approved mining plan</b> , under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC-II & normal conditions & the conditions mentioned in Annexure of this minutes.

## 2. Seac Conditions - Standard

S. No	Terms of Reference
2.1	<p style="text-align: center;"><b>TERMS OF REFERENCE (ToR) FOR GRANITE / ROUGH STONE QUARRY</b></p> <ol style="list-style-type: none"> <li>In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following: <ol style="list-style-type: none"> <li>Original pit dimension</li> <li>Quantity achieved Vs EC Approved Quantity</li> <li>Balance Quantity as per Mineable Reserve calculated.</li> <li>Mined out Depth as on date Vs EC Permitted depth</li> <li>Details of illegal/illicit mining</li> <li>Violation in the quarry during the past working.</li> <li>Quantity of material mined out outside the mine lease area</li> <li>Condition of Safety zone/benches</li> <li>Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.</li> </ol> </li> <li>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.</li> <li>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.</li> <li>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.</li> <li>The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report.</li> <li>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.</li> <li>In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining &amp; Fuel Research / Dhanbad, NIRM/Bangalore, Division of 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.</li> <li>However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope</li> </ol>

S. No	Terms of Reference
	<p>Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.</p> <p>9. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.</p> <p>10. The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.</p> <p>11. The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.</p> <p>12. If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,</p> <p>13. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?</p> <p>14. Quantity of minerals mined out.</p> <ul style="list-style-type: none"> <li>· Highest production achieved in any one year</li> <li>· Detail of approved depth of mining.</li> <li>· Actual depth of the mining achieved earlier.</li> <li>· Name of the person already mined in that leases area.</li> <li>· If EC and CTO already obtained, the copy of the same shall be submitted.</li> <li>· Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.</li> </ul> <p>15. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).</p> <p>16. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,</p> <p>17. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees &amp; safety distance between the adjacent quarries &amp; water bodies nearby provided as per the approved mining plan.</p> <p>18. The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same.</p> <p>19. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.</p> <p>20. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping &amp; open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.</p> <p>21. The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality &amp; flora/fauna including traffic/vehicular movement study.</p> <p>22. The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health,</p>

S. No	Terms of Reference
	<p>biodiversity, air pollution, water pollution, climate change and flood control &amp; health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.</p> <p>23. Rain water harvesting management with recharging details along with water balance (both monsoon &amp; non-monsoon) be submitted.</p> <p>24. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.</p> <p>25. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&amp;R issues, if any, should be provided.</p> <p>26. Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.</p> <p>27. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.</p> <p>28. Impact on local transport infrastructure due to the Project should be indicated.</p> <p>29. A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area &amp; 300m buffer zone and its management during mining activity.</p> <p>30. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.</p> <p>31. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.</p> <p>32. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix-I in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.</p> <p>33. Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner</p> <p>34. A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.</p> <p>35. A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.</p> <p>36. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.</p> <p>37. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.</p>

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

### 3. Seac Conditions - Site Specific

S. No	Terms of Reference
3.1	<p><b>1. A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic &amp; scientific approach with appointment of 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:</b></p> <p><b>(i) Copy of the agreement forming CMC.</b></p> <p><b>(ii) The Organisation chart of the Committee with defining the role of the members</b></p> <p><b>(iii) The 'Standard Operating Procedures' (SoP) executing the planned activities.</b></p> <p><b>2. The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report.</b></p> <p><b>3. Since waterbodies are situated nearby, the PP shall carry out the hydrological study including the details of waterflow pattern to determine the impacts of the mining operation in the waterbodies.</b></p> <p><b>4. The details of enumeration of structures including schools, colleges, primary health centers should be submitted along with the EIA report.</b></p> <p><b>5. The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m &amp; up to 1km shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc. and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations.</b></p> <p><b>6. The proponent shall furnish photographs of adequate fencing; garland drainage built with siltation tank &amp; green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries &amp; water bodies nearby provided as per the approved mining plan.</b></p> <p><b>7. The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report.</b></p> <p><b>8. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit</b></p>



S. No	Terms of Reference
	<p>stating to abide the EMP for the entire life of mine.</p> <p>9. The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing &amp; proposed quarries which included drilling &amp; blasting, loading &amp; hauling on the surrounding village and structures.</p> <p>10. The PP shall prepare a conceptual action plan accommodating the inclusion of haul road accessibility keeping the benches intact, by ensuring the slope stability of the working benches to be constructed and existing quarry wall.</p> <p>11. The PP shall install the CCTV camera for the continuous surveillance of mining activity &amp; furnish the photographic/videographic evidence along with the EIA report.</p>

#### 4. Seiaa Standard Conditions:

S. No	Terms of Reference
4.1	<p><b><u>Cluster Management Committee</u></b></p> <ol style="list-style-type: none"> <li>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.</li> <li>The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,</li> <li>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.</li> <li>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.</li> <li>The committee shall deliberate on risk &amp; emergency management plan, fire safety &amp; evacuation plan and sustainable development goals pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.</li> <li>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.</li> <li>The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.</li> <li>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.</li> </ol> <p><b><u>Agriculture &amp; Agro-Biodiversity</u></b></p> <ol style="list-style-type: none"> <li>Impact on surrounding agricultural fields around the proposed mining Area.</li> <li>Impact on soil flora &amp; vegetation around the project site.</li> <li>Details of type of vegetation including no. of trees &amp; 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.</li> <li>The Environmental Impact Assessment should study the agro-biodiversity, agro- forestry, horticultural plantations, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.</li> <li>Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.</li> <li>The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.</li> </ol> <p><b><u>Forests</u></b></p> <ol style="list-style-type: none"> <li>The project proponent shall detailed study on impact of mining on Reserve forests and free</li> </ol>

S. No	Terms of Reference
	<p>ranging wildlife.</p> <p>16. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.</p> <p>17. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.</p> <p>18. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.</p> <p><b><u>Water Environment</u></b></p> <p>19. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping &amp; open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.</p> <p>20. Erosion Control measures.</p> <p>21. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, &amp; any ecological fragile areas.</p> <p>22. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.</p> <p>23. The project proponent shall study and furnish the details on potential fragmentation impact on natural Environment, by the activities.</p> <p>24. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.</p> <p>25. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.</p> <p>26. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.</p> <p>27. The EIA shall include the impact of mining activity on the following:</p> <ol style="list-style-type: none"> <li>Hydrothermal/Geothermal effect due to destruction in the Environment.</li> <li>Bio-geochemical processes and its foot prints including Environmental stress.</li> <li>Sediment geochemistry in the surface streams.</li> </ol> <p><b><u>Energy</u></b></p> <p>28. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished.</p> <p><b><u>Climate Change</u></b></p> <p>29. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.</p> <p>30. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil &amp; below soil carbon stock, soil health and physical, chemical &amp; biological soil features.</p> <p>31. Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood.</p> <p><b><u>Mine Closure Plan</u></b></p> <p>32. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.</p> <p><b><u>EMP</u></b></p> <p>33. Detailed Environment Management Plan along with adaptation, mitigation &amp; remedial strategies covering the entire mine lease period as per precise area communication order issued and the scope for achieving SDGs.</p> <p>34. The Environmental Impact Assessment should hold detailed study on EMP with budget for</p>

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

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

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

S. No	Terms of Reference
	from State land use board or the concerned authority
1.7	It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report
1.8	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided
1.9	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period
1.10	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given
1.11	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given
1.12	A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the 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/

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

S. No	Terms of Reference
1.24	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated
1.25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided
1.26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided
1.27	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided
1.28	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from State Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished
1.29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out
1.30	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same
1.31	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution
1.32	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the 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

S. No	Terms of Reference
	examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed
1.36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations
1.37	Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation
1.38	Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project
1.39	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project
1.40	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given
1.41	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out
1.42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report
1.43	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc
1.44	Besides the above, the below mentioned general points are also to be followed:- a) All documents to be properly referenced with index and continuous page numbering. b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated. c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project. d) Where the documents provided are in a language other than English, an English translation should be provided. e) The Questionnaire for 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

S. No	Terms of Reference
	contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area





## **A. STANDARD TERMS OF REFERENCE**

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

the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.

- 8) Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
- 9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
- 10) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
- 11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
- 12) Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- 13) Status of forestry clearance for the broken-up area and virgin forestland involved in the Project including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
- 14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.

- 15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- 16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
- 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
- 20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects

falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).

- 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
- 22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season); December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.

- 24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
- 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
- 28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 29) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
- 30) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and Bgl. A schematic diagram may also be provided for the same.
- 31) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected

for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.

- 32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
- 33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
- 35) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
- 36) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
- 37) Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
- 38) Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and

grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.

- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed: -
  - a) Executive Summary of the EIA/EMP Report
  - b) All documents to be properly referenced with index and continuous page numbering.
  - c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
  - d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
  - e) Where the documents provided are in a language other than English, an English translation should be provided.
  - f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.

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

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

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

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



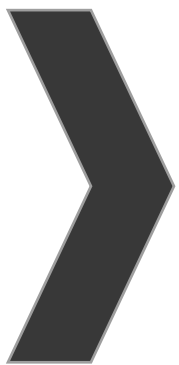
5. The proponent shall furnish the contour map of the water table detailing the number of wells located around the site and impacts on the wells due to mining activity.
6. A detailed study of the lithology of the mining lease area shall be furnished.
7. Details of village map, “A” register and FMB sketch shall be furnished.
8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be submitted along with EIA report.
9. Obtain a letter /certificate from the Assistant Director of Geology and Mining stating that there is no other Minerals/resources like sand in the quarrying area within the approved depth of mining and below depth of mining and the same shall be furnished in the EIA report.
10. EIA report should strictly follow the Environmental Impact Assessment Guidance Manual for Mining of Minerals published February 2010.
11. Detail plan on rehabilitation and reclamation carried out for the stabilization and restoration of the mined areas.
12. The EIA study report shall include the surrounding mining activity, if any.
13. Modeling study for Air, Water and noise shall be carried out in this field and incremental increase in the above study shall be substantiated with mitigation measures.
14. A study on the geological resources available shall be carried out and reported.
15. A specific study on agriculture & livelihood shall be carried out and reported.
16. Impact of soil erosion, soil physical chemical and biological property changes may be assumed.
17. Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./ private land, status of acquisition, nearby (in 2-3 km.) water body, population, within 10km other industries, forest, eco-sensitive zones, accessibility, (note - in case of industrial estate this information may not be necessary)
18. Baseline environmental data - air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population

19. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
20. Likely impact of the project on air, water, land, flora-fauna and nearby population
21. Emergency preparedness plan in case of natural or in plant emergencies
22. Issues raised during public hearing (if applicable) and response given
23. CER plan with proposed expenditure.
24. Occupational Health Measures
25. Post project monitoring plan
26. The project proponent shall carry out detailed hydro geological study through intuitions/NABET Accredited agencies.
27. A detailed report on the green belt development already undertaken is to be furnished and also submit the proposal for green belt activities.
28. The proponent shall propose the suitable control measure to control the fugitive emissions during the operations of the mines.
29. A specific study should include impact on flora & fauna, disturbance to migratory pattern of animals.
30. Reserve funds should be earmarked for proper closure plan.
31. A detailed plan on plastic waste management shall be furnished. Further, the proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throw away plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986. In this connection, the project proponent has to furnish the action plan.

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

- a. A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.

- b. All documents may be properly referenced with index, page numbers and continuous page numbering.
- c. Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF& CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- e. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no F. No.J -11013/77/2004-IA-II(I) dated 2<sup>nd</sup> December, 2009, 18<sup>th</sup> March 2010, 28<sup>th</sup> May 2010, 28<sup>th</sup> June 2010, 31<sup>st</sup> December 2010 & 30<sup>th</sup> September 2011 posted on the Ministry's website <http://www.moef.nic.in/> may be referred.
- After preparing the EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above-mentioned points, the proponent will take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.
  - The final EIA report shall be submitted to the SEIAA, Tamil Nadu for obtaining Environmental Clearance.
  - The TORs with public hearing prescribed shall be **valid for a period of three years** from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-II(I)(part) dated 29<sup>th</sup> August, 2017.



# **ANNEXURE-2**



அனுப்புநர்  
மாவட்ட ஆட்சித்தலைவர்,  
தேனி.

பெறுநர்:  
திருமதி.ம.பரிமளா, தலைவி,  
தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி  
கல்லுடைக்கும் மகளிர் சங்கம்,  
(பதிவு எண்.61/2021),  
தெற்கு தெரு, இராஜகோபாலன்பட்டி,  
ஆண்டிபட்டி வட்டம்,  
தேனி மாவட்டம்.625536..

ந.க.எண்.104/கனிமம்/2024, நாள்:09.12.2024.

பொருள்:

கனிமங்களும், குவாரிகளும் - சிறுவகைக் கனிமம் - உடைகல் -  
தேனி மாவட்டம் - ஆண்டிபட்டி வட்டம் - திம்மரசநாயக்கனூர்  
பிட்-2 கிராமம் - அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) -  
விஸ்தீரணம் 1.60.0 ஹெக்டேர் பரப்பில்  
தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி கல்லுடைக்கும் மகளிர்  
சங்கம் விண்ணப்பித்தது - முன்னுரிமை அடிப்படையில் நேரடி  
கற்குவாரி குத்தகை உரிமம் வழங்க சிறப்பு குழுவால் தேர்வு  
செய்யப்பட்டது - குத்தகை தொகையினை உறுதி செய்து -  
முதல் தவணை குத்தகை தொகையை செலுத்தப்பட்டது -  
ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க  
மதிப்பீட்டு ஆணையத்தின் ஒப்புதல் பெற்று சமர்ப்பிக்க கோருதல்  
- தொடர்பாக.

பார்வை:

1. வருவாய் கோட்டாட்சியர், பெரியகுளம் கடிதம்  
ந.க.எண்.6973/2023/அ6, நாள்:17.11.2023..
2. மாவட்ட வன அலுவலர், தேனி, தேனி வனக்கோட்டம்,  
தேனி. கடிதம் எண்.12122/2023/டி, நாள்:05.01.2024.
3. தேனி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.3,  
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4. திருமதி.ம.பரிமளா, தலைவி, தி/ள்.வண்ணாத்திபாறை  
காளீஸ்வரி கல்லுடைக்கும் மகளிர் சங்கம், (பதிவு  
எண்.61/2021), தெற்கு தெரு, இராஜகோபாலன்பட்டி,  
ஆண்டிபட்டி வட்டம், தேனி மாவட்டம். விண்ணப்பம்  
நாள்:07.02.2024.
5. சிறப்புக்குழு (Special Committee) கூட்ட அறிக்கை  
நாள்.12.07.2024.
6. குறிப்பானை ந.க.எண்.104/கனிமம்/2024,  
நாள்:05.09.2024.

\*\*\*\*\*

பார்வை 1 மற்றும் 2-ல் காணும் பரிந்துரை அறிக்கையின்படி, பார்வை 3-ல்  
காணும் தேனி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.3,  
நாள்:19.01.2024-ல் தேனி மாவட்டம், ஆண்டிபட்டி வட்டம், திம்மரசநாயக்கனூர் பிட்-2

M.பரிமளா



கிராமம், அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) விஸ்தீரணம் 1.60.0 ஹெக்டேர் பரப்பில் மகளிர் சங்கங்களுக்கு நேரடி குவாரி குத்தகை உரிமம் வழங்க விண்ணப்பங்கள் வரவேற்கப்பட்டது. அதனை தொடர்ந்து, பார்வை 4-ல் காணும் தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி கல்லுடைக்கும் மகளிர் சங்கமானது தேனி மாவட்டம், ஆண்டிபட்டி வட்டம், திம்மரசநாயக்கனூர் பிட்-2 கிராமம், அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) விஸ்தீரணம் 1.60.0 ஹெக்டேர் பரப்பு கல்குவாரிக்கு விண்ணப்பம் செய்தது.

பார்வை 5-ல் காணும், மாவட்ட ஆட்சித்தலைவர் அவர்களின் தலைமையில் அமைக்கப்பட்ட சிறப்புக்குழுவானது, தேனி மாவட்டம், ஆண்டிபட்டி வட்டம், திம்மரசநாயக்கனூர் பிட்-2 கிராமம், அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) விஸ்தீரணம் 1.60.0 ஹெக்டேர் பரப்பில் உடைகல் குவாரிப்பணி செய்ய தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி கல்லுடைக்கும் மகளிர் சங்கத்தினருக்கு 5 (ஐந்து) ஆண்டுகளுக்கு கற்குவாரி குத்தகை உரிமம் வழங்க பரிந்துரை செய்யப்பட்டது.

அதனை, தொடர்ந்து, பார்வை 6-ல் காணும் குறிப்பாணையில், தமிழ்நாடு சிறுகனிம சலுகை விதிகள், 1959, விதி எண்.8 (10-A) (C)-ன்படி 50% குத்தகை தொகை ரூ.22,00,000/-ஐ நான்கு சம தவணைகளில் முதல் தவணை குத்தகைத் தொகை ரூ.5,50,000/-ஐ செலுத்தி அசல் சலாணை சமர்ப்பிக்குமாறு கேட்டுக்கொள்ளப்பட்டது. அதன் பின்னர், மேற்படி சங்கத்தினர் முதல் தவணைத் தொகை ரூ.5,50,000/-யினை சலான் எண்.20240916011424, நாள்:20.09.2024-ன்படி செலுத்தி சமர்ப்பித்துள்ளனர்.

எனவே, வருவாய் கோட்டாட்சியர், பெரியகுளம், மாவட்ட வன அலுவலர், தேனி மற்றும் சிறப்பு குழுவின் பரிந்துரை அறிக்கையின் அடிப்படையில், விண்ணப்பதாரர் தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி கல்லுடைக்கும் மகளிர் சங்கத்தினருக்கு தேனி மாவட்டம், ஆண்டிபட்டி வட்டம், திம்மரசநாயக்கனூர் பிட்-2 கிராமம், அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) விஸ்தீரணம் 1.60.0 ஹெக்டேர் சாதாரண உடைகற்கள் வெட்டியெடுத்து குவாரிப்பணி செய்ய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959-ம் விதி 8 (10-A) (b) (iii)-ன்படி 5 (ஐந்து) ஆண்டுகளுக்கு கற்குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதி குவாரி உரிமம் வழங்க ஏதுவாக 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.41-ன்படி ஏற்பளிக்கப்பட்ட கரங்கத் திட்டத்தினை 90 தினங்களுக்குள்ளும் அதனை தொடர்ந்து, 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.42-ன்படி மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினையும் பெற்று சமர்ப்பிக்க வேண்டும்.

M. பரிமாண



நிபந்தனைகள்:

- அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டரும், அரசு புறம்போக்கு நிலங்களுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரிப் பணி மேற்கொள்ள வேண்டும்.
- அருகிலுள்ள பட்டாதாரர்களுக்கு எவ்வித இடையூறுமின்றி / அருகிலுள்ள பட்டா மற்றும் அரசு புலங்களில் எவ்வித ஆக்கிரமிப்பும் இன்றி குவாரிப்பணி மேற்கொள்ள வேண்டும்.
- கற்குவாரி குத்தகை உரிமம் பெறுவதற்கு முன்பாக ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை அவர்களின் கடிதம் ந.க.எண்.2921/எம்.எம்.4/2016, நாள்:09.03.2021-ல் தெரிவிக்கப்பட்டுள்ளவாறு குத்தகைதாரர் குவாரிப்பணி தொடங்குவதற்கு முன்னர் உரிமம் வழங்கப்பட்ட எல்லைகளை DGPS முறையில் அளவீடு செய்து குறுந்தட்டில் பதிவு செய்து அறிக்கையாக சமர்ப்பிக்க வேண்டும்.

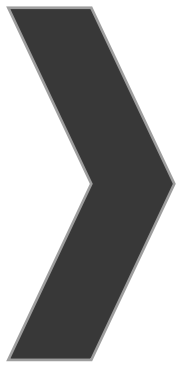
ஓம். (XXXXXXXXXXXXXX)  
மாவட்ட ஆட்சித்தலைவர்,  
தேனி.

/உ.ந.உ.ப./

மாவட்ட ஆட்சித்தலைவருக்காக,  
தேனி.

  
09/12/2024

M.பரிமளா



# **ANNEXURE-3**



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

To,  
Tvl.Vannathiparai Kalieswari  
Kalludaikum Magalir Sangam  
(Reg.No.61/2021),  
President:Tmt.M.Parimala,  
South Street, Rajagopalanpatti,  
Andipatty, Theni District.

Roc. No.104/Mines/2024, dated. 02.04.2025

Sir,

Sub: Mines and Minerals - Minor Mineral - Rough Stone -  
Theni District - Andipatty Taluk -  
Thimmarasanayakanur Bit-2 Village - Govt.  
Poramboke Land - in S.F. Nos. 1432 (Part) - Over an  
extent of 1.60.00 Hects - Quarry lease application  
preferred by Tvl.Vannathiparai Kalieswari Kalludaikum  
Magalir Sangam (Reg.No.61/2021),  
President:Tmt.M.Parimala - Precise area  
communicated -Draft Mining Plan submitted -  
Approval accorded -Regarding.

- Ref:
1. Theni District Gazette Extraordinary Notification,  
No.3, dated:09.01.2024.
  2. Quarry lease application preferred by  
Tvl.Vannathiparai Kalieswari Kalludaikum Magalir  
Sangam (Reg.No.61/2021),  
President:Tmt.M.Parimala, South Street,  
Rajagopalanpatti, Andipatty, Theni District,  
application dated.07.02.2024.
  3. Special Committee Report, daetd:12.07.2024.
  4. District Collector, Theni Precise area  
communication letter Roc No.  
Rc.No.104/Mines/2023, Dated:09.12.2024.
  5. Mining Plan dated Nil received on 11.02.2025  
from Tvl.Vannathiparai Kalieswari Kalludaikum  
Magalir Sangam (Reg.No.61/2021).

\*\*\*\*\*

In the reference 1<sup>st</sup> cited, the District Gazette Extraordinary Notification No.3, dated.09.01.2024 was issued by the District Collector for inviting application from the SGSY Groups registered under the Tamil Nadu Co-operative Act, 1983 or under Societies Act, 1975 and Societies formed by the released bonded laborers under rule 8(10)(A) of Tamil Nadu Minor Mineral Concession Rules, 1959 for direct grant of quarry lease for quarrying rough stone in Government poramboke land.

2) Based on the Gazette notification, the applicant Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam (Reg.No.61/2021) submitted an application on 07.02.2024 with a request to grant of rough stone quarry lease in Government poramboke land in S.F.No.1432 (Part), over an extent of 1.60.00 Hects of Thimmarasanayakkanur Bit-2 Village, Andipatty Taluk for a period of five years under rule 8(10-A) of Tamil Nadu Minor Mineral Concession Rules, 1959.

3) After examining the application, the special committee has furnished its recommendation to the District Collector to grant quarry lease to applicant Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam (Reg.No.61/2021) to quarry rough stone in S.F.No.1432 (Part), over an extent of 1.60.00 Hects of Thimmarasanayakkanur Bit-2 Village, Andipatty Taluk for a period of five years.

4) Based on the recommendation of the Special Committee vide letter 3<sup>rd</sup> cited, the precise area was communicated by the District Collector vide reference 4<sup>th</sup> cited to applicant Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam (Reg.No.61/2021) with a direction to submit the mining plan before the SEIAA Clearance within the stipulated time to obtain SEIAA Clearance for grant of rough stone quarry lease in S.F.No.1432 (Part), over an extent of 1.60.00 Hects of Thimmarasanayakkanur Bit-2 Village, Andipatty Taluk and Theni District.

5) In response to the precise area communicated, the applicant has submitted three copies of draft Mining Plan duly prepared by a Qualified Person and requested for approval of the same vide reference 5<sup>th</sup> cited.

6) The draft Mining Plan submitted by the applicant has been examined in detail. The applicant has proposed to produce 1,52,260 cbm of Rough stone up to a depth of 35 meters from the surface level for a period of 5 years. All the conditions stipulated in the precise area communicated have been incorporated in the Mining Plan.

7) In exercise of the powers vested under sub rule (2) and (5) of Rule 41 of Tamil Nadu Minor Mineral Concession Rules, 1959, I hereby approve the mining plan subject to the following conditions:-

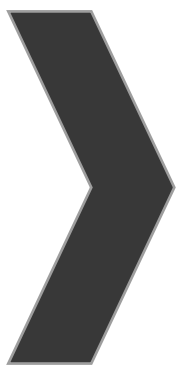
- i. The mining plan is approved without prejudice to any other order or direction from any court of contempt jurisdiction.
- ii. The mining plan is approved without prejudice to any other Law applicable to the quarry lease from time to time whether such laws are made by the Central Government, State Government or any other authority.
- iii. The approval of the mining plan does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development and Regulation) Act 1957, or any other connected laws including Forest (Conservation) Act, 1980, Forest Conservation Rules, 1981, Environment Protection Act, 1980, Indian Explosives Act, 1884 (Central Act IV of 1884) and the Rules made there under and the Tamil Nadu Minor Mineral Concession Rules, 1959.
- iv. The applicant is entitled for production of 1,52,260 cbm of Rough stone for a period of 5 years as per Mining plan.
- v. Quarrying operations should be carried out in accordance with the Approved Mining Plan.
- vi. A safety distance of 7.5 meters should be provided to the adjoining patta lands.
- vii. A safety distance of 10 meters should be provided to the adjoining Government poramboke lands.
- viii. No hindrance shall be caused to the adjacent pattadars lands, Government poramboke odai and public while carrying out quarrying operations.
- ix. Environmental Clearance should be obtained from the State Level Environment Impact Assessment Authority, Chennai.

8) As directed by the District Collector, Theni in the reference 4<sup>th</sup> cited, you are hereby requested to produce Environmental Clearance obtained from the State Level Environment Impact Assessment Authority (SEIAA), Chennai as applicable under Rule 42 of Tamil Nadu Minor Mineral Concession Rules, 1959 for grant of quarry lease, in respect of the precise area communicated.

**Encl:** Approved Mining plan.

Assist<sup>nt</sup> Director,  
Dept. of Geology and Mining,  
Theni.

*Ans*  
06/4/2014



# **APPROVAL MINING PLAN**



# MINING PLAN FOR THIMMARASANAICKANUR BIT-2 ROUGH STONE QUARRY

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

## LOCATION OF THE QUARRY LEASE APPLIED AREA

**STATE :** TAMIL NADU  
**DISTRICT :** THENI  
**TALUK :** ANDIPATTI  
**VILLAGE :** THIMMARASANAICKANUR BIT-2  
**S.F.NO :** 1432/3(PART)  
**EXTENT :** 1.60.0Ha

## FOR APPLICANT

Tvl.Vannathiparai Kalieswari Kalludaikum  
Magalir Sangam,  
Tmt.M.Parimala (President),  
(Register No.61/2021),  
South Street, Rajagopalanpatti,  
Andipatti Taluk, Theni District - 625 536.

## PREPARED BY

C.Natarajan, M.Sc.,M.Phil.,  
Qualified Person  
No.93/36E2, Subramaniyar Kovil Street,  
Omalur Taluk, Salem District,  
Tamil Nadu, Pin-636 455.  
Mobile: 97502 23535 & 94446 54520.

### **ECO-FRIENDLY**



### **SUSTAINABILITY**



### **SAFETY**



**(PPE)**



Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,  
Tmt.M.Parimala (President),  
(Register No.61/2021),  
South Street, Rajagopalanpatti,  
Andipatti Taluk, Theni District – 625 536.

**CONSENT LETTER FROM THE APPLICANT**

The Mining Plan in respect of **Rough Stone** quarry over an extent of 1.60.0hectares of Government land in S.F.No.1432/3(Part) of Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu State has been prepared by

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

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

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

No.93/36E2, Subramaniyar Kovil Street,  
Omalur Taluk, Salem District,  
Tamil Nadu, Pin code-636 455.  
Mobile: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  
For Tvl.Vannathiparai Kalieswari  
Kalludaikum Magalir Sangam,

• M. Parimala

M.Parimala (President),

Place: Theni  
Date: 10.12.2024

M. Parimala



Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,  
Tmt.M.Parimala (President),  
(Register No.61/2021),  
South Street, Rajagopalanpatti,  
Andipatti Taluk, Theni District – 625 536.

### **DECLARATION**

The Mining Plan in respect of **Rough Stone** quarry over an extent of 1.60.0hectares of Government land in S.F.No.1432/3(Part) of Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu State has been prepared with my consultation and I have understood the contents and agree to implement the same in accordance with the Mining Laws.

Signature of the Applicant  
For Tvl.Vannathiparai Kalieswari  
Kalludaikum Magalir Sangam,

\* M.பரிமலா

M.Parimala (President),

Place: Theni

Date: 10.12.2024

M.பரிமலா



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

**Qualified Person**

No.93/36E2, Subramaniyar Kovil Street,  
Omalur Taluk, Salem District,  
Tamil Nadu, Pin code-636 455.  
Mobile:97502 23535 & 94446 54520.

### CERTIFICATE

This is to certify that, the provisions of Minor Minerals Conservation and Development Rules, 2010 (MMCDR) have been observed in the Mining Plan for the grant of **Rough Stone** quarry lease over an extent of 1.60.0hectares of Government land in S.F.No.1432/3(Part) of Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu State applied by Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, 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: 11.12.2024

M. Natarajan





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

**Qualified Person**


No.93/36E2,Subramaniyar Kovil Street,  
Omalur Taluk, Salem District,  
Tamil Nadu, Pin code-636 455.  
Mobile:97502 23535 & 94446 54520.

**CERTIFICATE**

Certified that, in preparation of Mining Plan for **Rough Stone** quarry over an extent of 1.60.0hectares of Government land in S.F.No.1432/3(Part) of Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu State for Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, covers all the provisions of Mines Act, Rules, and Regulations etc made there under and whenever specific permission are required, the applicant will approach the Director General of Mines Safety, Chennai. The standards prescribed by DGMS in respect of Mines Health will be strictly implemented.

Certified

Signature of Qualified Person.

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

**Qualified Person**

Place: Salem

Date: 11.12.2024

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

**Qualified Person**

M. Natarajan



## **CERTIFICATE**

Certified that I, C.Natarajan, residing at No.93/36 E2, Subramaniyar Kovil Street, Omalur Taluk, Salem District, Tamil Nadu, Pin Code-636 455. I am a Post graduate in Geology (M.Sc., Geology) from Annamalai university and more than five years of experience in mining Field.

Rule 15(1)(a) and (b) of Minerals (Other than Atomic, Hydro Carbons Energy Minerals) concession Rules 2016 stipulates the eligibility for preparing Mining Plans as *"(1)(a) a post graduate degree in Geology granted by a university established"* and *(1)(b) "Professional experience of five years of working in a supervisory capacity in the field of mining after obtaining the degree"*. Since my qualification and experience are satisfied the Rule (1)(a) and (1)(b) of 15 of the Said Rules, I am eligible to prepare Mining Plans for both Major and Minor Minerals.

Accordingly I prepared this Mining Plan in respect of Rough Stone quarry lease applied for an extent of 1.60.0Ha of (Government land) in S.F.No.1432/3(Part) of Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, by Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, for a period of Five years. Since the Mining Plan is prepared as per the provisions contained in Rule 15(1) (a) and (b) of Minerals (Other than Atomic, Hydro Carbons Energy Minerals) concession Rules 2016, the same may be approved by the Competent Authority.

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

Place: Salem

Date: 11.12.2024

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

M. Natarajan

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## MINING PLAN FOR MINOR MINERALS

### ROUGH STONE

Over an extent of 1.60.0hectares of Government land in S.F.No.1432/3(Part) of Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District, Tamil Nadu State.

(PREPARED UNDER RULE 8, 41 and 42 OF TNMMCR 1959)

#### **1.0 Introduction and Executive Summary:**

1. The present Mining Plan is prepared for Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), (Register No.61/2021), South Street, Rajagopalanpatti, Andipatti Taluk, Theni District - 625 536.
2. The application was processed by the District Collector, Theni and passed an order vide Rc.No.104/Kanimam/2024 dated 09.12.2024 directing the applicant to produce approved Mining Plan under Rule 41(5) of the Tamil Nadu Minor Mineral Concession Rules, 1959 and Environmental Clearance Certificate under Rule 42 from the State Level Environmental Impact Assessment Authority (SEIAA) for the grant of quarry lease to quarry **Rough Stone** over an extent of 1.60.0hectares of Government lands in S.F.No.1432/3(Part) of Thimmarasanaickanur Bit-2 Village, Andipatti Taluk, Theni District of Tamil Nadu State for a period of five years.
3. Accordingly, Mining Plan is prepared under the provisions of rule 8, 41 and 42 as per the amendments under Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating following the conditions imposed in the precise area communication letter.
  - a) A safety distance of 7.5m to the adjoining patta lands and 10m should be provided to the Government poramboke lands while quarry operations.
  - b) The applicant should not cause any hindrance to adjoining patta lands and Government lands while quarry operations.



- c) The applicant should submit the DGPS survey report before the grant of the quarry lease as per As per the letter received from the Director of Geology and Mining, Chennai, vide letter R.c.no.2921/M.M.4/2016 dated 09.03.2021, the applicant should conduct DGPS survey and the boundary co-ordinates report submit along with CD.
4. The applicant intends the Rough stone to use only for Basement stones and not use for any crushing units.
  5. Geological Resources is estimated at 3,42,645m<sup>3</sup> of Rough stone and Mineable Reserves is estimated at 1,52,260m<sup>3</sup> of Rough Stone and after leaving necessary safety distance from the lease boundary as indicated in the precise area letter and relevant mining laws in force.
  6. Production Schedule is proposed production of 1,52,260m<sup>3</sup> of Rough Stone for the period of five years.
  7. The applicant ensured that, child labours under 18 years of age will not be engaged for quarrying operation.
  8. The applicant ensure that will engage should have valid certified persons (Mines Manager, Foreman, Mate) during quarrying operation.
  9. Environmental parameters,
    - i) The area does not attract the Forest Conservation Act, 1980 as there is no forest around 1.4km radius.
    - ii) There is no interstate boundary around 10kms radius.
    - iii) There is no wild life animal sanctuary within 8.7Kms 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).



10. Environmental measures to be adopted shall be,

- i) Dust Control at source while drilling and excavation,
- ii) Dust suppression at loading point and transport haul roads,
- iii) Noise Control in HEMM Operation, 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	:	Thimmarasanaickanur Bit-2																																										
b.	Name of the Panchayat Union	:	Andipatti																																										
c.	The proposed total Movable Reserves	:	1,52,260m <sup>3</sup> of Rough Stone,																																										
d.	The proposed quantity of reserves (level of production) for Five years to be mined is (Recoverable reserves)	:	1,52,260m <sup>3</sup> of Rough Stone,																																										
e.	Total extent of the area	:	1.60.0Ha																																										
f.	Proposed Period of mining	:	Five Years																																										
g.	Existing depth	:	15m below ground level																																										
h.	Proposed Depth of mining	:	35m (below ground level) for the proposed mining plan.																																										
i.	Method of mining/level of mechanization	:	Opencast Manual method of 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 are proposed to deploy for quarrying operation.																																										
k.	Cost of the Project A. Fixed Assets Cost B. Operational Cost C. EMP Cost		Rs. 25,00,000/- Rs. 31,50,000/- Rs. 5,00,000/- Total Project cost(A+B+C)= <b>Rs.61,50,000/-</b>																																										
l.	The area applied for lease is bounded by Nine 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>10° 01' 32.29"N</td><td>77° 38' 22.55"E</td><td>1-2 = 88.0m</td></tr> <tr> <td>2</td><td>10° 01' 35.08"N</td><td>77° 38' 23.22"E</td><td>2-3 = 37.6m</td></tr> <tr> <td>3</td><td>10° 01' 36.29"N</td><td>77° 38' 23.37"E</td><td>3-4 = 27.4m</td></tr> <tr> <td>4</td><td>10° 01' 37.08"N</td><td>77° 38' 23.78"E</td><td>4-5 = 17.2m</td></tr> <tr> <td>5</td><td>10° 01' 37.17"N</td><td>77° 38' 24.34"E</td><td>5-6 = 101.8m</td></tr> <tr> <td>6</td><td>10° 01' 35.67"N</td><td>77° 38' 27.31"E</td><td>6-7 = 152.8m</td></tr> <tr> <td>7</td><td>10° 01' 31.08"N</td><td>77° 38' 25.39"E</td><td>7-8 = 12.0m</td></tr> <tr> <td>8</td><td>10° 01' 31.17"N</td><td>77° 38' 25.01"E</td><td>8-9 = 57.2m</td></tr> <tr> <td>9</td><td>10° 01' 32.49"N</td><td>77° 38' 23.68"E</td><td>9-1 = 35.0m</td></tr> </tbody> </table>			Corners	Co-ordinates		Distance between the corners	Latitude	Longitude	1	10° 01' 32.29"N	77° 38' 22.55"E	1-2 = 88.0m	2	10° 01' 35.08"N	77° 38' 23.22"E	2-3 = 37.6m	3	10° 01' 36.29"N	77° 38' 23.37"E	3-4 = 27.4m	4	10° 01' 37.08"N	77° 38' 23.78"E	4-5 = 17.2m	5	10° 01' 37.17"N	77° 38' 24.34"E	5-6 = 101.8m	6	10° 01' 35.67"N	77° 38' 27.31"E	6-7 = 152.8m	7	10° 01' 31.08"N	77° 38' 25.39"E	7-8 = 12.0m	8	10° 01' 31.17"N	77° 38' 25.01"E	8-9 = 57.2m	9	10° 01' 32.49"N	77° 38' 23.68"E	9-1 = 35.0m
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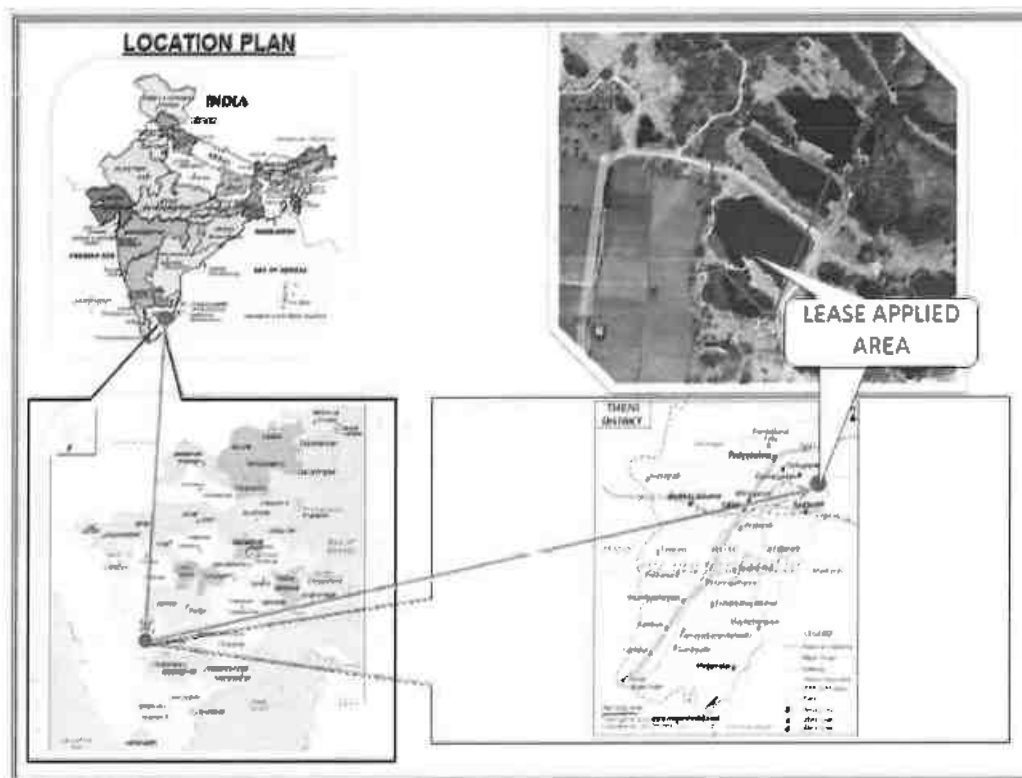
## 2.0 General Information:

	a.	Name of the Applicant	:	Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President),
	b.	Address of the Applicant with phone No and e-mail id if any	:	(Register No.61/2021), South Street, Rajagopalanpatti, Andipatti Taluk, Theni District – 625 536. Cell No.: 97871 58214
	c.	Status of the Applicant	:	The applicant is a welfare society
2.2	a.	Mineral Which the applicant intends to mine	:	Rough Stone.
	b.	Precise area communication letter No.	:	Precise area communication letter received from the District Collector, Theni vide Rc.No.104/Kanimam/2024 dated 09.12.2024.
	c.	Period of permission / lease granted	:	The District Collector, Theni, has grant of lease Period for <b>five years</b> .
	d.	Name and Address of the QP preparing Mining Plan	:	<b>C.Natarajan, M.Sc.,M.Phil.,</b> <b>Qualified Person</b> No.93/36E2, Subramaniyar Kovil Street, Omalur Taluk, Salem District, Tamil Nadu, Pin-636 455. Mobile: 97502 23535 & 94446 54520.



### 3.0 Location:

S.No	Details of the Area:	
1	Corner Coordinates	Latitude : 10°01'31.08"N to 10°01'37.17"N Longitude : 77°38'22.55"E to 77°38'27.31"E
2	Toposheet Number	58 F /12
3	The altitude of the area	284m (MSL)
4	Extent	1.60.0Ha
5	Survey No	1432/3(Part)
6	Village	Thimmarasanaickanur Bit-2
7	Taluk	Andipatti
8	District	Theni
9	State	Tamil Nadu



a.	Classification of the Area (Ryotwari / poramboke / others)	:	Government poramboke land
b.	Ownership / Occupancy of the Applied area (Surface rights)	:	It is Government land the applicant has obtained tender from the Government Please refer annexure no -I and IA.
c.	Toposheet No. with Latitude and Longitude	:	Topo Sheet No: 58 F / 12 Latitude : 10°01'31.08"N to 10°01'37.17"N Longitude : 77°38'22.55"E to 77°38'27.31"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 Anaikaraipatti - Shelkarpatti village road on southeastern side of the area. The Nearest Railway line is Madurai to Bodinaickkanur line which is about 2.8Km on Southeastern side of the area.



**SATELLITE IMAGERY OF THE LEASE APPLIED AREA**



**TOPOGRAPHICAL VIEW OF THE LEASE APPLIED AREA**

**Fig. Location of the lease Applied Area**



## PART - A

### 4.0 Geology and Mineral Reserves:

4.1	a. Topography	: <ul style="list-style-type: none"> <li>➤ The area applied for quarry lease is exhibits almost plain topography covered by rough stone formation. The massive Gneissic Rock formation is noticed right from the surface and sloping towards Southeastern side of the area, the altitude of the area is above 284m (maximum) from MSL.</li> <li>➤ No major river is found nearby the lease applied area.</li> <li>➤ Water table is found at a depth of 60m in summer and 57m in rainy seasons.</li> <li>➤ Temperature of the area is reported to be 18°C to a maximum of 42°C during summer.</li> <li>➤ Rainfall of this area is about 800mm to 900 mm during the both NE &amp; SW monsoons.</li> </ul>
	b. General Geology of the Area	: <p>The area is underlain by the wide range of metamorphic rocks of peninsular gneissic complex. These rocks are extensively weathered and overlain by the recent valley fills and alluvium at places. The geological formations found in the district are Archaean rocks like Gneisses, Granites, Charnockites basic granulites and calc-gneisses. The younger formations are Quartz veins and pegmatite.</p> <p>The rock type noticed in the area for lease is Gneissic Rock which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Gneissic Rock is part of peninsular Gneisses, a high grade metamorphic rock.</p> <p>The strike of the Gneissic Rock formation is N40°E-S40°W with vertical dipping.</p> <p>The general geological succession of the area is given as under.</p>



			<b>AGE</b> Recent - Unconformity - Archaean - <b>ROCK TYPE</b> Topsoil - Dolerite dyke Gneissic Rock 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 existing quarry pit.
4.3	a.	Estimation of Reserves	: The Geological and Recoverable reserves are estimated by cross sectional method. Totally four sections have been drawn, one section drawn length wise as (X-Y) and another Three sections drawn width wise as (A-B), (C-D) & (E-F), 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 35m (below ground level) only. availability of resources is given below.

Table No-1

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m <sup>3</sup>	Geological Resources of Rough stone in m <sup>3</sup>
XY-AB	I	10	18	5	900	900
	II	10	18	5	900	900
	III	10	18	5	900	900
	IV	57	120	5	34200	34200
	V	57	120	5	34200	34200
	VI	57	120	5	34200	34200
	VII	57	120	5	34200	34200
	<b>Total</b>					<b>139500</b>
XY-CD	I	9	119	5	5355	5355
	II	9	119	5	5355	5355
	III	9	119	5	5355	5355
	IV	9	119	5	5355	5355
	V	9	119	5	5355	5355
	VI	9	119	5	5355	5355
	VII	9	119	5	5355	5355
	<b>Total</b>					<b>37485</b>

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XY-EF	I	8	18	5	720	720
	II	8	18	5	720	720
	III	8	18	5	720	720
	IV	75	109	5	40875	40875
	V	75	109	5	40875	40875
	VI	75	109	5	40875	40875
	VII	75	109	5	40875	40875
<b>Total</b>						<b>165660</b>
<b>Grand Total</b>						<b>342645</b>

The Geological Resources of Rough stone : 3,42,645m<sup>3</sup>

**b. Already excavated**

The area has been quarried in earlier operation the existing pit dimension are given below.

Table No-2

Pit No	length (Max) in(m)	Width (Max) in (m)	Depth (Max) in (m)
I	96	38	15m Below ground level
II	85	70	15m Below ground level

**c. Available Mineable Reserve**

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

Table No-3

Table No. 6						
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m³	Mineable Reserves of Rough stone in m³
XY-AB	IV	42	93	5	19530	19530
	V	37	83	5	15355	15355
	VI	32	73	5	11680	11680
	VII	27	63	5	8505	8505
	Total					55070
XY-CD	I	9	102	5	4590	4590
	II	9	92	5	4140	4140
	III	9	82	5	3690	3690
	IV	9	72	5	3240	3240
	V	9	62	5	2790	2790
	VI	9	52	5	2340	2340
	VII	9	42	5	1890	1890
	Total					22680
XY-EF	IV	63	81	5	25515	25515
	V	58	71	5	20590	20590
	VI	53	61	5	16165	16165
	VII	48	51	5	12240	12240
	Total					74510
Grand Total					152260	

The Available mineable reserve is computed as 1,52,260m<sup>3</sup> of Rough stone upto a depth of 35m (below ground level) only.

M. J. L. M. N.



## 5.0 Mining:

5.1	Method of Mining	:	<p>1. Opencast method of manual method of mining with 5m height, 5m width of the bench.</p> <p>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.</p>
5.2	Mode of Working	:	<p>The rough stone is proposed to quarry 5m bench height, 5m width with conventional opencast manual mining method.</p> <p>The Rough stone quarry specifically used only for Basement stones and not for any crushing industries. The quarry operation involves Manual jackhammer drilling, and transportation of Rough building stone to the needy Residential &amp; Industrial customers.</p> <p>The removed mass is manually dressed into small building stones for foundation purpose and then loaded manually into tippers for transportation to the needy customers.</p>
5.3	Proposed bench height & Width	:	Quarrying of Rough Stone is proposed bench height of 5m and bench width of 5m.
5.4	Details of Overburden / Mineral Production proposed for the first 5 years.	:	There is no overburden anticipated during the entire Rough Stone quarrying operation. The excavated rough stone will be manually dressed into small building stones for foundation purpose.



**The Yearwise Production and Development Table**

Table No -4

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m <sup>3</sup>	Mineable Reserves of Rough stone in m <sup>3</sup>
I	XY-AB	IV	42	93	5	19530	19530
	XY-CD	I	9	102	5	4590	4590
		II	9	92	5	4140	4140
		III	5	82	5	2050	2050
	Total						30310
II	XY-CD	III	4	82	5	1640	1640
		IV	9	72	5	3240	3240
	XY-EF	IV	63	81	5	25515	25515
	Total						30395
III	XY-EF	V	58	71	5	20590	20590
	XY-CD	V	9	62	5	2790	2790
	XY-AB	V	17	83	5	7055	7055
	Total						30435
IV	XY-AB	V	20	83	5	8300	8300
		VI	32	73	5	11680	11680
	XY-CD	VI	9	52	5	2340	2340
	XY-EF	VI	27	61	5	8235	8235
	Total						30555
V	XY-EF	VI	26	61	5	7930	7930
		VII	48	51	5	12240	12240
	XY-CD	VII	9	42	5	1890	1890
	XY-AB	VII	27	63	5	8505	8505
	Total						30565
Grand Total							152260

The applicant has proposed to carry out 1,52,260m<sup>3</sup> of Rough stone upto a depth of 35m (below ground level) for the period of five years.

5.5	Machineries to be used							
	a.	Drilling		:	Only jack hammer drilling will be used			
	S.No	Type	Nos	Dia Hole mm	Size Capacity	Make	Motive power	
	1	Jack hammer	1	32	1.2m to 6m	Atlas Copco	Compressed air	
	2	Compressor	1	-	-	Atlas Capco	Diesel Drive	





	b.	Loading	:	Manual loading (considerable Rough stone accumulates the same will be loaded by Hired front end loader like JCB).												
	c.	Transportation	:	Tipper 2Nos (5/10Ts) capacity.												
5.6		Disposal of Overburden	:	There is no overburden anticipated during the entire Rough Stone quarrying operation.												
5.7		Brief Note on Conceptual Mining Plan for the entire lease period	:	<p>Conceptual Mining Plan is prepared with an object of five years of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructures etc.</p> <p>Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc.</p> <p>Ultimate Pit dimension is given as under,</p> <table><tr><th colspan="4">Ultimate Pit dimension (M) end of Mining plan Period</th></tr><tr><th>Pit No</th><th>Length (max) in (m)</th><th>Width (Avg) in (m)</th><th>Depth(max) in(m)</th></tr><tr><td>I</td><td>124</td><td>94</td><td>35m (below ground level)</td></tr></table> <p>Afforestation has been proposed on all along the boundary barrier by planting trees.</p> <p>All the baseline information studies like Air Quality monitoring, Noise and Vibration monitoring, Water Analysis studies will be carried out every year as per the MOEF norms.</p>	Ultimate Pit dimension (M) end of Mining plan Period				Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in(m)	I	124	94	35m (below ground level)
Ultimate Pit dimension (M) end of Mining plan Period																
Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in(m)													
I	124	94	35m (below ground level)													



#### 6.0 **Blasting:**

6.1	Blasting Pattern	:	Not applicable
6.2	Types of Explosives	:	There is no Blasting proposed for the rough stone operation.
6.3	Measures proposed to minimize ground vibration due to blasting	:	Not applicable
6.4	Storage of Explosives and safety measures to be taken while blasting.	:	Not applicable

#### 7.0 **Mine Drainage:**

7.1	Depth of Water table	:	The ground water table is reported as 60m below ground level. In the proposed mining plan only 35m (below ground level) depth has been envisaged as workable depth for safe & economic quarrying for the entire lease period. Hence the quarrying operation may not affect the ground water.
7.2	Arrangement and Places where the mine water is finally proposed to be discharged	:	The ground water may not rise immediately in this type of mining. However, the rain water percolation and collection of water from the seepage shall be less than 300lpm and it shall be pumped about periodically by a stand by diesel powered Centrifugal pump motivated with 7.5H.P.Motor. The quality of water is potable and it is not contaminated with any hazardous things. Hence, water stored in the quarry pit will be pumped into the adjacent agricultural fields. Further the water stored in the old pit will also be used for plantation purposes



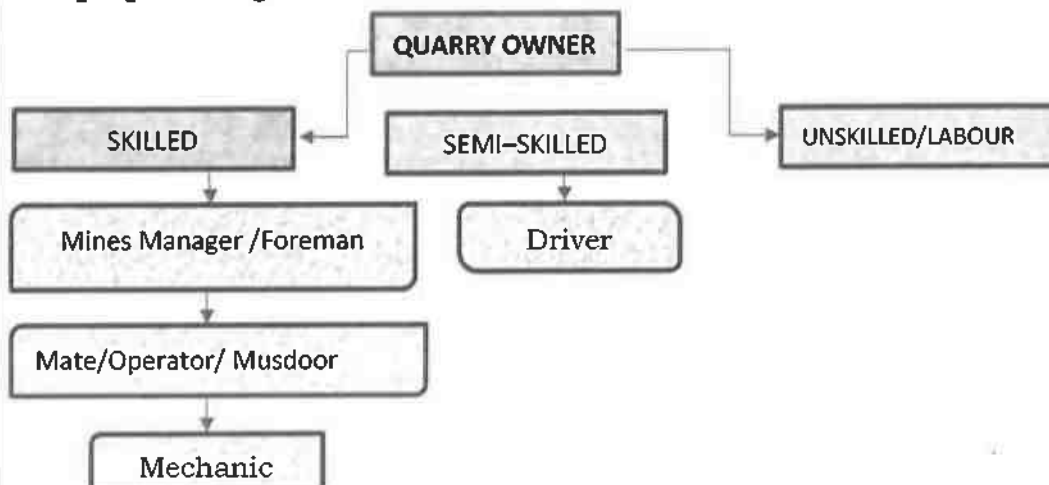
# **8.0 Other Permanent Structures:**

8.1	Habitations / Village	:	There are no habitations within a radius of 300m.
8.2	Power lines (HT/LT)	:	There is no Power lines (HT/LT) within a radius of 50m.
8.3	Water bodies (River, Pond, Lake, Odai, Channel etc)	:	There is two seasonal odai passing on Northeastern and Western side and is 100m, and 230m away from the area.
8.4	Archeological / Historical Monuments	:	There are no Archeological / Historical Monuments within a radius of 300m.
8.5	Road (NH, SH, Village Road etc)	:	The National Highway (NH-85) Madurai - Bodinaickanur is about 2.3km on Southern side of the area. The State Highway (SH-101) Devathanapatti - Varusanadu is about 4.8Km on Northwestern 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	2 No.
		Mechanic	1 No.
2.	Semi-skilled	Driver	2 No.
3.	Unskilled	Labours	12Nos
			Total = 20Nos



Allowing 10% absentee, the no. of men of roll will be around 18.

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 T.Sedapatti village which is about 700m on Southeastern side of the area.
b.	Sanitary facilities	:	Semi-permanent latrines & urinals shall be maintained at convenient places for use of labours as per the provisions of Rule (33) of the Mines Rules, 1960 separately for males and females. Washing facilities shall also be arranged as per rule (36) of the Mines Rules, 1960.

	c. First Aid Facility	: First aid kits are kept in Mines office room, in case of such eventualities the victim will be given first aid immediately at the site and injured person will be taken to the hospital. Hospital is available at distance of 3.5Km (SW) in Andipatti the competent and Statutory foreman/ permit manager will be in charge of first aid.
	d. Labour Health	: As per Mines Rule, Periodic medical examination related to occupational health safety will be conducted to all the workers in applicant's own cost.
	e. Precautionary safety measures to the Labourers:	
	<p>Safety provisions like helmet, goggles, safety shoes, Dust mask, Ear muffs etc., have to be provided as per the circulars and amendments made for Mine labours under the guidance of DGMS being a mechanized operation.</p> <p>Necessary training will be conducted once in a year to all the employees with the help of qualified and experienced officers to train about the safe and systematic quarrying operation.</p> <div style="display: flex; align-items: center; justify-content: space-around;"> <div data-bbox="347 1211 818 1886">  </div> <div data-bbox="890 1238 1378 1850">  </div> </div>	



## PART - B

### 10.0 Environmental Management Plan:

10.1	Existing Land Use Pattern	: <div><div><div>1. The area exhibits almost plain topography covered by rough stone formation.</div><div>2. Quarrying operation is proposed up to a depth of 35m (below ground level) for the proposed mining plan period.</div><div>3. Fluctuation of Water table in this area is in between 60m and 57m during a year.</div><div>4. This region receives the average annual rainfall of 800mm to 900mm. The surrounding area is practiced by the seasonal cultivation.</div></div><div>The existing land use pattern is given as under.</div><div>Table No-5</div><table><tr><th>Sl. No.</th><th>Land Use</th><th>Present Area (Ha)</th><th>Area in use during the quarrying period (Ha)</th></tr><tr><td>1.</td><td>Quarrying Pit</td><td>0.96.0</td><td>1.17.0</td></tr><tr><td>2.</td><td>Infrastructure</td><td>Nil</td><td>0.01.0</td></tr><tr><td>3.</td><td>Roads</td><td>0.01.0</td><td>0.01.0</td></tr><tr><td>4.</td><td>Green Belt</td><td>Nil</td><td>0.41.0</td></tr><tr><td>5.</td><td>Unutilized</td><td>0.63.0</td><td>Nil</td></tr><tr><td></td><td>Total =</td><td>1.60.0</td><td>1.60.0</td></tr></table></div>	Sl. No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)	1.	Quarrying Pit	0.96.0	1.17.0	2.	Infrastructure	Nil	0.01.0	3.	Roads	0.01.0	0.01.0	4.	Green Belt	Nil	0.41.0	5.	Unutilized	0.63.0	Nil		Total =	1.60.0	1.60.0
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5.	Unutilized	0.63.0	Nil																											
	Total =	1.60.0	1.60.0																											
10.2	Water Regime	: Water table in this area is noticed at a depth of 60m and presently, in the proposed mining plan only 35m (below ground level) 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 given as under. <table><tr><th colspan="4">Table No-6</th></tr><tr><th>S. No</th><th>Name of the Village</th><th>Approximate distance &amp; Direction from lease applied area</th><th>Approximate population</th></tr><tr><td>1.</td><td>Nallakaruppathevan patti</td><td>400m - NE</td><td>400</td></tr><tr><td>2.</td><td>T.Sedapatti</td><td>700m - SE</td><td>450</td></tr><tr><td>3.</td><td>Vegavadiashramam</td><td>1.6Km- NW</td><td>250</td></tr><tr><td>4.</td><td>T.Renganavaram</td><td>1.8Km - SW</td><td>300</td></tr></table>	Table No-6				S. No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population	1.	Nallakaruppathevan patti	400m - NE	400	2.	T.Sedapatti	700m - SE	450	3.	Vegavadiashramam	1.6Km- NW	250	4.	T.Renganavaram	1.8Km - SW	300
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4.	T.Renganavaram	1.8Km - SW	300																							
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 excavation without blasting by using 0.90 Cu.m Excavator and 5/10 (Ts) Trucks, 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. No where 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 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 35m (below ground level) 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 35m 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 4100Sqm area is proposed to use under afforestation by planting 492nos 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		
	<b>A.Fixed Asset Cost:</b>		
	1. Land Cost (Tender amount)	:	Rs. 22,00,000
	2. First aid room and accessories	:	Rs.1,00,000
	3. Labour Shed	:	Rs.1,00,000
	4. Sanitary Facility	:	Rs.1,00,000
	<b>Total=</b>		<b>Rs. 25,00,000/-</b>
	<b>B.Operational Cost:</b>		
	1. Machineries	:	Rs.30,00,000-
	2. Fencing cost	:	Rs. 1,50,000
	<b>Total</b>	:	<b>Rs.31,50,000/-</b>







**12.0 Any Other Details Intend to Furnish by the Applicant:**

- (i) Permission will be obtained from the District Mines Office to extract the Rough Stone from the Boundary barriers and for slopes.
- (ii) Care and precautionary measures will be taken for the safety of workers as per Rules and Acts.
- (iii) The applicant will endeavor every attempt to quarry the Rough Stone economically without any wastage and to improve the environment and ecology.
- (iv) The Mining Plan is prepared by incorporating the conditions stipulated in the precise area communication issued and relevant mining laws in force.
- (v) Any violation pointed out by the inspecting authorities shall be rectified as per the guidelines of the Department.

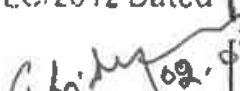
Prepared by

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

Place : Salem  
Date : 11.12.2024

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

This Mining Plan is approved based on incorporation of the particulars specified under guidelines given by the commissioner of Geology and Mining (I/c) Roc. No. 3868/LC/2012 Dated 19-11-2012

  
Assistant Director  
Geology and Mining  
Theni

This Mining Plan is approved subject to the condition / Stipulated as indicated in the Mining Plan Approval ;  
Roc. No: 109/Mining Dated: 02.04.2024

அனுப்புநர்  
மாவட்ட ஆட்சித்தலைவர்,  
தேனி.

பெறுநர்:  
திருமதி.ம.பரிமளா, தலைவி,  
தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி  
கல்லுடைக்கும் மகளிர் சங்கம்,  
(பதிவு எண்.61/2021),  
தெற்கு தெரு, இராஜகோபாலன்பட்டி,  
ஆண்டிபட்டி வட்டம்,  
தேனி மாவட்டம்.625536..



ந.க.எண்.104/கனிமம்/2024, நாள்:09.12.2024.

பொருள்:

கனிமங்களும், குவாரிகளும் - சிறுவகைக் கனிமம் - உடைகல் -  
தேனி மாவட்டம் - ஆண்டிபட்டி வட்டம் - திம்மரசநாயக்கனூர்  
பிட்-2 கிராமம் - அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) -  
விஸ்தீரணம் 1.60.0 ஹெக்டேர் பரப்பில்  
தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி கல்லுடைக்கும் மகளிர்  
சங்கம் விண்ணப்பித்தது - முன்னுரிமை அடிப்படையில் நேரடி  
கற்குவாரி குத்தகை உரிமம் வழங்க சிறப்பு குழுவால் தேர்வு  
செய்யப்பட்டது - குத்தகை தொகையினை உறுதி செய்து -  
முதல் தவணை குத்தகை தொகையை செலுத்தப்பட்டது -  
ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க  
மதிப்பீட்டு ஆணையத்தின் ஒப்புதல் பெற்று சமர்ப்பிக்க கோருதல்  
- தொடர்பாக.

பார்வை:

1. வருவாய் கோட்டாட்சியர், பெரியகுளம் கடிதம்  
ந.க.எண்.6973/2023/அ6, நாள்:17.11.2023..
2. மாவட்ட வன அலுவலர், தேனி, தேனி வனக்கோட்டம்,  
தேனி. கடிதம் எண்.12122/2023/டி, நாள்:05.01.2024.
3. தேனி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.3,  
நாள்:19.01.2024.
4. திருமதி.ம.பரிமளா, தலைவி, தி/ள்.வண்ணாத்திபாறை  
காளீஸ்வரி கல்லுடைக்கும் மகளிர் சங்கம், (பதிவு  
எண்.61/2021), தெற்கு தெரு, இராஜகோபாலன்பட்டி,  
ஆண்டிபட்டி வட்டம், தேனி மாவட்டம். விண்ணப்பம்  
நாள்:07.02.2024.
5. சிறப்புக்குழு (Special Committee) கூட்ட அறிக்கை  
நாள்.12.07.2024.
6. குறிப்பானை ந.க.எண்.104/கனிமம்/2024,  
நாள்:05.09.2024.

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பார்வை 1 மற்றும் 2-ல் காணும் பரிந்துரை அறிக்கையின்படி, பார்வை 3-ல்  
காணும் தேனி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.3,  
நாள்:19.01.2024-ல் தேனி மாவட்டம், ஆண்டிபட்டி வட்டம், திம்மரசநாயக்கனூர் பிட்-2

M.பரிமளா



கிராமம், அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) விஸ்தீரணம் 1.60.0 ஹெக்டேர் பரப்பில் மகளிர் சங்கங்களுக்கு நேரடி குவாரி குத்தகை உரிமம் வழங்க விண்ணப்பங்கள் வரவேற்கப்பட்டது. அதனை தொடர்ந்து, பார்வை 4-ல் காணும் தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி கல்லுடைக்கும் மகளிர் சங்கமானது தேனி மாவட்டம், ஆண்டிபட்டி வட்டம், திம்மரசநாயக்கனூர் பிட்-2 கிராமம், அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) விஸ்தீரணம் 1.60.0 ஹெக்டேர் பரப்பு கல்குவாரிக்கு விண்ணப்பம் செய்தது.

பார்வை 5-ல் காணும், மாவட்ட ஆட்சித்தலைவர் அவர்களின் தலைமையில் அமைக்கப்பட்ட சிறப்புக்குழுவானது, தேனி மாவட்டம், ஆண்டிபட்டி வட்டம், திம்மரசநாயக்கனூர் பிட்-2 கிராமம், அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) விஸ்தீரணம் 1.60.0 ஹெக்டேர் பரப்பில் உடைகல் குவாரிப்பணி செய்ய தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி கல்லுடைக்கும் மகளிர் சங்கத்தினருக்கு 5 (ஐந்து) ஆண்டுகளுக்கு கற்குவாரி குத்தகை உரிமம் வழங்க பரிந்துரை செய்யப்பட்டது.

அதனை, தொடர்ந்து, பார்வை 6-ல் காணும் குறிப்பாணையில், தமிழ்நாடு சிறுகனிம சலுகை விதிகள், 1959, விதி எண்.8 (10-A) (C)-ன்படி 50% குத்தகை தொகை ரூ.22,00,000/-ஐ நான்கு சம தவணைகளில் முதல் தவணை குத்தகைத் தொகை ரூ.5,50,000/-ஐ செலுத்தி அசல் சலாணை சமர்ப்பிக்குமாறு கேட்டுக்கொள்ளப்பட்டது. அதன் பின்னர், மேற்படி சங்கத்தினர் முதல் தவணைத் தொகை ரூ.5,50,000/-யினை சலான் எண்.20240916011424, நாள்:20.09.2024-ன்படி செலுத்தி சமர்ப்பித்துள்ளனர்.

எனவே, வருவாய் கோட்டாட்சியர், பெரியகுளம், மாவட்ட வன அலுவலர், தேனி மற்றும் சிறப்பு குழுவின் பரிந்துரை அறிக்கையின் அடிப்படையில், விண்ணப்பதாரர் தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி கல்லுடைக்கும் மகளிர் சங்கத்தினருக்கு தேனி மாவட்டம், ஆண்டிபட்டி வட்டம், திம்மரசநாயக்கனூர் பிட்-2 கிராமம், அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) விஸ்தீரணம் 1.60.0 ஹெக்டேர் சாதாரண உடைகற்கள் வெட்டியெடுத்து குவாரிப்பணி செய்ய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959-ம் விதி 8 (10-A) (b) (iii)-ன்படி 5 (ஐந்து) ஆண்டுகளுக்கு கற்குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதி குவாரி உரிமம் வழங்க ஏதுவாக 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.41-ன்படி ஏற்பளிக்கப்பட்ட கரங்கத் திட்டத்தினை 90 தினங்களுக்குள்ளும் அதனை தொடர்ந்து, 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.42-ன்படி மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினையும் பெற்று சமர்ப்பிக்க வேண்டும்.

M. பரிமாண



நிபந்தனைகள்:

- அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டரும், அரசு புறம்போக்கு நிலங்களுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரிப் பணி மேற்கொள்ள வேண்டும்.
- அருகிலுள்ள பட்டாதாரர்களுக்கு எவ்வித இடையூறுமின்றி / அருகிலுள்ள பட்டா மற்றும் அரசு புலங்களில் எவ்வித ஆக்கிரமிப்பும் இன்றி குவாரிப்பணி மேற்கொள்ள வேண்டும்.
- கற்குவாரி குத்தகை உரிமம் பெறுவதற்கு முன்பாக ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை அவர்களின் கடிதம் ந.க.எண்.2921/எம்.எம்.4/2016, நாள்:09.03.2021-ல் தெரிவிக்கப்பட்டுள்ளவாறு குத்தகைதாரர் குவாரிப்பணி தொடங்குவதற்கு முன்னர் உரிமம் வழங்கப்பட்ட எல்லைகளை DGPS முறையில் அளவீடு செய்து குறுந்தட்டில் பதிவு செய்து அறிக்கையாக சமர்ப்பிக்க வேண்டும்.

ஓம். (XXXXXXXXXXXXXX)  
மாவட்ட ஆட்சித்தலைவர்,  
தேனி.

/உ.ந.உ.ப./

மாவட்ட ஆட்சித்தலைவருக்காக,  
தேனி.

09/12/2024

M.பரிமளா

District : Theni

Taluk : Aundipatti [13]

Village : Thimmarasanayanur Bit-2 [202]

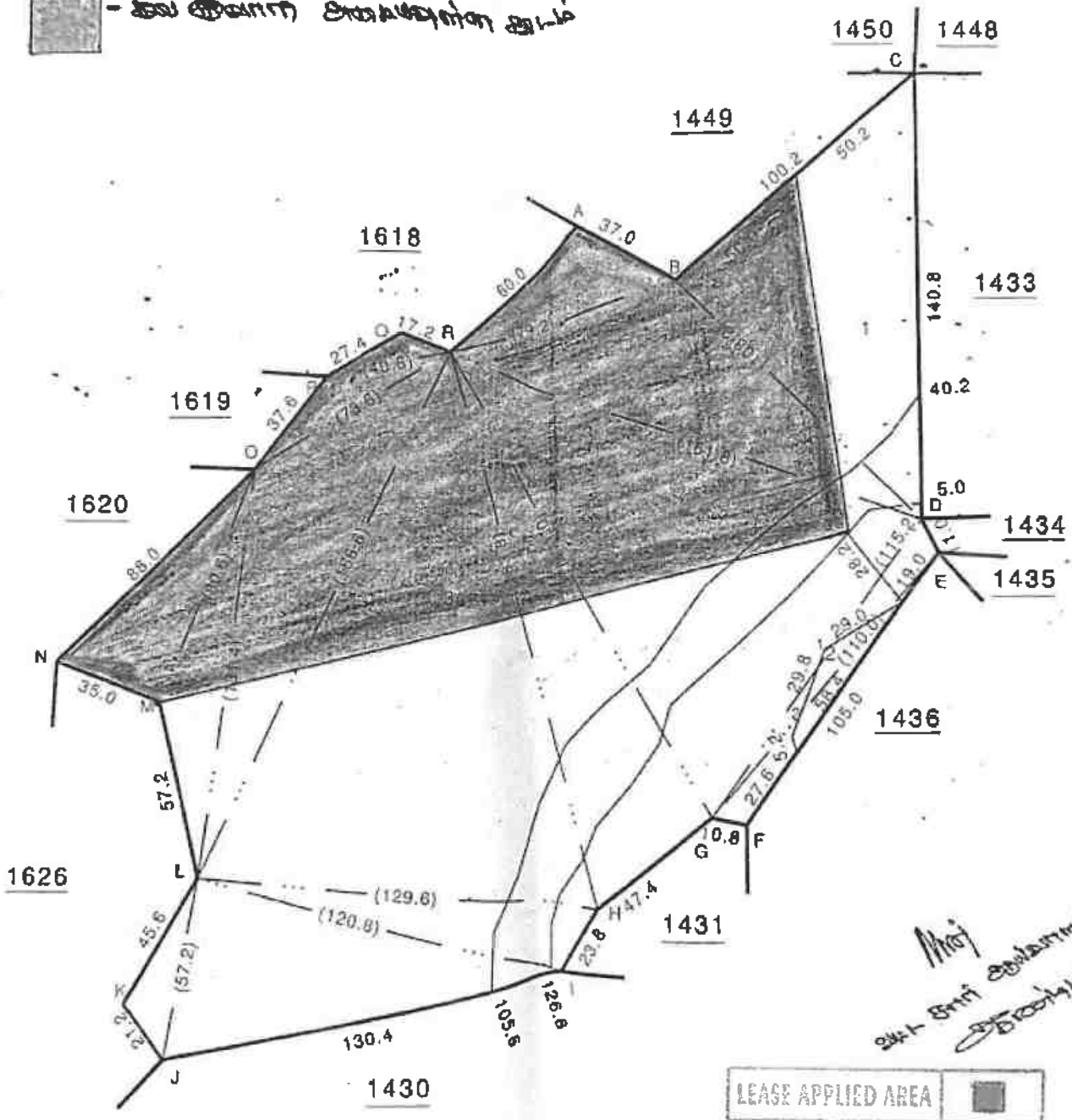
Survey No : 1432 ANNEXURE 14

Area : Hect 04 Ares 77.50

Scale : 1 : 2000



செலுத்தப்பட்ட பகுதி



செலுத்தப்பட்ட பகுதி

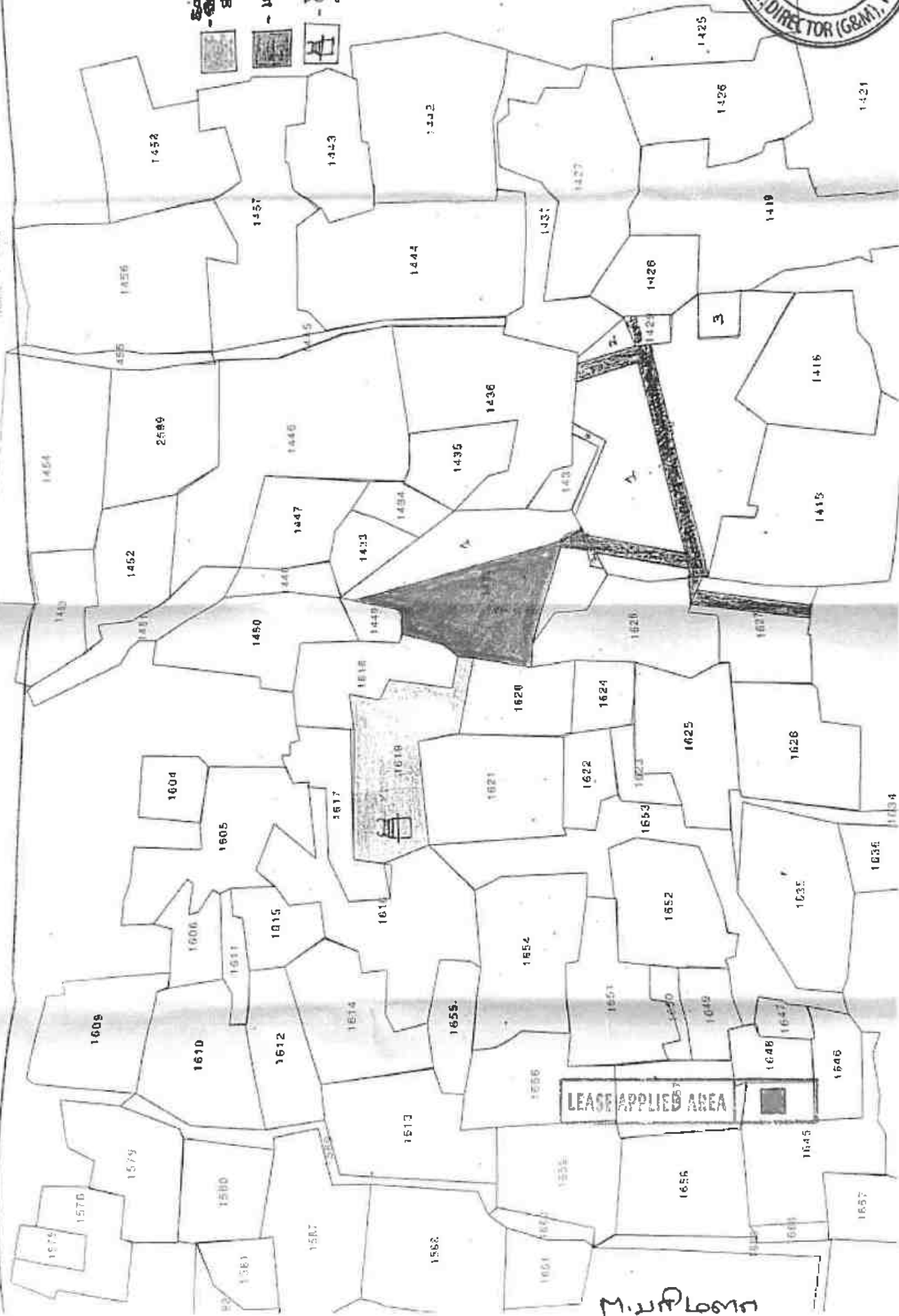
LEASE APPLIED AREA

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H	45.4			K	45.4			C	181.6						
I	37.0			L	57.2			D	20.0						
J	100.2			M	39.0			E	115.2						
K	140.8			N	88.6			F	110.0						
L	11.0			O	37.8			G	171.0						
M	19.4			P	27.4			H	183.8						
N	47.4			Q	17.2			I	129.8						
O	23.4			R	40.0										

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 100. 1.100



LEASE APPLIED AREA

ਮ.ਯਾਦਲੋਗ

आयकर विभाग  
INCOME TAX DEPARTMENT



भारत सरकार  
GOVT. OF INDIA

स्थायी लेखा संख्या कार्ड  
Permanent Account Number Card

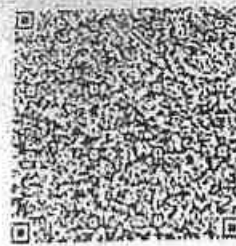
AAJAV3495N

नाम / Name

VANNATHIPARAI KALEESWARI  
KALUDAIAKKUM WOMEN SHG

दिनांक / Date of Issuance

29/06/2021



28568

In case this card is lost / found, kindly inform / return to :

Income Tax PAN Services Unit, UTTTSL

Plot No. 3, Sector 11, CBD Belapur,

Navi Mumbai - 400 614.

Helpline Number : 033-40802999

इस कार्ड के खोने/पाने पर कृपया सूचित करें/लौटें :

आयकर पैन सेवा यूनिट, UTTTSL

प्लॉट नं. 3, सेक्टर 11, सी.बी.डी. बेलपुर

नवी मुंबई-400 614.

हेल्पलाइन नंबर : 033-40802999



For Income Tax Related  
Queries

E-Mail :

pangrievance@incometax.gov.in  
ito.systems11@incometax.gov.in

ANNEXURE



M. J. J. J. J.





இந்திய அரசாங்கம்  
Government of India

இந்திய தனிப்பட்ட அடையாள ஆளைய அமைப்பு  
Unique Identification Authority of India

பதிவேட்டு எண் / Enrolment No.: 2193/12211/90556

To  
பரிமாள் மகேந்திரன்  
Pannala Mahendran  
W/O Mahendran  
21/3  
SOUTH STREET  
ANDIPATTITHAULK  
T RAJAGOBALANPATTI  
Timmerasanyakkatur  
Rajagobalanpatti  
Terni Tamil Nadu - 625536  
9543696614

Issued Date: 24/11/2020

Signature valid



உங்கள் ஆதார் எண் / Your Aadhaar No. :

8679 4855 2925

VID : 9121 1183 2334 8334

எனது ஆதார். எனது அடையாளம்



இந்திய அரசாங்கம்  
Government of India



பரிமாள் மகேந்திரன்  
Pannala Mahendran  
பிறந்த நாள்/DOB: 27/04/1980  
பெண் / FEMALE

Issued Date: 24/11/2020

8679 4855 2925

VID : 9121 1183 2334 8334

எனது ஆதார். எனது அடையாளம்



Union Minister of India

ANNEXURE



ASST. DIRECTOR  
GEOLOGY  
& MINING, THENI

DIRECTOR (G&M), THENI

தகவல்

- இந்த ஆதாரத்திற்கான சான்று தயாரிப்பதற்கு தயவு
- பதிலளிப்பதற்கு தயவு செய்து ஆதார எண்: 8679 4855 2925
- ஆதார எண்: 8679 4855 2925
- ஆதார எண்: 8679 4855 2925
- இது எலக்ட்ரானிக் செயல்முறை மூலம் தயாரிக்கப்பட்ட கடிதமாகும்.

### INFORMATION

- Aadhaar is a proof of identity, not of citizenship.
- Verify identity using Secure QR Code/ Offline X.M.P/ Online Authentication.
- This is electronically generated letter.

- ஆதார் நாடு முழுவதிலும் செல்லுபடியாகும்
- பல்வேறு அரசு மற்றும் அரசு சார்பு சேவைகளை எளிதில் பெற ஆதார் உதவுகிறது
- உங்கள் மொபைல் எண் மற்றும் மின்னஞ்சல் இவ்வ ஆதாரில் புதுப்பிக்கவும்
- Aadhaar செயலியைப் பயன்படுத்தி உங்கள் எம்மார்டு போனில் ஆதாரை எடுத்துச் செல்லுங்கள்

- Aadhaar is valid throughout the country.
- Aadhaar helps you avail various Government and non-Government services easily.
- Keep your mobile number & email ID updated in Aadhaar.
- Carry Aadhaar in your smart phone -- use mAadhaar App.

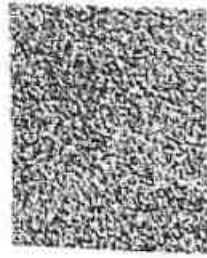


இந்திய அரசாங்கம்  
Unique Identification Authority of India



பதிவேட்டு எண்: 2193/12211/90556  
பரிமாள் மகேந்திரன், எண் 21/3, தென் தெரு, ராஜகோபலன்பட்டி, திமிரசனயக்கூர், தென் தாமிரவருணியம், தமிழ்நாடு - 625536

Address:  
W/O Mahendran, 21/3, SOUTH STREET, T RAJAGOBALANPATTI, ANDIPATTITHAULK, Timmarasanyakkatur, Terni, Tamil Nadu - 625536



8679 4855 2925

VID : 9121 1183 2334 8334

1847

help@uidai.gov.in

www.uidai.gov.in

M. பரிமாள்

ANNEXURE

V/4

## CHETTINAD CEMENT CORPORATION LTD.,

(Regd. Office: RANI SEETHAI HALL BUILDING IV & V FLOORS, 603, ANNA SALAI, MADRAS-600 006.)  
WORKS OFFICE: PULIYUR.

21144  
PHONE 22744 KARUR  
21745  
TELE: GRAM "CEMENT" Puliur C.F.  
Telex: 0458-215.  
STD Code: 04324

All Correspondence  
Kumararajah  
PULIYUR CEMENT  
(Karur Taluk)



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

22<sup>nd</sup> September, 1987.CERTIFICATE.

This is to certify that Mr.C.Natarajan has been working as a Geologist from 14-12-1979 to till date. He has been incharge of supervision of day to day functions in respect of Exploration, Preparation of Geological Plans & Sections, Preparation of Mines Plans, and Quality control and other allied mining activities in the following Pits of our Seethainagar Limestone Mines in Anna District.

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

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

for CHETTINAD CEMENT CORPORATION LTD.,

(T.RAJU).

Mines Manager &amp; Dy. General Manager.

M. J. P. L. M. M.



## Faculty of Science

The Senate of the Annamalai University hereby makes known that E. Natarajan has been admitted to the Degree of Master of Science (by Examination) in Geology, he having been certified by duly appointed Examiners at the examination held in April, 1976, to be qualified to receive the same and that he was placed in the First Class.

Given under the seal of the University.

Annamalainagar

8th December, 1976.

M. V. Logan

A. Chandrasekha  
Vice-Chancellor.

10°01'37.17"N

77°38'27.31"E

77°38'22.55"E

10°01'31.08"N

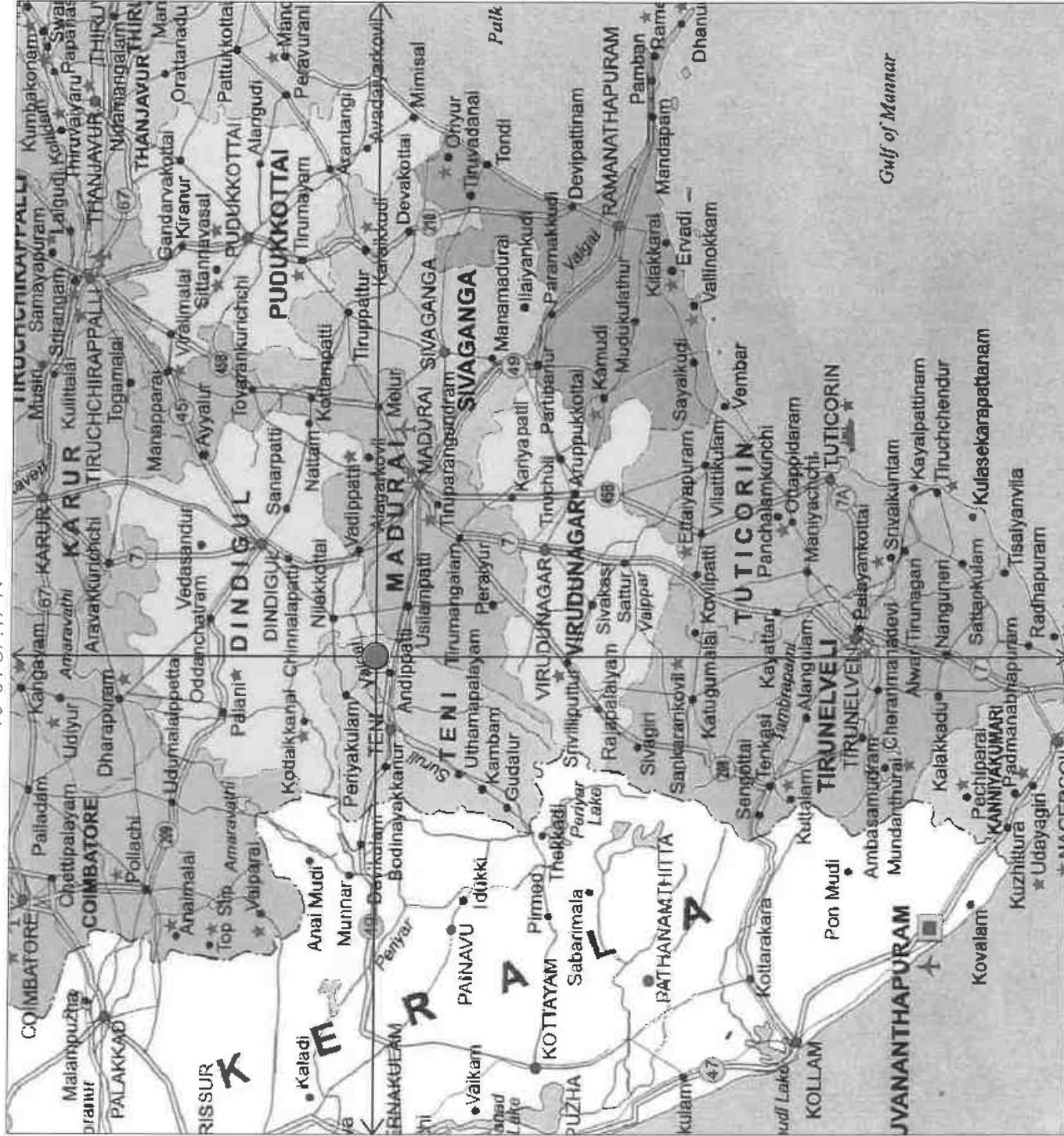


PLATE NO: I

DATE OF SURVEY : 10.12.2024

APPLICANT:

TVLVANNATHIPAKAI KALUSI IWARI  
KALLUDAIKKUM MAGALIR SANGAM,  
TMT.M PARIMALA (PRESIDENT),  
(REGISTER NO 61/2021),  
SOUTH STREET, RAJAGOPALANPATTI,  
ANDIPATTI TALUK,  
THENI DISTRICT - 625 536

QUARRY LEASE APPLIED AREA:

S.F.NO : 1432/3(PART),  
EXTENT : 1.60.0Ha,  
VILLAGE : THIMMARASANAICKANUR BIT-2,  
TALUK : ANDIPATTI,  
DISTRICT : THENI.

INDEX

Q. L. APPLIED AREA : ●

TOPO SHEET NO : 58 F / 12

LATITUDE : 10°01'31.08"N to 10°01'37.17"N

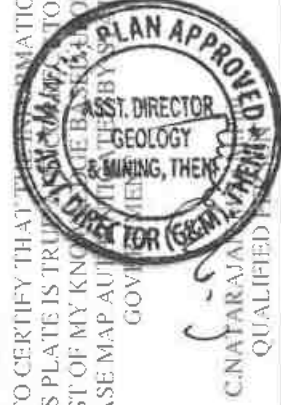
LONGITUDE : 77°38'22.55"E to 77°38'27.31"E

LOCATION PLAN

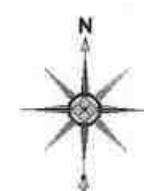
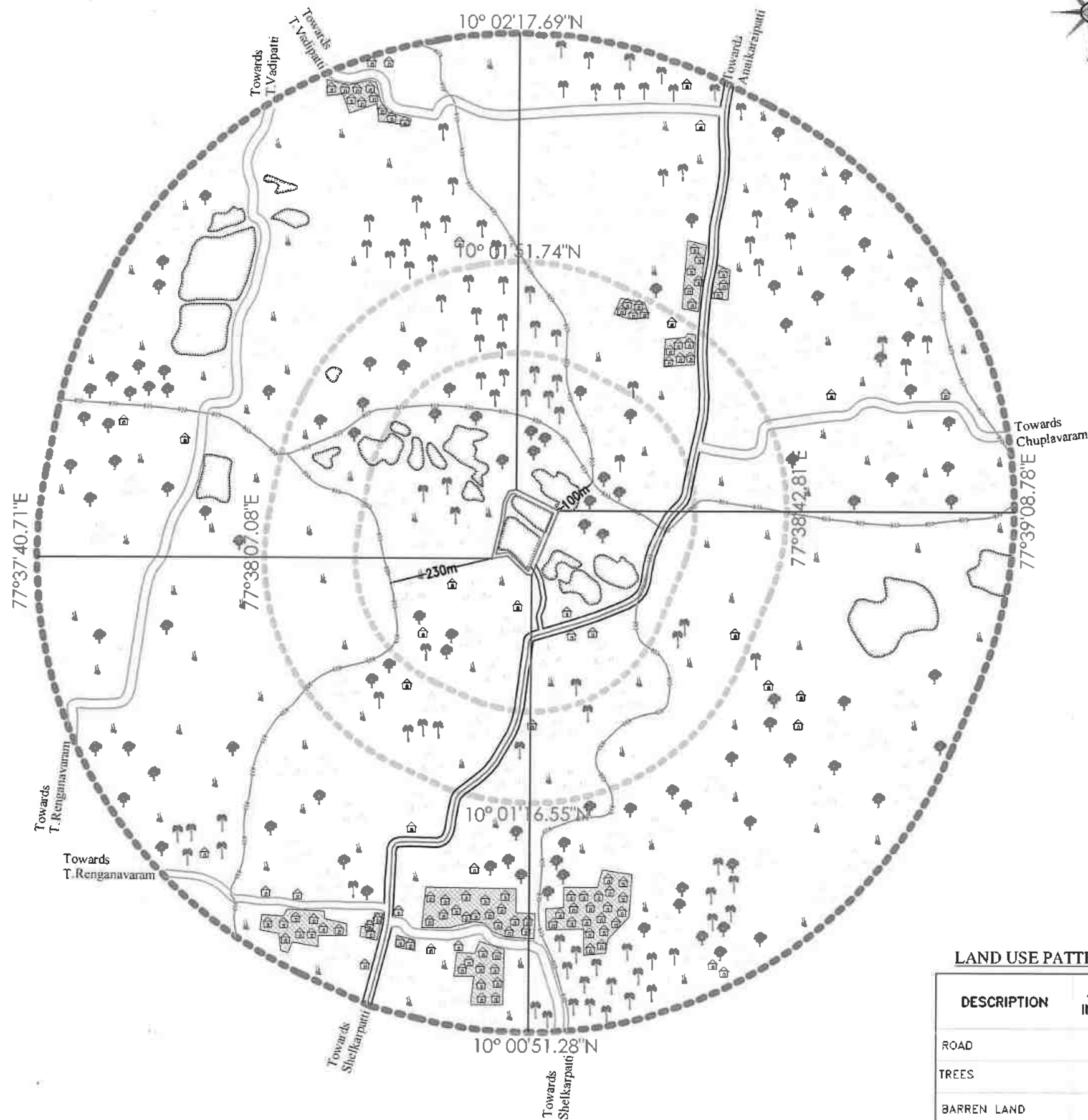
NOT TO SCALE

PREPARED BY :

THIS IS TO CERTIFY THAT THE INFORMATION  
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THE BEST OF MY KNOWLEDGE BASED ON  
THE LEASE MAP AUTHORITY OF THE  
GOVERNMENT OF TAMIL NADU



M. L. G. 10/12/24



**PLATE NO: 1A**  
**DATE OF SURVEY :10.12.2024.**

**APPLICANT:**  
 TVL VANNATHIPARAI KALISHWARI  
 KALLUDAIKKUM MAGALIR SANGAM,  
 TMT M.PARIMALA (PRESIDENT),  
 (REGISTER NO.61/2021),  
 SOUTH STREET, RAJAGOPALANPATTI,  
 ANDIPATTI TALUK,  
 THENI DISTRICT - 625 536.



**QUARRY LEASE APPLIED AREA:**  
 S.F.NO : 1432/3(PART),  
 EXTENT : 1.60.0Ha,  
 VILLAGE : THIMMARASANAICKANUR BIT-2,  
 TALUK : ANDIPATTI,  
 DISTRICT : THENI.

**INDEX**

TOPO SHEET NO : 58 F / 12

LATITUDE : 10°01'31.08"N to 10°01'37.17"N

LONGITUDE : 77°38'22.55"E to 77°38'27.31"E

Q.L.APPLIED AREA



7.5m & 10m SAFETY DISTANCE



300m RADIUS



500m RADIUS



1KM RADIUS



APPROACH ROAD



STATE HIGHWAY



VILLAGE ROAD



BARREN LAND



TREES



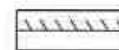
SEASONAL AGRICULTURE



ODAI



QUARRY PIT



HABITATION



**LAND USE PATTERN**

DESCRIPTION	AREA IN (%)
ROAD	10
TREES	10
BARREN LAND	40
AGRICULTURE LAND	15
WATER BODIES	15
HABITATION	10

**ENVIRONMENTAL PLAN**

SCALE 1: 10,000

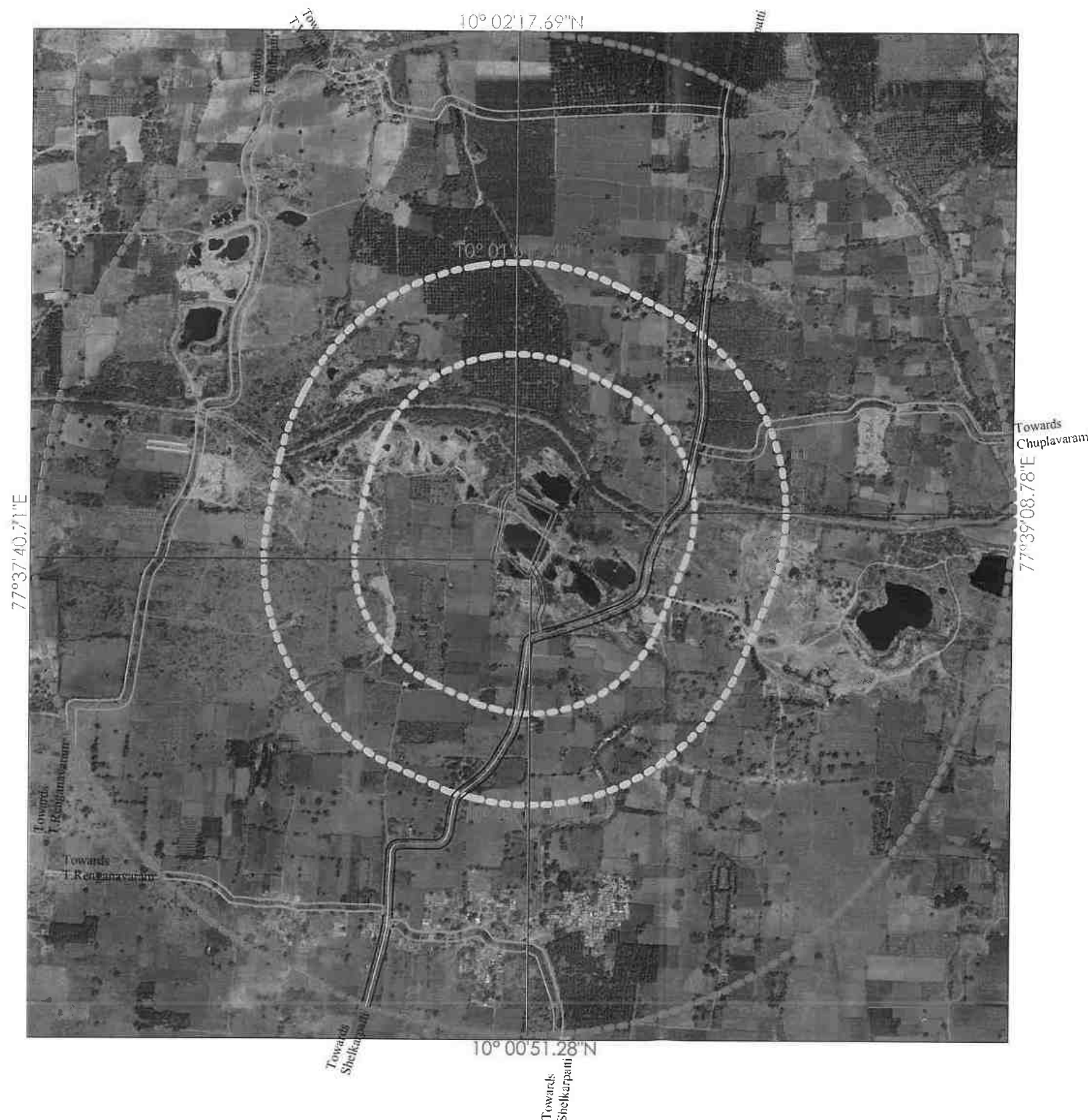
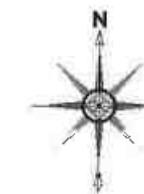
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 THE LEASE MAP AUTHENTICATED BY STATE  
 GOVERNMENT

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

M. LIP LOM





**PLATE NO: 1B**

**DATE OF SURVEY : 10.12.2024.**

**APPLICANT:**

TVL VANNATHIPARAI KALISHWARI  
KALLUDAIKKUM MAGALIR SANGAM,  
TMT.M.PARIMALA (PRESIDENT),  
(REGISTER NO.61/2021),  
SOUTH STREET, RAJAGOPALANPATTI,  
ANDIPATTI TALUK,  
THENI DISTRICT - 625 536.

**QUARRY LEASE APPLIED AREA:**

S.F.NO : 1432/3(PART),  
EXTENT : 1.60.0Ha,  
VILLAGE : THIMMARASANAICKANUR BIT-2,  
TALUK : ANDIPATTI,  
DISTRICT : THENI.

**INDEX**

TOPO SHEET NO : 58 F / 12

LATITUDE : 10°01'31.08"N to 10°01'37.17"N

LONGITUDE : 77°38'22.55"E to 77°38'27.31"E

Q.L.APPLIED AREA	
7.5m & 10m SAFETY DISTANCE	
300m RADIUS	
500M RADIUS	
1KM RADIUS	
APPROACH ROAD	
VILLAGE ROAD	
STATE HIGHWAY	

**SATELLITE IMAGERY MAP**

SCALE 1: 10,000

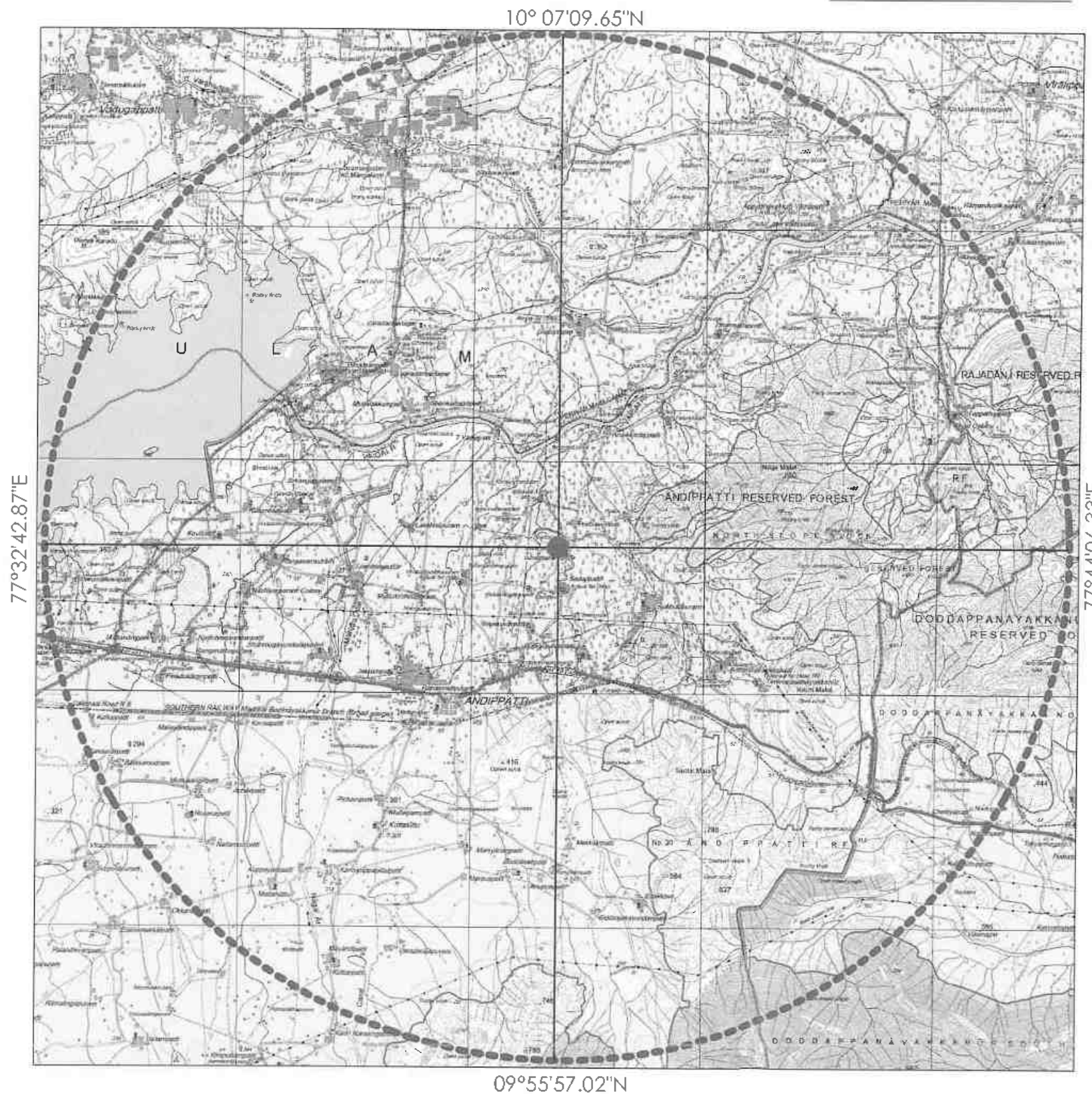
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GOVERNMENT

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

PLATE NO-I C

DATE OF SURVEY : 10.12.2024



**APPLICANT:**

TVL.VANNATHIPARAI KALISHWARI  
KALLUDAIKKUM MAGALIR SANGAM,  
TMT.M.PARIMALA (PRESIDENT),  
(REGISTER NO.61/2021),  
SOUTH STREET, RAJAGOPALANPATTI,  
ANDIPATTI TALUK,  
THENI DISTRICT - 625 536.



**QUARRY LEASE APPLIED AREA:**

S.F.NO : 1432/3(PART),  
EXTENT : 1.60.0Ha,  
VILLAGE : THIMMARASANAICKANUR BIT-2,  
TALUK : ANDIPATTI,  
DISTRICT : THENI.

**INDEX**

TOPO SHEET NO : 58 F / 12

LATITUDE : 10°01'31.08"N to 10°01'37.17"N

LONGITUDE : 77°38'22.55"E to 77°38'27.31"E

Q.L.APPLIED AREA



10KM RADIUS



CONVENTIONAL SYMBOLS	
Topographic symbols and abbreviations	
Water bodies (river, lake, pond, etc.)	
Boundaries (village, taluk, district, etc.)	
Infrastructure (road, railway, etc.)	
Vegetation (forest, etc.)	
Buildings (village, etc.)	
Other symbols (etc.)	

**TOPO SKETCH OF QUARRY LEASE**

**APPLIED AREA FOR**

**10Km RADIUS**

SCALE- 1:100000

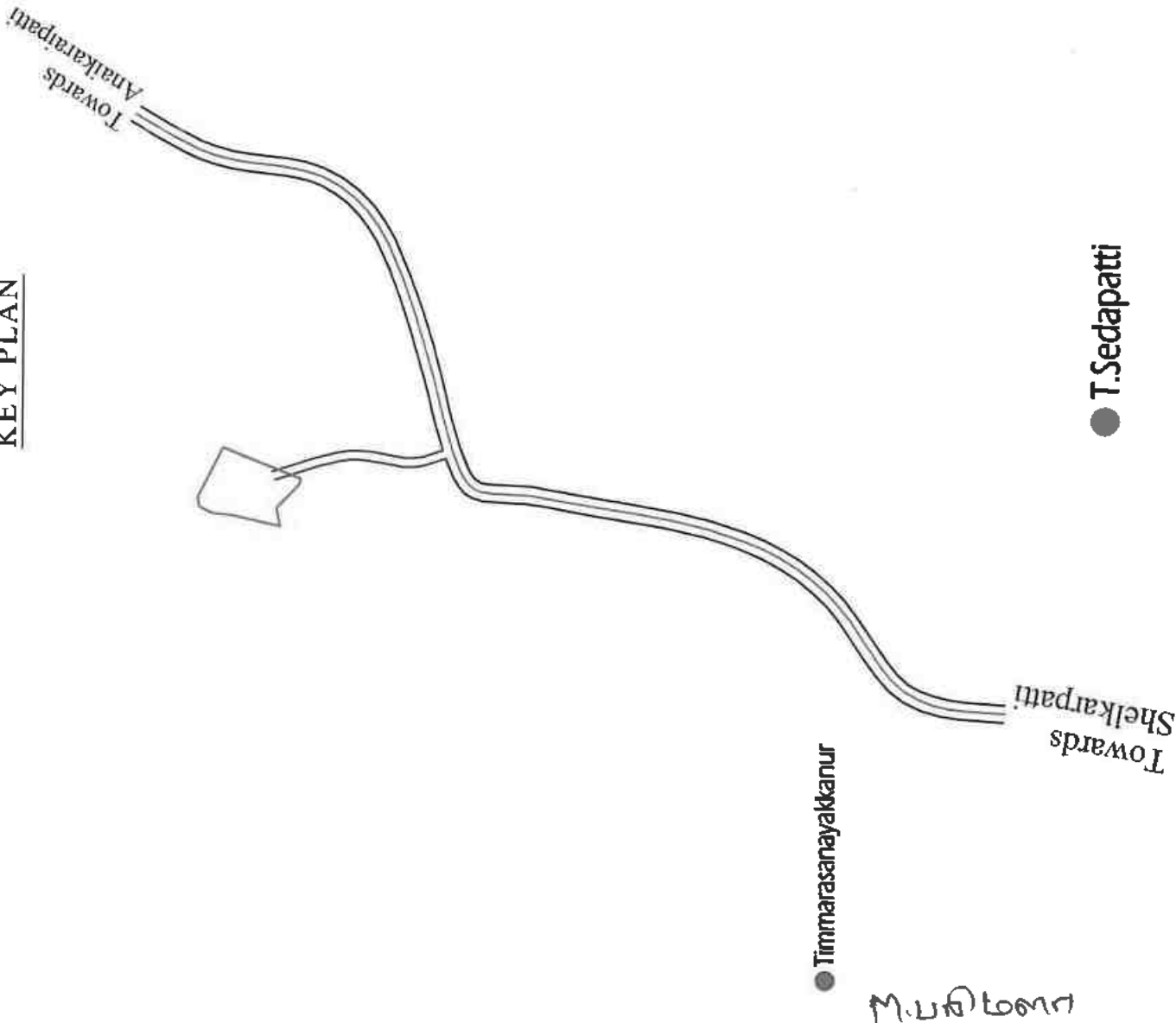
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GOVERNMENT

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

M.20/607



## KEY PLAN



### PLATE NO:ID

DATE OF SURVEY : 10.12.2024.

### APPLICANT:

TVL VANNATHIPARAI KALISHWARI  
KALLUDAIKKUM MAGALIR SANGAM,  
TMT M.PARIMALA (PRESIDENT),  
(REGISTER NO 61/2021),  
SOUTH STREET, RAJAGOPALANPATTI,  
ANDIPATTI TALUK,  
THENI DISTRICT - 625 536.

### QUARRY LEASE APPLIED AREA:

S.F.NO : 1432/3(PART),  
EXTENT : 1.60 OHa,  
VILLAGE : THIMMARASANAICKANUR BIT-2,  
TALUK : ANDIPATTI,  
DISTRICT : THENI.

### INDEX



Q.L.APPLIED AREA



APPROACH ROAD



STATE HIGHWAY



HABITATIONS

### KEY PLAN

Not To Scale

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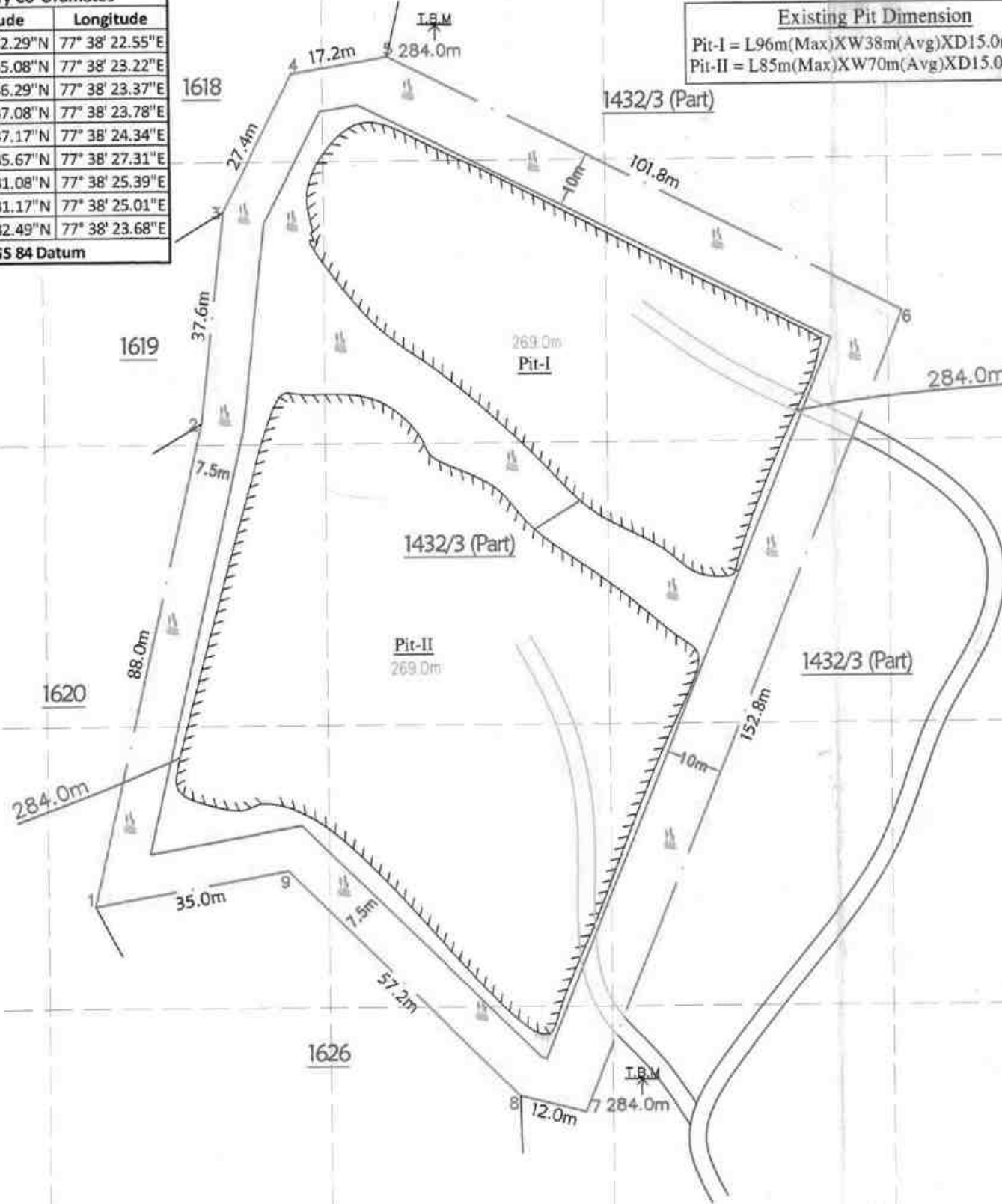
QUALIFIED PERSON





Boundary Co-Ordinates		
Label	Latitude	Longitude
1	10° 01' 32.29"N	77° 38' 22.55"E
2	10° 01' 35.08"N	77° 38' 23.22"E
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8	10° 01' 31.17"N	77° 38' 25.01"E
9	10° 01' 32.49"N	77° 38' 23.68"E
WGS 84 Datum		

**Existing Pit Dimension**  
 Pit-I = L96m(Max)XW38m(Avg)XD15.0m(Max)  
 Pit-II = L85m(Max)XW70m(Avg)XD15.0m(Max)



## PLATE NO-II

DATE OF SURVEY : 10.12.2024

## APPLICANT:

TVL.VANNATHIPARAI KALISHWARI  
 KALLUDAIKKUM MAGALIR SANGAM,  
 TMT.M.PARIMALA (PRESIDENT),  
 (REGISTER NO.61/2021),  
 SOUTH STREET, RAJAGOPALANPATTI,  
 ANDIPATTI TALUK,  
 THENI DISTRICT - 625 536.

## QUARRY APPLIED LEASE AREA:

S.F.NO : 1432/3(PART),  
 EXTENT : 1.60.0Ha,  
 VILLAGE : THIMMARASANAICKANUR BIT-2,  
 TALUK : ANDIPATTI,  
 DISTRICT : THENI.

## INDEX

Q.L. APPLIED BOUNDARY	
7.5m & 10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
QUARRY ROAD	
CONTOUR	
SCRUB	
QUARRY PIT	

## QUARRY LEASE & SURFACE PLAN

SCALE 1 : 1000

## PREPARED BY:

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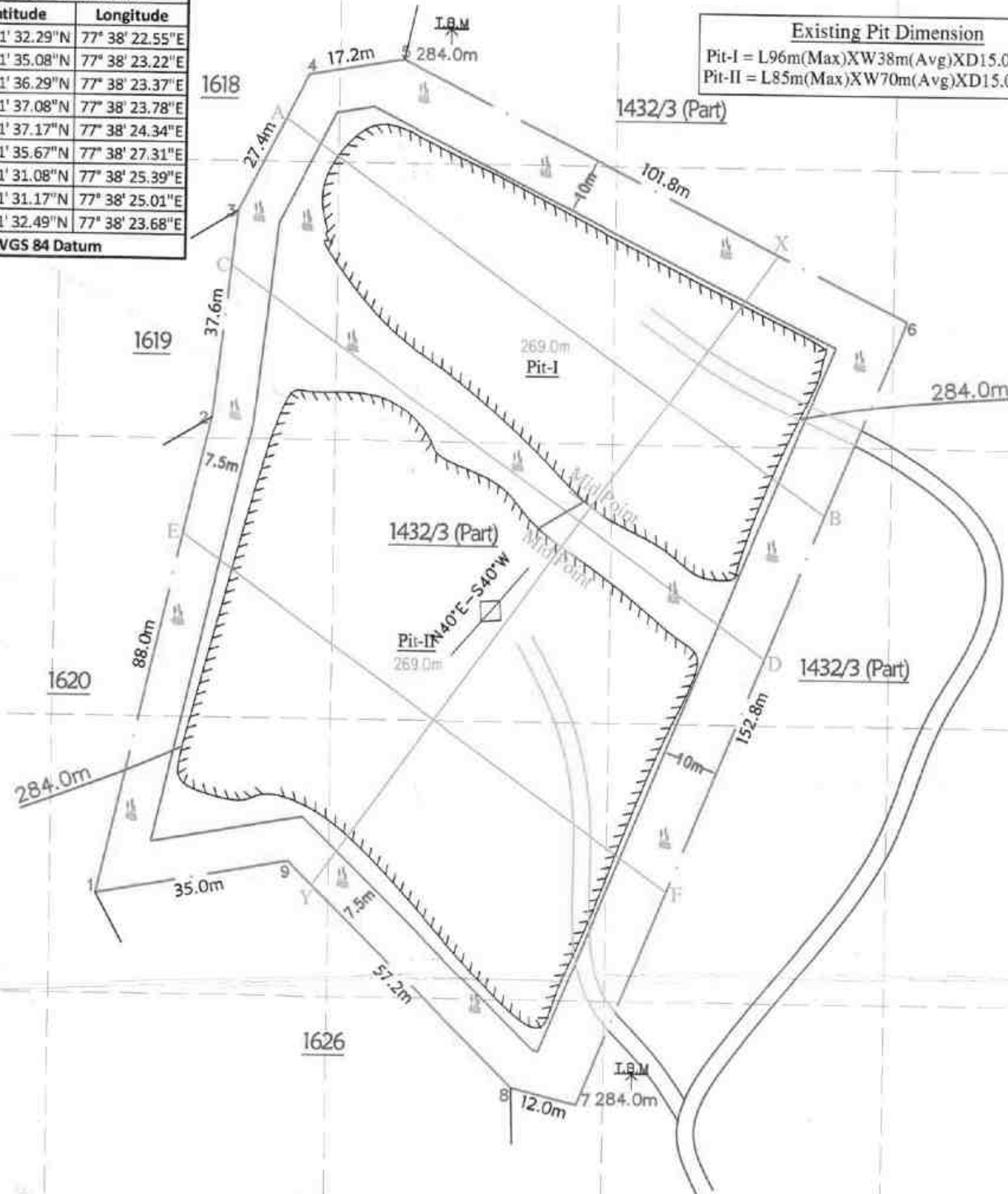
C.NATARAJAN, M.Sc, M.Phil.,  
 QUALIFIED PERSON

M. J. J. J. J.



Boundary Co-Ordinates		
Label	Latitude	Longitude
1	10° 01' 32.29"N	77° 38' 22.55"E
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3	10° 01' 36.29"N	77° 38' 23.37"E
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WGS 84 Datum		

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Pit-I = L96m(Max)XW38m(Avg)XD15.0m(Max)  
Pit-II = L85m(Max)XW70m(Avg)XD15.0m(Max)



Geological Resources						
section	Bench	length in (m)	Width in (m)	Depth in (m)	Volume m3	Geological Resources of Rough Stone in m3
XY-AB	I	10	18	5	900	900
	II	10	18	5	900	900
	III	10	18	5	900	900
	IV	57	120	5	34200	34200
	V	57	120	5	34200	34200
	VI	57	120	5	34200	34200
	VII	57	120	5	34200	34200
Total						139500
XY-CD	I	9	119	5	5355	5355
	II	9	119	5	5355	5355
	III	9	119	5	5355	5355
	IV	9	119	5	5355	5355
	V	9	119	5	5355	5355
	VI	9	119	5	5355	5355
	VII	9	119	5	5355	5355
Total						37485
XY-EF	I	8	18	5	720	720
	II	8	18	5	720	720
	III	8	18	5	720	720
	IV	75	109	5	40875	40875
	V	75	109	5	40875	40875
	VI	75	109	5	40875	40875
	VII	75	109	5	40875	40875
Total						165660
Grand Total						342645

PLATE NO-III

DATE OF SURVEY : 10.12.2024

APPLICANT:

TVL.VANNATHIPARAI KALISHWARI  
KALLUDAIKKUM MAGALIR SANGAM,  
TMT.M.PARIMALA (PRESIDENT),  
(REGISTER NO.61/2021),  
SOUTH STREET, RAJAGOPALANPATTI,  
ANDIPATTI TALUK,  
THENI DISTRICT - 625 536.

QUARRY APPLIED LEASE AREA:

S.F.NO : 1432/3(PART),  
EXTENT : 1.60.0Ha,  
VILLAGE : THIMMARASANAICKANUR BIT-2,  
TALUK : ANDIPATTI,  
DISTRICT : THENI.

INDEX

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

TOPOGRAPHY, GEOLOGICAL  
PLAN & SECTIONS

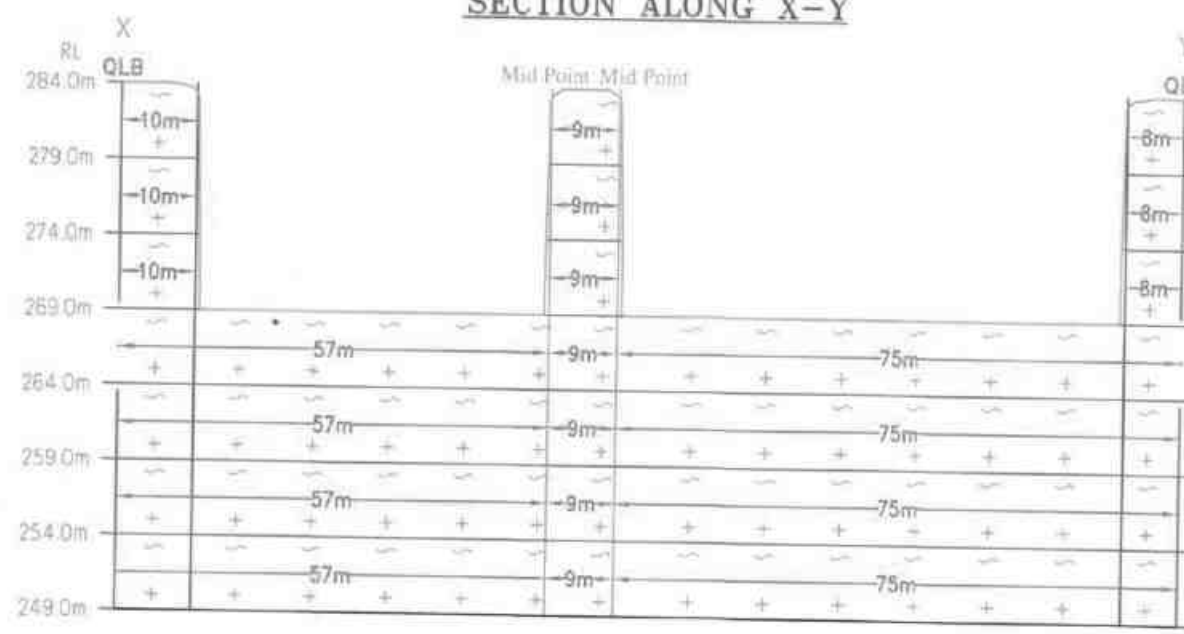
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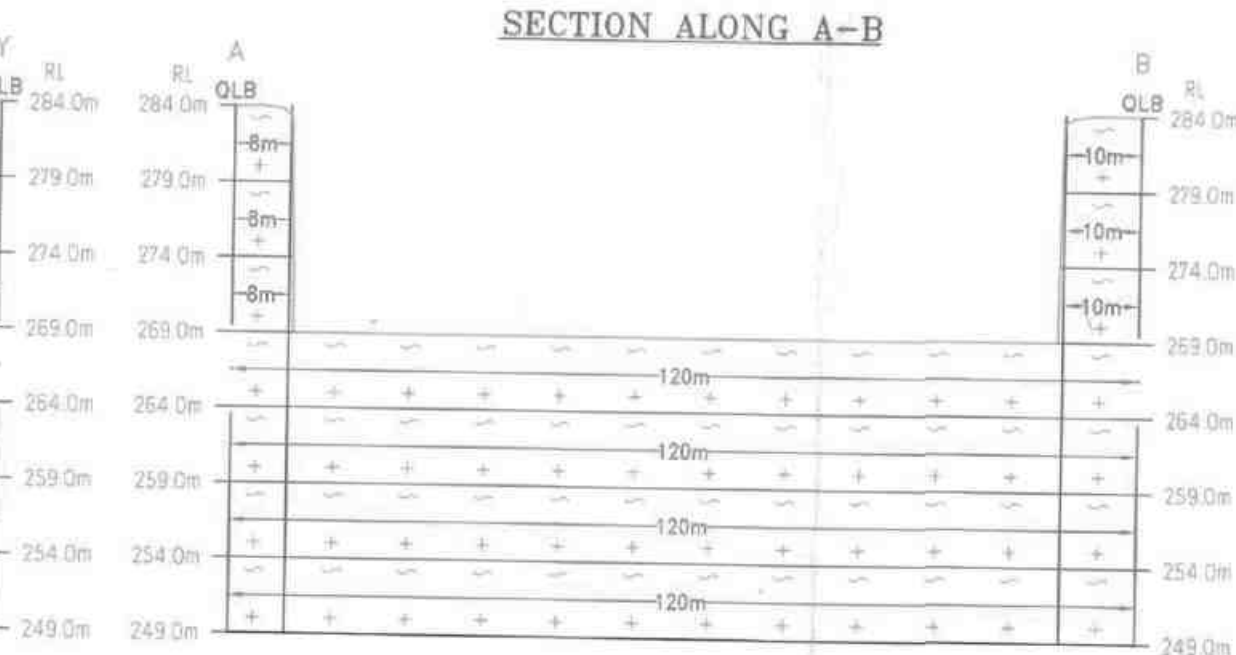
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GOVERNMENT

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

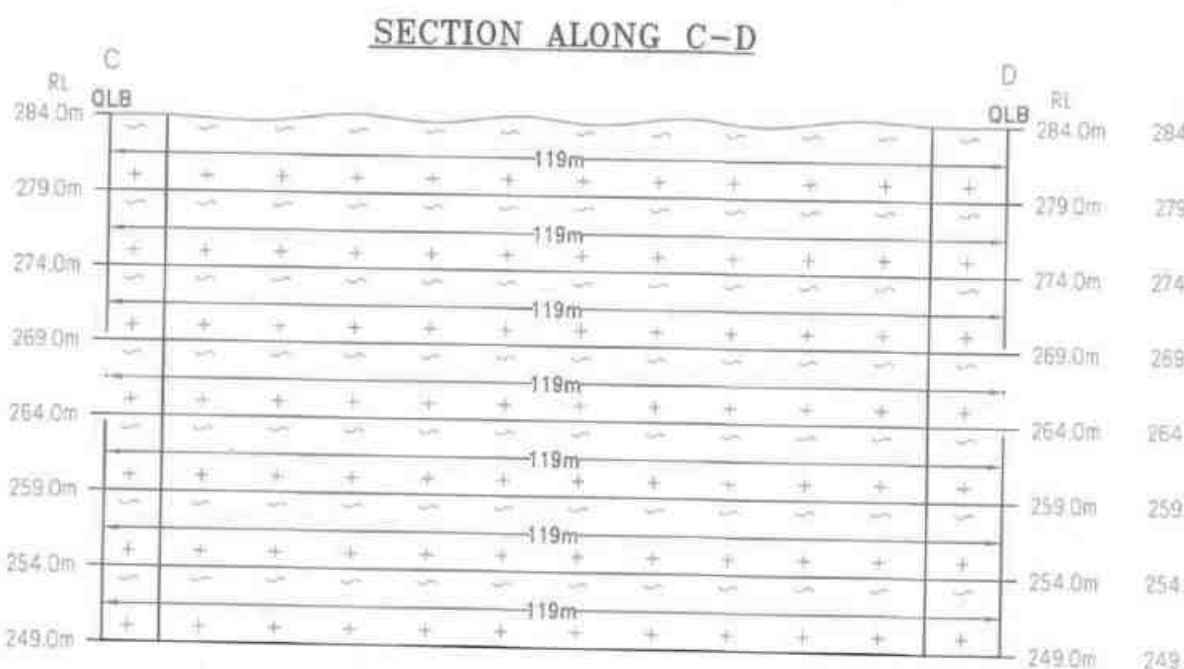
SECTION ALONG X-Y



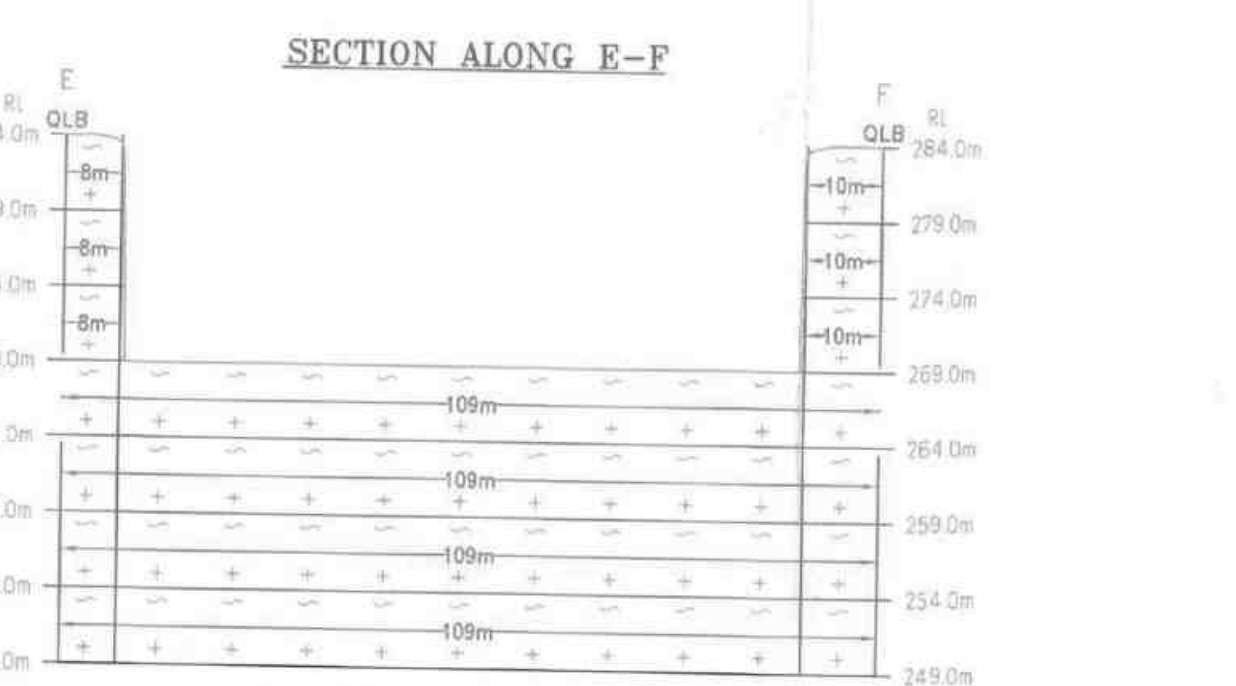
SECTION ALONG A-B



SECTION ALONG C-D



SECTION ALONG E-F

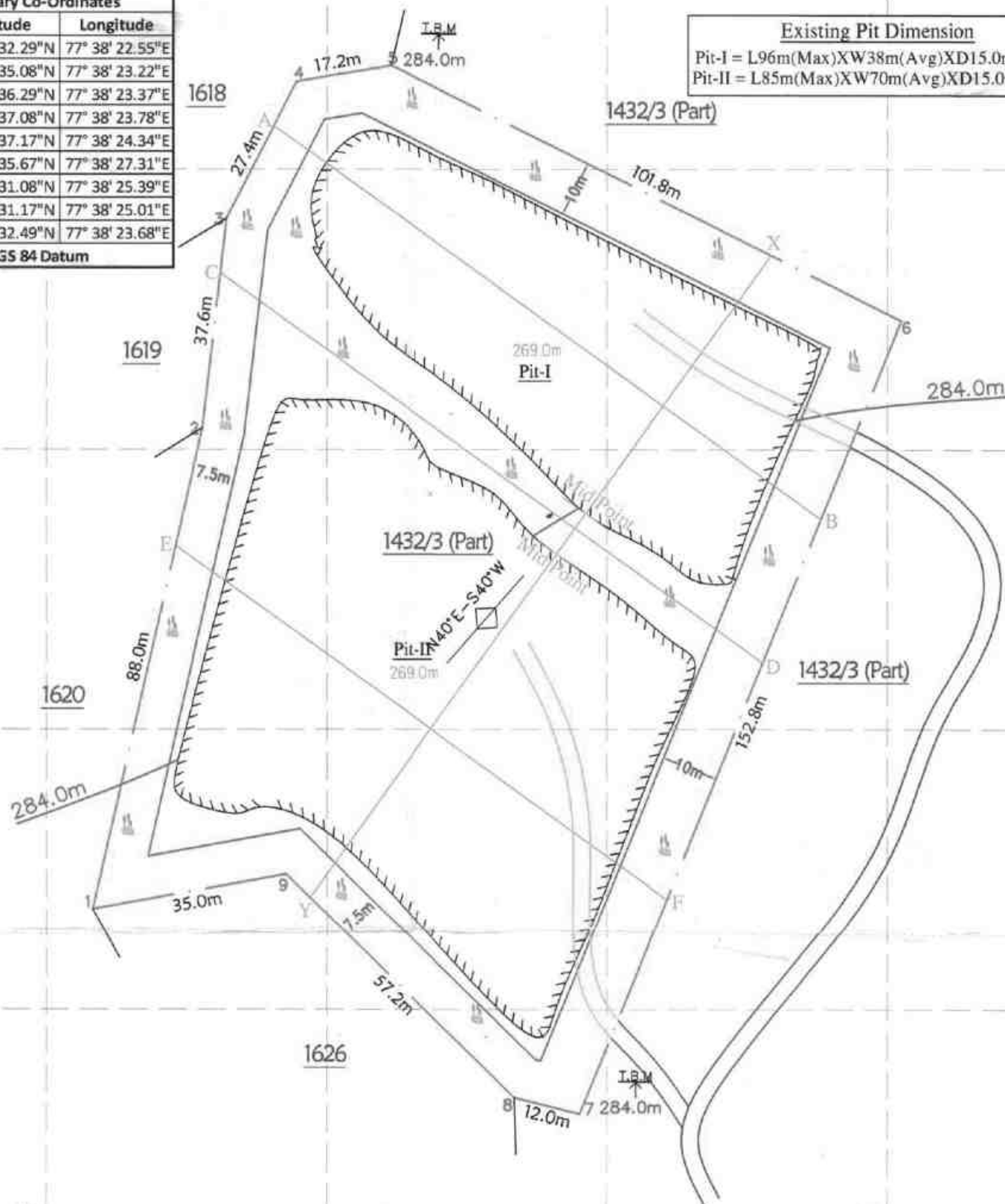






Boundary Co-Ordinates		
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8	10° 01' 31.17"N	77° 38' 25.01"E
9	10° 01' 32.49"N	77° 38' 23.68"E
WGS 84 Datum		

Existing Pit Dimension  
Pit-I = L96m(Max)XW38m(Avg)XD15.0m(Max)  
Pit-II = L85m(Max)XW70m(Avg)XD15.0m(Max)



Mineable Reserves						
section	Bench	length in (m)	Width in (m)	Depth in (m)	Volume m3	Mineable Reserves Rough Stone in m3
XY-AB	IV	42	93	5	19530	19530
	V	37	83	5	15355	15355
	VI	32	73	5	11680	11680
	VII	27	63	5	8505	8505
Total						55070
XY-CD	I	9	102	5	4590	4590
	II	9	92	5	4140	4140
	III	9	82	5	3690	3690
	IV	9	72	5	3240	3240
	V	9	62	5	2790	2790
	VI	9	52	5	2340	2340
	VII	9	42	5	1890	1890
Total						22680
XY-EF	IV	63	81	5	25515	25515
	V	58	71	5	20590	20590
	VI	53	61	5	16165	16165
	VII	48	51	5	12240	12240
Total						74510
Grand Total						152260

PLATE NO-IV  
DATE OF SURVEY : 10.12.2024

APPLICANT:  
TVL.VANNATHIPARAI KALISHWARI  
KALLUDAIKKUM MAGALIR SANGAM,  
TMT.M.PARIMALA (PRESIDENT),  
(REGISTER NO.61/2021),  
SOUTH STREET, RAJAGOPALANPATTI,  
ANDIPATTI TALUK,  
THENI DISTRICT - 625 536.

QUARRY APPLIED LEASE AREA:  
S.F.NO : 1432/3(PART),  
EXTENT : 1.60.0Ha,  
VILLAGE : THIMMARASANAICKANUR BIT-2,  
TALUK : ANDIPATTI,  
DISTRICT : THENI.

#### INDEX

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

#### MINEABLE PLAN & SECTIONS

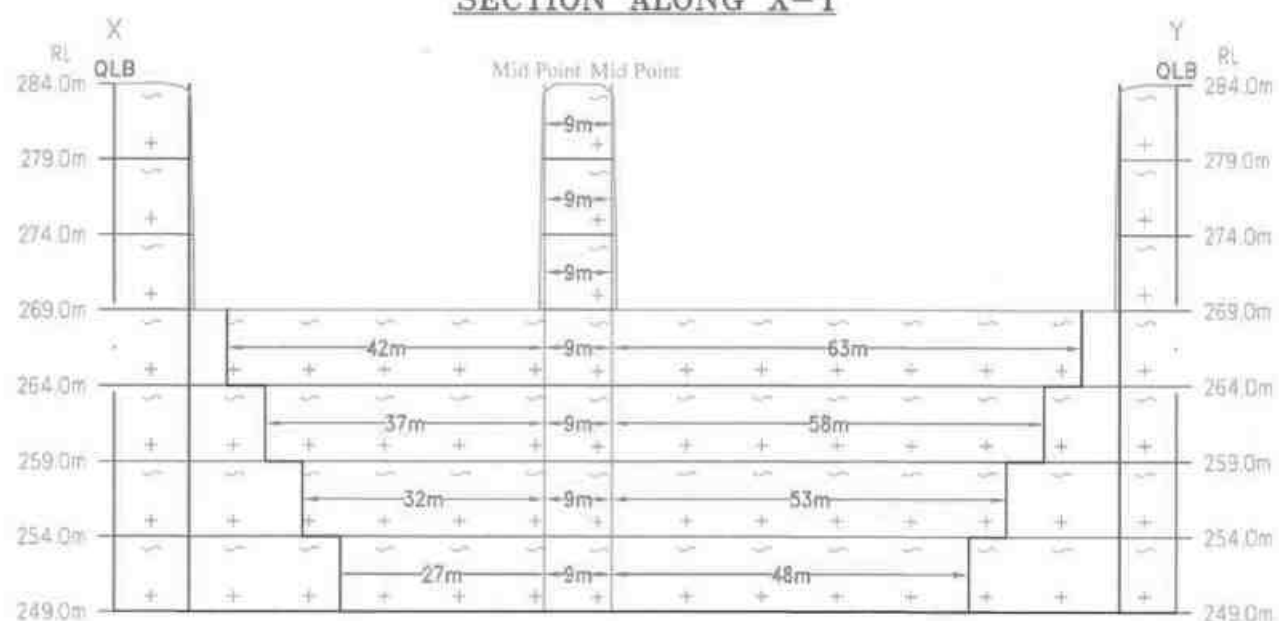
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SECTIONS HOR 1:1000, VER 1:500

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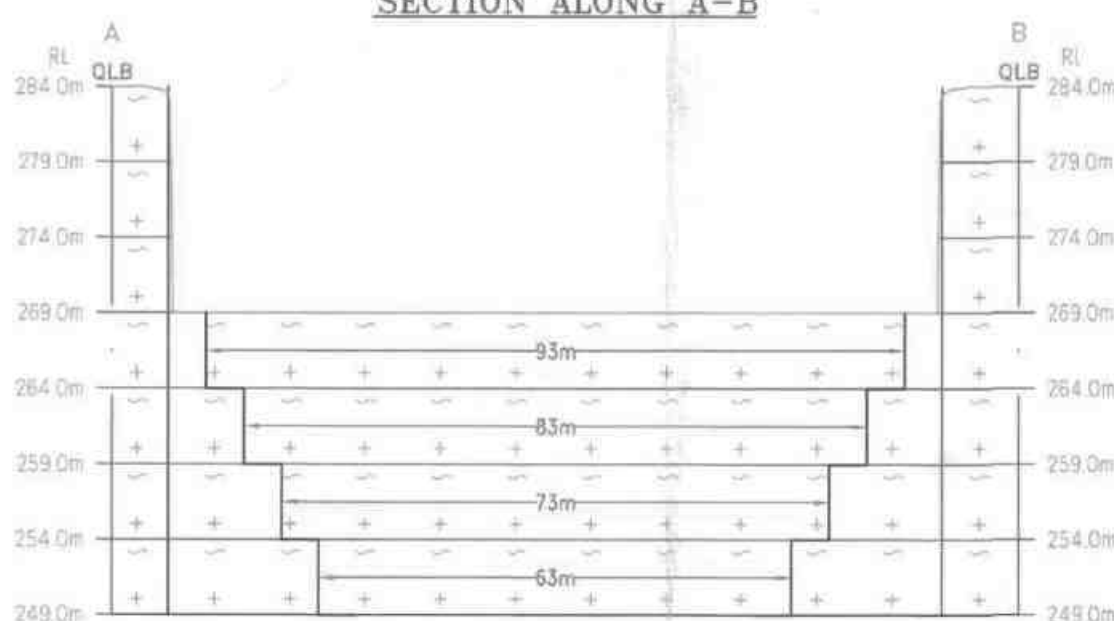
C.NATARAJAN, M.Sc.M.Phil.,  
QUALIFIED PERSON

M. N. Natarajan

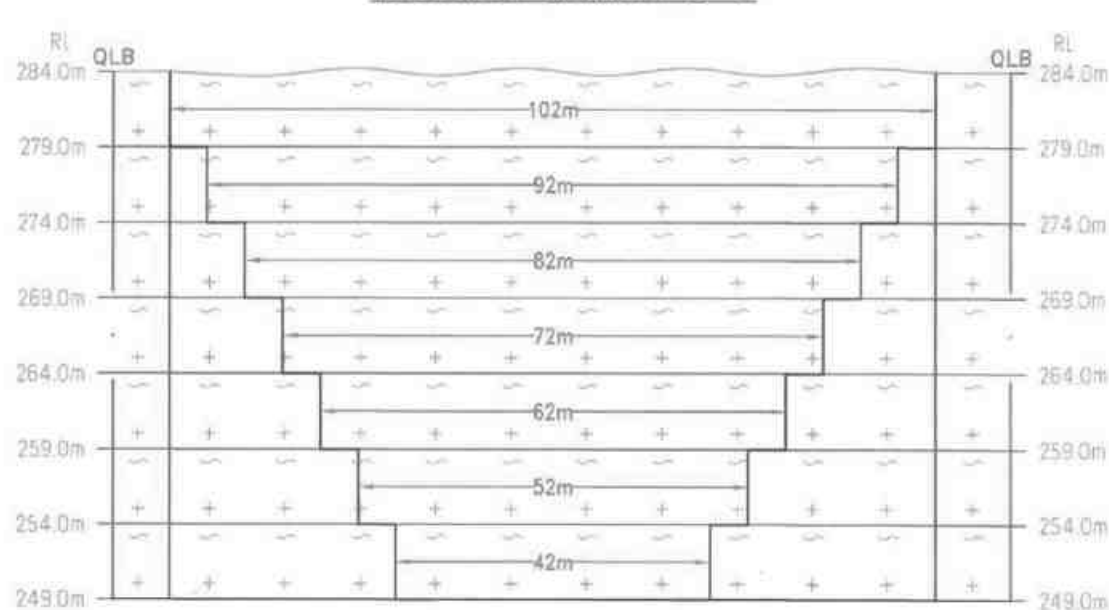
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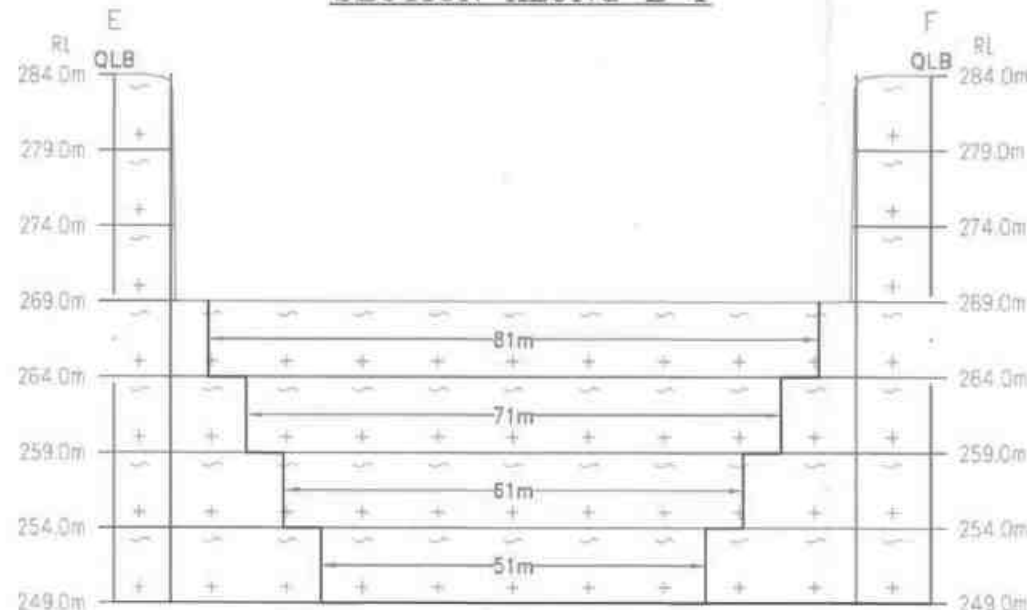
#### SECTION ALONG A-B



#### SECTION ALONG C-D



#### SECTION ALONG E-F

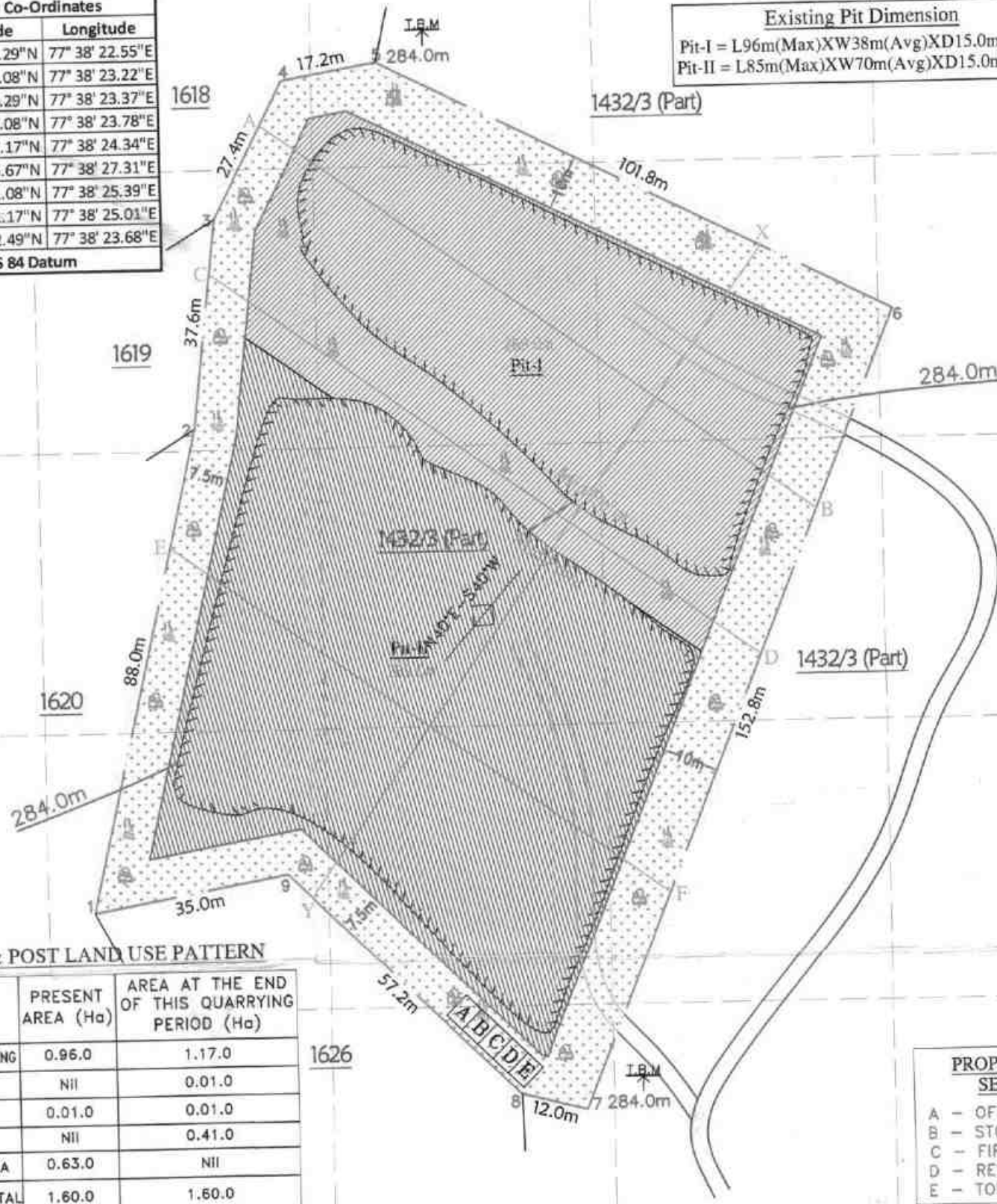






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8	10° 01' 31.17"N	77° 38' 25.01"E
9	10° 01' 32.49"N	77° 38' 23.68"E
WGS 84 Datum		

Existing Pit Dimension  
Pit-I = L96m(Max)XW38m(Avg)XD15.0m(Max)  
Pit-II = L85m(Max)XW70m(Avg)XD15.0m(Max)



PRESENT & POST LAND USE PATTERN

DESCRIPTION	PRESENT AREA (Ha)	AREA AT THE END OF THIS QUARRYING PERIOD (Ha)
AREA UNDER QUARRYING	0.96.0	1.17.0
INFRASTRUCTURE	NII	0.01.0
ROADS	0.01.0	0.01.0
GREEN BELT	NII	0.41.0
UN-UTILIZED AREA	0.63.0	NII
GRAND TOTAL	1.60.0	1.60.0

Yearwise Production							
Year	section	Bench	length in (m)	Width in (m)	Depth in (m)	Volume m3	Yearwise Production of Rough Stone in m3
I	XY-AB	IV	42	93	5	19530	19530
		I	9	102	5	4590	4590
	XY-CD	II	9	92	5	4140	4140
		III	5	82	5	2050	2050
		Total					
II	XY-CD	III	4	82	5	1640	1640
		IV	9	72	5	3240	3240
	XY-EF	IV	63	81	5	25515	25515
		Total					
III	XY-EF	V	58	71	5	20590	20590
		V	9	62	5	2790	2790
	XY-AB	V	17	83	5	7055	7055
		Total					
IV	XY-AB	V	20	83	5	8300	8300
		VI	32	73	5	11680	11680
	XY-CD	VI	9	52	5	2340	2340
		XY-EF	VI	27	61	5	8235
	Total						30555
V	XY-EF	VI	26	61	5	7930	7930
		VII	48	51	5	12240	12240
	XY-CD	VII	9	42	5	1890	1890
		XY-AB	VII	27	63	5	8505
	Total						30565
Grand Total							152260

PLATE NO-V  
DATE OF SURVEY : 10.12.2024

APPLICANT:  
TVL VANNATHIPARAI KALISHWARI  
KALLUDAIKKUM MAGALIR SANGAM,  
TMT.M.PARIMALA (PRESIDENT),  
(REGISTER NO.61/2021),  
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ANDIPATTI TALUK,  
THENI DISTRICT - 625 536.

QUARRY APPLIED LEASE AREA:  
S.F.NO : 1432/3(PART),  
EXTENT : 1.60.0Ha,  
VILLAGE : THIMMARASANAICKANUR BIT-2,  
TALUK : ANDIPATTI,  
DISTRICT : THENI.

#### INDEX

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

#### YEARWISE DEVELOPMENT & PRODUCTION PLAN & SECTIONS

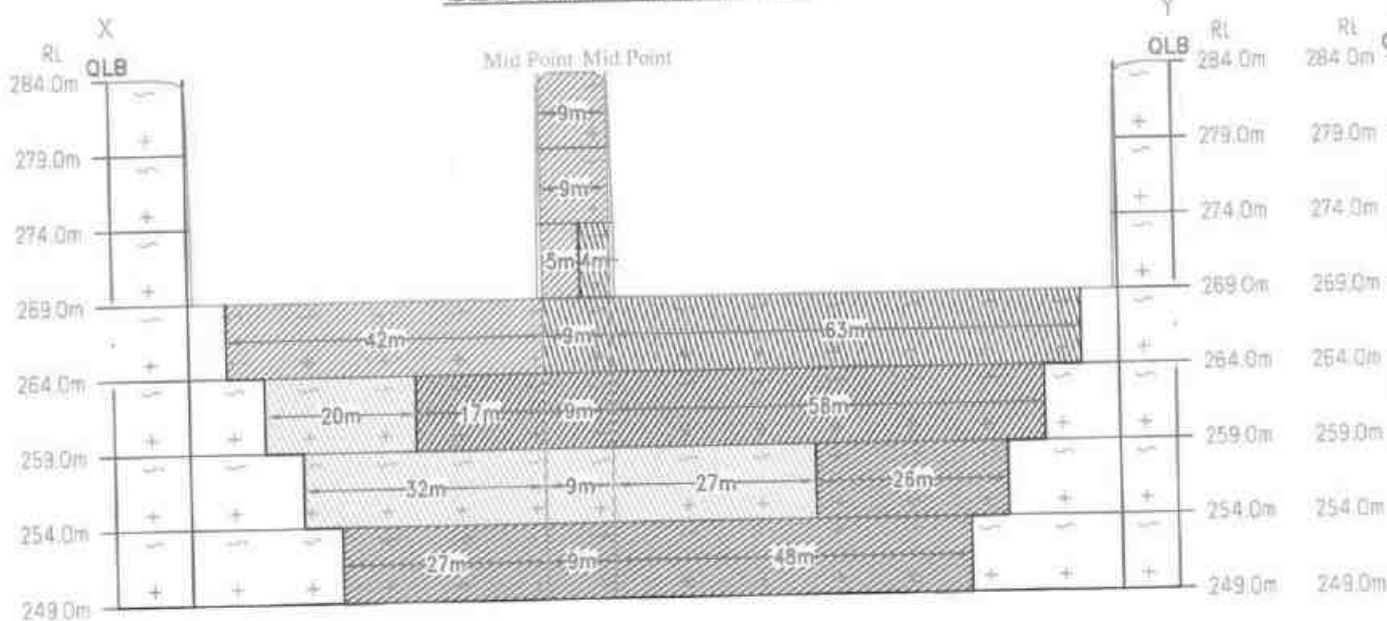
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SECTIONS HOR 1:1000, VER 1:500

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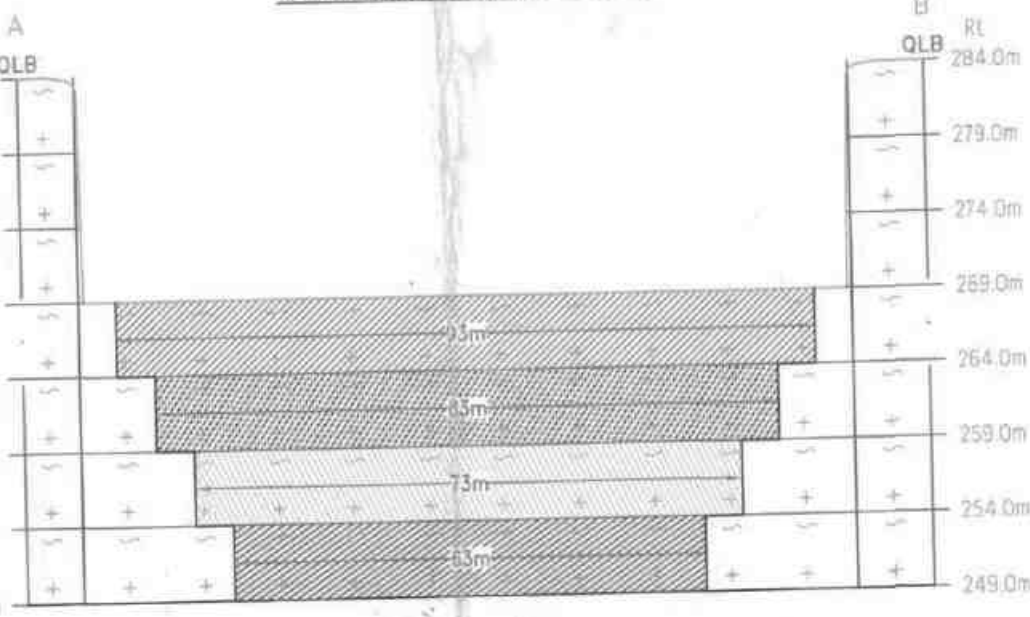
C. NATARAJAN, M.Sc., M.Phil.,  
QUALIFIED PERSON

M. 2106017

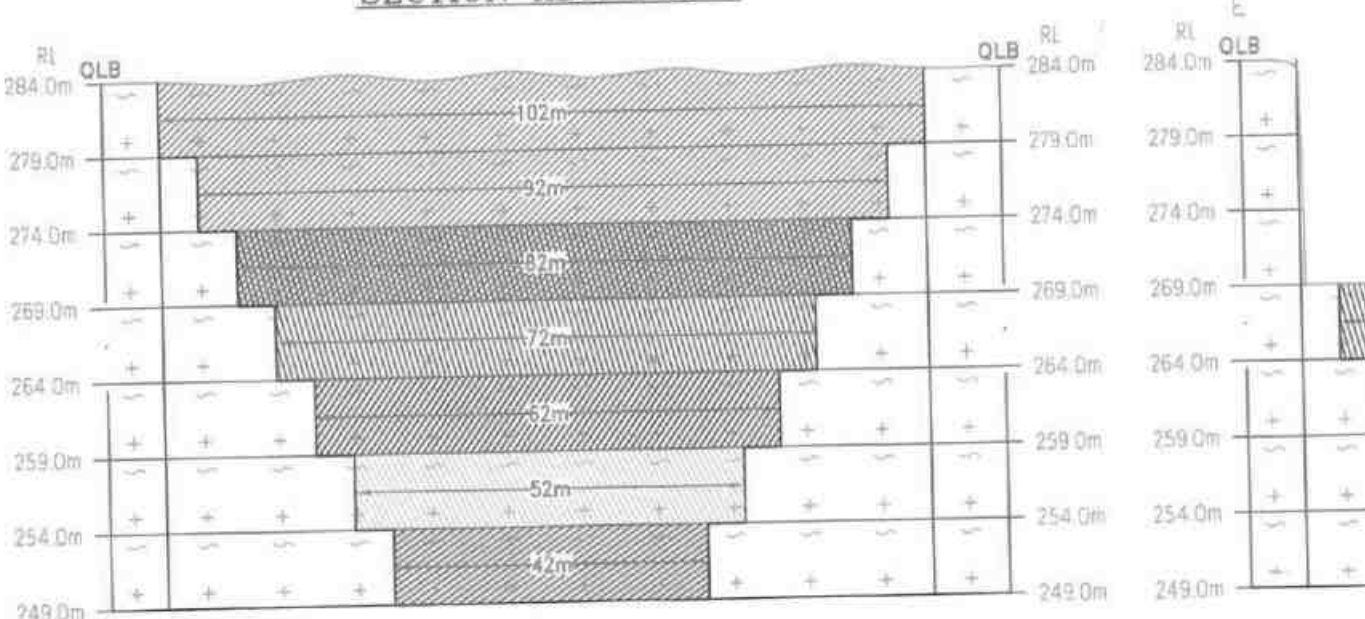
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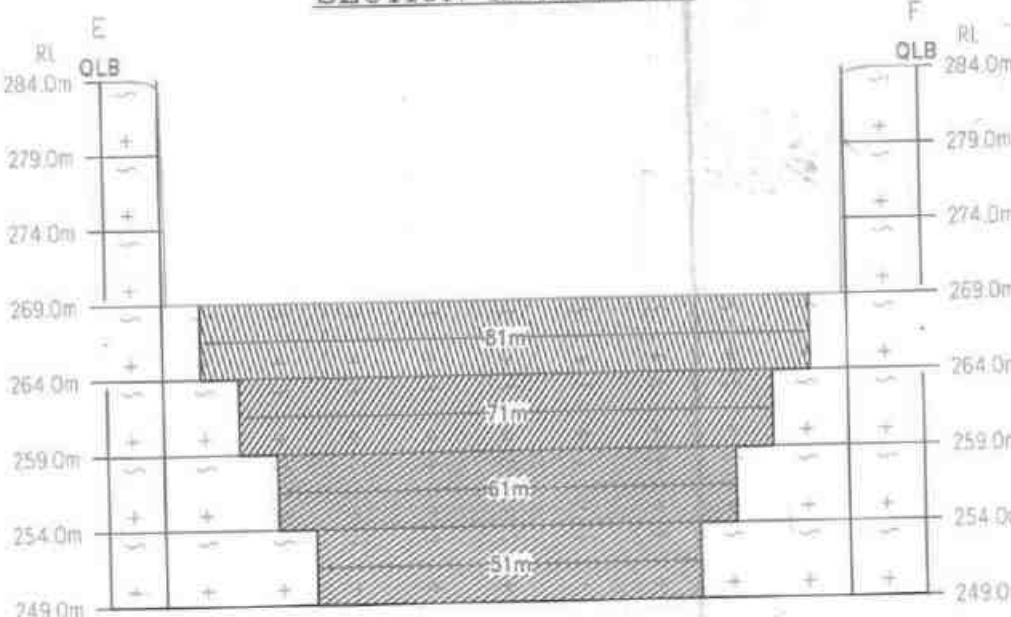
SECTION ALONG A-B



SECTION ALONG C-D



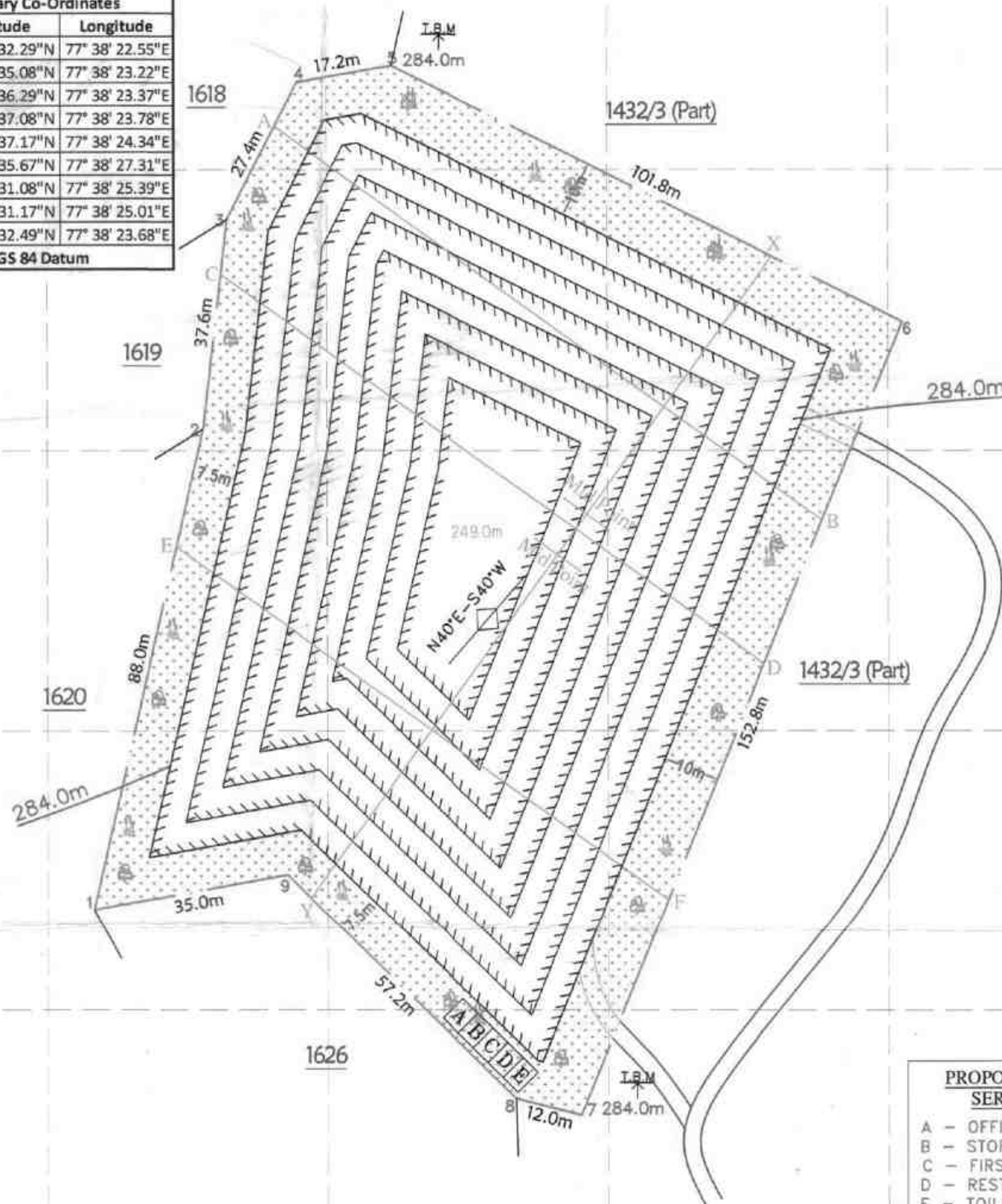
SECTION ALONG E-F







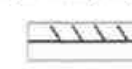
Boundary Co-Ordinates		
Label	Latitude	Longitude
1	10° 01' 32.29"N	77° 38' 22.55"E
2	10° 01' 35.08"N	77° 38' 23.22"E
3	10° 01' 36.29"N	77° 38' 23.37"E
4	10° 01' 37.08"N	77° 38' 23.78"E
5	10° 01' 37.17"N	77° 38' 24.34"E
6	10° 01' 35.67"N	77° 38' 27.31"E
7	10° 01' 31.08"N	77° 38' 25.39"E
8	10° 01' 31.17"N	77° 38' 25.01"E
9	10° 01' 32.49"N	77° 38' 23.68"E
WGS 84 Datum		



#### PROPOSED SITE SERVICES

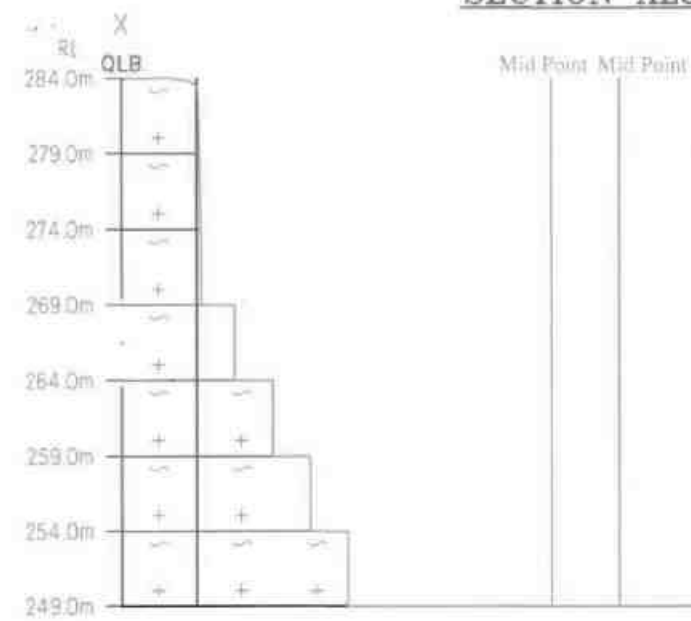
- A - OFFICE
- B - STORE ROOM
- C - FIRST AID ROOM
- D - REST SHELTER
- E - TOILET

ULTIMATE PIT DIMENSION  
L124m(Max)X94m(Avg)XD35m(Max)

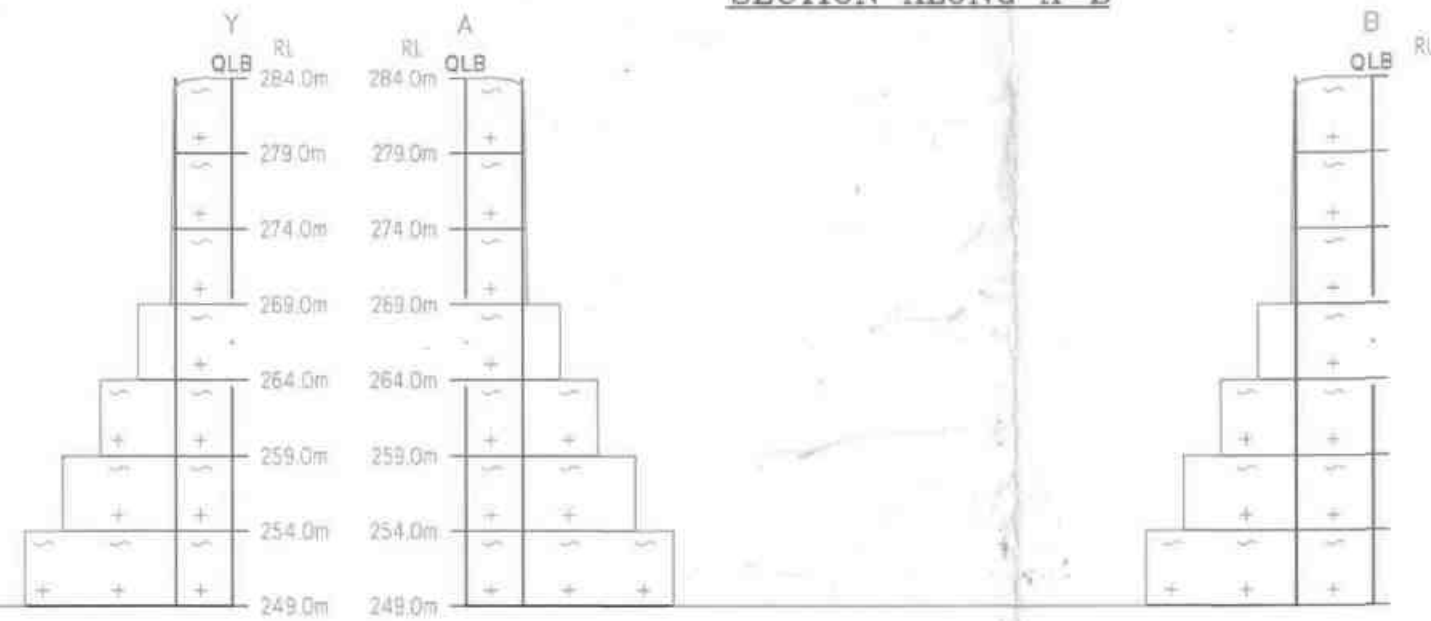


Proposed area to be Planted

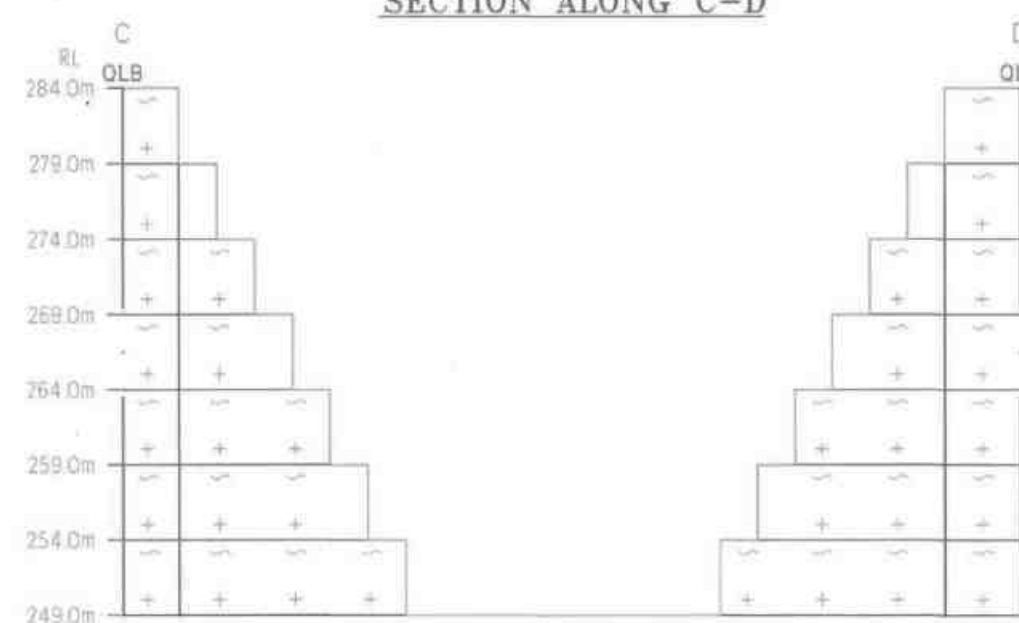
#### SECTION ALONG X-Y



#### SECTION ALONG A-B



#### SECTION ALONG C-D



#### SECTION ALONG E-F

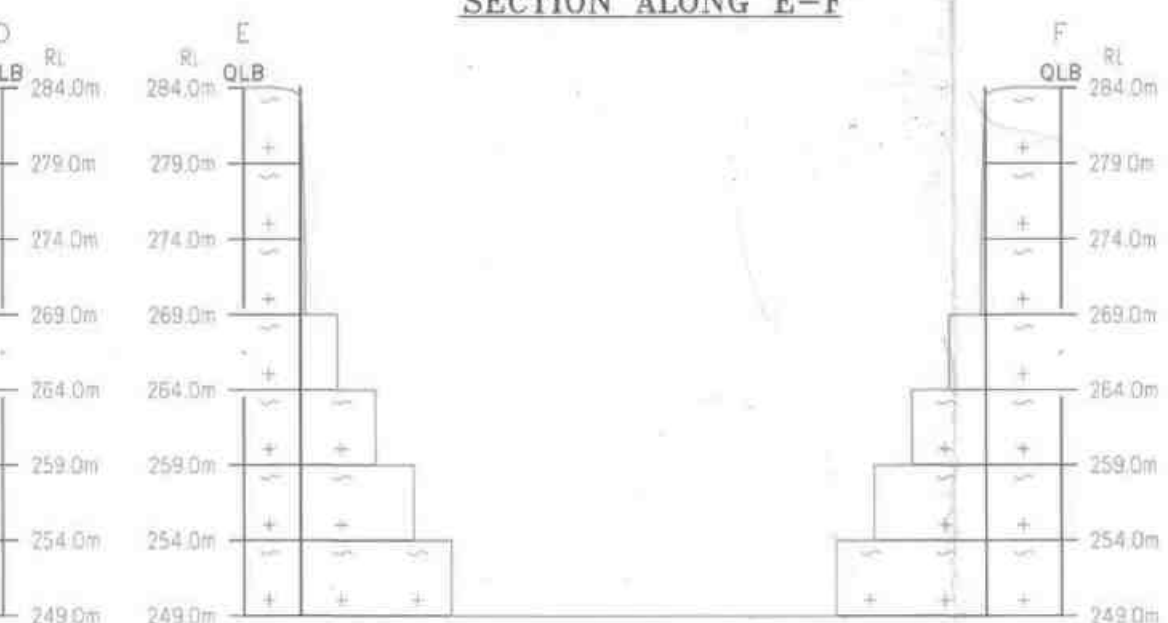


PLATE NO-VI  
DATE OF SURVEY : 10.12.2024

APPLICANT:  
TVL.VANNATHIPARAI KALISHWARI  
KALLUDAIKKUM MAGALIR SANGAM,  
T.M.T.PARIMALA (PRESIDENT),  
(REGISTER NO.61/2021),  
SOUTH STREET, RAJAGOPALANPATTI,  
ANDIPATTI TALUK,  
THENI DISTRICT - 625 536.

QUARRY APPLIED LEASE AREA:  
S.F.NO : 1432/3(PART),  
EXTENT : 1.60.0Ha,  
VILLAGE : THIMMARASANAICKANUR BIT-2,  
TALUK : ANDIPATTI,  
DISTRICT : THENI.

#### INDEX

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

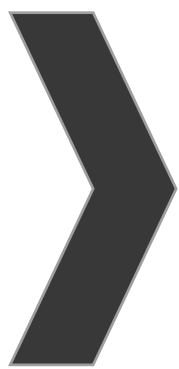
#### CONCEPTUAL PLAN & SECTIONS

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

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

C.NATARAJAN, M.Sc.,  
QUALIFIED PERSON

M. LALITHA



# ANNEXURE-4

From

Assistant Director,  
Geology and Mining,  
Theni.

To

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

Roc. No.104/Mines/2023, dated.22.05.2025

sir,

Sub: Mines and Minerals - Minor Mineral - Rough Stone -  
Theni District - Andiapatty Taluk -  
Thimmarasanayakkanur Bit-2 Village - Govt. Poramboke  
Land - in S.F. Nos.1432 (Part) - Over an extent of 1.60.00  
Hects - Quarry lease application preferred by  
Tvl.Vannathiparai Kalieswari Kalludaikum Magalir  
Sangam (Reg.No.61/2021), President:Tmt.M.Parimala -  
Precise area communicated - Draft Mining Plan  
submitted - Precise area communicated - Draft Mining  
Plan submitted - Approval accorded - 500 meter radius  
quarry details -Requested - Regarding..

- Ref:
1. Theni District Gazette Extraordinary Notification,  
No.3, dated:09.01.2024.
  2. Quarry lease application preferred by  
Tvl.Vannathiparai Kalieswari Kalludaikum Magalir  
Sangam (Reg.No.61/2021),  
President:Tmt.M.Parimala, South Street,  
Rajagopalanpatti, Andipatty, Theni District,  
application dated.07.02.2024.
  3. Special Committee Report, daetd:12.07.2024.
  4. District Collector, Theni Precise area  
communication letter Roc No.  
Rc.No.104/Mines/2023, Dated:09.12.2024.
  5. Mining Plan dated Nil received on 11.02.2025 from  
Tvl.Vannathiparai Kalieswari Kalludaikum Magalir  
Sangam (Reg.No.61/2021).

\*\*\*\*\*

In the reference 1<sup>st</sup> cited, Tvl.Vannathiparai Kalieswari  
Kalludaikum Magalir Sangam (Reg.No.61/2021),  
President:Tmt.M.Parimala has preferred an application for the grant of  
quarry lease to quarry Rough Stone in S.F.Nos.1432 (Part) over an extent  
of 1.60.00 Hects of Thimmarasanayakkanur Bit-2 Village, Andiapatty Taluk  
under Rule 19 of Tamil Nadu Minor Mineral Concession Rules, 1959.

Based on reports and recommendations of the Revenue Divisional Officer, Periyakulam and Assistant Director, Department of Geology and Mining, Theni precise area was communicated by the Assistant Director to Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam (Reg.No.61/2021) with a direction to submit the draft mining plan as stipulated in rule 41 of Tamil Nadu Minor Mineral Concession Rules, 1959.

Accordingly, Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam (Reg.No.61/2021), President:Tmt.M.Parimala has submitted the draft Mining Plan and the same has been approved on 02.04.2025. In this connection the applicant has requested to furnish the details of quarry lease situated within 500 mts radius from the subject quarry for obtaining Environmental Clearance from the State Level Environment Impact Assessment Authority.

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

A. Existing Quarries

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

B. Abandoned/Expired Quarries

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

C. Present Proposed Quarries

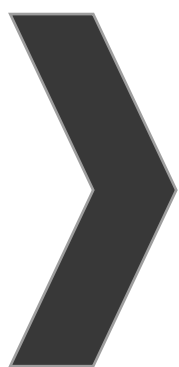
S. No.	Name of the owner	Village and Taluk	S.F.No.	Extent (in Hects)
1.	Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam (Reg.No.61/2021),	Thimmarasanayakkanur Bit-2 Village	1432 (Part)	1.60.00 Hects.



	President:Tmt.M.Parimala, No.2, North Street, Rajagopalanpati, Thimmarasanayakkanur Village, Andiapatty Taluk, Theni District	Andiapatty Taluk		
2.	Tvl.Vannathiparai Nagammal Kalludaikum Magalir Sangam (Reg.No.62/2021), President:Tmt.T.Thavamani, No.2, North Street, Rajagopalanpati, Thimmarasanayakkanur Village, Andipatty Taluk, Theni District	Thimmarasanayakkanu r Bit-2 Village Andipatty Taluk	1619 (Part)	2.50.00 Hects.
3.	R.Murugan, S/o.Rengasamy, North Street, T.Rajagopalanpatti, Andipatty Taluk, Theni District.	Thimmarasanayakkanu r Bit-2 Village Andipatty Taluk	1613/3C2, 1655/2	1.17.50 Hects.

*Chidambaram*  
Assistant Director,  
Geology and Mining,  
Theni.

*22-10-2021*



# ANNEXURE-5

LOCATION OF THE QUARRY LEEASE APPLIED AREA



TVL VANNATHIPARAI KALIESWARI KALLUDAIKUM MAGALIR  
SANGAM

NAME OF THE APPLICANT	:	M. PARIMALA (PRESIDENT)
DISTRICT	:	THENI
TALUK	:	ANDIPATTI
VILLAGE	:	THIMMARASANAYARKKANUR BIT-2
S.F.NOS	:	1432/3(PART)
EXTENT	:	1.60.0Ha

Place:

Date:

  
14/02/2025  
VADIGAN  
சுற்றுலா  
புறத்துறை  
உதவி  
அலுவலர்  
உதவி  
அலுவலர்

பணநிர்ணயப்படுகிறது

இதன் மூலம் தனியார் வட்டம்

தமிழ்நாடு வியாபாரம் ம.உ.இ கிராமம், புல எண். 1432/3 -ன்

உண்டாகும் 1.60.00 ரெக்டிரேயன் (மசு) உள்ள நிலத்தில்

விண்ணாக்கியபாற்ற தானியமான கலியாணத்தின் மூலம் தனியார்

தினமும் M. பாலமார் தனியார் உண்டாகும் ரெக்டிரேயன்

உடைய அடிப்படையில் தனியார் மசு ரெக்டிரேயன் புலத்தினால்

பிரதே 300 மீ திரைக்கலை திரைக்கலை, புலத்தின் திரைக்கலை

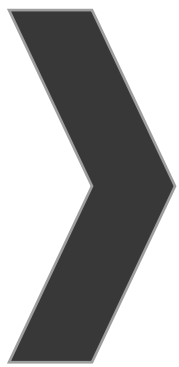
புலத்தின் மசும் அடிப்படையில் திரைக்கலை, திரைக்கலை

புலத்தின் மசும் அடிப்படையில் திரைக்கலை திரைக்கலை

மசுக்கள் திரைக்கலை தனியார் அடிப்படையில் திரைக்கலை

திரைக்கலை திரைக்கலை

17/6/2025  
கிராம நிர்வாக அலுவலர்  
தமிழ்நாடு வியாபாரம் ம.உ.இ கிராமம்  
ஆண்டியல் வட்டம்



# **ANNEXURE-6**



அனுப்புநர்  
மாவட்ட ஆட்சித்தலைவர்,  
தேனி.

பெறுநர்:  
திருமதி.ம.பரிமளா, தலைவி,  
தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி  
கல்லுடைக்கும் மகளிர் சங்கம்,  
(பதிவு எண்.61/2021),  
தெற்கு தெரு, இராஜகோபாலன்பட்டி,  
ஆண்டிபட்டி வட்டம்,  
தேனி மாவட்டம்.625536..

ந.க.எண்.104/கனிமம்/2024, நாள்:09.12.2024.

பொருள்:

கனிமங்களும், குவாரிகளும் - சிறுவகைக் கனிமம் - உடைகல் -  
தேனி மாவட்டம் - ஆண்டிபட்டி வட்டம் - திம்மரசநாயக்கனூர்  
பிட்-2 கிராமம் - அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) -  
விஸ்தீரணம் 1.60.0 ஹெக்டேர் பரப்பில்  
தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி கல்லுடைக்கும் மகளிர்  
சங்கம் விண்ணப்பித்தது - முன்னுரிமை அடிப்படையில் நேரடி  
கற்குவாரி குத்தகை உரிமம் வழங்க சிறப்பு குழுவால் தேர்வு  
செய்யப்பட்டது - குத்தகை தொகையினை உறுதி செய்து -  
முதல் தவணை குத்தகை தொகையை செலுத்தப்பட்டது -  
ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க  
மதிப்பீட்டு ஆணையத்தின் ஒப்புதல் பெற்று சமர்ப்பிக்க கோருதல்  
- தொடர்பாக.

பார்வை:

1. வருவாய் கோட்டாட்சியர், பெரியகுளம் கடிதம்  
ந.க.எண்.6973/2023/அ6, நாள்:17.11.2023..
2. மாவட்ட வன அலுவலர், தேனி, தேனி வனக்கோட்டம்,  
தேனி. கடிதம் எண்.12122/2023/டி, நாள்:05.01.2024.
3. தேனி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.3,  
நாள்:19.01.2024.
4. திருமதி.ம.பரிமளா, தலைவி, தி/ள்.வண்ணாத்திபாறை  
காளீஸ்வரி கல்லுடைக்கும் மகளிர் சங்கம், (பதிவு  
எண்.61/2021), தெற்கு தெரு, இராஜகோபாலன்பட்டி,  
ஆண்டிபட்டி வட்டம், தேனி மாவட்டம். விண்ணப்பம்  
நாள்:07.02.2024.
5. சிறப்புக்குழு (Special Committee) கூட்ட அறிக்கை  
நாள்.12.07.2024.
6. குறிப்பானை ந.க.எண்.104/கனிமம்/2024,  
நாள்:05.09.2024.

\*\*\*\*\*

பார்வை 1 மற்றும் 2-ல் காணும் பரிந்துரை அறிக்கையின்படி, பார்வை 3-ல்  
காணும் தேனி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.3,  
நாள்:19.01.2024-ல் தேனி மாவட்டம், ஆண்டிபட்டி வட்டம், திம்மரசநாயக்கனூர் பிட்-2

M.பரிமளா



கிராமம், அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) விஸ்தீரணம் 1.60.0 ஹெக்டேர் பரப்பில் மகளிர் சங்கங்களுக்கு நேரடி குவாரி குத்தகை உரிமம் வழங்க விண்ணப்பங்கள் வரவேற்கப்பட்டது. அதனை தொடர்ந்து, பார்வை 4-ல் காணும் தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி கல்லுடைக்கும் மகளிர் சங்கமானது தேனி மாவட்டம், ஆண்டிபட்டி வட்டம், திம்மரசநாயக்கனூர் பிட்-2 கிராமம், அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) விஸ்தீரணம் 1.60.0 ஹெக்டேர் பரப்பு கல்குவாரிக்கு விண்ணப்பம் செய்தது.

பார்வை 5-ல் காணும், மாவட்ட ஆட்சித்தலைவர் அவர்களின் தலைமையில் அமைக்கப்பட்ட சிறப்புக்குழுவானது, தேனி மாவட்டம், ஆண்டிபட்டி வட்டம், திம்மரசநாயக்கனூர் பிட்-2 கிராமம், அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) விஸ்தீரணம் 1.60.0 ஹெக்டேர் பரப்பில் உடைகல் குவாரிப்பணி செய்ய தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி கல்லுடைக்கும் மகளிர் சங்கத்தினருக்கு 5 (ஐந்து) ஆண்டுகளுக்கு கற்குவாரி குத்தகை உரிமம் வழங்க பரிந்துரை செய்யப்பட்டது.

அதனை, தொடர்ந்து, பார்வை 6-ல் காணும் குறிப்பாணையில், தமிழ்நாடு சிறுகனிம சலுகை விதிகள், 1959, விதி எண்.8 (10-A) (C)-ன்படி 50% குத்தகை தொகை ரூ.22,00,000/-ஐ நான்கு சம தவணைகளில் முதல் தவணை குத்தகைத் தொகை ரூ.5,50,000/-ஐ செலுத்தி அசல் சலாணை சமர்ப்பிக்குமாறு கேட்டுக்கொள்ளப்பட்டது. அதன் பின்னர், மேற்படி சங்கத்தினர் முதல் தவணைத் தொகை ரூ.5,50,000/-யினை சலான் எண்.20240916011424, நாள்:20.09.2024-ன்படி செலுத்தி சமர்ப்பித்துள்ளனர்.

எனவே, வருவாய் கோட்டாட்சியர், பெரியகுளம், மாவட்ட வன அலுவலர், தேனி மற்றும் சிறப்பு குழுவின் பரிந்துரை அறிக்கையின் அடிப்படையில், விண்ணப்பதாரர் தி/ள்.வண்ணாத்திபாறை காளீஸ்வரி கல்லுடைக்கும் மகளிர் சங்கத்தினருக்கு தேனி மாவட்டம், ஆண்டிபட்டி வட்டம், திம்மரசநாயக்கனூர் பிட்-2 கிராமம், அரசு புறம்போக்கு புல எண்.1432/3 (பகுதி) விஸ்தீரணம் 1.60.0 ஹெக்டேர் சாதாரண உடைகற்கள் வெட்டியெடுத்து குவாரிப்பணி செய்ய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959-ம் விதி 8 (10-A) (b) (iii)-ன்படி 5 (ஐந்து) ஆண்டுகளுக்கு கற்குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதி குவாரி உரிமம் வழங்க ஏதுவாக 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.41-ன்படி ஏற்பளிக்கப்பட்ட கரங்கத் திட்டத்தினை 90 தினங்களுக்குள்ளும் அதனை தொடர்ந்து, 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம விதிகள், விதி எண்.42-ன்படி மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினையும் பெற்று சமர்ப்பிக்க வேண்டும்.

M. பரிமாண



நிபந்தனைகள்:

- அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டரும், அரசு புறம்போக்கு நிலங்களுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரிப் பணி மேற்கொள்ள வேண்டும்.
- அருகிலுள்ள பட்டாதாரர்களுக்கு எவ்வித இடையூறுமின்றி / அருகிலுள்ள பட்டா மற்றும் அரசு புலங்களில் எவ்வித ஆக்கிரமிப்பும் இன்றி குவாரிப்பணி மேற்கொள்ள வேண்டும்.
- கற்குவாரி குத்தகை உரிமம் பெறுவதற்கு முன்பாக ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை அவர்களின் கடிதம் ந.க.எண்.2921/எம்.எம்.4/2016, நாள்:09.03.2021-ல் தெரிவிக்கப்பட்டுள்ளவாறு குத்தகைதாரர் குவாரிப்பணி தொடங்குவதற்கு முன்னர் உரிமம் வழங்கப்பட்ட எல்லைகளை DGPS முறையில் அளவீடு செய்து குறுந்தட்டில் பதிவு செய்து அறிக்கையாக சமர்ப்பிக்க வேண்டும்.

ஓம். (XXXXXXXXXXXXXX)  
மாவட்ட ஆட்சித்தலைவர்,  
தேனி.

/உ.ந.உ.ப./

மாவட்ட ஆட்சித்தலைவருக்காக,  
தேனி.

09/12/2024

M.பரிமளா



District : Theni

Taluk : Aundipatti [13]

Village : Thimmarasanayanur Bit-2 [202]

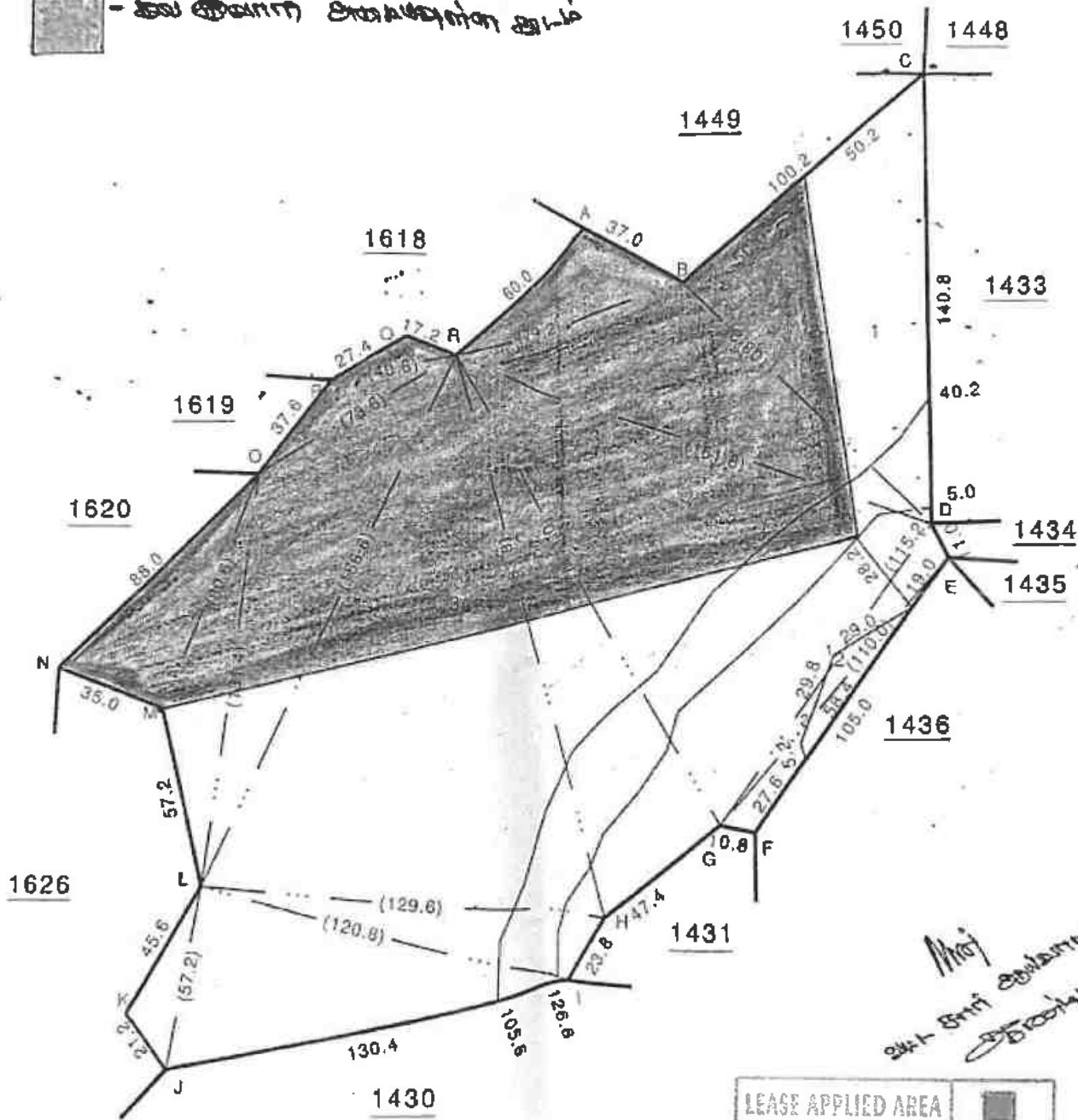
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- ஸ்டீல் பைண்ட் எக்ஸ்ப்ளோரேஷன் பிளாட்



May  
24-8-2021  
[Signature]

LEASE APPLIED AREA

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J	100.2			M	39.0			E	115.2			N	131.4		
K	140.8			N	88.6			F	110.0			O	40.8		
L	11.0			O	37.8			G	171.0			P	80.6		
M	19.4			P	27.4			H	183.8			Q	40.8		
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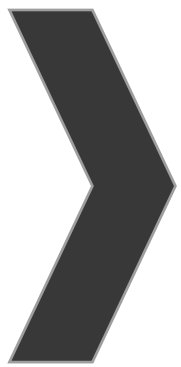


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LEASE APPLIED AREA

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# ANNEXURE-7



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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

Report No.	SARL/25/1889	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1889	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	04.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	58.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL(D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

\*\*\*END OF THE REPORT\*\*\*

Please Contact:

For any Technical Issues & Complaints: [technical@shrientanalytical.com](mailto:technical@shrientanalytical.com)

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

Report No.	SARL/25/1890	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-1890	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	04.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	49.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1891	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1891	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	05.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	56.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1892	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-1892	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	05.03.2025	Test Completed on	17.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	44.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1893	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-1893	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	06.03.2025	Test Completed on	17.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	42.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1894	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-1894	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	06.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	42.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	19.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.3	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1895	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-1895	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	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	48.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1896	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-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-1896	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	07.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	45.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	7.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1897	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-1897	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	07.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	38.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	17.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
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## TEST REPORT

Report No.	SARL/25/1898	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-1898	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	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	44.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

Report No.	SARL/25/1899	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-1899	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	08.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	51.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1900	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-1900	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	08.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	54.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

**Verified**



**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1901	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-1901	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	09.03.2025	Test Completed on	17.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	54.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.3	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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\*\*\*END OF THE REPORT\*\*\*

  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1902	Report Date.	17.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-1902	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	09.03.2025	Test Completed on	17.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	56.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
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## TEST REPORT

Report No.	SARL/25/1943	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-1943	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	11.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	49.2	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1944	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-1944	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	11.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	49.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1945	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-1945	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	12.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	51.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1946	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-1946	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	11.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	51.2	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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## TEST REPORT

Report No.	SARL/25/1947	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-1947	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	13.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	44.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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



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## TEST REPORT

Report No.	SARL/25/1948	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-1948	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	13.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	44.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1949	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-1949	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	13.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	55.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

**Verified**



**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1950	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-1950	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	14.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	42.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	7.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1951	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-1951	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	14.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	41.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	19.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1952	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, AndipattiTaluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-1952	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	14.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	45.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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

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## TEST REPORT

Report No.	SARL/25/1953	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1953	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	15.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	53.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

Report No.	SARL/25/1954	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-1955	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	15.03.2025	Test Completed on	24.03.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	52.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
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## TEST REPORT

Report No.	SARL/25/1955	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1955	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	16.03.2025	Test Completed on	24.03.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	54.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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## TEST REPORT

Report No.	SARL/25/1956	Report Date.	24.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-1956	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	16.03.2025	Test Completed on	24.03.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	48.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

Report No.	SARL/25/1997	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1997	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	18.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	53.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL(D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1998	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-1998	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	18.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	49.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.3	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/1999	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1999	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	19.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	51.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2000	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2000	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	19.03.2025	Test Completed on	31.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	47.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2001	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2001	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	20.03.2025	Test Completed on	31.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	43.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
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## TEST REPORT

Report No.	SARL/25/2002	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2002	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	20.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	38.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	17.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	3.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

Report No.	SARL/25/2003	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2003	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	20.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	47.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

Report No.	SARL/25/2004	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2004	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	21.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	43.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	7.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

Report No.	SARL/25/2005	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2005	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	21.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	42.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	19.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2006	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2006	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	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	50.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2007	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2007	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	22.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	54.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

### For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2008	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2008	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	22.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	52.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

Report No.	SARL/25/2009	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2009	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	23.03.2025	Test Completed on	31.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	52.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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\*\*\*END OF THE REPORT\*\*\*

  
**S. BALAMURUGAN**  
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## TEST REPORT

Report No.	SARL/25/2010	Report Date.	31.03.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2010	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	23.03.2025	Test Completed on	31.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	55.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

### For Shrient Analytical and Research Labs Pvt. Ltd

  
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\*\*\*END OF THE REPORT\*\*\*

  
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## TEST REPORT

Report No.	SARL/25/2051	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2051	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	25.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	48.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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## TEST REPORT

Report No.	SARL/25/2052	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2052	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	25.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	57.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2053	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2053	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	26.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	50.2	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2054	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2054	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	26.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	52.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2055	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2055	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	27.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	44.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2056	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2056	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	27.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	46.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2057	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2057	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	27.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	44.0	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2058	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2058	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	28.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	43.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.3	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2059	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2059	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	28.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	39.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	18.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2060	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2060	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	28.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	47.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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

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

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[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

Report No.	SARL/25/2061	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2061	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	29.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	59.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	27.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2062	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2062	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	29.03.2025	Test Completed on	07.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	42.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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

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## TEST REPORT

Report No.	SARL/25/2063	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2063	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	30.03.2025	Test Completed on	07.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	58.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	27.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.3	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2064	Report Date.	07.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2064	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	30.03.2025	Test Completed on	07.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	46.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2105	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2105	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	01.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	61.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	28.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	13.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL(D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2106	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2106	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	01.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	45.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

Report No.	SARL/25/2107	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2107	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	02.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	66.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	30.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	13.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2108	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2108	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	02.04.2025	Test Completed on	14.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	43.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2109	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2109	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	03.04.2025	Test Completed on	14.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	45.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	7.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2110	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2110	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	03.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	41.4	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	19.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.3	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2111	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2111	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	03.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	53.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2112	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2112	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	04.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	43.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2113	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2113	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	04.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	45.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2114	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2114	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	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	46.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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## TEST REPORT

Report No.	SARL/25/2115	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2115	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	05.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	55.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	13.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2116	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2116	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	05.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	49.2	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2117	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2117	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	06.04.2025	Test Completed on	14.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	52.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2118	Report Date.	14.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2118	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	06.04.2025	Test Completed on	14.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	52.0	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

### For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2159	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2159	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	08.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	55.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	13.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2160	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2160	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	08.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	58.0	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	13.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2161	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2161	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	09.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	53.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2162	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2162	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	09.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	56.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2163	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2163	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	10.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	46.2	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	7.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

Report No.	SARL/25/2164	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2164	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	10.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	39.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	18.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.3	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

Report No.	SARL/25/2165	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2165	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	10.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	48.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2166	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2166	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	11.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	41.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	19.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2167	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2167	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	11.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	49.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2168	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2168	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	11.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	52.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2169	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2169	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	12.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	62.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	28.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	13.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2170	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2170	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	12.04.2025	Test Completed on	21.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	50.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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

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## TEST REPORT

Report No.	SARL/25/2171	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2171	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	13.04.2025	Test Completed on	21.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	60.4	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	27.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2172	Report Date.	21.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2172	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	13.04.2025	Test Completed on	21.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	47.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2213	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2213	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	15.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	55.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL(D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2214	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2214	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	15.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	41.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	3.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2215	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2215	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	16.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	57.2	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2216	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2216	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	16.04.2025	Test Completed on	28.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	44.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2217	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2217	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	17.04.2025	Test Completed on	28.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	48.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	8.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2218	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2218	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	17.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	45.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2219	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2219	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	17.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	47.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
**Verified**



  
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Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2220	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2220	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	18.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	45.4	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	7.3	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2221	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2221	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	18.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	40.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	18.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2222	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2222	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	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	51.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2223	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2223	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	19.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	56.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	13.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2224	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2224	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	19.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	50.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2225	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2225	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	20.04.2025	Test Completed on	28.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	55.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	13.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2226	Report Date.	28.04.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2226	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	20.04.2025	Test Completed on	28.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	54.0	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
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## TEST REPORT

Report No.	SARL/25/2267	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2267	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	22.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	49.0	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2268	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2268	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	22.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	58.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	27.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	13.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
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Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2269	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2269	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	23.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	50.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2270	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2270	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	23.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	56.0	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2271	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2271	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	24.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	47.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	8.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2272	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2272	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	24.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	51.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2273	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2273	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	24.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	49.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2274	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2274	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	25.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	42.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	19.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2275	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2275	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	25.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	47.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.3	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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## TEST REPORT

Report No.	SARL/25/2276	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2276	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	25.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	52.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2277	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2277	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	26.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	52.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2278	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2278	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	26.04.2025	Test Completed on	05.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	49.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2279	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2279	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	27.04.2025	Test Completed on	05.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	53.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2280	Report Date.	05.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2280	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	27.04.2025	Test Completed on	05.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	47.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2321	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2321	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	29.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	55.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL(D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2322	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2322	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	29.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	43.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
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## TEST REPORT

Report No.	SARL/25/2323	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2323	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	30.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	54.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2324	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2324	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	30.04.2025	Test Completed on	12.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	46.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2325	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2325	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	01.05.2025	Test Completed on	12.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	47.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	8.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.47	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2326	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2326	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	01.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	51.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2327	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2327	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	01.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	53.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2328	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2328	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	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	45.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	7.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2329	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2329	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	02.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	48.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2330	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2330	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	03.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	55.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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## TEST REPORT

Report No.	SARL/25/2331	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2331	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	03.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	57.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2332	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2332	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	03.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	50.0	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2333	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2333	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	04.05.2025	Test Completed on	12.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	56.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	13.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2334	Report Date.	12.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2334	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	04.05.2025	Test Completed on	12.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	51.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2375	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2375	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	06.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	49.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2376	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2376	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	06.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	54.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

Report No.	SARL/25/2377	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2377	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	07.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	51.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

Report No.	SARL/25/2378	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2378	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	07.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	53.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2379	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2379	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	08.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	48.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	8.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2380	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2380	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	08.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	48.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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Phone Number +91 82208 36377 Email: -[info@shrientanalytical.com](mailto:info@shrientanalytical.com)  
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## TEST REPORT

Report No.	SARL/25/2381	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2381	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	08.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	46.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2382	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2382	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	09.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	43.4	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.3	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2383	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2383	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	09.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	44.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2384	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2384	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	09.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	50.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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## TEST REPORT

Report No.	SARL/25/2385	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2385	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	10.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	52.2	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2386	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2386	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	10.05.2025	Test Completed on	19.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	45.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2387	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2387	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	11.05.2025	Test Completed on	19.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	54.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.6	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2388	Report Date.	19.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2388	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	11.05.2025	Test Completed on	19.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	43.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2429	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2429	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	13.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	52.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL(D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2430	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2430	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	13.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	42.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2431	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2431	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	14.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	54.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2432	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaikkanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2432	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	14.05.2025	Test Completed on	26.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	45.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2433	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2433	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	15.05.2025	Test Completed on	26.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	50.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.8	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	7.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2434	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2434	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	15.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	50.4	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

Report No.	SARL/25/2435	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2435	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	15.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	44.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

### For Shrient Analytical and Research Labs Pvt. Ltd

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2436	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2436	Sample Received on	19.05.2025
Sample Collected by	02.05.2025	Test Commenced on	19.05.2025
Sample Collected on	16.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	52.4	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	8.3	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2437	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2437	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	16.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	47.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	21.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

  
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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2438	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2438	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	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	54.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2439	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2439	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	17.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	49.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2440	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2440	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	17.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	53.3	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2441	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2441	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	18.05.2025	Test Completed on	26.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	53.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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

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## TEST REPORT

Report No.	SARL/25/2442	Report Date.	26.05.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2442	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	18.05.2025	Test Completed on	26.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	57.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.4	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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## TEST REPORT

Report No.	SARL/25/2483	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2483	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	20.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	57.0	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	26.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

Report No.	SARL/25/2484	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2484	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	20.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	50.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.7	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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



# Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045  
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## TEST REPORT

Report No.	SARL/25/2485	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-Andipatti 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-2485	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	21.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	53.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.9	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.3	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	12.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2486	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7-T.Renganavaram 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-2486	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	21.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	55.0	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.5	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2487	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2487	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	22.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	54.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.6	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	8.1	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2488	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2488	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	22.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	43.5	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	20.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2489	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2489	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	22.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	46.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	22.1	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2490	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Theppathupatty 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-2490	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	23.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	48.9	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.0	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	7.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2491	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-T. Vadipatty 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-2491	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	23.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	50.6	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	6.0	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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## TEST REPORT

Report No.	SARL/25/2492	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Thoppampatti 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-2492	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	23.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	49.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.2	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.8	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	11.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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S. BALAMURUGAN  
Asst. Technical Manager

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

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



# Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045  
Phone Number +91 82208 36377 Email: -[info@shrientanalytical.com](mailto:info@shrientanalytical.com)  
[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

Report No.	SARL/25/2493	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2493	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	24.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	53.8	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.7	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2494	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2494	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	24.05.2025	Test Completed on	02.06.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	50.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	24.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.5	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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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/25/2495	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1-Project site core zone
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2495	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	55.1	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	25.3	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	4.9	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

**For Shrient Analytical and Research Labs Pvt. Ltd**

  
**Verified**



  
**Authorized Signatory**  
**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2496	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam, Tmt.M.Parimala (President), At S.F.No.1432/3 (Part), Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Anaikaraipatti 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-2496	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM <sub>10</sub> )	IS:5182: Part 23:2006	µg/m <sup>3</sup>	48.7	100
2	Particulate Matter less than 2.5micron size (PM <sub>2.5</sub> )	IS 5182 (Part 24):2019	µg/m <sup>3</sup>	23.4	60
3	Sulphur dioxide (SO <sub>2</sub> )	IS:5182: Part 02:2001	µg/m <sup>3</sup>	5.2	80
4	Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182: Part 06:2006	µg/m <sup>3</sup>	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m <sup>3</sup>	BDL (D.L – 1.1)	-

Remarks: Limits: \*National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2497
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Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, AndipattiTaluk, Theni District, Tamil Nadu State
Sample Description	WATER
Sample Mark	W1-Project site core zone

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2497	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 <sup>th</sup> Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023	-	7.28	6.50-8.50
4	Electrical Conductivity	APHA 24 <sup>th</sup> Edition 2510 B: 2023	(µS/cm)	1095	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	660	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	336	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	82.0	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	31.4	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	205	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	131	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	449	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	125	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/25/2497
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Report Date.	02.06.2025
--------------	------------

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO <sub>4</sub> 2-)	APHA 24th Edition 4500 SO <sub>4</sub> 2- E: 2023	mg/L	148	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 <sub>3</sub> )	IS 3025 (Part 34): 1988	mg/L	3.58	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.35	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: \*Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2498
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Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, AndipattiTaluk, Theni District, Tamil Nadu State
Sample Description	WATER
Sample Mark	W2-Anaikaraipatti village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2498	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 <sup>th</sup> Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023	-	7.75	6.50-8.50
4	Electrical Conductivity	APHA 24 <sup>th</sup> Edition 2510 B: 2023	(µS/cm)	1017	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	612	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	42.4	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	15.6	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	106	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	65.0	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	175	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	375	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/25/2498
------------	--------------

Report Date.	02.06.2025
--------------	------------

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO <sub>4</sub> 2-)	APHA 24th Edition 4500 SO <sub>4</sub> 2- E: 2023	mg/L	75.9	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 <sub>3</sub> )	IS 3025 (Part 34): 1988	mg/L	1.65	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.29	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: \*Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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

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## TEST REPORT

Report No.	SARL/25/2499
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Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, AndipattiTaluk, Theni District, Tamil Nadu State
Sample Description	WATER
Sample Mark	W3-Theppathupatty Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2499	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 <sup>th</sup> Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 <sup>th</sup> Edition 4500 – H <sup>+</sup> B: 2023	-	7.22	6.50-8.50
4	Electrical Conductivity	APHA 24 <sup>th</sup> Edition 2510 B: 2023	(µS/cm)	1336	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	802	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	576	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	133	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	58.6	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	332	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	244	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	380	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	252	1000





# Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045

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## TEST REPORT

Report No.	SARL/25/2499
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Report Date.	02.06.2025
--------------	------------

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO <sub>4</sub> 2-)	APHA 24th Edition 4500 SO <sub>4</sub> 2- E: 2023	mg/L	102	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 <sub>3</sub> )	IS 3025 (Part 34): 1988	mg/L	3.06	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.52	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: \*Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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

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

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## TEST REPORT

Report No.	SARL/25/2500
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Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, AndipattiTaluk, Theni District, Tamil Nadu State
Sample Description	WATER
Sample Mark	W4-T. Vadipatty Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2500	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 <sup>th</sup> Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023	-	7.31	6.50-8.50
4	Electrical Conductivity	APHA 24 <sup>th</sup> Edition 2510 B: 2023	(µS/cm)	1426	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	860	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	480	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	109	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	49.9	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	272	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	208	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	440	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	213	1000



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## TEST REPORT

Report No.	SARL/25/2500
------------	--------------

Report Date.	02.06.2025
--------------	------------

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO <sub>4</sub> 2-)	APHA 24th Edition 4500 SO <sub>4</sub> 2- E: 2023	mg/L	154	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 <sub>3</sub> )	IS 3025 (Part 34): 1988	mg/L	2.75	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.35	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: \*Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



\*\*\*END OF THE REPORT\*\*\*

  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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

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## TEST REPORT

Report No.	SARL/25/2501
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Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, AndipattiTaluk, Theni District, Tamil Nadu State
Sample Description	WATER
Sample Mark	W5-Thoppampatti Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2501	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 <sup>th</sup> Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023	-	7.21	6.50-8.50
4	Electrical Conductivity	APHA 24 <sup>th</sup> Edition 2510 B: 2023	(µS/cm)	918.5	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	552	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	106	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	29.8	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	265	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	124	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	286	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	149	1000



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## TEST REPORT

Report No.	SARL/25/2501
------------	--------------

Report Date.	02.06.2025
--------------	------------

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO <sub>4</sub> 2-)	APHA 24th Edition 4500 SO <sub>4</sub> 2- E: 2023	mg/L	32.0	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 <sub>3</sub> )	IS 3025 (Part 34): 1988	mg/L	2.69	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.32	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/25/2502
------------	--------------

Report Date.	02.06.2025
--------------	------------

Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, AndipattiTaluk, Theni District, Tamil Nadu State
Sample Description	WATER
Sample Mark	W6-Andipatti Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2502	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 <sup>th</sup> Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023	-	7.93	6.50-8.50
4	Electrical Conductivity	APHA 24 <sup>th</sup> Edition 2510 B: 2023	(µS/cm)	736.6	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	442	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	216	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	48.0	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	23.0	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	120	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	96.0	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	202	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	132	1000



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## TEST REPORT

Report No.	SARL/25/2502
------------	--------------

Report Date.	02.06.2025
--------------	------------

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO <sub>4</sub> 2-)	APHA 24th Edition 4500 SO <sub>4</sub> 2- E: 2023	mg/L	52.4	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.05	0.3
16	Nitrate (as NO <sub>3</sub> )	IS 3025 (Part 34): 1988	mg/L	1.54	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.47	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: \*Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

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/25/2503
------------	--------------

Report Date.	02.06.2025
--------------	------------

Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, AndipattiTaluk, Theni District, Tamil Nadu State
Sample Description	WATER
Sample Mark	W7-T.Renganavaram village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2503	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 <sup>th</sup> Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023	-	7.24	6.50-8.50
4	Electrical Conductivity	APHA 24 <sup>th</sup> Edition 2510 B: 2023	(µS/cm)	845.8	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	510	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	284	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	71.6	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	25.2	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	179	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	105	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	232	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	151	1000





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## TEST REPORT

Report No.	SARL/25/2503
------------	--------------

Report Date.	02.06.2025
--------------	------------

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO <sub>4</sub> 2-)	APHA 24th Edition 4500 SO <sub>4</sub> 2- E: 2023	mg/L	56.6	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.05	0.3
16	Nitrate (as NO <sub>3</sub> )	IS 3025 (Part 34): 1988	mg/L	2.89	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.47	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: \*Drinking Water Specifications as per IS - 10500:2012. BDL - Below Detectable limit (DL - Detectable limit).

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/25/2504
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Report Date.	02.06.2025
--------------	------------

Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, AndipattiTaluk, Theni District, Tamil Nadu State
Sample Description	WATER
Sample Mark	SWQ1 - Vaigai River 1

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2504	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.06.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result
<b>A.</b>	<b>Physical parameters</b>			
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable
2	Turbidity	APHA 24 <sup>th</sup> Edition 2130 B: 2023	NTU	<1.0
3	pH at 25 °C	APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023	-	7.92
4	Electrical Conductivity	APHA 24 <sup>th</sup> Edition 2510 B: 2023	(µS/cm)	231
<b>B.</b>	<b>Chemical parameters</b>			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	140
6	Total hardness (as CaCO <sub>3</sub> )	APHA 24th Edition 2340 C: 2023	mg/L	82.7
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	16.8
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	9.7
9	Calcium Hardness (as CaCO <sub>3</sub> )	APHA 24th Edition 3500 Ca B: 2023	mg/L	42.1
10	Magnesium Hardness (as CaCO <sub>3</sub> )	APHA 24th Edition 3500 Mg B: 2023	mg/L	40.6
11	Total alkalinity (as CaCO <sub>3</sub> )	APHA 24th Edition 2320 B: 2023	mg/L	44.9
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	32.4



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## TEST REPORT

Report No.	SARL/25/2504
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Report Date.	02.06.2025
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Sl. No	Parameters	Protocol	Unit	Result
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	14.8
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(D.L - 0.01)
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	BDL(DL-1.0)
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.25
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(D.L-0.05)
19	Chemical Oxygen Demand	APHA 24th Edition 5220 B: 2023	mg/L	BDL (D.L – 4.0)
20	Bio Chemical Oxygen Demand 3 Days at 27°C	IS 3025 (Part 44): 1993	mg/L	BDL (D.L – 2.0)
21	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	BDL (D.L – 2.0)
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	6.2

Remarks: BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2505	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, AndipattiTaluk, Theni District, Tamil Nadu State
Sample Description	WATER
Sample Mark	SWQ2 - Vaigai River 2

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-2505	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.06.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result
<b>A.</b>	<b>Physical parameters</b>			
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable
2	Turbidity	APHA 24 <sup>th</sup> Edition 2130 B: 2023	NTU	<1.0
3	pH at 25 °C	APHA 24 <sup>th</sup> Edition 4500 – H+ B: 2023	-	7.86
4	Electrical Conductivity	APHA 24 <sup>th</sup> Edition 2510 B: 2023	(µS/cm)	196
<b>B.</b>	<b>Chemical parameters</b>			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	118
6	Total hardness (as CaCO <sub>3</sub> )	APHA 24th Edition 2340 C: 2023	mg/L	77
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	16.0
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	8.8
9	Calcium Hardness (as CaCO <sub>3</sub> )	APHA 24th Edition 3500 Ca B: 2023	mg/L	39.9
10	Magnesium Hardness (as CaCO <sub>3</sub> )	APHA 24th Edition 3500 Mg B: 2023	mg/L	36.6
11	Total alkalinity (as CaCO <sub>3</sub> )	APHA 24th Edition 2320 B: 2023	mg/L	37.6
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	35.7



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## TEST REPORT

Report No.	SARL/25/2505
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Report Date.	02.06.2025
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Sl. No	Parameters	Protocol	Unit	Result
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	15.9
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(D.L - 0.01)
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	1.65
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.19
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(D.L-0.05)
19	Chemical Oxygen Demand	APHA 24th Edition 5220 B: 2023	mg/L	BDL (D.L – 4.0)
20	Bio Chemical Oxygen Demand 3 Days at 27°C	IS 3025 (Part 44): 1993	mg/L	BDL (D.L – 2.0)
21	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	BDL (D.L – 2.0)
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	6.1

Remarks: BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



\*\*\*END OF THE REPORT\*\*\*

Authorized Signatory  
S. BALAMURUGAN  
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## TEST REPORT

Report No.	SARL/25/2504	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	SOIL
Sample Mark	S1-Project site core zone

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2504	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	-	7.86
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	102.5
3	Dry matter content	IS 15106: 2002	%	90.31
4	Water Content	IS 15106: 2002	%	9.69
5	Organic Matter	IS 2720: Part 22: 1972	%	0.64
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	346
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	26.52
	i. Sand			
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	58.61
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	14.87
9	Phosphorus as P	IS 10158: 1982	mg/kg	0.92
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	775
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	524
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	%	19.4
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/25/2505	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	SOIL
Sample Mark	S2-Anaikaraipatti village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2505	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.59
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	72.64
3	Dry matter content	IS 15106: 2002	%	94.25
4	Water Content	IS 15106: 2002	%	5.75
5	Organic Matter	IS 2720: Part 22: 1972	%	1.32
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	265
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty clsy
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	8.91
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	47.45
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	43.64
	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	1.65
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	420
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	660
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	%	18.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	39

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For Shrient Analytical and Research Labs Pvt. Ltd

  
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Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2506	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	SOIL
Sample Mark	S3-Theppathupatty Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2506	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.84
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	151.4
3	Dry matter content	IS 15106: 2002	%	93.22
4	Water Content	IS 15106: 2002	%	6.78
5	Organic Matter	IS 2720: Part 22: 1972	%	1.12
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	286
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty clsy loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	13.53
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	47.48
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	38.99
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	2.11
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	1045
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	890
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	%	19.5
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	41

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For Shrient Analytical and Research Labs Pvt. Ltd

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2507	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	SOIL
Sample Mark	S4-T. Vadipatty Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2507	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.69
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	86.59
3	Dry matter content	IS 15106: 2002	%	95.47
4	Water Content	IS 15106: 2002	%	4.53
5	Organic Matter	IS 2720: Part 22: 1972	%	0.84
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	634
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	24.73
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	68.35
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	6.92
	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	1.37
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	589
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	789
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	%	18.2
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	44

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
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**S. BALAMURUGAN**  
Asst. Technical Manager

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## TEST REPORT

Report No.	SARL/25/2508	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	SOIL
Sample Mark	S5-Thoppampatti Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2508	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.57
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	85.92
3	Dry matter content	IS 15106: 2002	%	96.56
4	Water Content	IS 15106: 2002	%	3.44
5	Organic Matter	IS 2720: Part 22: 1972	%	0.96
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	634
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	29.12
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	53.11
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	17.77
	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	1.92
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	364
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	702
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	%	19.5
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

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S. BALAMURUGAN  
Asst. Technical Manager

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

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

Page 1 of 1



# Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045  
Phone Number +91 82208 36377 Email: - [info@shrientanalytical.com](mailto:info@shrientanalytical.com)  
[www.shrientanalytical.com](http://www.shrientanalytical.com)

## TEST REPORT

Report No.	SARL/25/2509	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, AndipattiTaluk, Theni District, Tamil Nadu State
Sample Description	SOIL
Sample Mark	S6-Andipatti Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2509	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.96
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	92.47
3	Dry matter content	IS 15106: 2002	%	93.42
4	Water Content	IS 15106: 2002	%	6.58
5	Organic Matter	IS 2720: Part 22: 1972	%	1.39
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	445
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	33.46
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	49.22
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	17.32
	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	1.41
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	412
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	614
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	19.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	40

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: [technical@shrientanalytical.com](mailto:technical@shrientanalytical.com)

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## TEST REPORT

Report No.	SARL/25/2510	Report Date.	02.06.2025
------------	--------------	--------------	------------

Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, Andipatti Taluk, Theni District, Tamil Nadu State
Sample Description	SOIL
Sample Mark	S7-T.Renganavaram village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-2510	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.74
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	102.4
3	Dry matter content	IS 15106: 2002	%	94.58
4	Water Content	IS 15106: 2002	%	5.42
5	Organic Matter	IS 2720: Part 22: 1972	%	1.02
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	230
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silt loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	29.51
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	52.48
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	18.01
	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	1.56
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	355
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	726
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	18.9
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	40

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



  
Authorized Signatory  
**S. BALAMURUGAN**  
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: [technical@shrientanalytical.com](mailto:technical@shrientanalytical.com)

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## TEST REPORT

Report No.	SARL/25/2511	Report Date.	02.06.2025
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Customer Name & Address	Rough Stone Quarry Of Tvl.Vannathiparai Kalieswari Kalludaikum Magalir Sangam,Tmt.M.Parimala (President), At S.F.No.1432/3 (Part),Of Thimmarasanaickanur Bit- 2 Village, AndipattiTaluk, Theni District, Tamil Nadu State
Sample Description	NOISE LEVEL DATA

Customer Reference	As per work order	Sampling Method	SARL/IOP/023
Sample Reference No	SARL/NO/CHE-2511	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	43.2	43.4	42.2	41.7	39.6	39.9	41.7
07.00	40.9	45.6	50.2	44.4	47.1	42.3	49.7
08.00	44.2	47.9	49.1	47.4	51.2	48.6	48.6
09.00	45.0	49.5	50.8	49.4	52.7	52.3	50.3
10.00	52.6	50.9	43.2	50.5	50.1	54.2	42.7
11.00	51.7	47.3	46.6	49.7	53.2	51.6	46.1
12.00	48.5	49.3	47.8	50.7	47.5	50.7	47.3
13.00	49.3	47.9	46.1	51.4	48.4	50.2	45.6
14.00	54.9	48.2	49.1	49.6	51.5	53.7	48.6
15.00	54.7	46.7	45.4	47.0	50.7	54.1	44.9
16.00	53.6	47.2	46.7	49.2	49.6	52.5	46.2
17.00	53.3	44.8	48.2	45.4	44.7	51.4	47.7
18.00	51.2	43.5	47.1	45.8	42.6	48.9	46.6
19.00	47.8	41.3	44.7	47.2	41.9	47.4	44.2
20.00	47.0	40.2	42.2	42.9	40.7	45.2	41.7
21.00	45.3	41.8	40.2	44.0	42.6	44.2	39.7
22.00	46.8	41.0	38.3	42.1	38.8	40.7	37.8
23.00	44.8	41.4	38.8	41.2	37.4	40.1	38.3
24.00	42.6	38.0	39.5	39.7	39.6	39.2	39.0
01.00	44.2	38.5	38.4	40.1	38.0	38.4	37.9
02.00	43.1	37.2	39.8	39.5	38.8	40.2	39.3
03.00	42.2	37.8	38.9	40.2	40.1	40.6	38.4
04.00	41.4	38.5	39.1	41.0	38.0	41.3	38.6
05.00	40.9	40.3	39.9	40.0	41.7	40.8	39.4



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## TEST REPORT

Report No.	SARL/25/2511
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Report Date.	02.06.2025
--------------	------------

	N1	N2	N3	N4	N5	N6	N7
DAY EQUIVALENT	50.3	46.5	46.7	47.8	49.0	50.3	46.2
NIGHT EQUIVALENT	43.3	38.9	38.7	40.2	39.3	39.9	38.2
DAY & NIGHT EQUIVALENT	49	45.1	45.3	46.4	47.4	48.8	44.8

Remarks:

### LOCATIONS:

- N1-Project site core zone
- N2-Anaikaraipatti village
- N3-Theppathupatty Village
- N4-T. Vadipatty Village
- N5-Thoppampatti Village
- N6-Andipatti Village
- N7-T.Renganavaram Village

For Shrient Analytical and Research Labs Pvt. Ltd

  
Verified



\*\*\*END OF THE REPORT\*\*\*

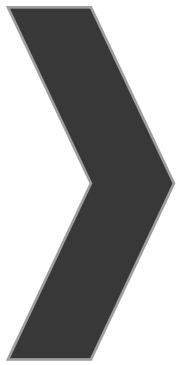
  
Authorized Signatory  
S. BALAMURUGAN  
Asst. Technical Manager

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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](http://www.nabl-india.org))

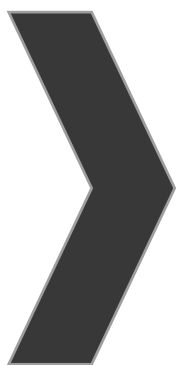
Name of Legal Entity: SHRIENT ANALYTICAL AND RESEARCH LABS PRIVATE LIMITED

Signed for and on behalf of NABL



N. Venkateswaran  
Chief Executive Officer





# ANNEXURE-9

அனுப்பநர்:

தலைமை ஆசிரியர்.

உள. ஏ. நகுலதாஸ் பள்ளி,

T. கிராமகோயலன்பட்டி

சிவந்தபட்டி சிவந்தியம்.

பெறுநர்:

ம. பரிமளா - தலைவர்

த/ள உண்ணாத்திப் பாறை காளிஸ்வர்

கல் உடைக்கம் மகனார் சங்கம்

பதிவு எண் 61/2021

தெற்குத் தெரு, கிராமகோயலன்பட்டி

சிவந்தபட்டி சங்கம்.

தேனி Dt 625536.

பொருள்:

பள்ளிக்குத் தேவையான தனியாட்பொருள்கள்  
உத்தி செய்து தருமாறு கேட்டல் சார்பு.

சீங்கல் பள்ளியில் சீமார் 90 மாணவ-மாணவிகள்  
கல்வி பயின்று வருகின்றனர். மாணவர்களுக்கான  
பென்ட், தடக்கம் மற்றும் வேலை, நூற்காலிகள்,  
மின்விசிறிகள் தேவையப்படுகிறது. மேற்கூறிய  
உத்திகளை செய்து தருமாறு கேட்டுக் கொள்கிறேன்.  
நன்றி.

T. கிராமகோயலன்பட்டி  
16.05.2025

அப்பகுக்கு:

சுமந்தி IC

Head Master

PANCHAYAT UNION MIDDLE SCHOOL

T. RAJAGOPALANPATTY,

Aundipatty, Tk. Theni, Dt.