

DRAFT EIA / EMP FOR
PROPOSED ROUGH STONE AND GRAVEL QUARRY
CATEGORY B1 - CLUSTER (CLUSTER AREA – 6.42.00 Ha.)

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

APPROVED TOR vide TO25B0108TN5926769N, Dated: 20.06.2025

PROPOSED QUARRY LEASE DETAILS	
SURVEY NOS	103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3
VILLAGE	KANARPATTI
TALUK	MANUR
DISTRICT	TIRUNELVELI
EXTENT	2.39.0 HECTARES
PROPOSED PRODUCTION FOR FIVE YEARS	3,92,550 M ³ OF ROUGH STONE & 37,988 M ³ OF GRAVEL
LAND	PATTA LAND

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

Category of the Project: B1 Cluster Mining, Total Cluster Area – 6.42.00 Ha
Baseline Monitoring Period – March to May 2025

APPLICANT

THIRU.B.PARAMASIVAM,
S/O. BALAKRISHNAN,
NO. 249, NELLAI TIRUTHU, PALLIKOTTAI,
MANUR TALUK, TIRUNELVELI DISTRICT,
PIN CODE– 628002

ENVIRONMENTAL CONSULTANT	LABORATORY
M/s. GLOBAL MINING SOLUTIONS <i>(NABET Accredited & ISO 9001 Certified Consultant)</i> Plot No. 6, S.F.No. 13/2, A2, VS City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455. NABET Accreditation No: NABET/EIA/23-26/SA 0241 Valid up to: 04.01.2026 Contact: 97502 23535 & 94446 54520 Email: infoglobalmining@gmail.com, globalminingsolutionssalem@gmail.com	M/s. SHRIENT ANALYTICAL & RESEARCH LABS PRIVATE LIMITED <i>(NABL Accredited Testing Laboratory)</i> Valid Until -29.09.2025 #416/15, Dhargas Road, Perungalathur, West Tambaram, Chennai, Tamil Nadu, India.

AMENDMENT PAGE

SL	Page No.	Section / Clause / Para / Line (as Applicable)	Date of Amendment	Amendment Made	Reasons of amendment	Signature of Person Authorizing Amendment
1						
2						
3						
4						
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8						
9						
10						

ACKNOWLEDGEMENT

M/s. Global Mining Solutions, Salem is very much thankful to Thiru.B.Paramasivam, (Lessee) for the confidence and trust placed on our organization for carrying out Environmental Impact Assessment (EIA) study for the proposed Rough Stone and Gravel Quarry over a cluster area of 6.42.00 Ha at Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State and formulating the Environmental Management Plan (EMP). We also gratefully acknowledge the cooperation and assistance provided by concerned government authorities for collection of secondary information for the preparation of EIA/EMP report. Our sincere thanks to the local people of Kanarpatti 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



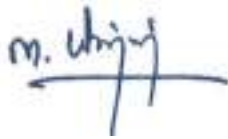
(M.Prabhu)

Managing Director

UNDERTAKING

In Line with MoEF OM no. J – 11013/41/2006-IA.II (I) dated 5th October 2011, we hereby give our undertaking for owning the content and information in the EIA/EMP report submitted for EC of the proposed Rough Stone and Gravel Quarry over a cluster area of 6.42.00 Ha at Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State.

For M/s. Global Mining Solutions



Name: Manikandan Manickam

EIA Coordinator – Mining of Minerals

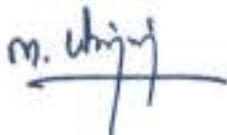
Global Mining Solutions

UNDERTAKING

In Line with MOEF OM no. J-11013/41/2006-IA.II (1) dated 4th Aug 2009 and its Amendments, we hereby confirm that all Terms of Reference issued by Ministry of Environment, Forest and Climate Change vide ToR Identification No. TO25B0108TN5926769N, dated 20.06.2025 for preparation of EIA/EMP report for the proposed Rough Stone and Gravel Quarry over a cluster area of 6.42.00 Ha at Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State, for the production of 3,92,550 Cu.m of Rough Stone and 37,988 Cu.m of Gravel 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



National Accreditation Board for Education and Training

Certificate of Accreditation

Global Mining Solutions

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

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

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		NABET	MoEFCC	
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2	Thermal power plants	4	1 (d)	B
3	Metallurgical industries (ferrous)	8	3 (a)	A
4	Cement Plants	9	3 (b)	A
5	Building and construction projects	38	8 (a)	B
6	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/JAO/25/3638 dated May 30, 2025. The accreditation needs to be renewed before the expiry date Global Mining Solutions, Salem 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

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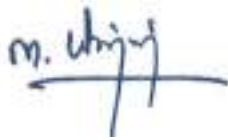


DECLARATION

Declaration by Experts contributing to the proposed Rough Stone and Gravel Quarry over a cluster area of 6.42.00 Ha at Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State.

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

EIA Coordinator Name: M. Manikandan Manickam



Signature & Date

Period of involvement: March 2025 to May 2025.

Contact information:

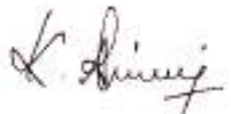
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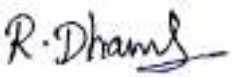
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Salem, Tamil Nadu – 636 455

DRAFT EIA EMP REPORT OF PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.B.PARAMASIVAM OVER AN EXTENT OF 2.39.00 HA LOCATED AT S.F.NOS. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 AND 99/3 OF KANARPATTI VILLAGE, MANUR TALUK, TIRUNELVELI DISTRICT, TAMIL NADU STATE

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

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

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

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			<i>geological feature of the area.</i> <i><u>Period: March 2025 to May.</u></i>	

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COMPLIANCE TO **TERMS OF REFERENCE**

POINT WISE COMPLIANCE OF TOR CONDITIONS

S.No	TOR Points	Reply	Page No
2.1 SEIAA Standard Conditions			
Cluster Management Committee			
1	Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.	There are two existing quarry and this present proposed quarry (2 Existing + 1 Proposed), within a 500-metre radius. The proponent will take the initiative to form a cluster management committee once environmental clearance is obtained for this quarry.	-
2	The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, water sprinkling, tree plantation, blasting etc.,	Agreed. It will be complied.	
3	The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.	Agreed. The list of members of the committee formed will be submitted to ad/mines after obtaining Environmental Clearance.	
4	Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.	Agreed. Details of the Operation plan for cluster mining operations will be submitted once we get environmental clearance.	
5	The committee shall deliberate on risk management plan pertaining	Risk management plan for the individual quarry is given in this	

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	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.	report. As far as cluster working condition is concerned, once the committee is formed, risk management as a cluster including inundation of clusters and the evacuation plan will be elaborated.	
6	The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail in the EIA report.	Environmental policy for the cluster will be framed by the cluster management committee and the policy will be in accordance with EPA Act, 1986 and its amendments, guidelines by MoEF&CC/SEIAA and other regulatory bodies. This policy will be displayed in the quarry.	
7	The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.	Agreed. It will be complied as mentioned in the Point No.4	
8	The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.	Agreed. It will be complied as mentioned in the Point No.4	
Agriculture & Agro-biodiversity			
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	

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		land. It will be controlled at the source level by proper dust suppression as such wet drilling, controlled blasting and water sprinkling on the project roads and project surrounding roads. As per Air Quality Modelling, the impact of the air quality limited to 400m radius. So, there is no impact for the Agriculture, Forestry & Traditional practices located within 10km radius.	
10	impacts on soil flora & vegetation around the project site.	The chemical and physical characteristics of the soil is given in Table 3.7.5 of Chapter 3. The anticipated impact and its mitigation measures for soil environment and biological environment are detailed in section 4.2.2 & 4.4.5 of Chapter 4 respectively.	130, 152 & 167
11	Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.	There is no standing trees or vegetation within the mine lease area.	
12	The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.	The ecological details have been provided in Section 3.7.7 under Chapter 3 and measures have been provided in Section 4.4.5 under Chapter 4.	135 & 167

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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.	
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.	150
Forests			
15	The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife	The following Reserve Forest are located within 10 km radius. Kavalkutti Parambai R.F – 7.15km (SW), Kottamalai R.F – 8.50 km (SW), Uthumalai R.F – 9.80 km (NW), Thalaiyuthu R.F – 9.75 km (SE). There is no reserve Forest area within 1 km radius.	
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 biological environment is given in section 4.4.5 under Chapter 4.	167
17	The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.	There are no standing trees within lease area.	
18	The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors	There are no protected areas, National Parks, environmentally sensitive areas Corridors and Wildlife pathways near project site.	

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	and Wildlife pathways, near project site.		
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 incorporated in the Final EIA Report.	
20	Erosion Control measures.	There is no waste generation (OB) in this quarry has been envisaged. However, there may be erosion due the rainy season and that is limited within quarry area. The control measures are explained in Chapter 4.	149
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.	103 & 149
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.	

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23	The project proponent shall study and furnish the details on potential fragmentation impact on natural environment by the activities.	Section 2.4 provides the land-use pattern at present and at the end of the quarrying period. The post mining land use plan showing afforestation and water body is shown in Figure No-2.10.	83
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 vegetative growth and aesthetic in the safety zone area.	135
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.	152
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.	153
27	The EIA shall include the impact of mining activity on the following: a) Hydrothermal/Geothermal effect due to destruction in the Environment.	The proposed quarry operation is Opencast Mechanized operation with drilling, blasting, excavation, loading and transportation. So, the effect of Hydrothermal/Geothermal is not envisaged.	

	b) Bio-geochemical processes and its foot prints including Environmental stress. c) Sediment geochemistry in the surface streams	This is a simple mining operation, so bio-geochemical processes are not envisaged. Chittar River – 1.60 km (N), Due to mining operation, there may be minimum impact to the nearby water bodies due to dust sedimentation. It will be controlled by wet drilling, water sprinkling and plantation.	
	Energy		
28	The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilize the Energy shall be furnished	The measures taken to control noise, air, water, and dust have been given under Chapter 4.	149
	Climate Change		
29	The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.	The carbon emission and the measures to mitigate carbon emission have been discussed in Section 4.4.5 under Chapter.	167
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..	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.	
31	Impact of mining on pollution leading to GHGs emissions and		

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	the impact of the same on the local livelihood.		
	EMP		
33	Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued and the scope for achieving SDGs.	Complied. The details are described in Chapter 10.	201
34	The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.	Total EMP Cost for 5 years is 20.19 lakhs i.e., Rs.7.75 Lakhs of Capital + Recurring cost Rs. 12.44 lakhs for five year, which is including the cost of Rs. 0.51 Lakhs (capital) and Rs. 0.10 (Recurring) for Greenbelt development.	207
	Risk Assessment		
35	To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.	The risk assessment and management plan for this project has been provided in Section 7.2 under Chapter 7.	181
	Disaster Management Plan		
36	To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid,/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.	Disaster Management plan are detailed in section 7.3, Chapter 7.	184

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	Others		
37	The project Proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.	There are no historical places, schools, cemeteries, temples, bird sanctuaries, and wildlife sanctuaries within 500 meters of the proposed project area. In this regard, the project proponent has received an official letter from the Village Administrative Officer, The letter copy enclosed as Annexure – 5.	
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). 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.	
SEAC Specific Conditions			
1	A Cluster Management Committee (CMC) shall be constituted	A cluster management committee including all the	

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	including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of required statutory personnel, appropriate environmental management, system of maintaining the haul roads and village/panchayat roads, authorized blasting operation, Monitoring system of the environmental & other statutory compliances & its reporting status, 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 Organization chart of the Committee with defining the role of the members (iii) The 'Standard Operating Procedures' (SoP) executing the planned activities.	proponents of the rough stone quarrying projects within the cluster of 500 m radius will be constituted for the effective implementation of appropriate environmental management plan. Affidavit in this regard will be submitted during final EIA/EMP Report.	
2	The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report.	Agreed. Proof photographs for erected pillars will be submitted in the Final EIA / EMP Report.	
3	Since the Power substation is located at a distance of 330m, the PP shall obtain NOC from the TANGEDCO along with the EIA report	Agreed, It will be submitted in the Final EIA/EMP Report.	

4	Since three water bodies are located within 1km, the PP shall submit a detailed hydrological report from any reputed educational/research institutions such as NIT Trichy, Alagappa Institution, CEERI, etc., indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc located within 1 km of the proposed quarry. Further, the PP shall provide the comprehensive data and related documentation supporting the observations made in the hydrogeology report furnished during the appraisal.	A detailed Hydrogeological Report will be incorporated in the Final EIA Report.	
5	The details of enumeration of structures including schools, colleges, primary health centres should be submitted along with the EIA report.	There are no School, Temple, College and health centers within 500 m radius from the proposed project site.	
6	The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m & upto 1km shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc. and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations.	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. Structures details from 300 m to 1 km will be incorporated in the Final EIA / EMP Report.	104

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7	The proponent shall furnish photographs of adequate fencing, garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	The green belt, fencing, garland drain work are in process and the proof photographs of the same will be submitted in the Final EIA/EMP Report. There are no permanent structures within a 50-meter radius of the proposed project site, and a safety distance of 7.5 meters along the boundary has been provided. A channel passes on the southern side of the area, 140 meters away from the lease area. Map showing the Safety distance is given in Figure 2.2 of Chapter 2.	79
8	The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report.	The bio diversity study has been carried out by our FAE is given in section 3.7.7 of Chapter 3.	135
9	The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	A detailed Environmental Management Plan has been prepared and are detailed in chapter 10. Affidavit stating to abide the EMP for the entire life of mine will be incorporated in the Final EIA / EMP Report.	
10	The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding village and structures.	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.	186 & 149

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11	The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic / videographic evidence along with the EIA report.	Agreed, The PP will install CCTV at the proposed mine lease area and submit proof in the Final EIA/EMP report.	
SEAC Standard Condition			
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:	Not Applicable This is a proposed new project. No mining has been carried out in this lease area so far.	
	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 Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.	Not Applicable This is a proposed new project. No mining has been carried out in this lease area so far.	
2	Details of habitations around the proposed mining area and latest	The VAO certificate is enclosed as Annexure – 5.	

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	VAO certificate regarding the location of habitations within 300m radius from the periphery of the site.		
3	The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.	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. Structures details from 300 m to 500 m will be incorporated in the Final EIA / EMP Report.	104
4	The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within I km of the proposed quarry.	A detailed hydro-geological report will be included in the Final EIA Report.	-
5	The Proponent shall carry out Bio diversity study through reputed Institution 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.	135
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.	The DFO letter will be incorporated in the Final EIA/EMP Report.	

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7	In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the pp shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.	Not Applicable It is fresh quarry lease applied area.	
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 ultimate depth for this proposal (five years) is 47 m BGL only. The slope stability study will be carried through reputed Institute once the depth reach 25 m BGL.	
9	The PP shall furnish the affidavit stating that the blasting operation	Affidavit will be incorporated in the Final EIA/EMP Report.	

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	in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster mining mate mine foreman, II/I Class mines manager appointed by the proponent.		
10	The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.	Controlled blasting techniques using delay detonators and optimum charge per delay will be implemented in this quarry. The details on blasting parameters are given in section 2.9.2 of Chapter 2.	91 B
11	The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.	The PP has not carried out any quarrying operation before this project.	
12	If the proponent has already carried out the mining activity in the proposed mining lease area	Not applicable. It is fresh quarry lease applied area.	

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	after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,		
13	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?	It is fresh quarry lease applied area.	
14	Quantity of minerals mined out. • Highest production achieved in any one year • Detail of approved depth of mining. • Actual depth of the mining achieved earlier. • Name of the person already mined in that leases area. • If EC and CTO already obtained, the copy of the same shall be submitted. Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.	It is fresh quarry lease applied area.	
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	Project coordinates superimposed in satellite imagery and topo map given as Figure No – 3.3 and Figure 3.4. The geology and geomorphology map are provided in Figure No.3.17 and 3.18 of Chapter 3.	109 & 110 142 & 143

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	the study area (core and buffer zone).	The 10km Radius Index plan showing buffer zone is given in Figure No.3.3 & Figure 3.4 in Chapter – 3.	
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 are no water bodies within a 50-meter radius of the applied lease area. and a safety distance of 7.5 meters along the boundary has been provided. A channel passes on the southern side of the area, 140 meters away from the lease area. Map showing the Safety distance is given in Figure 2.2 of Chapter 2. The project site lacks vegetation, and a green belt will be developed over an area of 0.51.00 hectares with 510 saplings. The work of the same is under process.	79
18	The Project proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same.	The geological reserves – 10,73,250 m³ of rough stone and 47,700m³ of Gravel for 47 m BGL. The mineable reserves – 3,92,550 m³ of rough stone and 37,988 m³ of gravel for 47 m BGL.	

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		The proposed total production quantity (Five years) is 3,92,550 m³ of rough stone and 37,988 m³ of gravel for 47 m BGL. Details are given in Chapter 2.	
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.	205
20	The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within I 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	A detailed hydro-geological report will be incorporated in the Final EIA Report.	

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	documentation in this regard may be provided.		
21	The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora /fauna including traffic / vehicular movement study.	The baseline data were collected (March 2025 to May 2025) for the environmental components including land, soil, water, air, noise, biology, socio-economy, and the results have been discussed in Chapter 3. Traffic density survey is detailed in section 2.12 of Chapter 2.	103 &97
22	The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.	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.	186 & 149
23	Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	Rain water harvesting Plan is given in section 4.2.3.4 of chapter 4. Water balance is shown in Figure 4.1.	154 -155
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	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	133

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	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.	other ecological features has been discussed in Section 3.7.6 of Chapter 3. details of surrounding ecological sensitive features have been provided in Table 3.1 under Chapter 3. Land use plan of the project area showing pre-operational, operational and post-operational phases are discussed in Table 2.4 under 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.	Not Applicable. No dumps have been proposed outside the lease area. There is no overburden / waste generation from this quarry, the entire mined out minerals will be directly transported to the needy 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 TMCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.	This condition is not applicable to this project because this project is not located in proximity to the areas of areas declared as 'Critically Polluted' (or) the project areas which attracts the court restrictions for mining operations.	
27	Description of water conservation measures proposed to be adopted in the Project should be given.	The rain water falling in the quarry will be harvested in the sump at the lowest level of the	154 - 155

	Details of rainwater harvesting proposed in the Project, if any, should be provided.	quarry. This sump will act as a settling pond to prevent solids escaping along with discharge, before outlet. etc. Towards surface runoff management, a garland drain will be constructed around the quarry and will be connected to a settling pond with silt traps. The supernatant clear water from the settling pond will be flow to the downstream users. Rain water harvesting plan is given in section 4.2.3.4 of Chapter 4.	
28	Impact on local transport infrastructure due to the Project should be indicated.	A traffic density study was carried out and are detailed in section 2.12 of Chapter 2.	97
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.	The details on tree survey covering 300 m radius is given in section 3.7.7 of chapter 3.	135
30	A detailed mine closure plan for the proposed project shall be included in EIA-/EMP report which should be site-specific.	The mine closure plan details are given in section 2.10 of Chapter 2 and section 7.6 of Chapter 7.	94
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	Accepted. It will be done.	

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	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.	A detailed green belt development plan has been provided in Table 4.4.5.4 of Chapter 4.	173
33	Tatler / 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	The FAE of ecology and biodiversity has advised the project proponent that saplings of one year old raised in the ecofriendly bags should be purchased and planted with the spacing of 3 m between each plant around the proposed project area as per the advice of local forest authorities/botanist.	
34	A Disaster management Plan shall be prepared and included in the EIA,/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.	A disaster management plan for the project has been provided in Section 7.3 under Chapter 7.	184

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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 plan for the project has been provided in Section 7.2 under Chapter 7.	181
36	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Occupational health impacts of the project and preventive measures have been discussed in detail in Section 4.4.7 under Chapter 4.	174
37	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	No public health implications are anticipated due to this project. Details of CER activities have been discussed in Chapter 8. Public health facilities will be further aimed to be developed through CER activities wherein periodic health checkups, medical camps for the locals will be conducted.	
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	No negative impact on socio-economic environment of the study area is anticipated and this project shall benefit the socio-economic environment by	

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	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.	offering employment for 30 people directly.	
39	Details of litigation pending against the project, if any, with direction /order passed by any Court of law against the Project should be given.	No litigation is pending in any court against this 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.	Benefits of the project is given in Chapter 8.	
41	If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.	Not Applicable It is fresh quarry lease applied area	
42	The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	The EMP is planned for the entire life of the mine. The affidavit for the same will be included in the Final EIA/EMP Report.	
43	Concealing any factual information or submission of false/fabricated data and failure to	Agreed	

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	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.		
Standard ToR			
1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force. w.r.t. the highest production achieved prior to 1994	Not applicable. Applied Lease area fresh new Quarry.	
2	A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.	This proposed project area is classified as Patta land registered in the name of Thiru.Paramasivan (applicant) and Thiru.Saravanan, vide patta no. 1572, 2034, 1352 and 1355 the applicant has obtained consent from the pattadar. The copy of the Patta, Adangal, A-Register and Consent are enclosed as Annexure -6.	
3	All documents including approved mine plan, EIA and public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.	Noted & agreed. All documents including approved mine plan, EIA and Public Hearing are compatible with one another in terms of the mine lease area, production levels, waste generation and its management,	

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		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 coordinates superimposed in satellite imagery and topo map given as Figure No – 3.3 and Figure 3.4. The geology and geomorphology map are provided in Figure No.3.17 & 3.18, Chapter 3. The 10km Radius Index plan showing buffer zone is given in Figure No.3.3 & Figure 3.4 in Chapter – 3.	109 & 110 142 & 143
5	Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.	The following map in 1:50,000 Scale: Geology map of the project area covering 10km radius – Figure No. 3.17. Geomorphology Map of the Study Area covering 10 km radius – Figure No. 3.18. Drainage map – 3.16	141 - 143
6	Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.	(a) Precise Area Communication: The Project Proponent has obtained Precise Area Communication from the Assistant Director, Department of Geology and Mining, Tirunelveli, vide Rc.No.606 / Kanimam-1 / 2024, Dated 29.01.2025. The letter copy enclosed as Annexure – 2. (b) Mining Plan Approval:	

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		The project proponent has prepared mining plan under rule L9(I),41 &42 of Tamil Nadu Minor Mineral Concession Rules, 1959 and the same has been approved by the Assistant Director, Dept. of Geology & Mining, Tirunelveli vide Rc.No.606 / MIN-1 / 2024, Dated 28.02.2025. The approval letter along with approved plan is enclosed as Annexure – 3.	
7	It should be clearly stated whether the proponent company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.	The proponent will frame a well-planned environmental policy. Its details are provided under Section 10.1, Chapter-10. Monitoring Mechanism is detailed under Section .10.3.	201

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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 opencast mine, subsidence is not applicable. The impact due to ground vibrations due to blasting is given in para 4.4.4, Chapter-4.	181
9	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.	Noted & Agreed The study area considered for this study is 10 km radius and all data contained in the EIA report such as waste generation etc., is for the Life of the Mine / lease period.	
10	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary. national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	The land use of the study area was studied to demarcate various LULC categories and its details are provided under section 3.7.6. Of Chapter-3. The land use pattern at present and at the end of the quarrying period has been provided in Table 2.4, Chapter-2. The Conceptual plan of mine lease area is shown in Figure No- 2.10.	133
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. Hence, there is no external overburden dump involved.	

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12	Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.	There is no Forest Land involved in the proposed project area. The proposed project area is a patta land. Approved Mining Plan is enclosed in Annexure – 3.	
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	The following Reserve Forest are located within 10 km radius.	

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	necessary details, should be given.	Kavalkutti Parambai R.F - 7.15km (SW), Kottamalai R.F - 8.50 km (SW), Uthumalai R.F - 9.80 km (NW), Thalaiyuthu R.F - 9.75 km (SE). There is no reserve Forest area 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 worked out with cost implications and submitted.	The mining lease area and the 10 km buffer zone from the periphery of the core zone is devoid of declared ecologically sensitive features like national parks, biospheres, sanctuaries, etc.	
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.	Not Applicable. There are No National Parks, Biosphere Reserves, Wildlife Corridors, and Tiger/Elephant Reserves within 10 km Radius from the periphery of the project area. Gangaikondan Spotted Deer Sanctuary - 14.40 km (SE)	
18	A detailed biological study of the study area [core zone and buffer	A detailed study of flora and fauna composition in the core	135

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	zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present' In case of any scheduled fauna found in the study area. the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.	and buffer zone of the project has been made. The details are furnished in section 3.7.7.	
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	Not Applicable	

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	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.	The mining activities will be carried out within the mine lease area only. The entire mine lease area of 2.39.00 Ha is a patta land. There is no population within the ML area. Hence, the question of R& R does not arise.	
22	one season (non-monsoon) [i.e. March-May (Summer Season);	Baseline Data were collected for One Season (March 2025 to May	103

	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.	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 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	Air Quality Modelling for prediction of incremental GLC's of pollutant was carried out using AERMOD view and Detailed in Section 4.2.4.3. Air Quality Modelling For Cluster are detailed in section 7.4.1 of Chapter 7.	159 192

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	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.	The total water requirement for the project is 6.0 KLD. The required water will be procured from outside agencies initially and later rainwater harvested in the mine pit shall be used other than drinking purpose. Water Balance diagram is presented in Figure No – 4.1.	154
25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.	Not Applicable Water for dust suppression, greenbelt development and domestic use will be sourced from accumulated rainwater/seepage water in mine pits and purchased from local water vendors through water tankers on daily requirement basis.	
26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	Rain water will be diverted into working area by constructing drains to store and use for dust suppression and greenbelt development. Details are presented in section 4.2.3.4 The total water requirement for the project will be 6.0 KLD comprising Drinking and domestic 2.4 KLD, Dust suppression 1.6 KLD, Greenbelt 2.0 KLD. The water will be	155

DRAFT EIA EMP REPORT OF PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.B.PARAMASIVAM OVER AN EXTENT OF 2.39.00 HA LOCATED AT S.F.NOS. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 AND 99/3 OF KANARPATTI VILLAGE, MANUR TALUK, TIRUNELVELI DISTRICT, TAMIL NADU STATE

		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.	
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.	153
28	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.	The quarrying activity will not intersect ground water table as quarrying is proposed upto a depth of 47 m bgl and water table is found at a depth of 65 – 68 m BGL.	
29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.	Not applicable	

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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.	<table><tr><td>Site Elevation above MSL</td><td>104 m from MSL</td></tr><tr><td>Ultimate Depth</td><td>47 m bgl</td></tr><tr><td>Ground water</td><td>65 - 68 m BGL.</td></tr></table>	Site Elevation above MSL	104 m from MSL	Ultimate Depth	47 m bgl	Ground water	65 - 68 m BGL.	
Site Elevation above MSL	104 m from MSL								
Ultimate Depth	47 m bgl								
Ground water	65 - 68 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 species and the species which are tolerant to pollution.	Greenbelt Development Plan & Recommended Species proposed for Greenbelt Development are detailed in Section 4.4.5.4. 0.51.00 hectares of land are allotted for greenbelt development.	173						
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	The traffic density study was carried out and the same is given in section 2.12 of Chapter 2.	97						

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	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.	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 2.11.4 of Chapter 2.	96
34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.	At the conceptual stage the quarried-out land will be fenced and lower benches will be allowed to collect rain water to act as a temporary reservoir and Greenbelt development will be carried out on the top bench, unutilized areas and haul roads. Mine closure plan is detailed in Section 2.10 of Chapter 2.	94
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	Details of occupational health and safety aspects are given under the Section 4.4.7 & Section 10.4.	174

DRAFT EIA EMP REPORT OF PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.B.PARAMASIVAM OVER AN EXTENT OF 2.39.00 HA LOCATED AT S.F.NOS. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 AND 99/3 OF KANARPATTI VILLAGE, MANUR TALUK, TIRUNELVELI DISTRICT, TAMIL NADU STATE

	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.	No Public Health Implications anticipated due to this project. Details of CER are discussed under Chapter No. 8,	
37	Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	This project provides employment to 30 people directly. Local people will be hired for unskilled labour. Through CER, nearby schools, hospitals will be benefitted. For CER, 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.	201
39	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to	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	

DRAFT EIA EMP REPORT OF PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.B.PARAMASIVAM OVER AN EXTENT OF 2.39.00 HA LOCATED AT S.F.NOS. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 AND 99/3 OF KANARPATTI VILLAGE, MANUR TALUK, TIRUNELVELI DISTRICT, TAMIL NADU STATE

	implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.	bound action plan wherever applicable will be provided in Final EIA/EMP report.	
40	Details of litigation pending against the project, if any, with direction /order paced by any Court of Law against the Project should be given.	There is no litigation pending against the project.	
41	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.	Project Cost is Rs. 122.53 Lakhs (including EMP & CER cost) CER Cost is Rs.3.0/- lakhs EMP Cost Capital Cost is Rs. 7.75/- Lakhs Recurring Cost is Rs. 12.44 /- 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.	184
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.	199
44			
A	Executive Summary of the EIA/EMP Report	Yes, Enclosed	
B	All documents to be properly referenced with index and continuous page numbering.	All the documents are properly referenced with index and continuous page numbering.	
C	Where data are presented in the Report especially in Tables, the period in which the data were	Yes, Complied	

DRAFT EIA EMP REPORT OF PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.B.PARAMASIVAM OVER AN EXTENT OF 2.39.00 HA LOCATED AT S.F.NOS. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 AND 99/3 OF KANARPATTI VILLAGE, MANUR TALUK, TIRUNELVELI DISTRICT, TAMIL NADU STATE

	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,	Baseline monitoring results are detailed in Chapter 3. Original Baseline monitoring reports will be made available during appraisal of the project.	
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	
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	Noted & Agreed	

DRAFT EIA EMP REPORT OF PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.B.PARAMASIVAM OVER AN EXTENT OF 2.39.00 HA LOCATED AT S.F.NOS. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 AND 99/3 OF KANARPATTI VILLAGE, MANUR TALUK, TIRUNELVELI DISTRICT, TAMIL NADU STATE

	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-I 101 I161812010-1A.II (I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance the existing operations of the project, should be obtained from the Regional office of Ministry of Environment, Forest and Climate Change, as may be applicable.	Yes, Complied	
J	The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.	Surface Plan and Geological Plan – Figure No. 2.7.	89

1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

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

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

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

Thiru.B.Paramasivam proposes to operate Rough Stone and Gravel Quarry over an extent of 2.39.00 Ha. Patta land in S.F. No. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3 of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State. The proposed ML is a Patta land in the name of Thiru.Paramasivan (applicant) and Thiru.Saravanan, vide patta no. 1572, 2034, 1352 and 1355 the applicant has obtained consent from the pattadar, for which precise area has been communicated by Assistant Director, Department of Geology and Mining, Tirunelveli, vide Rc.No.606 / Kanimam-1 / 2024, Dated 29.01.2025 and mining plan approved by Assistant Director, Department of Geology and Mining, Tirunelveli, vide Rc.No.606/MIN-1/ 2024, Dated 28.02.2025.

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

Table – 1.1 Cluster Mines Details

Sl. No	Extent	Proponent	Status of lease
1	2.19.50 Ha	Thiru.B.Paramasivam	Existing
2	1.83.5 Ha	Thiru.A.Densingh Babu	
3	2.39.00 Ha	Thiru.B.Paramasivam	Proposed
Total extent is 6.42.00 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 MoEF & CC Notification S.O. 2269(E) Dated 1st July 2016. Satellite image of Quarries in Cluster is shown in Fig 1.1.

As per MoEF&CC OM: F.No. L-11011/175/2018-IA-II(M), dated 12.12.2018, the 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/531131/2025 Dated 28.03.2025. The ToR proposal was placed in 570th SEAC meeting, dt 23.05.2025 and 840th SEIAA meeting, dated 17.06.2025. Then ToR has been issued by the SEIAA vide ToR identification number TO25B0108TN5926769N, dated 20.06.2025 to prepare the draft EIA report as per the recommended ToR for conducting public hearing and obtaining Environmental Clearance from the SEIAA.



Figure1.1 Satellite Image showing cluster quarries

1.2 IDENTIFICATION OF PROJECT AND PROJECT PROPONENT

1.2.1 IDENTIFICATION OF PROJECT

Table -1.2 Project Identification

Name of the Project	Rough Stone and Gravel Quarry of Thiru.B.Paramasivam
S.F No.	103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3
Location of the Project	Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State
Extent	2.39.0 Ha.
Type of Land	It is patta land registered in the name of Thiru.Paramasivan (applicant) and Thiru.Saravanan, vide patta no. 1572, 2034, 1352 and 1355 the applicant has obtained consent from the pattadar

1.2.2 IDENTIFICATION OF PROJECT PROPONENT

Table -1.3- Details of Project PropONENT

Name of the Project PropONENT	Thiru.B.Paramasivam,
Communication address	S/o. Balakrishnan, No. 249, Nellai Tiruthu, Pallikottai, Manur Taluk, Tirunelveli District, Pin Code- 628002
	saravana80762@gmail.com
Mobile No.	7010380806

1.3 BRIEF DESCRIPTION OF THE PROJECT

1.3.1 NATURE AND SIZE OF THE PROJECT

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

Table – 1.4 Brief Descriptions of the Project

Name of the Quarry	Rough Stone and Gravel Quarry of Thiru.B.Paramasivam	
Toposheet No	58- H/09	
Latitude between	08°53'17.20"N to 08°53'23.44"N	
Longitude between	77°38'20.53"E to 77°38'27.15"E	
The altitude of the area	104 m (MSL)	
Proposed Depth of Mining	47 m BGL	
	Rough Stone	Gravel
Geological Resources	10,73,250 m ³	47,700 m ³
Mineable Reserves	3,92,550 m ³	37,988 m ³
Proposed Production	3,92,550 m ³	37,988 m ³
Ultimate pit Dimension	172 m (L) X 108 m (W) X 47 m BGL (D),	
Water Level in the area	65 - 68 m bgl	
Method of Mining	Opencast Mechanized Mining Method involving drilling and blasting	
Topography	The area applied for quarry lease is almost plain topography covered by Gravel formation. The massive Charnockite formation is noticed below 2.0 m (Avg) Gravel and sloping towards southeastern side of the area, the altitude of the area is above 104 m (maximum) from MSL.	
Machinery Proposed	Jack Hammer	5 Nos
	Compressor	2 Nos
	Excavator with bucket and rock breaker	2 Nos
	Tipper (5/10 T)	4 Nos
Proposed Manpower Development	30 Nos	
Water Requirement	6 KLD	
Greenbelt Development	The safety zone of 0.51.0 ha will be developed with about 510 nos of plantation.	
Fuel Requirement	3,20,371 liters of HSD (Entire ProjectLife)	
Project Cost	Rs. 122.53 Lakhs (including EMP & CER cost).	

EMP Cost	Total EMP Cost for 5 years is 20.19 lakhs i.e., Rs.7.75 Lakhs of Capital + Recurring cost Rs. 12.44 lakhs for Five years
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.Nos. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3, of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State. The area lies in the north latitude of **08°53'17.20"N to 08°53'23.44"N** and eastern longitude of **77°38'20.53"E to 77°38'27.15"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 MoEF&CC (Ministry of Environment Forests and Climate Change), GoI (Government of India) govern the proposed project. The applicable environmental legislation for the proposed mining project is detailed below,

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

1.5.1 PRESENT LEGAL STATUS

Table 1.5 – Present Legal Status

Description	Issuing Authority	Status	Letter number	Date	Reference
Precise Area Communication	Assistant Director, Department of Geology and Mining, Tirunelveli	Received	Rc.No.606/Kanimam-1/2024	29.01.2025	Annexure - 2
Mine Plan Approval Letter	Assistant Director, Geology & Mining, Tirunelveli	Approved	Rc.No.606/MIN-1/2024	28.02.2025	Annexure-3
District Survey Report	Collector, Assistant Director, Geology & Mining Tirunelveli	Authenticated	As per S.O. 3611(E) dated 25.07.2018	17.06.2019	-
500m radius Cluster Letter	Assistant Director, Geology & Mining, Tirunelveli	Obtained	Rc.No.606/MIN-1/2024	28.02.2025	Annexure-4
VAO NOC for features within 300m radius	VAO, Kanarpatti Village	obtained	-	24.02.2025	Annexure-5

1.5.2 SCREENING

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

1.5.3 SCOPE OF THE STUDY

In line with the prescribed Terms of Reference (TOR), the area comprising 10 km radius around the proposed mine lease boundary is considered as the study area. The EIA/EMP report has been prepared following the generic structure specified in the EIA Notification 2006. The detailed studies have been conducted as per prescribed Standard TOR issued by SEIAA, TamilNadu vide ToR identification number TO25B0108TN5926769N, Dated 20.06.2025. The point wise compliance for the ToR has been incorporated in this EIA/EMP report.

The main scope of the EIA study is to quantify the cumulative impact in the study area due to cluster quarries and formulate the effective mitigation measures for this applied project area. A detailed account of the emission sources, emissions control equipment, background Air quality levels, Meteorological measurements, Dispersion model and all other aspects of pollution like effluent discharge, Dust generation etc., have been discussed in this report. The baseline monitoring study has been carried out during the Period of March 2025 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 MoEF & CC the report has been divided into the following chapters and presented as follows:

1. Introduction

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

2. Project Description

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

3. Description of the Environment

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

4. Anticipated Environmental Impacts & Mitigation Measures

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

5. Analysis of Alternatives (Site And Technology)

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

6. Environmental Monitoring Program

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

7. Additional Studies

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

8. Project Benefits

This chapter presents the benefits from this project

9. Environmental Management Plan

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

10. Summary and Conclusion

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

11. Disclosure of Consultant

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

2.0 PROJECT DESCRIPTION

2.1 TYPE OF THE PROJECT

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

This project proposed to produce 3,92,550 m³ of Rough Stone and 37,988 m³ of Gravel for the period of first 5 years with ultimate depth up to 47 m BGL.

2.2 NEED FOR THE PROJECT

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

2.3 LOCATION OF THE PROJECT

This is a Rough Stone and Gravel Quarry located in Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State. The area lies in the north latitude of **08°53'17.20"N to 08°53'23.44"N** and eastern longitude of **77°38'20.53"E to 77°38'27.15"E** and **toposheet number 58- H/09**. Location of the proposed project is shown in Figure 2.1 the satellite imagery of the project site is shown in Figure 2.2.

This proposed project area is classified as patta land registered in the name of Thiru.Paramasivan (applicant) and Thiru.Saravanan, vide patta no. 1572, 2034, 1352 and 1355 the applicant has obtained consent from the pattadar & does not fall within 10 km radius of any Eco – sensitive zone, Wild life Sanctuary, National Park, Tiger Reserve, Elephant Corridor and Biosphere Reserves. The M.L area details are presented in below Table.

Table 2.1 Boundary Coordinates of the Project

Corners	Co- ordinates	
	Latitude	Longitude
1	08° 53' 17.39"N	77° 38' 20.94"E
2	08° 53' 18.49"N	77° 38' 20.66"E
3	08° 53' 18.70"N	77° 38' 20.53"E
4	08° 53' 21.47"N	77° 38' 20.85"E
5	08° 53' 23.44"N	77° 38' 21.00"E
6	08° 53' 23.27"N	77° 38' 24.00"E
7	08° 53' 23.24"N	77° 38' 27.15"E
8	08° 53' 20.57"N	77° 38' 26.99"E
9	08° 53' 20.99"N	77° 38' 23.74"E
10	08° 53' 17.20"N	77° 38' 23.40"E

Table 2.2 Mine Lease Area and its Ownership

Location	S.F. No	Area in Ha	Pattadar	Remarks
Kanarpatti Village, Manur Taluk, Tirunelveli District	103/1A	0.19.50	Thiru.B. Paramasivam	It is a Patta land in the name of Thiru. Saravanan & Thiru.B. Paramasivam (Applicant) vide Patta Nos. 1355, 1352, 1572, 2034. The applicant has obtained the consent from the other Pattadhar and the same has been registered. The copy of the Patta, Adangal, A-Register and consent registration document are enclosed as Annexure – 6.
	103/1B	0.21.00		
	103/2A	0.34.50		
	103/2B	0.30.50		
	102/2	0.21.00	Thiru. Saravanan	
	102/3	0.38.00		
	99/2	0.22.50		
	99/3	0.52.00		
Total		2.39.00		

Table 2.3 Site Connectivity

Nearest Roadway	There is an existing road from the area leads to Manur -Alagiyapandiyapuram village on east side of the area. The National Highway (NH-44) Tirunelveli – Salem is about 13.5km on east side of the area. The State Highway (SH-41) Tirunelveli - Sankarankovil is about 1.3Km on east side of the area.
Nearest Village	Kanarpatti Habitations – 1.7 km (SE)
Nearest Railway	Naraikinaru Railway Station - Arani Road – 20.10 km – W The Nearest Railway line is Tirunelveli to Kovilpatti line which is about 15Km on southeast side of the area.
Nearest Airport	Tuticorin Airport - 46.20 km - SE

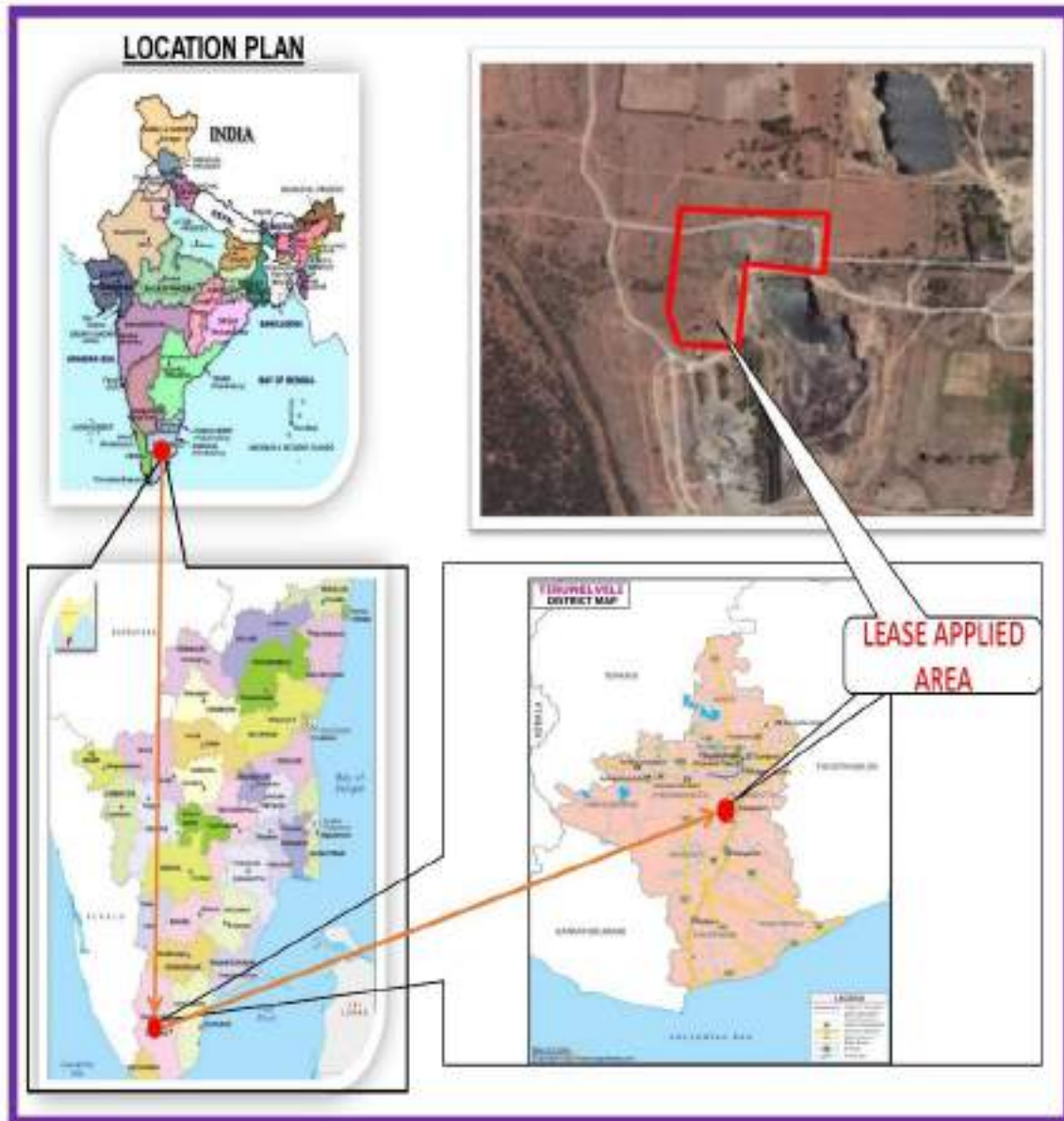


Figure 2.1 Location Map

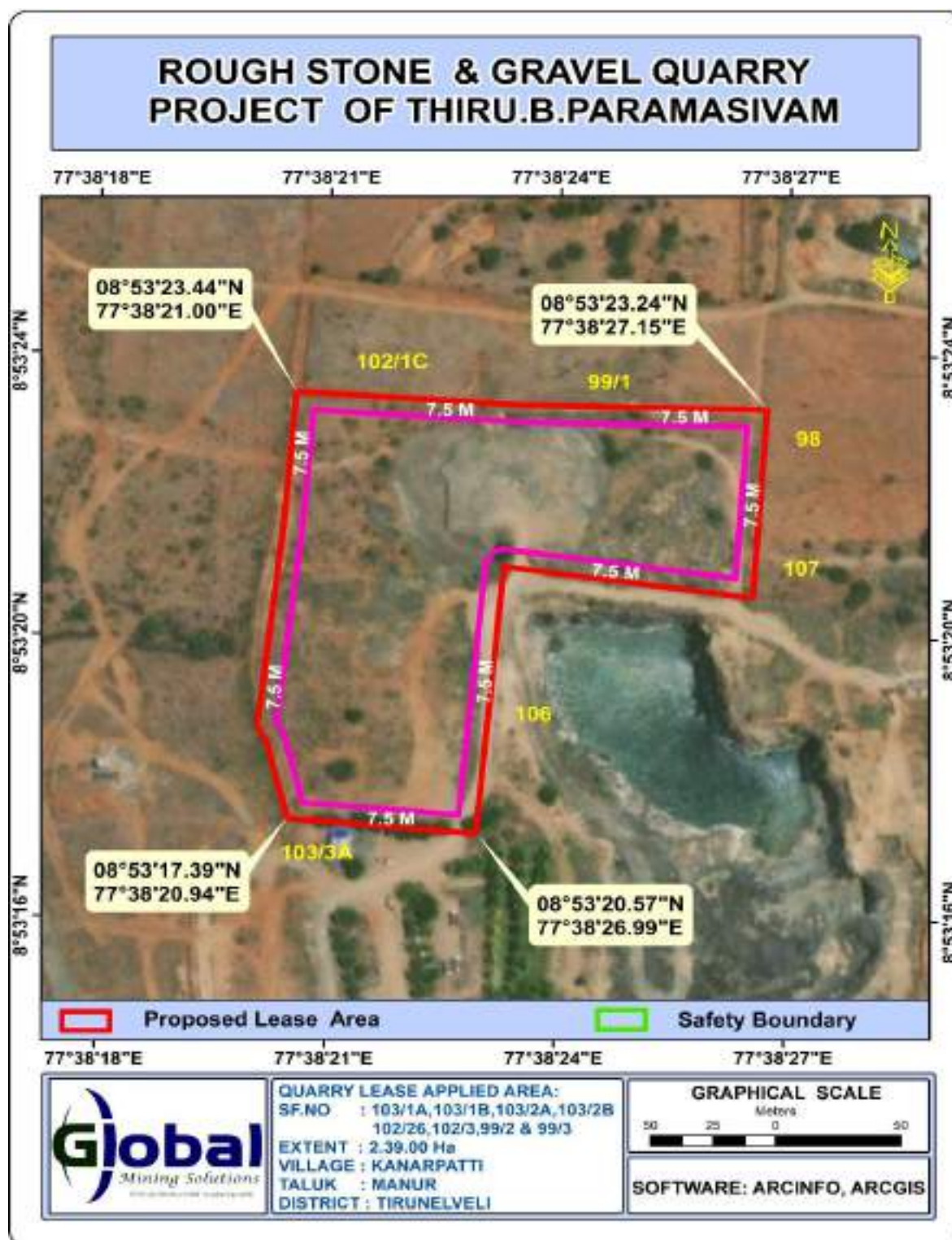


Figure 2.2 Google Image of the project site

DRAFT EIA EMP REPORT OF PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.B.PARAMASIVAM OVER AN EXTENT OF 2.39.00 HA LOCATED AT S.F.NOS. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 AND 99/3 OF KANARPATTI VILLAGE, MANUR TALUK, TIRUNELVELI DISTRICT, TAMIL NADU STATE



Figure 2.3 Lease Plan

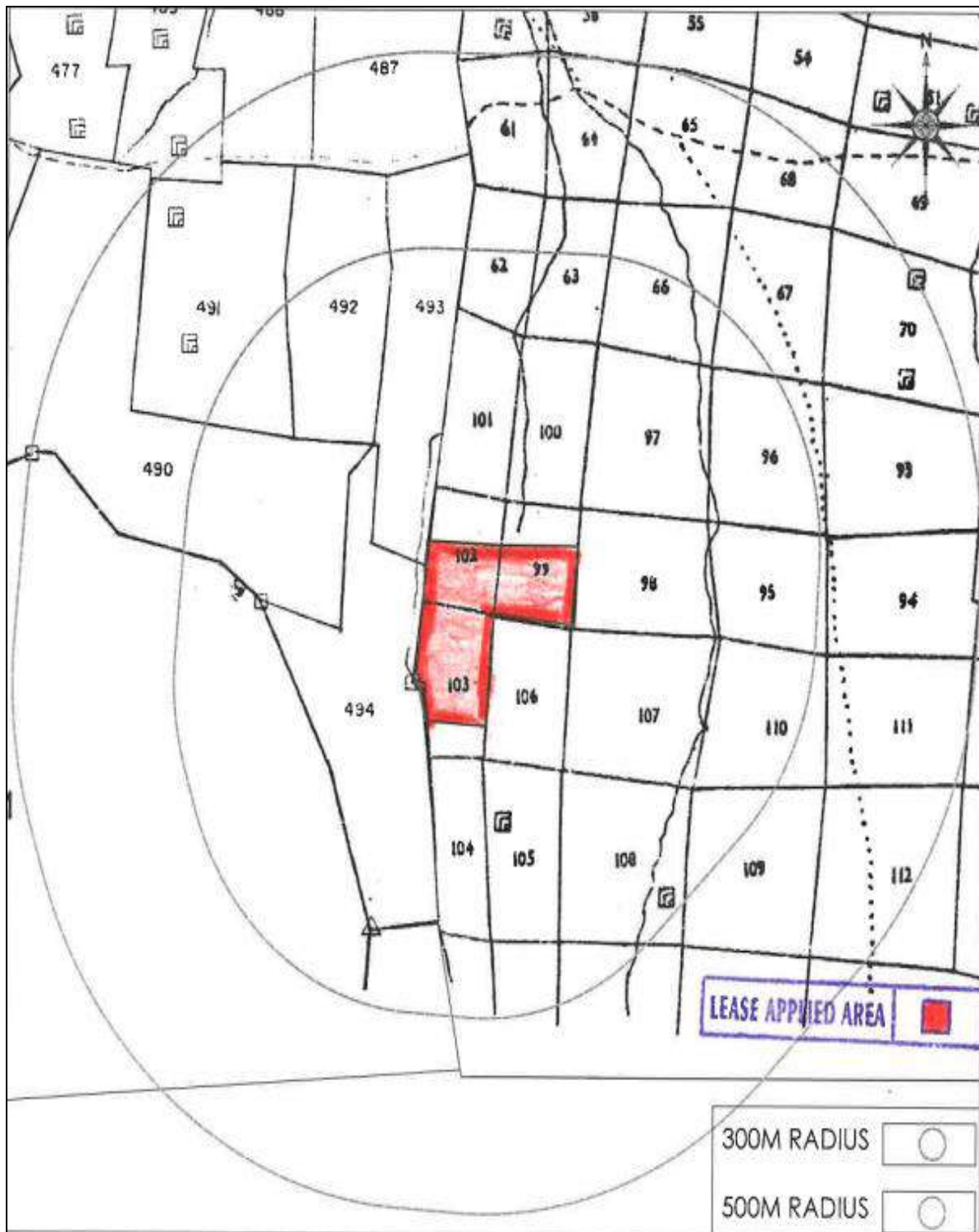


Figure 2.4 Village Map



Figure 2.5 Site Photographs

2.4 LAND USE PATTERN OF THE PROJECT AREA

The entire project site is patta land and in the name of Thiru.Paramasivan (applicant) and Thiru.Saravanan, vide patta no. 1572, 2034, 1352 and 1355 the applicant has obtained consent from the pattadar. 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	NIL	1.86.00
Infrastructure	NIL	0.01.0
Roads	NIL	0.01.0
Greenbelt	NIL	0.51.0
Unutilized	2.39.00	NIL
Total	2.39.00	2.39.00

2.5 SIZE AND MAGNITUDE OF THE OPERATION

The proposed activity is the extraction of Rough Stone and Gravel by open cast mechanized mining method over an extent of 2.39.00 Ha and to produce 3,92,550 m³ of Rough Stone and 37,988 m³ of Gravel for the period of 5 years with ultimate depth upto 47 m BGL. 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 exhibits almost plain covered by Gravel formation. The massive Charnockite formation is noticed below 2m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 104m (maximum) from MSL. Chittar River – 1.60 km (N).

2.7 GEOLOGY

2.7.1 REGIONAL GEOLOGY

The Geologically Tirunelveli District is mostly underlain by the Archaean crystalline and metamorphic complex. The geology of the district is complicated due to recurring tectonic and magmatic activities occurred during. Pre-Cambrian period.

The famous Sittampundi Anorthosite Complex which is known for its complex geology and occurrences of Platinum Group of Elements is situated in this district. Hornblende Biotite Gneisses are the oldest rocks in four taluks of the district. It is very fissile and present widely in plains. The gneisses are highly weathered upto 30 m at some places.

The Charnockites are coarse grained, massive and foliated at places and their colour is bluish dark to grey. They are the second largest rock type present in the district. They are massive and less weathered than the gneisses. They exhibit 2 to 3 distinct set of joints and most of them are vertical with steep dips. Iron ore deposits associated with quartz feldspathic gneiss and garnetiferous quartz gneisses are present in some areas. These rocks are highly folded and jointed and less weathered. Quartzite and crystalline lime stones are exposed in patches in north and central parts of the district. The thickness of these bands varies from a few metres to ten metres and the length extends to few kilometres. Numerous lenses of dunite with magnesite veins of various dimension are exposed within gneiss. There are number of basic dykes present in the study area. Granites are found in some parts of the district. They are massive and jointed poorly. Thin veneer of alluvium is found along the course of the Cauvery and Thirumanimuthar. However, alluvium of few meters thickness is found near the junction of river Thirumanimuthar and river Cauvery. Several faults and shears are occurring mostly with north east-southwest trend. They are expected to influence the course of groundwater movement, its storage and developmental potentials in the district. Regional Geology map for the 10 Km radius from the proposed project site is given as Figure 3.17.

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 N50° E – S50°W with dipping towards SE70°. The general geological succession of the area is given as under.

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

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

The quarrying is restricted up to a depth of 47m (below ground level) only, availability of resources is given below.

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in Ts	Geological Resources of Rough stone in Ts
XY-AB	I	186	86	2	31992	-	2	63984	
	II	186	86	5	-	79980	2.75		219945
	III	186	86	5	-	79980	2.75		219945
	IV	186	86	5	-	79980	2.75		219945
	V	186	86	5	-	79980	2.75		219945
	VI	186	86	5	-	79980	2.75		219945
	VII	186	86	5	-	79980	2.75		219945
	VIII	186	86	5	-	79980	2.75		219945
	IX	186	86	5	-	79980	2.75		219945
	X	186	86	5	-	79980	2.75		219945
Total					31992	719820	-	63984	1979505
X1Y1-AB	I	77	102	2	15708	-	2	31416	
	II	77	102	5	-	39270	2.75		107992.50
	III	77	102	5	-	39270	2.75		107992.50
	IV	77	102	5	-	39270	2.75		107992.50
	V	77	102	5	-	39270	2.75		107992.50
	VI	77	102	5	-	39270	2.75		107992.50
	VII	77	102	5	-	39270	2.75		107992.50
	VIII	77	102	5	-	39270	2.75		107992.50
	IX	77	102	5	-	39270	2.75		107992.50
	X	77	102	5	-	39270	2.75		107992.50
Total					15708	353430	-	31416	971932.50
Grand Total					47700	1073250	-	95400	2951437.50
Gravel Formation					: 95,400 Ts / 47,700 m³				
The Geological Resources of Rough stone					: 29,51,437.50 Ts / 10,73,250 m³				

2.8.1 MINEABLE RESERVES

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

. Table 2.6 – Available Mineable Reserves

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in Ts	Mineable Reserves of Rough stone in Ts
XY-AB	I	170	78	2	26520	-	2	53040	
	II	165	76	5	-	62700	2.75		172425.00
	III	155	71	5	-	55025	2.75		151318.75
	IV	145	66	5	-	47850	2.75		131587.50
	V	135	61	5	-	41175	2.75		113231.25
	VI	125	56	5	-	35000	2.75		96250.00
	VII	115	51	5	-	29325	2.75		80643.75
	VIII	105	41	5	-	21525	2.75		59193.75
	IX	95	31	5	-	14725	2.75		40493.75
	X	85	21	5	-	8925	2.75		24543.75
Total					26520	316250	-	53040	869687.50
X1Y1-AB	I	61	94	2	11468	-	2	22936	
	II	56	92	5	-	25760	2.75		70840.00
	III	46	87	5	-	20010	2.75		55027.50
	IV	36	82	5	-	14760	2.75		40590.00
	V	26	77	5	-	10010	2.75		27527.50
	VI	16	72	5	-	5760	2.75		15840.00
Total					11468	76300	-	22936	209825.00
Grand Total					37988	392550	-	75976	1079512.50

The mineable reserve is computed as 10,79,512.50Ts / 3,92,550,m³ of Rough stone and 75,976Ts / 37,988 m³ of Gravel formation upto a depth 47m (below ground level) only.

2.9 PROCESS DESCRIPTION AND TECHNOLOGY

2.9.1 PROCESS DESCRIPTION

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

- Splitting of rock mass of considerable volume from the parent rock mass by jackhammer drilling and blasting, hydraulic excavators are used for loading the Rough Stone from pithead to the needy buyers.
- Occasionally hydraulic excavators are attached with rock breakers for fragmentation to avoid secondary blasting.
- The primary boulders thus splitted are removed from the pits by excavators and further made to smaller sizes by rock breakers attached in excavators.

The process diagram is provided in Figure 2.6. The Geological and 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.

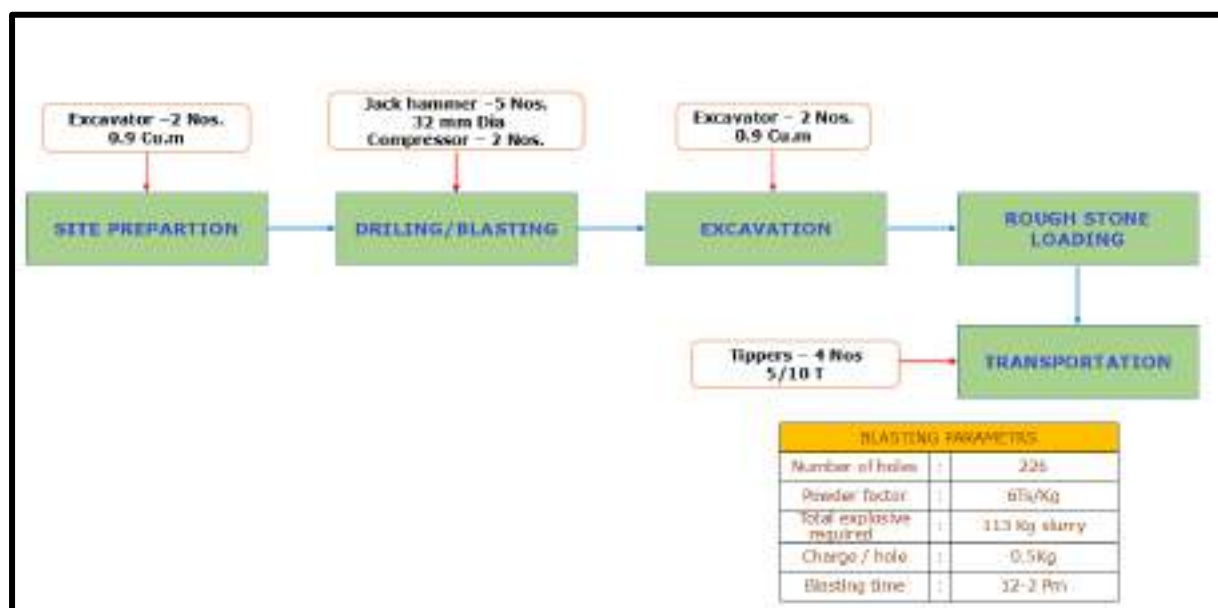


Figure 2.6 Process Flow Diagram

DRAFT EIA EMP REPORT OF PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.B.PARAMASIVAM OVER AN EXTENT OF 2.39.00 HA LOCATED AT S.F.NOS. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 AND 99/3 OF KANARPATTI VILLAGE, MANUR TALUK, TIRUNELVELI DISTRICT, TAMIL NADU STATE

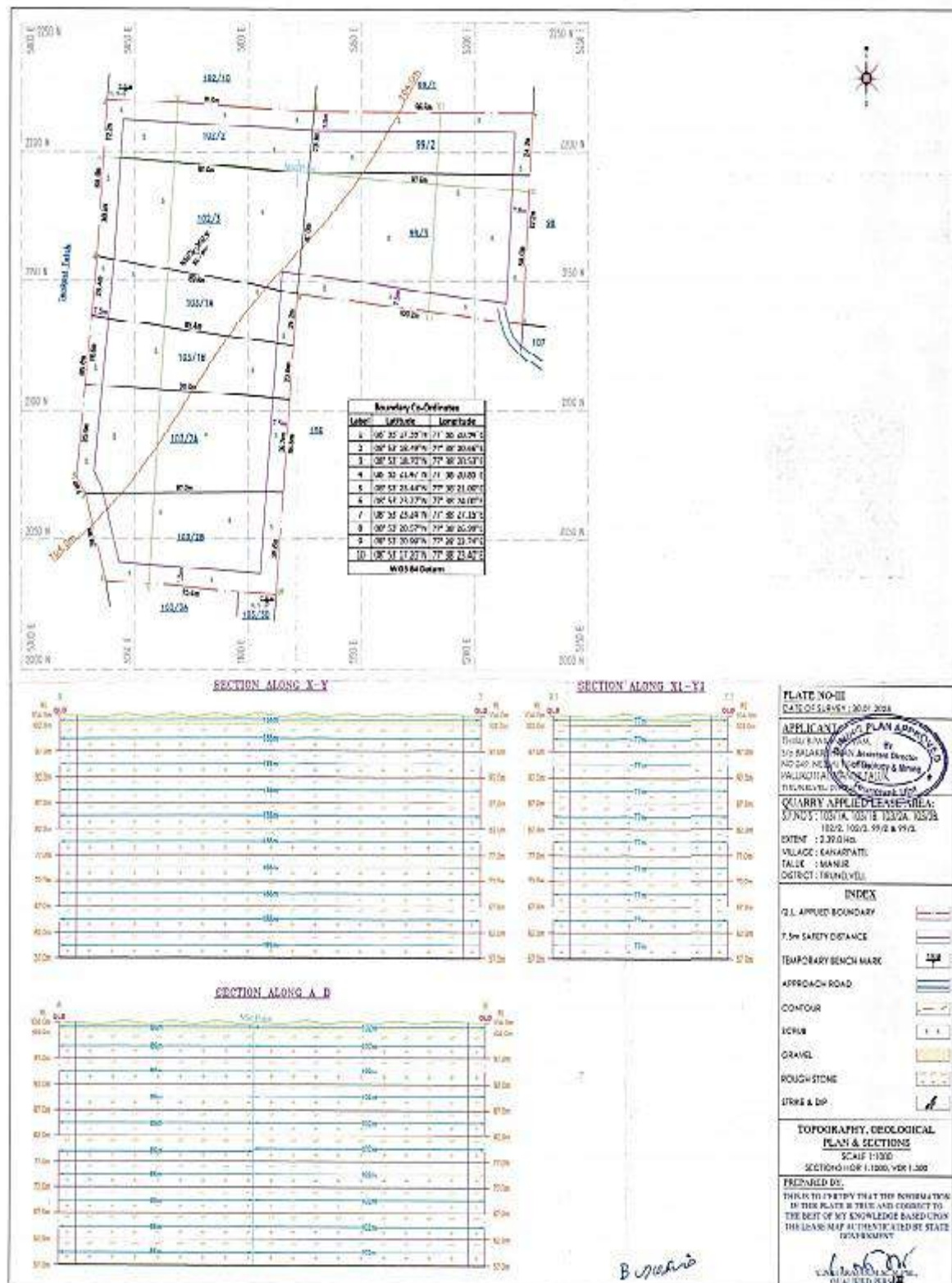


Figure 2.7 Topography, Geological plan and sections

DRAFT EIA EMP REPORT OF PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.B.PARAMASIVAM OVER AN EXTENT OF 2.39.00 HA LOCATED AT S.F.NOS. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 AND 99/3 OF KANARPATTI VILLAGE, MANUR TALUK, TIRUNELVELI DISTRICT, TAMIL NADU STATE

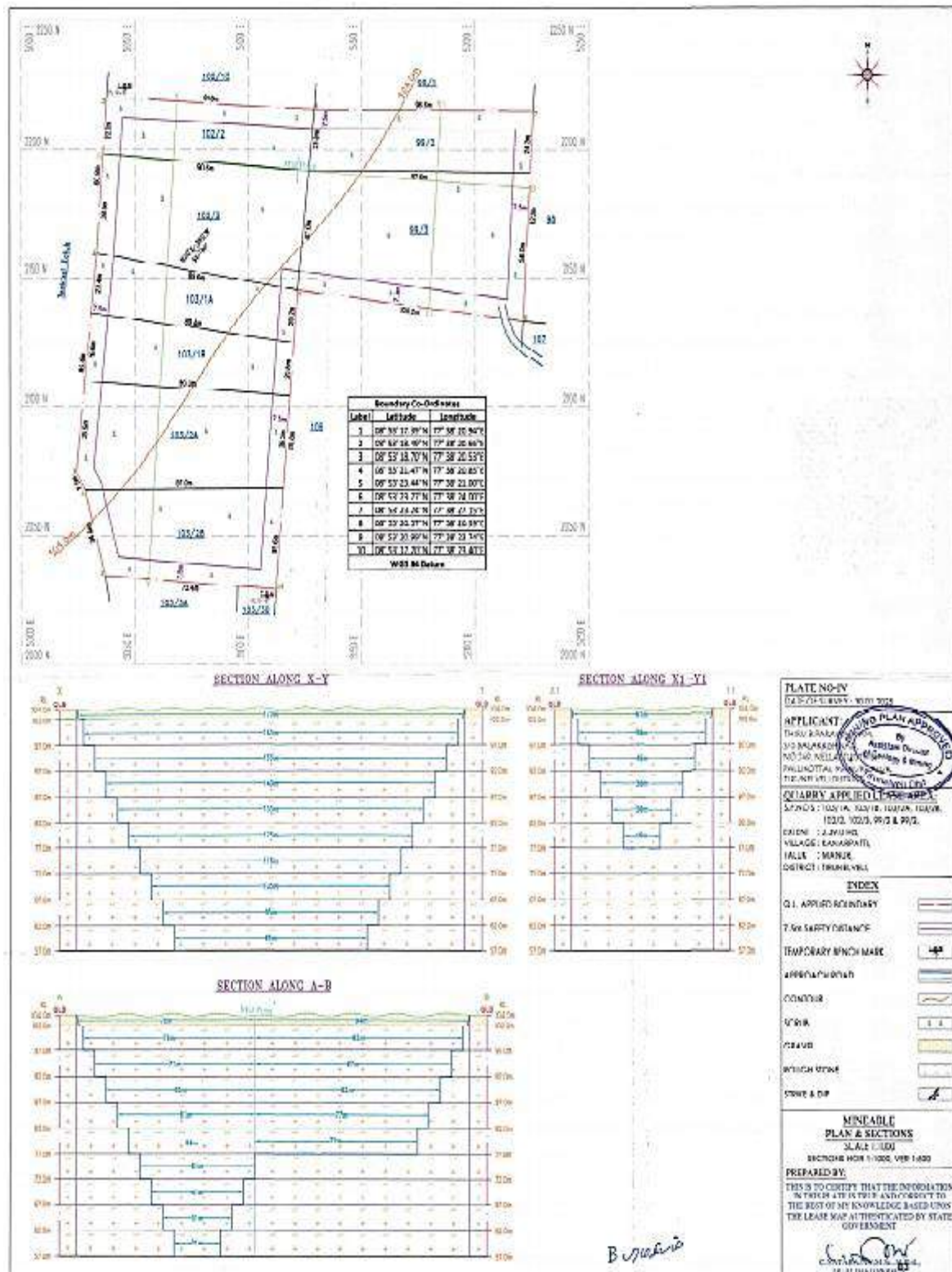


Figure 2.8 Mineable Plan & Sections

Table 2.7 – Machinery Details

S.NO	Name of the Equipment	Capacity	Requirement
1	Excavator with Rock breaker attachment	0.90 m3	2
2	compressor	400 psi	2
3	jack hammer	32 dia hole mm	5
4	Tipper	5/10 T	4

2.9.2 DRILLING AND BLASTING PARAMETERS

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

Diameter of the hole	32-36 mm
Spacing	0.6m
Depth	1 to 1.5 m
Burden of hole	0.6m
Pattern of hole	Zigzag
Inclination of hole	70° from horizontal
Number of holes	226
Powder factor	6Ts/Kg of Explosives
Total explosive required	113 Kg slurry Explosives
Charge / hole	0.5Kg
Blasting time	12-2 Pm

2.9.3 TYPE OF EXPLOSIVE

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

2.9.4 STORAGE OF EXPLOSIVES

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

2.9.5 PRODUCTION SCHEDULE

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

2.7. Table 2.8 Year wise Production Plan

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel in Ts	Mineable Reserves of Rough stone in Ts
I	XY-AB	I	111	78	2	17316	-	2	34632	-
		II	109	76	5	-	41420	2.75	-	113905.00
		III	104	71	5	-	36920	2.75	-	101530.00
	Total					17316	78340	-	34632	215435.00
II	XY-AB	I	59	78	2	9204	-	2	18408	-
		II	56	76	5	-	21280	2.75	-	58520.00
		III	51	71	5	-	18105	2.75	-	49788.75
	X1Y1- AB	I	61	94	2	11468	-	2	22936	-
		II	56	92	5	-	25760	2.75	-	70840.00
		III	31	87	5	-	13485	2.75	-	37083.75
	Total					20672	78630	-	41344	216232.50
III	X1Y1- AB	III	15	87	5	-	6525	2.75	-	17943.75
		IV	36	82	5	-	14760	2.75	-	40590.00
	XY-AB	IV	145	66	5	-	47850	2.75	-	131587.50
		V	31	61	5	-	9455	2.75	-	26001.25
	Total					-	78590	-	-	216122.50
IV	XY-AB	V	104	61	5	-	31720	2.75	-	87230.00
		VI	111	56	5	-	31080	2.75	-	85470.00
	X1Y1- AB	V	26	77	5	-	10010	2.75	-	27527.50
		VI	16	72	5	-	5760	2.75	-	15840.00
	Total					-	78570	-	-	216067.50
V	XY-AB	VI	14	56	5	-	3920	2.75	-	10780.00
		VII	115	51	5	-	29325	2.75	-	80643.75
		VIII	105	41	5	-	21525	2.75	-	59193.75
		IX	95	31	5	-	14725	2.75	-	40493.75
		X	85	21	5	-	8925	2.75	-	24543.75
	Total					-	78420	-	-	215655.00
Grand Total						37988	392550	-	75976	1079512.50
Five years Production plan: 3,92,550 m3 / 10,79,512.50 Ts of Rough Stone & 37,988 m3 / 75,976 Ts of Gravel										
Depth – 47 m BGL										

DRAFT EIA EMP REPORT OF PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.B.PARAMASIVAM OVER AN EXTENT OF 2.39.00 HA LOCATED AT S.F.NOS. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 AND 99/3 OF KANARPATTI VILLAGE, MANUR TALUK, TIRUNELVELI DISTRICT, TAMIL NADU STATE

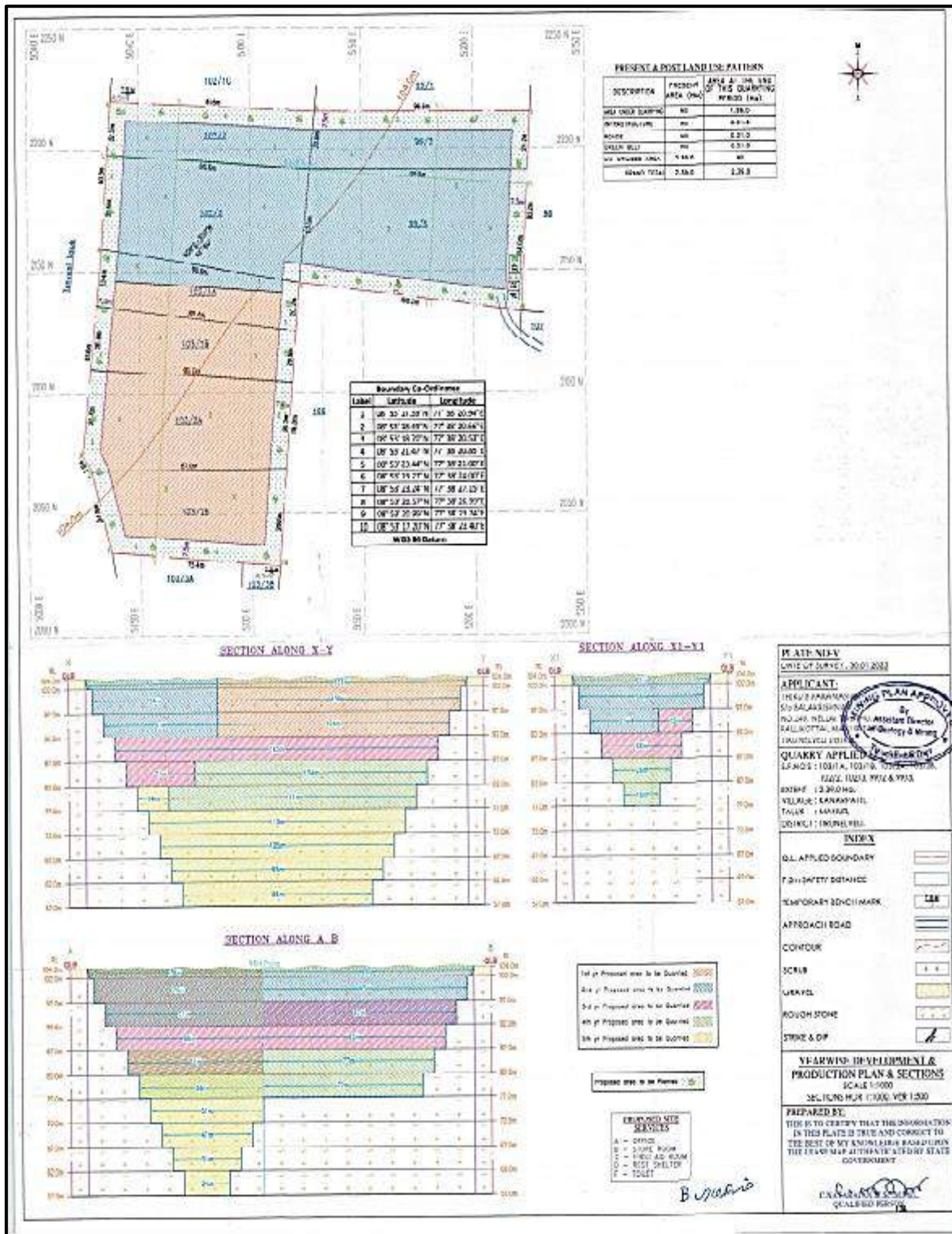


Figure 2.9 Year wise Production Plan & Sections

2.9.6 DISPOSAL OF WASTE

There is no waste anticipated in this rough stone Quarry. The entire quarried minerals will be utilized.

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

Pit	Length in m (Max)	Width in m (Max.)	Depth in m (Max.), bgl
I	172	108	47

Land use pattern of the Project area

Description	Present Area in Ha.	Area at the end of life of Quarry in Ha.
Quarrying pit	NIL	1.86.0
Infrastructure	NIL	0.01.0
Roads	NIL	0.01.0
Greenbelt	NIL	0.51.0
Unutilized	2.39.00	NIL
Total	2.39.00	2.39.00

- At the end of life of mine, the excavated mine pit / void of 1.86.0 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 (0.51.0 Ha.) will be developed along the safety barrier and top benches and 0.02 ha are approach road and Infrastructure.

DRAFT EIA EMP REPORT OF PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.B.PARAMASIVAM OVER AN EXTENT OF 2.39.00 HA LOCATED AT S.F.NOS. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 AND 99/3 OF KANARPATTI VILLAGE, MANUR TALUK, TIRUNELVELI DISTRICT, TAMIL NADU STATE

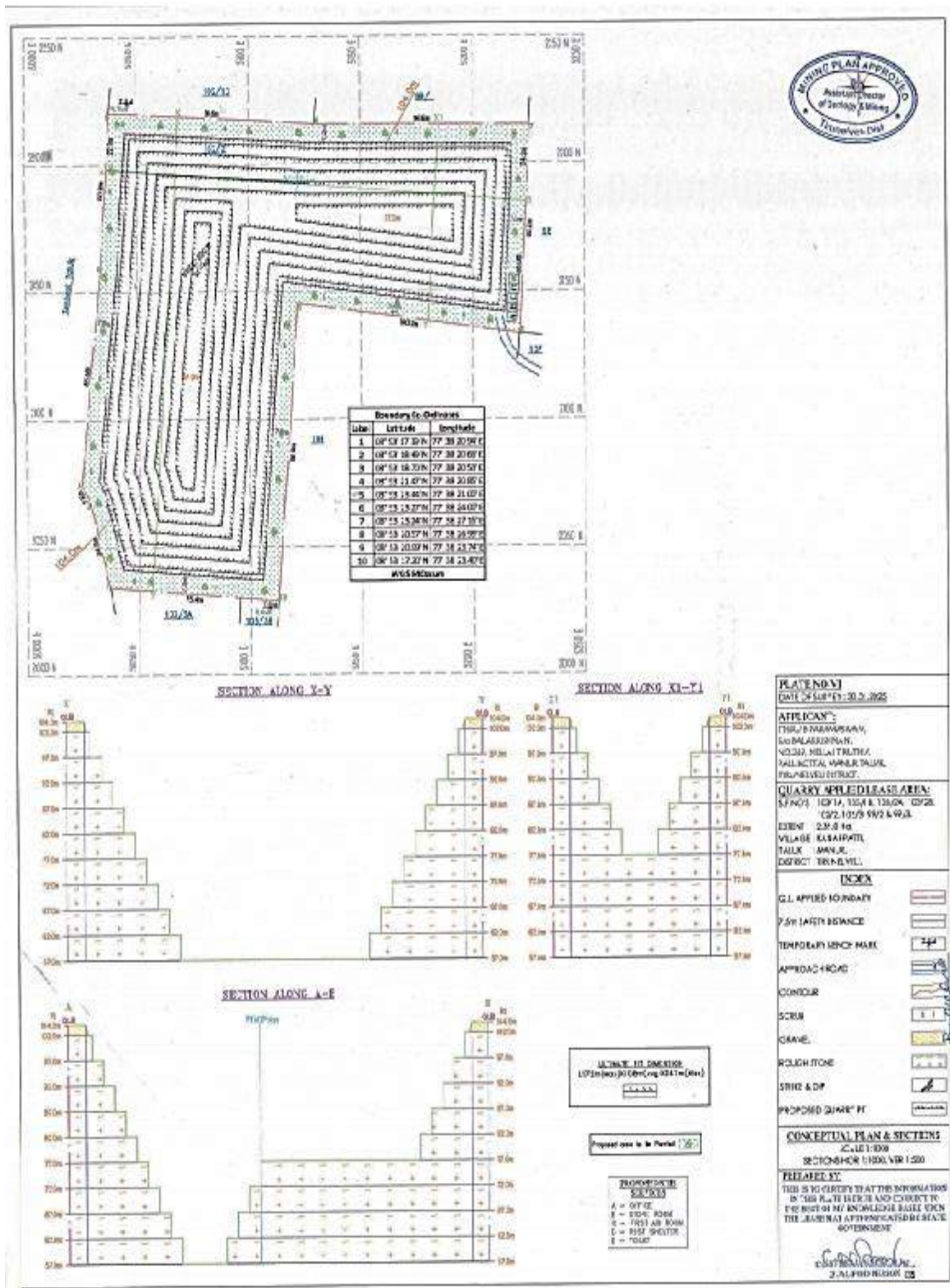


Figure 2.10 Conceptual Plan And Cross Section

2.11 PROJECT REQUIREMENT

2.11.1 WATER REQUIREMENT AND SOURCE

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

Table 2.10 Details of Water requirement

Activity	Water Requirement in KLD
Drinking & Domestic	2.4
Dust Suppression	1.6
Greenbelt Development	2.0
Total	6.0

2.11.2 POWER AND FUEL 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. 3,20,371 Liters HSD for entire life of the mine.

2.11.3 EMPLOYMENT GENERATION

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

Skilled	Operator	10 Nos
	Mechanic	1 No
	Mines Manager	1 No
	Fore Man / Mate	2 Nos
Semi-Skilled	Driver	4 Nos
Unskilled	Labours	12 Nos
Total		30 Nos

2.11.4 INFRASTRUCTURE REQUIREMENT

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

2.12 TRAFFIC STUDY:

The final product from the Quarry will be transported through the SH-41 Tirunelveli to Sankarankovil, which is about 1.60 Km on western side of the area.

Mineral Transportation

Table 2.11 Mineral Transportation		
Production Per day in tons		
Quarry	Total Mineral in tons per day	No. of Lorry Load per day
P1 (Proposed)	859	86
P2 (Existing)	637	64
P3 (Existing)	396	40
Total	1892	190

As two quarries already exist, they are part of the current traffic. The proposed project will bring 86 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.



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 weekday, or a functional urban highway during rush hour)	0.69 – 0.88
E	Unstable flow (flow becomes irregular, speed varies widely and rarely reaches speed limit)	0.88 - 1.00
F	Forced or breakdown flow (a constant traffic jam)	>1.00

Table 2.12 Existing Traffic Flow

Station Code	HMV		LMV		2/3 Wheelers		Total PCU
	No	PCU	No	PCU	NO	PCU	
1	65	195	52	52	181	90	337

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	86	258	33

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
SH-41 Tirunelveli to Sankarankovil	337	33	370	1500

- Due to this project the existing traffic volume will not exceed
- As per the IRC 1960 this existing SH 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
SH-41 Tirunelveli to Sankarankovil	337	0.22	33	0.02	0.24	A*

(* A – Free Flow)

2.12.1 PROJECT COST

The Project cost, including Operational, EMP & CER is **122.53 Lakhs**. The proponent is financially sound to meet this financial requirement. Besides, he also has the technical capability to work at quarry.

A. FIXED ASSET COST		
Particulars	Amount	
Land cost	14.34 Lakhs	
First aid room	1.00 Lakhs	
Labour Shed	1.00 Lakhs	
Sanitary Facility	1.00 Lakhs	
Total	17.34 Lakhs	
B. OPERATIONAL COST		
Machineries	80.00 Lakhs	
Fencing cost	2.00 Lakhs	
Total	82.00 Lakhs	
C. EMP COST (FOR 5 YEARS) in Lakhs		
Mitigation Measures	Capital cost	Recurring Cost /Annum
Air Environment	5.90	1.26
Noise Environment	0.30	0.02
Waste Management	0.25	0.12
Mine Closure	0.51	0.10
Implementation of EC, Mining Plan & DGMS Condition	0.79	0.75
Total	7.75	2.25
The total EMP Cost of 20.19 Lakhs for a period of five years have been proposed. i.e., Capital cost of Rs. 7.75 Lakhs + Recurring cost of Rs. 12.44 lakhs (@ 5% Escalation).		
Total	20.19 Lakhs	
D. CER COST		
CER Cost	3.00 Lakhs	

Grand (A+B+C+D)	Total	122.53 Lakhs

A. Fixed asset cost = 17.34 Lakhs

B. Operational cost = 82.00 Lakhs

C. EMP Cost = 20.19 Lakhs

D. CER Cost = 3.00 Lakhs

Total Project cost (A+B+C+D) = 122.53 Lakhs

Total project cost of this Rough stone Quarry is Rs. 122.53 Lakhs.

2.12.2 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 6 different locations.
- Water quality analysis in 8 different locations (6 Ground Water + 2 Surface Water)
- Noise levels monitoring in 6 different locations
- Soil quality analysis in 6 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. Within 300 radius of the project site, 14 structures were observed, which are crusher plant and its related structures & existing quarries related structures. Hence there are no inhabited site within 300m radius of the project site. The details structures located within 300 m radius are given in Figure 3.1.

Environmental Features Located within 500 m Radius:

There are no water bodies within a 100m radius and no HT/LT lines within a 300m radius. Within a 500m radius, there are a canal, cart track, substation, and HT line.

S. No.	Name of the Feature	Distance and Direction
E1	Canal	140m (SW)
E2	Cart Track	230m (S)
E3	Sub Station	330m (E)
E4, E5, E6, E7, E8	HT Lines	415m (SE), 395m (SE), 440m (SE), 350m (SE), 470m (NE)

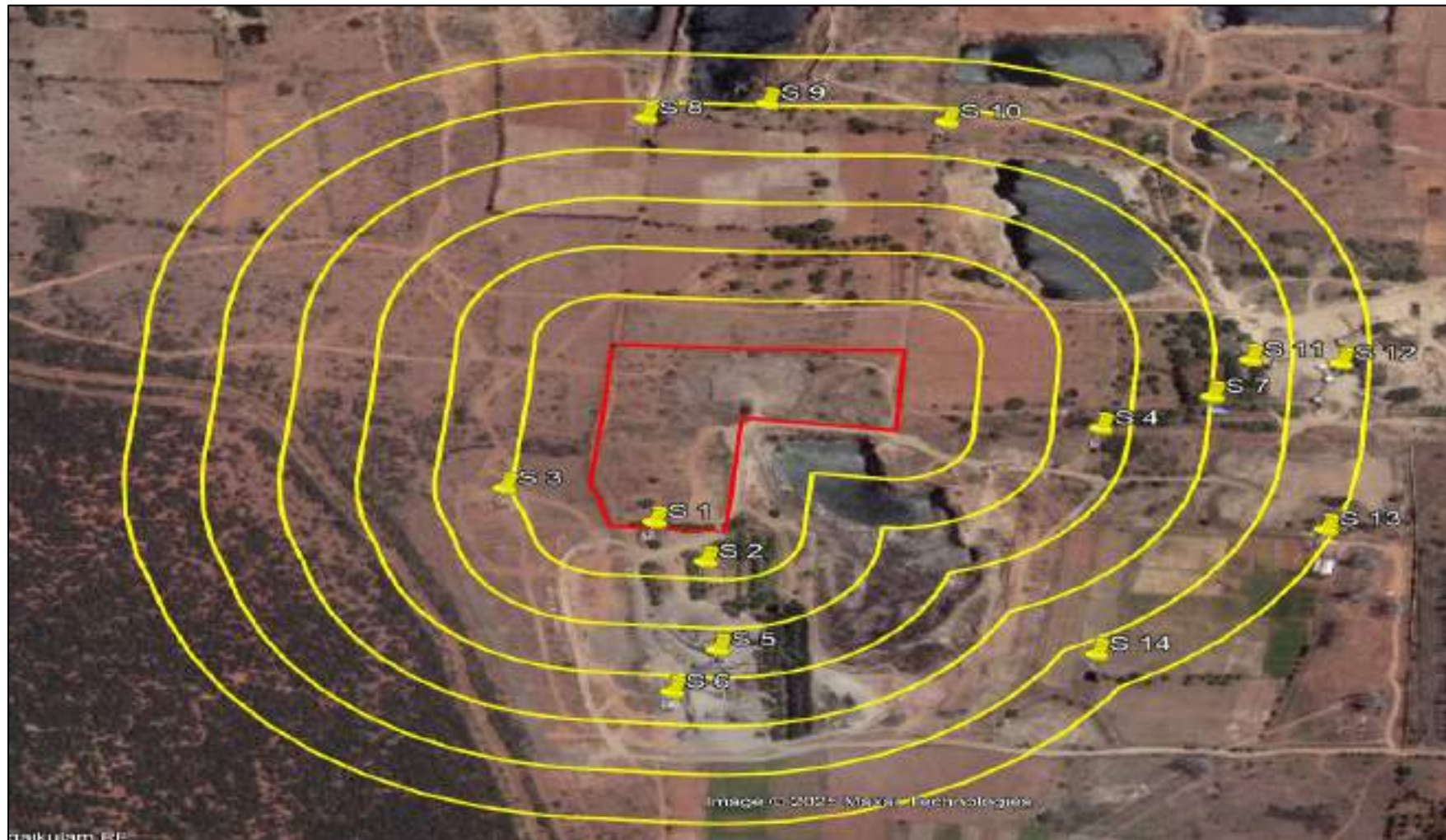


Figure 3.1 Google Image showing structures located within 300 m radius



Figure 3.2 Existing Environmental Features Within 500m Radius

3.6 ENVIRONMENTAL SETTINGS OF THE PROJECT

The Environmental settings of the project covering 10km radius of study area is given in Table 3.1. The study area map is given in Figure- 3.3 and satellite image showing 10 km radius is given in Figure 3.4.

Table 3.1 Environmental Settings of the Study Area – 10 km radius

S.NO	Particulars	Description
1.	Latitude & Longitude	Latitude: 08°53'17.20"N to 08°53'23.44"N Longitude: 77°38'20.53"E to 77°38'27.15"E
2.	The altitude of the area	104 m from MSL
3.	Topography	Plain Terrain
4.	Land use of M.L. area	It is patta land registered in the name of Thiru.Paramasivan (applicant) and Thiru.Saravanan, vide patta no. 1572, 2034, 1352 and 1355 the applicant has obtained consent from the pattadar
5.	Extent of the Lease area	2.39.00 Ha.
6.	Nearest Highway	The National Highway (NH-44) Tirunelveli – Salem is about 13.5km on east side of the area. The State Highway (SH-41) Tirunelveli - Sankarankovil is about 1.3Km on east side of the area.
7.	Nearest Railway Station	Thalaiyuthu Railway Station – 15.20 km – SE. The Nearest Railway line is Tirunelveli to Kovilpatti line which is about 15Km on southeast side of the area.
8.	Nearest airport	Tuticorin Airport - 46.20 km - SE
9.	Nearest Village	Kanarpatti Habitations –1.70 km (SE)
10.	Nearest Town	Kayathar- 15.00 km - NE
11.	Water Bodies	Core Zone – NIL Buffer Zone • Canal - 140m (SW),

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		• Odai – 550m (N) • Tank – 755m (NW) • Tank – 1.2km (SE) • Chittar River – 1.60 km (N) • Manur Tank – 3.1 km (SW)
12	Historical Places/Places of Tourist/ Archeological site	NIL within 10 km radius
13.	Environmental sensitive areas, Protected areas as per Wildlife Protection Act, 1972 (Tiger reserve, Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves)	NIL within 10 km radius Gangaikondan Spotted Deer Sanctuary – 14.40 km (SE)
14	Reserved / Protected Forests	Kavalkutti Parambai R.F – 7.15km (SW), Kottamalai R.F – 8.50 km (SW), Uthumalai R.F – 9.80 km (NW), Thalaiyuthu R.F – 9.75 km (SE)
15	Defence Installations	NIL within 10 km radius
16	Seismic Zone	Zone II
17	Other Industries in the study area	NIL within 10 km radius
18	Interstate boundary	NIL

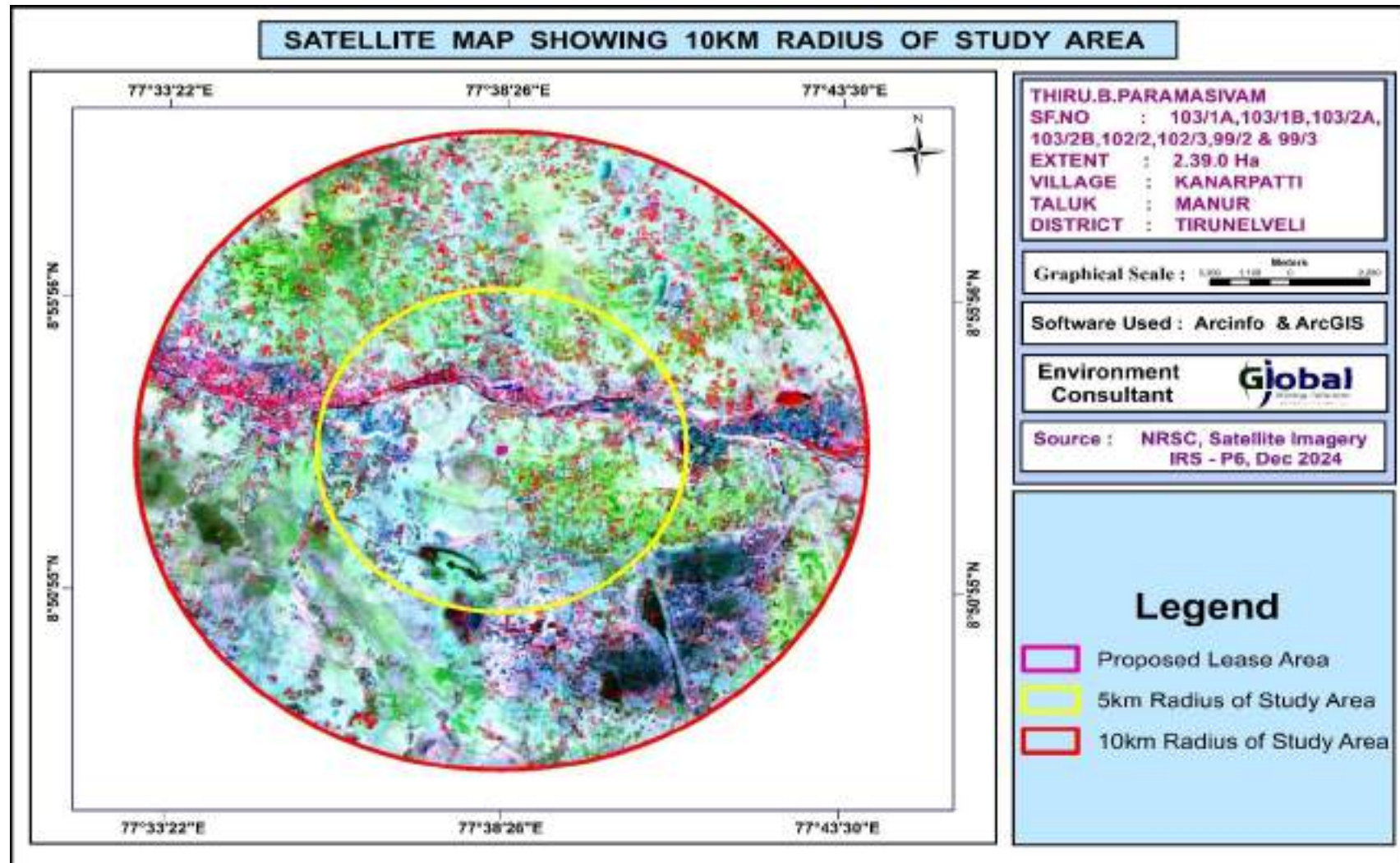


Figure 3.3 Satellite Image of the Study Area

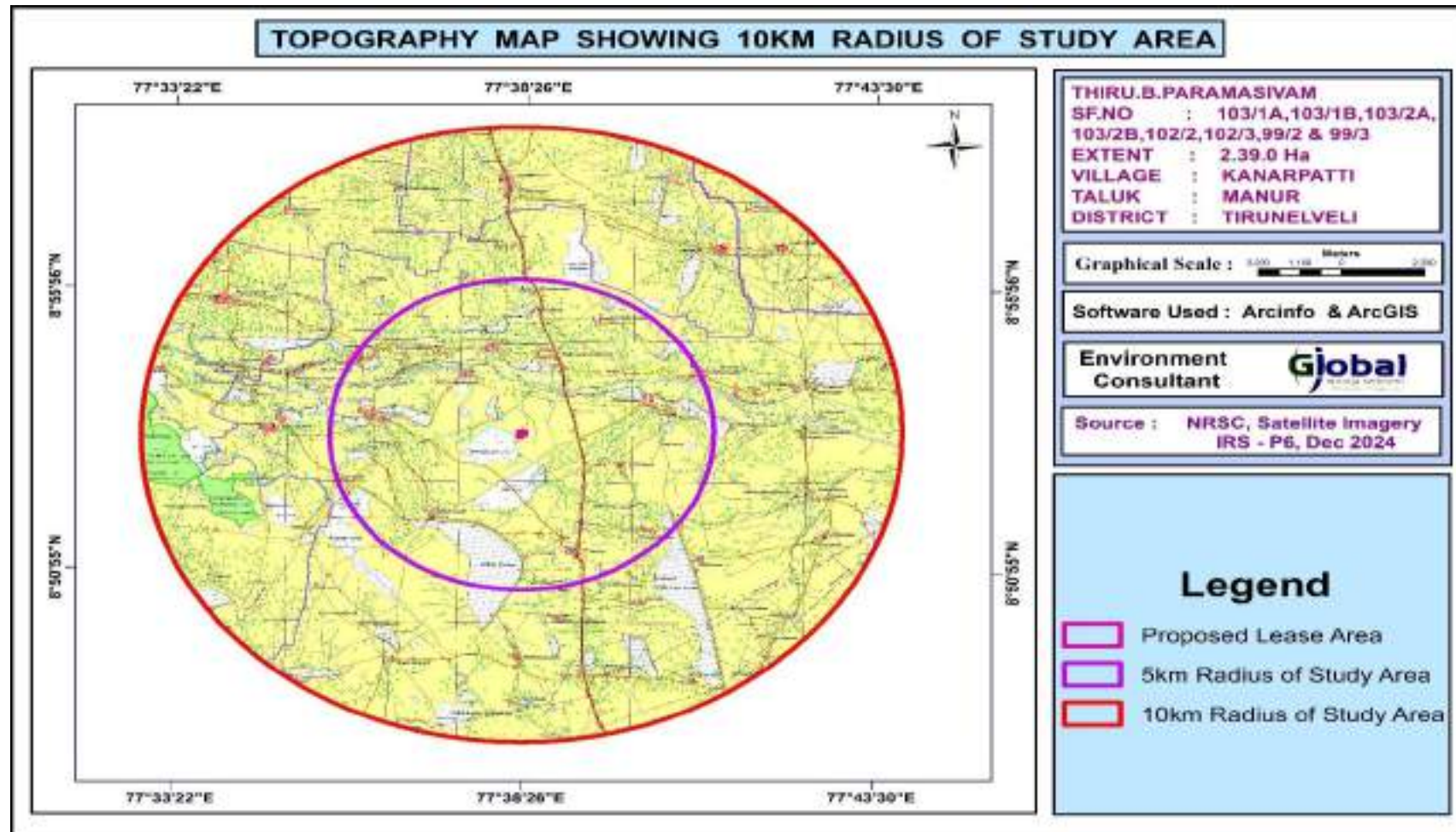


Figure 3.4 Topo map Showing Study Area

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 district receives the rain under the influence of both southwest and northeast monsoons. The northeast monsoon chiefly contributes to the rainfall in the district.

Rainfall data from IMD stations over the period 1901-2000 were utilized and a perusal of the data shows that the normal annual rainfall over the district is 879 mm. It is the maximum around Senkottai, Sankarankoil and all along the coast and it decreases towards inland. The areas around Ambasamudram, Tirunelveli and Kadayanallur receive minimum rainfall.

The district enjoys a Sub tropical climate. The period from May to June is generally hot and dry. The weather is pleasant during the period from December to January. The relative humidity is on an average between 79 and 84%. The mean minimum temperature is 22.9°C and mean maximum daily temperature is 33.5°C respectively.

Table 3.2 Rainfall Data

Years	2016	2017	2018	2019	2020	2021	2022	2023
Rainfall in mm	870.16	1004.80	945.10	910.60	893.4	915.6	1104.80	1004.50

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 3.3 Meteorological Data Recorded at Site

S.NO	Parameters	October to December 2023	
1.	Temperature (°C)	Min	21
		Max.	43
		Avg	30
2.	Relative Humidity (%)	Min	18
		Max	96
		Avg	63
3.	Wind Speed (km/h)	Min	0
		Max	6.2
		Avg	3.2
4.	Wind Direction	Blowing From – ESE	

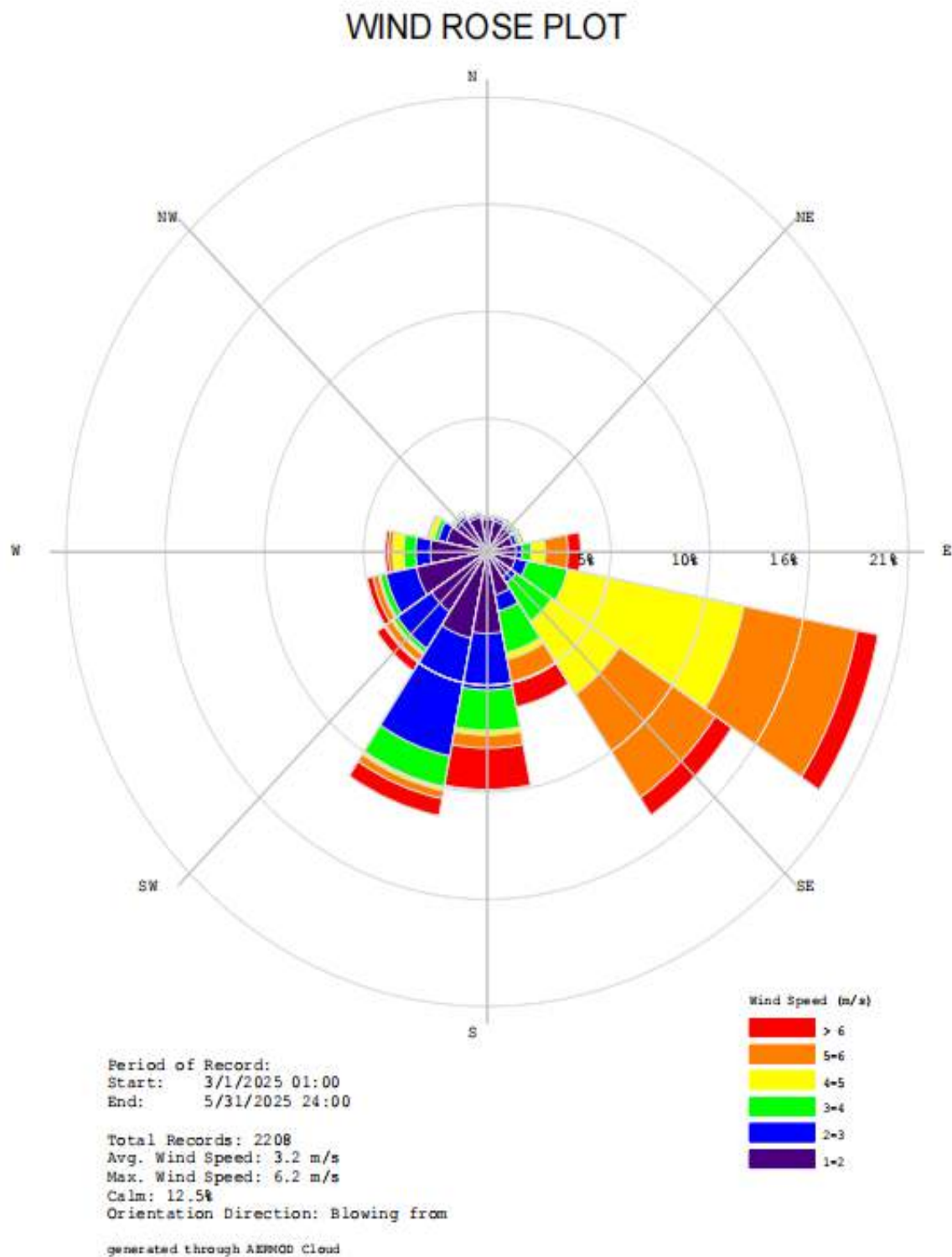


Figure 3.5 Wind Rose Diagram – Blowing From (March – May 2025)

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 3.4 Methodology for Air Quality Monitoring

Table 3.4 : Air Quality Monitoring		
1.	Monitoring Period	Summer (March to May 2025)
2.	Monitoring Location	The monitoring locations for ambient air study is given in Table – 3.5 and Figure 3.6.
Methodology		
3.	A. Sampling	(IS-5182:Part 1:2018)
	B. Analysis	
Parameters		Protocol
4.	Particulate Matter (PM ₁₀)	Gravimetric (IS 5182: Part 23:2017)
	Particulate Matter (PM _{2.5})	Gravimetric (IS 5182: Part 24:2019)
	Sulphur Dioxide	Colorimetric (West & Gaeke Method) (IS 5182: Part 02: 2017)
	Nitrogen Dioxide	Colorimetric (Modified Jacob & Hocheiser Method) (IS 5182: Part 06:2017)
	Carbon Monoxide	CO Monitor
	Monitoring Frequency	2 days in a week, 4 weeks in a month for 3 months in a season.

3.7.2.2 FREQUENCY AND PARAMETERS FOR SAMPLING

Ambient air quality monitoring has been carried out with a frequency of two samples per week at Six (6) 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 PM₁₀, PM_{2.5}, Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂) and Carbon Monoxide Monitoring has been carried out as per the CPCB, MoEF & CC guidelines and notifications.

It was ensured that the equipment was placed preferably at a height of at least 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

Six (6) monitoring stations were set up in the study area as depicted in Figure 3.6 for assessment of the existing ambient air quality. Details of the sampling locations are as per given below.

Table 3.5 – Ambient Air Quality Monitoring Locations

S.NO	Location Code	Monitoring Locations	Latitude and longitude
1	A1	Within Mine Lease area	8°53'20.99"N & 77°38'22.54"E
2	A2	Kalakudi	8°53'27.64"N & 77°36'27.31"E
3	A3	Kanarpatti	8°52'49.36"N & 77°39'43.56"E
4	A4	South Sezhilanallur	8°53'15.40"N & 77°41'11.50"E
5	A5	Alagiapandiapuram	8°54'44.88"N & 77°38'44.74"E
6	A6	Manur	8°51'11.37"N & 77°39'10.66"E

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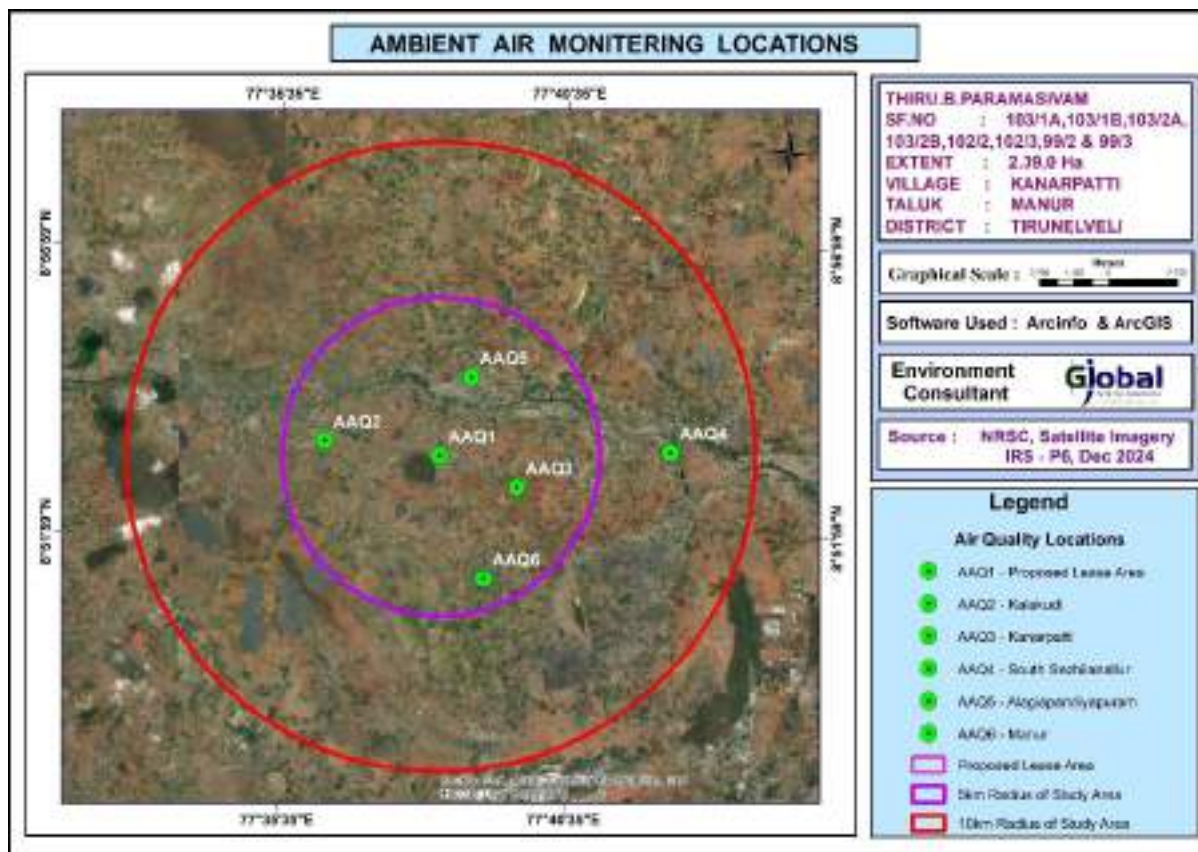


Figure 3.6 Ambient Air Quality Monitoring Locations

Table 3.6 Ambient Air Quality Data

		Ambient Air Quality									All Value in $\mu\text{g}/\text{m}^3$		
	Parameters	PM10			PM2.5			SO2			NO2		
S.NO	Locations	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
1	A1 - Within Mine Lease area	56.0	65.5	74.1	24.6	28.8	32.6	6.1	7.0	7.9	9.6	12.7	15.9
2	A2 - Kalakudi	48.9	56.1	63.3	22.0	25.2	28.5	5.3	6.4	7.4	7.8	10.9	14.2
3	A3 - Kanarpatti	47.1	52.0	57.3	22.3	24.5	26.6	4.7	5.8	7.2	7.3	9.5	12.8
4	A4 - South Sezhilanallur	46.3	50.6	54.9	21.3	23.3	25.3	4.5	5.9	7.1	6.6	9.1	11.6
5	A5 - Alagiapandiapuram	51.2	61.2	74	23.3	28.0	34.0	5.8	6.8	7.5	8.7	11.9	15.9
5	A6 - Manur	49.6	58.8	65.6	24.0	27.8	31.5	4.9	6.0	7.1	7.4	10.4	13.9
6	CPCB NAAQS 2009	100			60			80			80		

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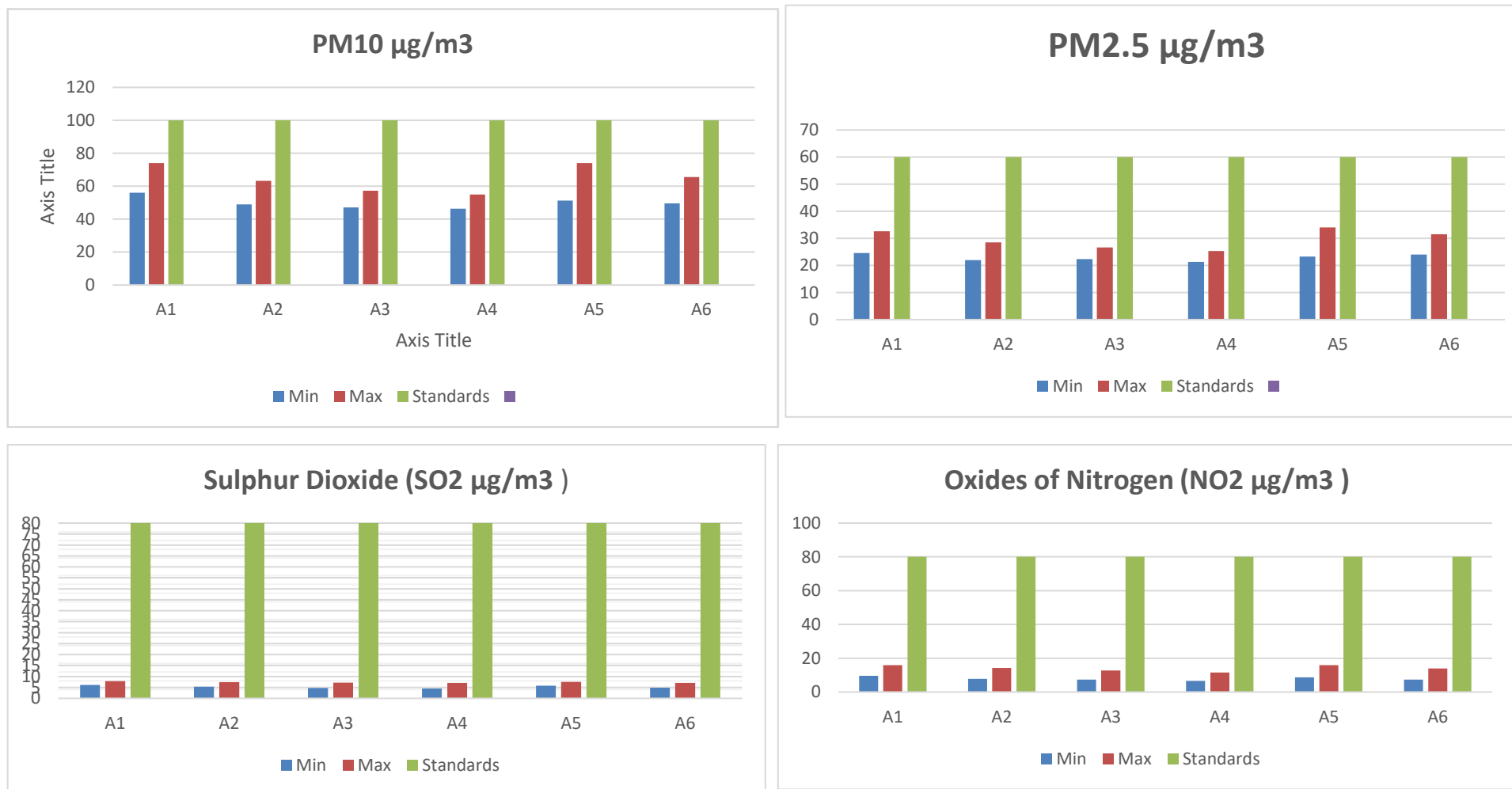


Figure -3.7 - Graphical Representation of Air Quality

Data

3.7.2.4 DISCUSSION

From the table it is seen that, in the ambient air, the PM₁₀ values were in the range of 46.3 – 74.1 µg/m³. PM_{2.5} values were in the range of 21.3 – 34.0 µg/m³. SO₂ levels were ranging from 4.5 – 7.9 µg/m³. NO₂ levels were ranging from 6.6 – 15.9 µg/m³. While comparing with the NAAQ Norms laid by MoEF, all monitored values of PM₁₀, PM_{2.5}, SO₂, NO₂ & CO were found to be well within the prescribed standards. The CO values in the all locations found to be below detectable limit (DL – 1144 µg/m³).

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

Chittar River is situated at a distance of 1.60 km in north direction. The area is studded with few tanks that serve as the source for agriculture and also their surplus feeds adjoining tanks. The rainfall over the area is moderate, the rainwater

storage in open wells, trenches is in practice over the area and the stored water acts as source of freshwater.

3.7.3.3 GROUND WATER

The district is underlain by both porous and fissured formations. The important aquifer systems in the district are constituted by i) Weathered and fractured hard rock formations of Archaean age. ii) Porous sedimentary formations ranging in age from Tertiary and Recent.

The groundwater exploration in the district down to a depth of 200m bgl has revealed that in the western part of the district potential fractures are encountered beyond 100m bgl while in the rest of the area, potential fractures are restricted to 100m bgl. The yield of the wells varies from 1 to 3.6 lps. In general, the wells drilled by various State agencies mainly for domestic purposes have yield in the range of 63 to 270 lpm.

The depth to water level in the district varied between 1.19 to 13.35 m bgl during pre- monsoon depth to water level (May 2006) and varied between 0.18 to 7.97 m bgl during post monsoon depth to water level (Jan 2007). The seasonal fluctuation shows a fall in water level, which ranges from -0.12 to -2.14 m bgl, and rise in water level, which ranges from 0.33 to 11.24 m bgl. The piezometric head varied between 1.72 to 13.65 m bgl (May 2006) during pre monsoon and 0.47 to 13.25 m bgl during post monsoon.

3.7.3.4 SAMPLING LOCATIONS

Three (3) surface water samples and Six (6) 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 3.7 and shown as Figure 3.8 & 3.9.

Table 3.7 Water Sampling Locations

S.NO	Location Code	Monitoring Locations	Latitude and longitude
Surface Water			
1	SW1	Canal – SW – 140 m	8°53'18.03"N & 77°38'15.23"E
2	SW2	Chittar River – Up Stream	8°54'37.41"N & 77°37'50.83"E
3	SW3	Chittar River – Down Stream	8°54'12.89"N & 77°38'43.03"E
Ground Water			
1	GW1	Within Mine Lease area	8°53'20.99"N & 77°38'22.54"E
2	GW2	Pillaiyarkulam	8°53'54.85"N & 77°40'13.61"E
3	GW3	Kalakudi	8°53'27.64"N & 77°36'27.31"E
4	GW4	South Sezhilanallur	8°53'15.40"N & 77°41'11.50"E
5	GW5	Alagiapandiapuram	8°54'44.88"N & 77°38'44.74"E
6	GW6	Manur	8°51'11.37"N & 77°39'10.66"E

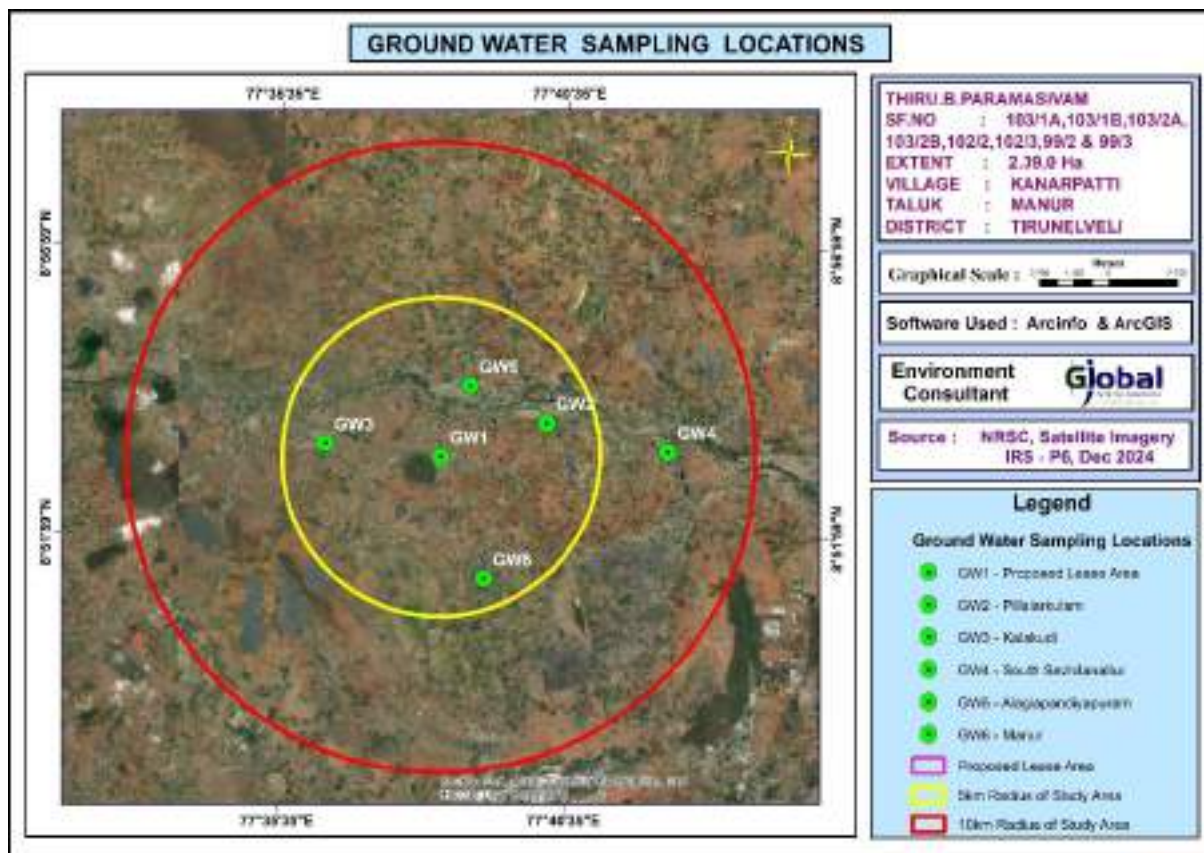


Figure 3.8 – Ground Water Monitoring Locations

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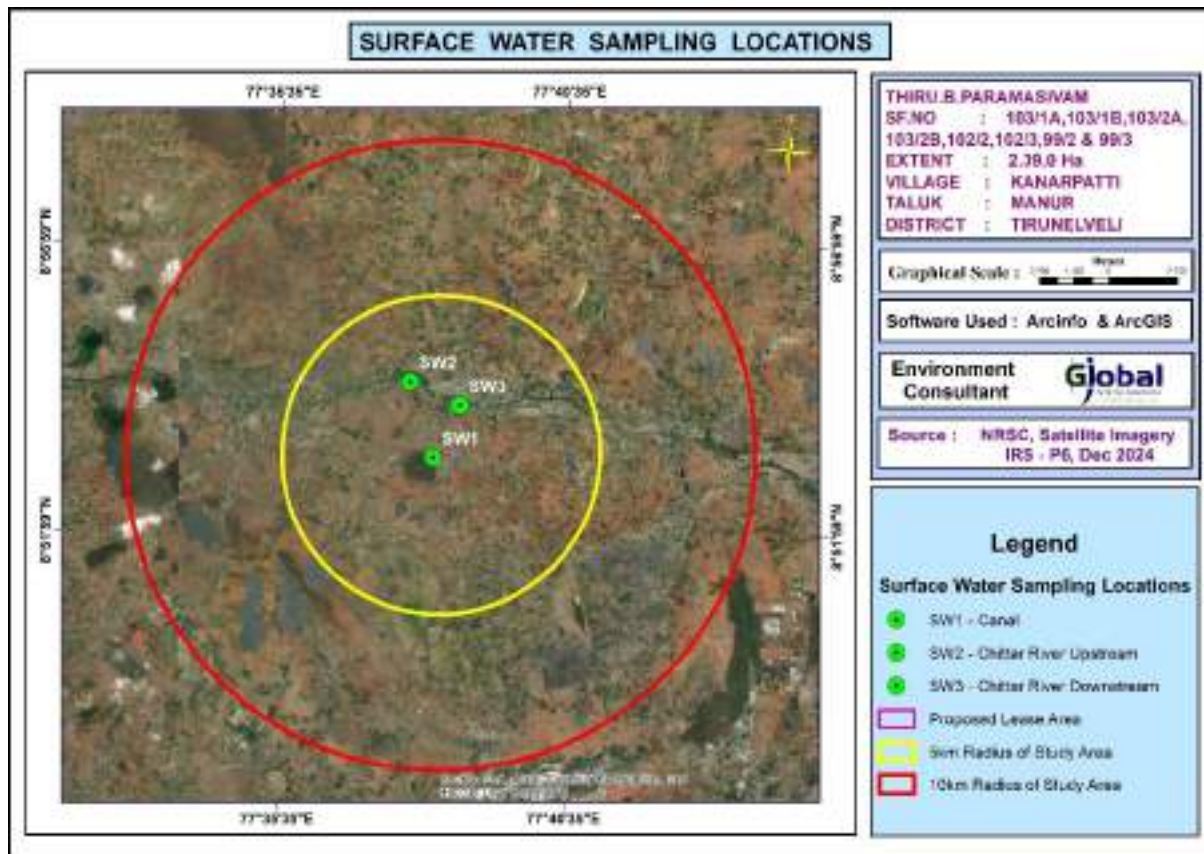


Figure 3.9 – Surface Water Monitoring Locations

DRAFT EIA EMP REPORT OF PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.B.PARAMASIVAM OVER AN EXTENT OF 2.39.00 HA LOCATED AT S.F.NOS. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 AND 99/3 OF KANARPATTI VILLAGE, MANUR TALUK, TIRUNELVELI DISTRICT, TAMIL NADU STATE

Table 3.8 – Ground Water Analysis Results

Parameter	GW1	GW2	GW3	GW4	GW5	GW6	Standards as Per IS 10500: 2012	
							Acceptable Limits	Permissible Limits
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity, NTU	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1	5
pH at 25 °C	7.63	7.38	7.69	7.38	7.81	7.57	6.5- 8.5	No Relaxation
Electrical Conductivity, $\mu\text{S/cm}$	1345	1520	1502	1120	1915	864	-	-
Total Dissolved Solids, mg/l	810	915	902	674	1150	520	500	2000
Total hardness as CaCO_3 mg/l	490	338	394	452	254	274	200	600
Calcium as Ca mg/l	98.0	105	78.4	124	50.4	52.8	75	200
Magnesium as Mg mg/l	58.8	18.2	47.5	34.1	30.7	34.1	30.0	100
Calcium as CaCO_3 mg/l	245	262	196	310	126	132	-	-
Magnesium as CaCO_3 mg/l	245	76.0	198	142	128	142	-	-
Total alkalinity as CaCO_3 mg/l	209	338	384	276	394	150	200	600
Chloride as Cl^- mg/l	245	182	248	126	386	140	250	1000
Free Residual chlorine as Cl^- mg/l	BDL(D.L-0.2)	BDL(D.L-0.2)	BDL (D.L - 0.2)	BDL(D.L-0.2)	BDL(D.L-0.2)	BDL(D.L-0.2)	0.2	1
Sulphates as SO_4^{2-} mg/l	204	321	236	154	305	96.8	200	400
Iron as Fe mg/l	0.05	0.04	0.06	0.08	0.06	BDL(DL-0.01)	0.3	No Relaxation
Nitrate as NO_3 mg/l	2.72	2.45	1.69	2.11	2.46	2.36	45	No Relaxation
Fluoride as F mg/l	0.37	0.46	0.39	0.32	0.21	0.22	1	1.5
Manganese as Mn mg/l	BDL(D.L-0.05)	BDL(D.L-0.05)	BDL (D.L - 0.05)	BDL(D.L-0.05)	BDL(D.L-0.05)	BDL(D.L-0.05)	0.1	0.3

Table 3.9 Surface Water Analysis Results

Parameter	SW1	SW2	SW3	Surface water standard s (IS 2296 Class-A)
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity, NTU	<1.0	<1.0	<1.0	1
pH at 25 °C	7.66	7.51	6.94	6.5- 8.5
Electrical Conductivity, $\mu\text{S/cm}$	262	276	158.2	-
Total Dissolved Solids, mg/l	162	170	95	500
Total Suspended Solids, mg/l	BDL(DL-2.0)	BDL(DL-2.0)	BDL(DL-2.0)	-
Total hardness as CaCO_3 mg/l	73.3	77.2	39.6	300
Calcium as Ca, mg/l	15.0	16.6	4.75	-
Magnesium as Mg mg/l	8.55	8.55	6.65	-
Calcium as CaCO_3 mg/l	37.6	41.6	11.9	-
Magnesium as CaCO_3 mg/l	35.6	35.6	27.7	-
Total alkalinity as CaCO_3 , mg/l	70.7	74.7	32.3	-
Chloride as Cl^- mg/l	59.7	57.7	29.4	250
Free Residual chlorine as Cl^- mg/l	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	0.2
Sulphates as SO_4^{2-} , mg/l	32.5	38.9	10.9	400
Iron as Fe, mg/l	0.06	0.06	0.03	0.3
Nitrate as NO_3 , mg/l	3.24	3.58	2.35	20

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Fluoride as , mg/l	0.55	0.58	0.44	1.56
Manganese as Mn, mg/l	BDL(DL-0.05)	BDL(DL-0.05)	BDL(DL-0.05)	0.1
COD as O ₂ , mg/l	BDL(DL-4.0)	BDL(DL-4.0)	BDL(DL-4.0)	-
BOD, 3 days @ 27°C, mg/l	BDL(DL-2.0)	BDL(DL-2.0)	BDL(DL-2.0)	2

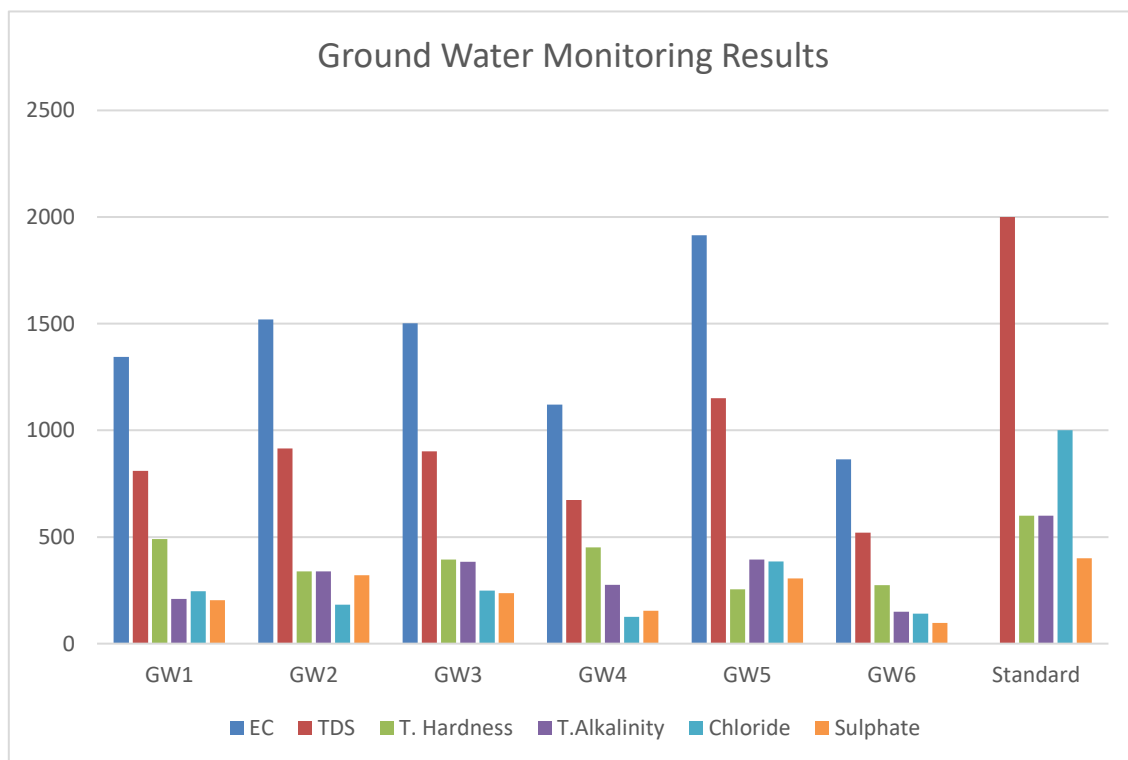


Figure 3. 10 Ground Water - Monitoring Results

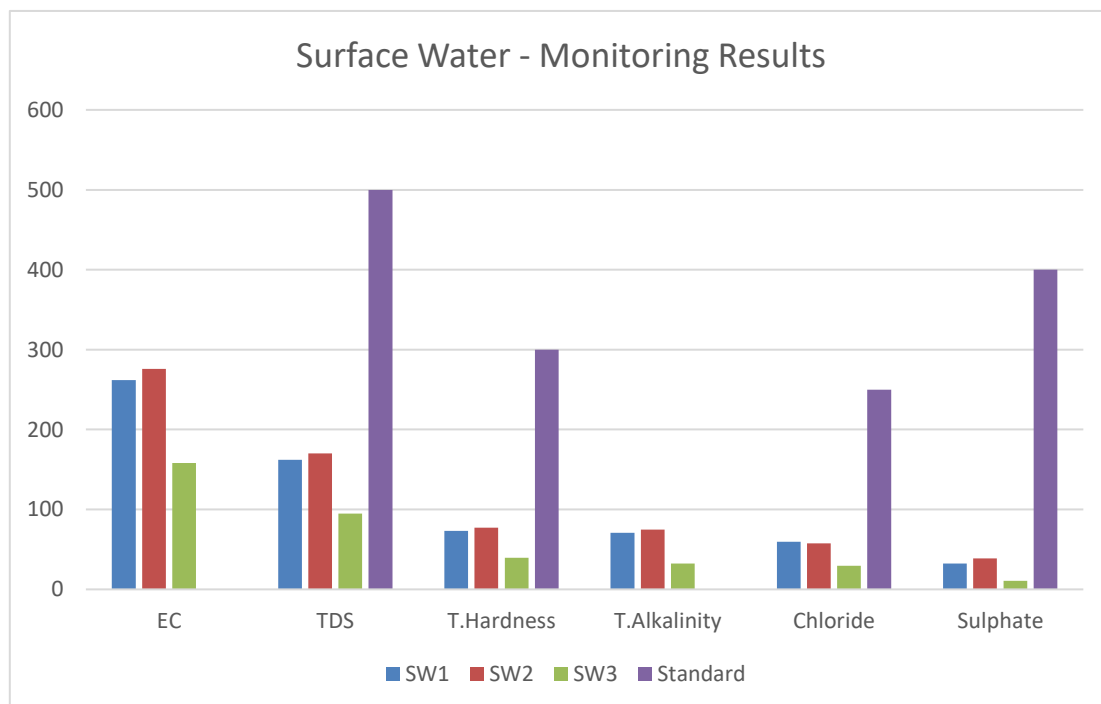


Figure 3. 11 Surface Water - Monitoring Results

3.7.3.5 DISCUSSION

Surface Water

The pH varied from 6.94 to 7.66 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 95 to 170 mg/l. Chloride varied between 29.4 mg/l and 59.7 mg/l. Nitrates varied from 2.35 to 3.58 mg/l, while sulphates varied from 10.9 to 38.9 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 7.38 to 7.81, Chlorides Ranges From 126- 386 mg/l, Sulphates value found to be between 96.8 - 321 mg/l, Fluoride Ranges low in lease area i.e. 0.21 – 0.46, Hardness varies from 254 – 490 mg/l, and Total dissolved solid 520 – 1150 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 Six (6) 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 3.12 and in below table.

Table 3.10 Noise Monitoring Locations

S.NO	Location Code	Monitoring Locations	Latitude and longitude
1	N1	Within Mine Lease area	8°53'20.99"N & 77°38'22.54"E
2	N2	Kalakudi	8°53'27.64"N & 77°36'27.31"E
3	N3	Kanarpatti	8°52'49.36"N & 77°39'43.56"E
4	N4	South Sezhilanallur	8°53'15.40"N & 77°41'11.50"E
5	N5	Alagiapandiapuram	8°54'44.88"N & 77°38'44.74"E
6	N6	Manur	8°51'11.37"N & 77°39'10.66"E

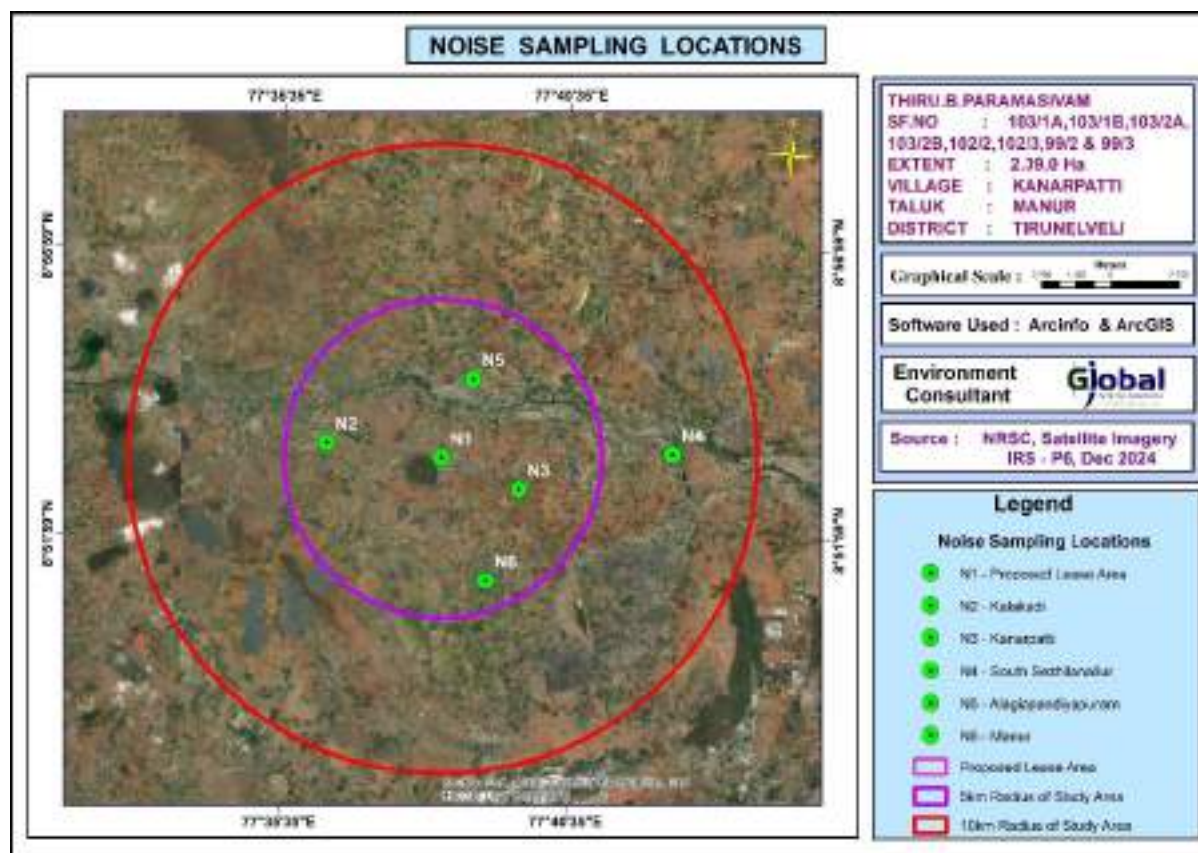


Figure 3.12 Noise Monitoring Location

3.7.4.2 METHOD OF MONITORING

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

3.7.4.3 NOISE MONITORING RESULT

An analysis of the different Leq data obtained during the study period has been made. Variation was noted during the day-time as well as night-time. The results are presented in below Table 3.11.

Table 3.11 Noise Monitoring Result

Monitoring Location	N1	N2	N3	N4	N5	N6
DAY EQUIVALENT	50.8	46.5	48.8	50.1	48.2	46.0
NIGHT EQUIVALENT	40.4	41.3	40.4	41.1	41.5	42.1
DAY & NIGHT EQUIVALENT	49.2	45.3	47.3	48.6	46.9	45.1
Limits as per MoEF&CC						
Day equivalent - 55 dB (A); Night equivalent - 45 dB (A); Work zone Exposure in 8 hr - 90 dB (A)						

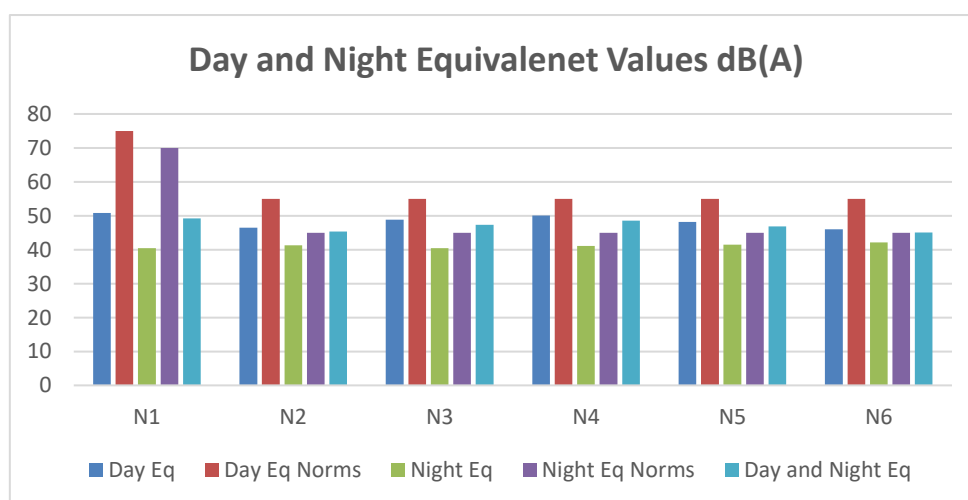


Figure 3.13 Nosie Monitoring Results

3.7.4.4 DISCUSSION

From the table it is observed that the day Equivalent Noise (Leq-d) level were ranging from 46.0 to 50.8 dB(A) and Night Equivalent Noise (Leq-n) level were ranging from 40.4 to 39.1 (A). Day and Night Equivalent Noise (Leq-n) level were ranging from 44.0 to 42.1 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 52 dB – 65 dB in the N1 location. (Project Site). It is very negligible and within the prescribed standards of MoEF & CC and DGMS.

3.7.5 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 3.12 and Figure 3.14.

3.7.5.1 MONITORING LOCATIONS

Soil samples were collected from 6 locations to assess the soil quality in and around the mines. Soil samples collected using sampling augers and field capacity apparatus.

Table 3.12 – Soil Sampling Locations

S.No	Location Code	Monitoring Locations	Latitude and longitude
1	S1	Within Mine Lease area	8°53'20.99"N & 77°38'22.54"E
2	S2	Kalakudi	8°53'27.64"N & 77°36'27.31"E
3	S3	Kanarpatti	8°52'49.36"N & 77°39'43.56"E
4	S4	South Sezhilanallur	8°53'15.40"N & 77°41'11.50"E
5	S5	Alagiapandiapuram	8°54'44.88"N & 77°38'44.74"E
6	S6	Manur	8°51'11.37"N & 77°39'10.66"E

3.7.5.2 METHODOLOGY

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

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

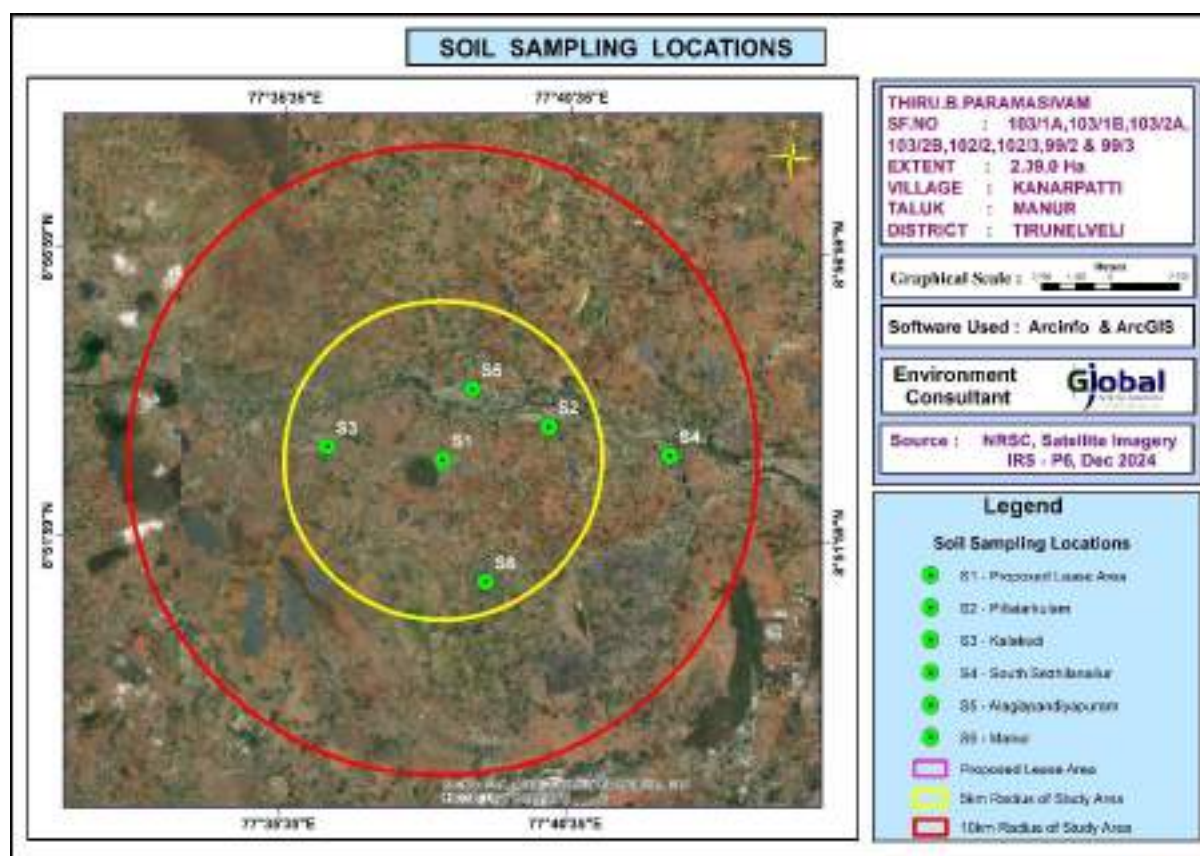


Figure 3.14 - Soil Sampling Stations

3.7.5.3 SOIL TESTING RESULT

Table 3.13 - Soil Testing Result

Parameter	Units	S1	S2	S3	S4	S5	S6
PH		7.47	6.6	7.06	7.54	6.99	7.06
EC	µmhos/cm	125.08	85.88	101.38	72.16	78.93	101.38
DRY MATTER	%	97.55	97.69	98.55	97.46	96.54	98.55
WATER CONTENT	%	2.45	2.31	1.45	2.54	3.46	1.45
ORGANIC MATTER	%	1.25	0.97	1.03	0.99	1.17	1.03
SOIL TEXTURE		SANDY LOAM	LOAM	SILTY CLAY LOAM	LOAM	LOAM	SILTY CLAY LOAM
Grain Size Distribution							
SAND	%	62.45	46.92	20.36	47.67	36.72	20.25
SILT	%	26.62	36.55	40.65	30.36	44.35	40.51
CLAY	%	10.93	16.53	38.99	21.97	18.93	39.24
PHOSPHORUS	mg/kg	2.18	1.9	2.05	1.67	1.55	2.05
SODIUM	mg/kg	466	634	602	682	576	602
POTASSIUM	mg/kg	318	431	490	374	332	490
NITROGEN & NITROGENOUS	mg/kg	175	238	182	194	220	182
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)
Water Holding Capacity	%	15.8	16.7	18.2	17.5	16.6	18.2
Porosity	%	35	36	38	37	36	38

Results of the soil samples show that the pH values were found to be 6.60 to 7.54 and Electrical Conductivity values were ranging between 72.16 – 125.08 µmhos/cm. Soils are generally Silt Loam. Organic matter values were ranging between 0.97 – 1.25 %. Total Nitrogen values were ranging between 175 – 238 mg/kg. Phosphorus values were ranging between 1.55 – 2.18µg/g. Potassium values were ranging between 318 – 490 mg/kg. Sodium values were ranging between 466 – 682 mg/kg. Total Sulphate values were observed to be BDL. The soil quality data for the 6 samples collected and analyzed are provided in Table no – 3.13.

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 3.14 Land use pattern of the project site

Description	Present Area in Ha.	Area at the end of life of Quarry in Ha.
Quarrying pit	NIL	1.86.00
Infrastructure	NIL	0.01.0
Roads	NIL	0.01.0
Greenbelt	NIL	0.51.0
Unutilized	2.39.00	NIL
Total	2.39.00	2.39.0

- At the end of life of mine, the excavated mine pit / void of 1.86.0 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 (0.51.0 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 3.15.

Table 3.15 Land use pattern of the Study area of 10 km radius

Sl.No.	LAND USE / LAND COVER	Area in Sq.Km	Area in Percentage
1	Built-up land	7.83	2.44
2	Crop land	184.77	57.59
3	Existing Quarry	0.91	0.28
4	Fallow land	6.47	2.01
5	Hill & Forest	4.09	1.27
6	Land with scrub	6.22	1.94
7	Land without scrub	89.49	27.70
8	Plantations	0.29	0.09
9	Water bodies	20.76	6.48
	Total Area	320.83	100.00

Source : Survey of India Toposheet and Landsat Satellite Imagery

From above table it is inferred that the majority of the land in the study area is Crop land (57.59 %) followed by Land without scrub (27.70).

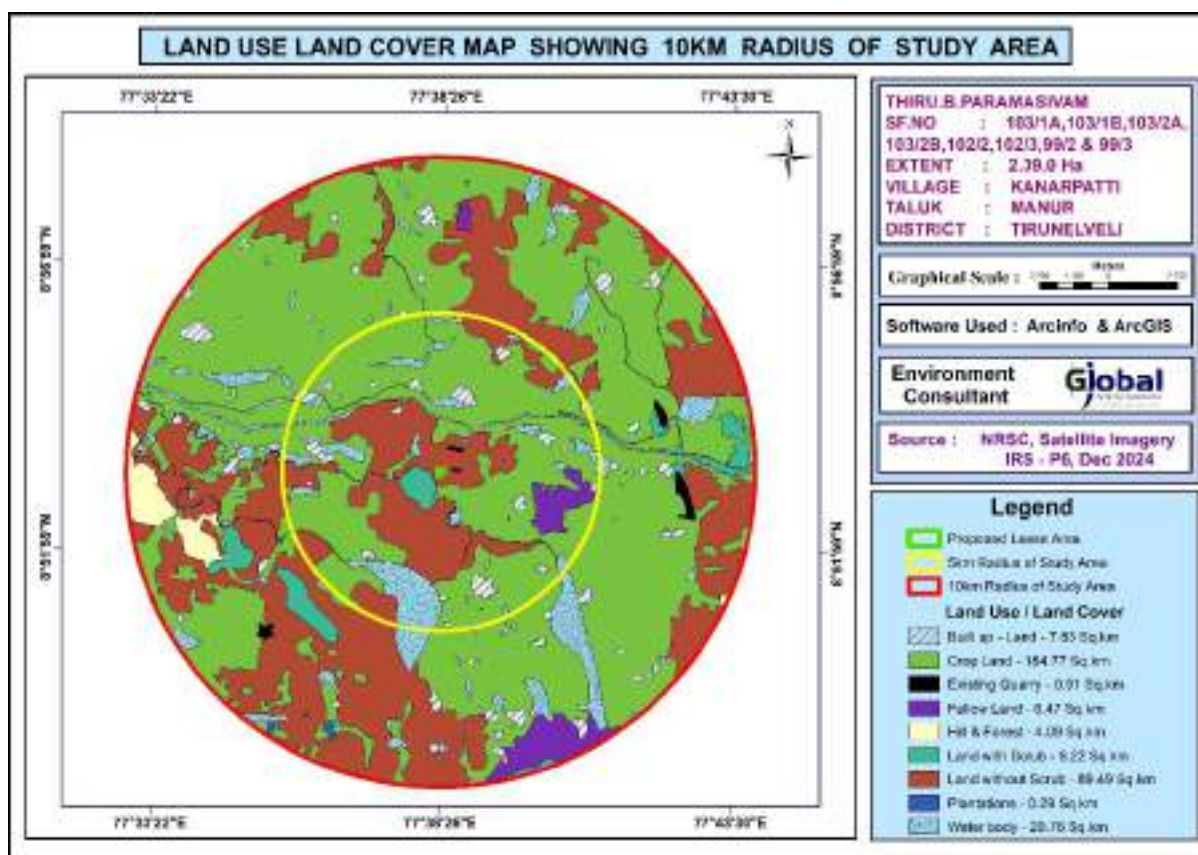


Figure 3.15 Land use map of the study area

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.

Table 3.16 List of Flora

S.NO	Scientific Name	Family	Local Name
GRASS			
1	<i>Arundo donax</i>	Poaceae	Common needle, grass
2	<i>Dendrocalamus strictus</i>	Poaceae	Kalamungil
3	<i>Heteropogon contortus</i>	Poaceae	Oosipullu
TREES			
1	<i>Citrus limon</i>	Rutaceae	Lemon
2	<i>Ficus benghalensis</i>	Moraceae	Krishna Fig, Krishna's
3	<i>Thespesia lampas</i>	Malvaceae	Common mallow, kattupparuthi
4	<i>Musa paradisiaca</i>	Musaceae	Plantain, vazhai
5	<i>Azadirachta indica</i>	Meliaceae	Veppai,
6	<i>Psidium gujava</i>	Myrtaceae	Guava
7	<i>Syzygium cumini</i>	Myrtaceae	Nagai
8	<i>Adina cordifolia</i>	Rubiaceae	Manjakadambu
9	<i>Acacia chundra</i>	Fabaceae	
10	<i>Erythrina indica</i>	Fabaceae	Mullu murungai
11	<i>Euphorbia antiquorum</i>	Euphorbiaceae	Kalli
12	<i>Ailanthus excelsa</i>	Simaroubaceae	Perumaram
13	<i>Pongamia pinnata</i>	Fabaceae	Indian beech, pungam
14	<i>Acacia leucophloea</i>	Mimosaceae	Velvelam
15	<i>Morinda tinctorial</i>	Rubiaceae	Nuna
16	<i>Dalbergia sissoo</i>	Fabaceae	nukkam totakatti
17	<i>Erythrina variegata</i>	Fabaceae	Kalyana murungai
18	<i>Borassus flabellifer</i>	Arecaceae	Palmyra palm
19	<i>Thespesia lampas</i>	Malvaceae	Common mallow, kattupparuthi
20	<i>Lannea coromandelica</i>	Anacardiaceae	Indian Ash Tree, Moya, Wodier
21	<i>Samanea saman</i>	Mimosodeae	Thoongumoonjj maram
22	<i>Prosopis juliflora</i>	Fabaceae	Algaroba, Mesquite
23	<i>Eucalyptus globulus</i>	Myrtaceae	Blue gum
24	<i>Tamarindus indica</i>	Caesalpiniaceae	Puli
25	<i>Dalbergia paniculate</i>	Fabaceae	Porapachalai
26	<i>Cocos nucifera</i>	Arecaceae	Coconut, thennai
27	<i>Delonix regia</i>	Caesalpiniaceae	Flame Tree, Royal Poinciana
28	<i>musa paradisiaca</i>	Musaceae	Plantain, vazhai
29	<i>Albizia lebbeck</i>	Mimosaceae	Siridam
30	<i>Punica granatum</i>	Lythraceae	Pomegranate, mathulai
31	<i>Tectona grandis</i>	Lamiaceae	Teak
32	<i>Acacia ferruginea</i>	Fabaceae	Parambai
HERBS			
1	<i>Datura metal</i>	Solanaceae	Thom, apple

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2	<i>Boerhavia diffusa</i>	Nyctaginaceae	Red hogweed, Tar Vine
3	<i>Zea mays</i>	Poaceae	Maize, Corn
4	<i>Thespesia populnea</i>	Malvaceae	Indian tulip tree poovarasu
5	<i>Agave Americana</i>	Agavaceae	Anaikathalai
6	<i>Vernonia cinerea</i>	Asteraceae	Purplefleabane, mookuthipoondur
7	<i>Parthenium hysterophorus</i>	Asteraceae	Congress grass
8	<i>Amaranthus viridis</i>	Amaranthaceae	kuppai-k-kirai
9	<i>Acalypha indica</i>	Euphorbiaceae	koli-p-puntu, kuppai-meni
10	<i>Chloris dolichostachya</i>	Poaceae	Finger grass, kuruthupillu
11	<i>Vernonia cinerea</i>	Asteraceae	Purplefleabane, mookuthipoondur
12	<i>Ocimum americanum</i>	Lamiaceae	Hoary basil, nai thulasi
13	<i>Abutilon indicum</i>	Malvaceae	Country Mallow, Tutti Herb
14	<i>Tribulus terrestris</i>	Zygophyllaceae	Puncture vine, nerunji
15	<i>Agave angustifolia</i>	Asparagaceae	Caribbean agave
16	<i>Croton saparsiflorus</i>	Euphorbiaceae	Reilpoondur
17	<i>Cynodon dactylon</i>	Poaceae	Bermuda, grass, arugampul
18	<i>Blumea lacera</i>	Asteraceae	Kattumullangi
19	<i>Achchyranthes aspera</i>	Amaranthaceae	Prickly chaff flower
20	<i>Aerva lanata</i>	Amaranthaceae	ciro-pula, ulinai
21	<i>Vinca rosea</i>	Apocynaceae	Nithyakalyani
22	<i>Agave angustifolia</i>	Asparagaceae	Caribbean agave
23	<i>Ocimum sanctum</i>	Lamiaceae	Holy basil, thulasi
24	<i>Amaranthus spinosus</i>	Amaranthaceae	Mullukkeerai
25	<i>Capsicum frutescens</i>	Solanaceae	Tezpur Chilli
26	<i>Agave sisalana Perrine</i>	Agavaceae	Sisal Agave, agave
27	<i>Amaranthus viridis</i>	Amaranthaceae	kuppai-k-kirai
28	<i>Aloe vera</i>	Liliaceae	Kathalai
29	<i>Croton saparsiflorus</i>	Euphorbiaceae	Reilpoondur
30	<i>Thespesia populnea</i>	Malvaceae	Indian tulip tree poovarasu
SHRUBS			
1	<i>Canna indica</i>	Cannaceae	Indian Shot, Wild canna
2	<i>Vitex negundo.</i>	Verbenaceae	Nocchi
3	<i>Tabernaemontana coronaria</i>	Apocynaceae	Nandiyarvattam
4	<i>Cassia auriculata</i>	Fabaceae	Aavarampoo
5	<i>Calotropis gigantea R.Br.</i>	Fabaceae	Tuvarai
6	<i>Lantana camara</i>	Verbenaceae	Unnichi
7	<i>Ricinus communis</i>	Euphorbiaceae	Castor bean plant

8	<i>Carica papaya</i>	Caricaceae	Pappali
9	<i>Jatropha glandulifera</i>	Euphorbiaceae	Kaatuamanakku
10	<i>Gossyplum arboretum</i>	Malvaceae	Cotton, paruthi
11	<i>Solanum trilobatum</i>	Solanaceae	Thoodhuvalai
12	<i>Lawsonia inermis</i>	Lythraceae	Henna, maruthondri
13	<i>Argemone Mexicana</i>	Papaveraceae	Prickly poppy, kudiyotti
14	<i>Solanum torvum</i>	Solanaceae	Sundaikkai
15	<i>Capparis sepiaria</i>	Capparaceae	Karindu
CLIMBERS			
1	<i>Cucurbita pepo</i>	Cucurbitaceae	Parangi
2	<i>Cissus quadrangularis</i>	Vitaceae	Perandai
3	<i>Pergularia daemia</i>	Asclepiadaceae	Uttamani
4	<i>Abrus precatorius</i>	Fabaceae	Coral bead
5	<i>Ipomea hederifolia</i>	Convolvulaceae	Kanavali kkodi

3.7.7.4 LIST OF FAUNA

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

Table 3.17 List of Fauna

S.No	Common name	Scientific name	Family	IUCN / WPA schedule
MAMMALS				
1	Indian Palm squirrel	Funambulus palmarum	Squirrel	IV
2	Hare	Lepus nigricollis	Leporids	IV
3	House rat	Rattus rattus	Murids	IV
4	Mannuli paambu	Eryx 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
REPTILES				
1	Common Garden lizard	Calotes versicolor	Agamid lizards	IV
2	Rough tailed Sand boa	Gongylophis conicus	Boidae	IV
3	Indian Cobra	Naja naja	elapid snakes	II
4	Indian mud turtle	Lissemys punctate	Softshell turtles	IV
5	Common Green Snake	Passerita mycterizaris	Colubrid Snakes	IV
6	Common rat snake	Ptyas mucosus	Colubrid Snakes	II
BIRDS				
1	Grey Partridge	Francolinus pondicerianus	Phasianidae	IV
2	Indian Ring Dove	Streptopelia decaocto	Pigeons and doves	IV

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3	Red collared dove	Streptopelia tranquebarica	Pigeons and doves	IV
4	Astur badius	Shikra	Accipitridae	IV
5	Black Drongo	Dicrurus macrocerus	Drongos	IV
6	House Sparrow	Passer domesticus	Sparrow	IV
7	Weaver bird	Ploceus Philippines	Ploceidae	IV
8	Rose Ringed Parakeet	Psittacula krameria	Parrots	IV
9	Little egret	Egretta garzetta	Heron	IV
10	Redvented BulBul	Pycnonotus cafer	Bulbul	IV
FISH				
1	Common carp	Cyprinus earpio	Minnows and Carps	IV
2	Tilapia	Oreochromis mossambicus	Cichlid	IV
3	Carplet	Amblypharyngodon Sp	Cyprinidae	IV
4	Trout	Chela sp	-	IV
5	Punctatus	Ophiocephalus	Snakehead	IV

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

3.7.8 HYDROGEOLOGY OF THE STUDY AREA

Chittar River is situated at a distance of 1.60 km in north direction. The area is studded with few tanks that serve as the source for agriculture and also their surplus feeds adjoining tanks. A detailed hydrogeological study will be incorporated in the Final EIA/EMP report.

The quarrying activity will not intersect ground water table as quarrying is proposed upto a depth of 47 m bgl and water table is found at a depth of 65 - 68 m BGL.

The groundwater exploration in the district down to a depth of 200m bgl has revealed that in the western part of the district potential fractures are encountered beyond 100m bgl while in the rest of the area, potential fractures are restricted to

100m bgl. The yield of the wells varies from 1 to 3.6 lps. In general, the wells drilled by various State agencies mainly for domestic purposes have yield in the range of 63 to 270 lpm.

The depth to water level in the district varied between 1.19 to 13.35 m bgl during pre- monsoon depth to water level (May 2006) and varied between 0.18 to 7.97 m bgl during post monsoon depth to water level (Jan 2007). The seasonal fluctuation shows a fall in water level, which ranges from -0.12 to -2.14 m bgl, and rise in water level, which ranges from 0.33 to 11.24 m bgl. The piezometric head varied between 1.72 to 13.65 m bgl (May 2006) during pre monsoon and 0.47 to 13.25 m bgl during post monsoon.

TOPOGRAPHY

The area applied for quarry lease is exhibits almost plain topography covered by Gravel formation. The massive Charnockite formation is noticed below 2.0 m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 104 m (maximum) from MSL.

3.7.9 DRAINAGE PATTERN OF THE AREA

Chittar River is 1.60 km to the north. There is a canal 140 m to the southwest, a seasonal odai 550 m to the north, and a tank 755 m to the northwest. The drainage map of the study area is given in Figure 3.16.

3.7.10 GEOMORPHOLOGY

Predominantly the buffer zone is dominated by Shallow weathered buried Pediplain, and the lease area falls under the same category. Geomorphology of the study area is detailed below. The geomorphology of the study area is given in Figure 3.18.

Sl.No	GEOMORPHOLOGY	Area in Sq.Km	Area in Percentage
1	Deeply weathered buried pediplain	0.43	0.13
2	Moderately weathered buried pediplain	27.22	8.51
3	Pediment – Inselberg Complex	38.66	12.08
4	Residual Hills	0.72	0.23

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5	Shallow weathered buried Pediplain	251.41	78.63
6	Structural Hills	1.34	0.42
	Total Area	319.78	100.00

3.7.11 GEOLOGY

The regional geology of the study area is shown below in Figure 3.17. Predominantly the buffer zone is dominated by Hornblende biotite gneiss, and the lease area falls under the same category. The geology of the study area is detailed below.

Sl.No.	GEOLOGY	Area in Sq.Km	Area in Percentage
1	Calc Granulite & limestone	1.97	0.61
2	Charnockite	1.96	0.61
3	Hornblende biotite gneiss	297.21	92.64
4	Quartzite	18.07	5.63
5	Silt, Clay, Kankar % Sand	1.61	0.50
	Total Area	320.82	100.00

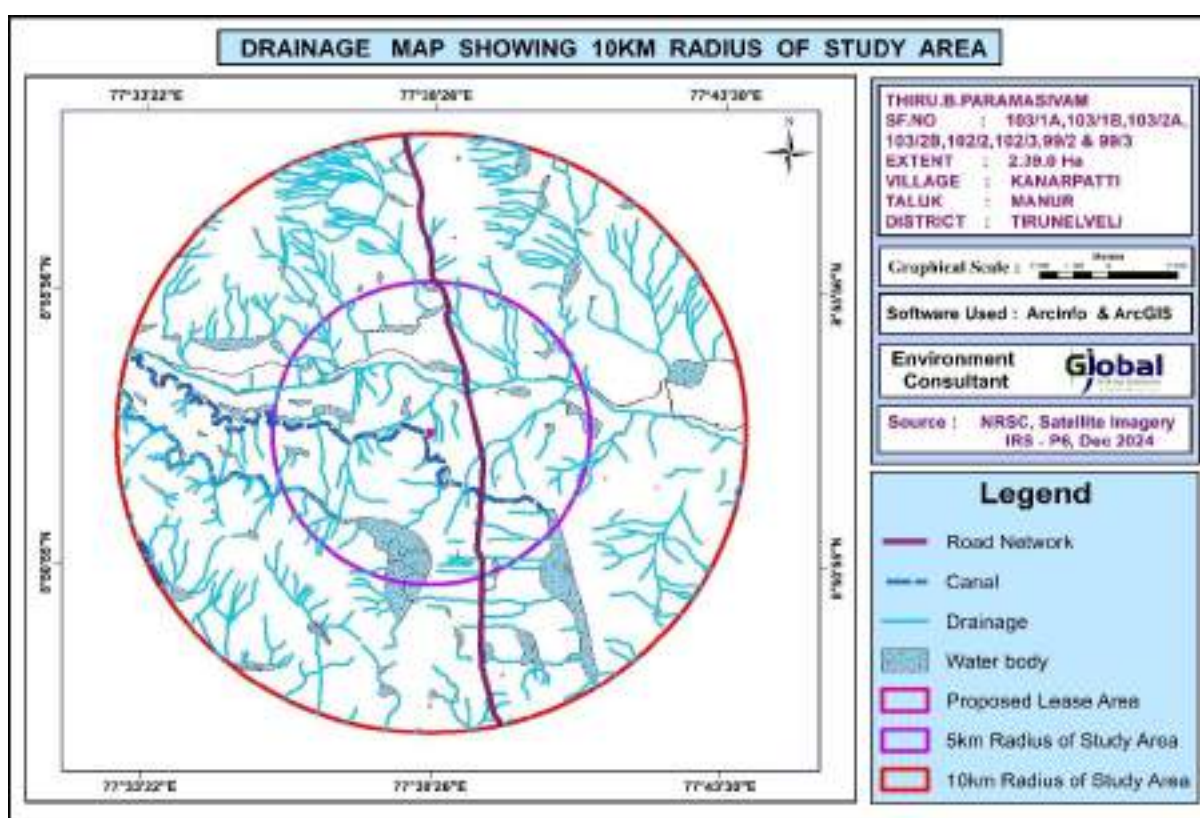


Figure 3.16 Drainage map of the study area

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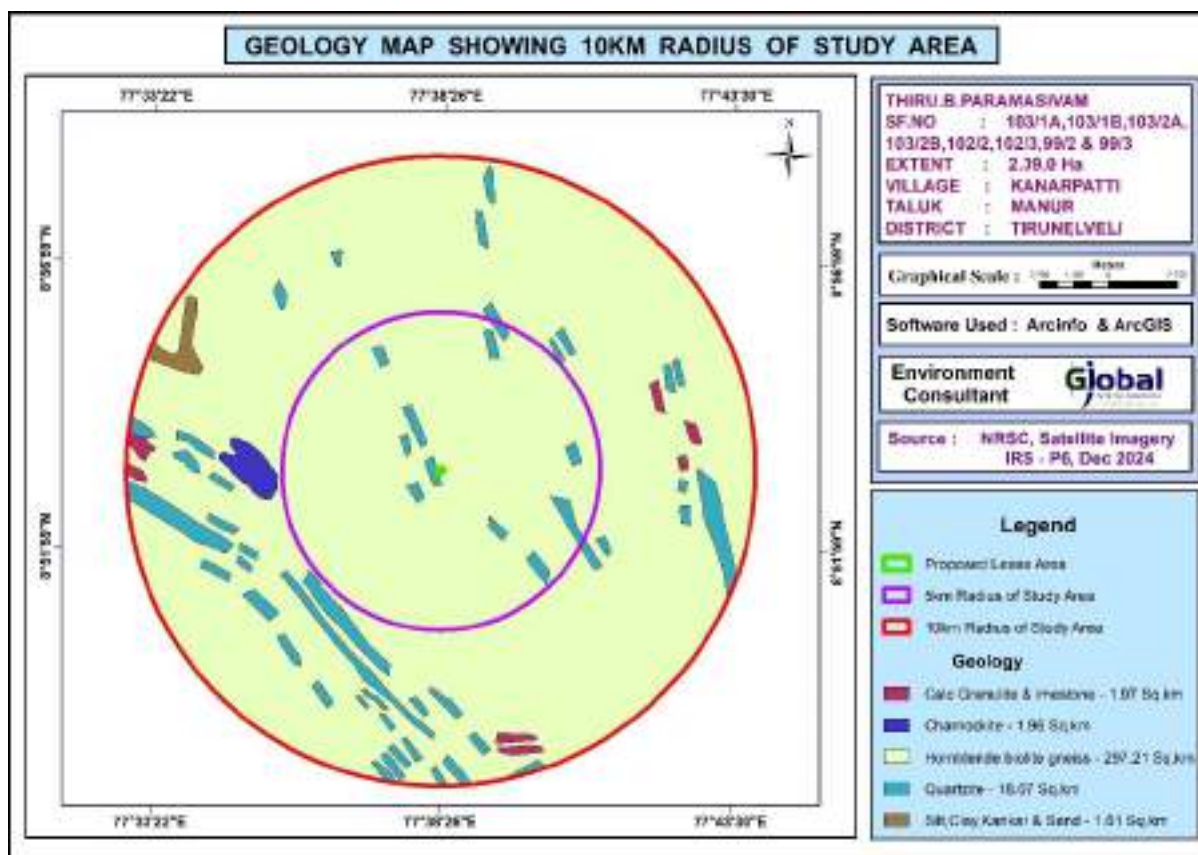


Figure 3.17 Geology map of the study area

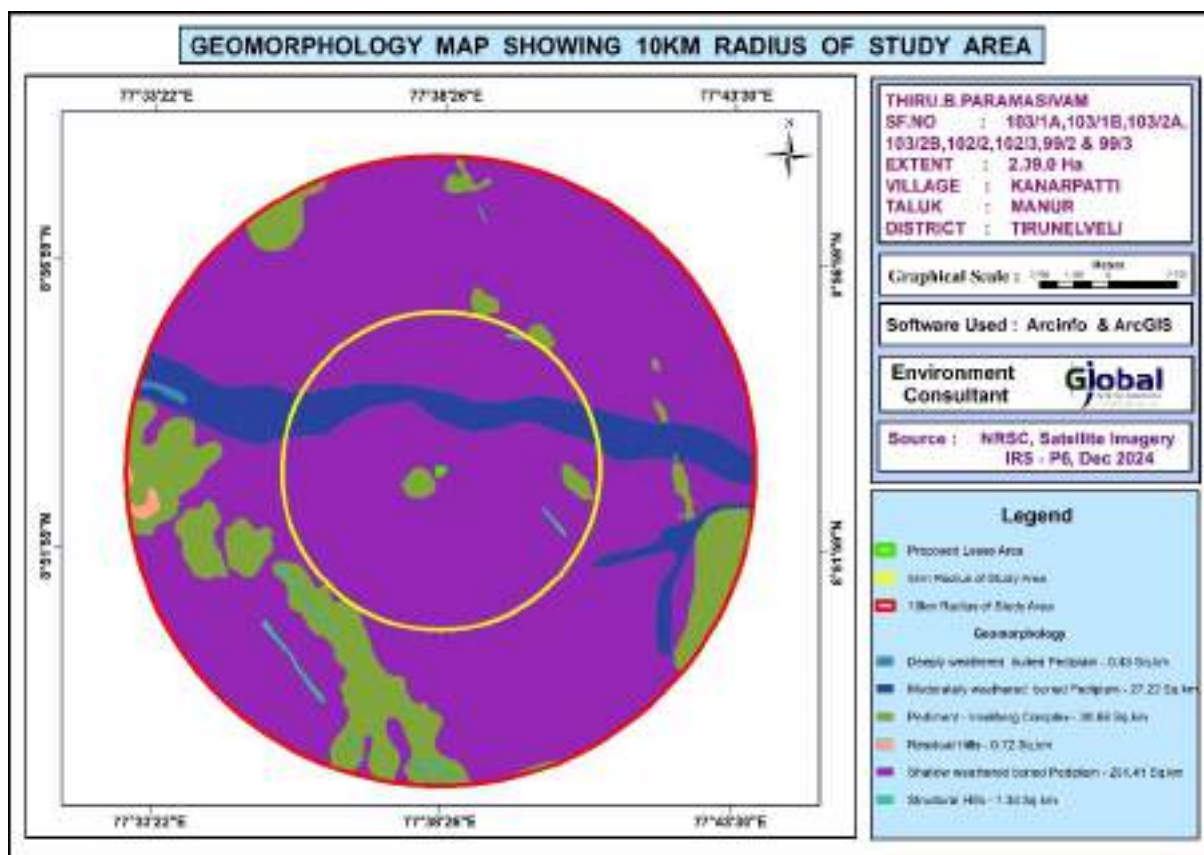


Figure 3.18 Geomorphology map of the study area

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

There are 29 villages in the study area and its demographic details are given in table 3.18 and village map is given in Figure 3.19.

Basic Amenities

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

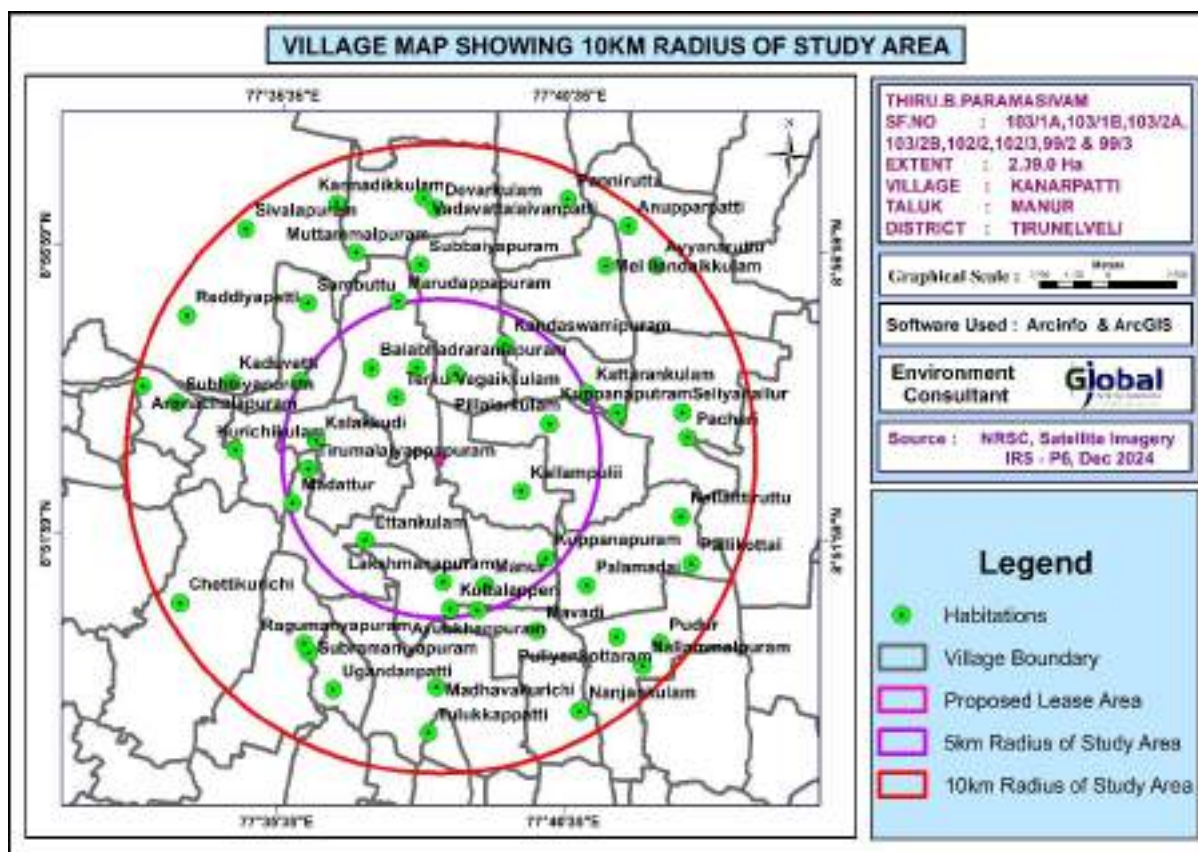


Figure 3.19 Village Map of the Study Area

Table 3.18 - Population profile of the study area

Population profile of the study area		
Particulars	No of Population	Percentage (%)
A. Population break-up by Gender		
Male Population	34473	48.98
Female Population	35896	51.02
Total	70369	100
B. Population break-up by Caste		
Scheduled Caste	24178	34.35
Scheduled Tribes	12	0.01
Others	46179	65.64
Total	70369	100
C. Literacy Level		
Total Literate Population	45598	64.79
Total Illiterate Population	24771	35.21
Total	70369	100

D. Occupational structure		
Main workers	30771	43.72
Marginal workers	6790	9.64
Total Workers	37561	53.37
Total Non-workers	32808	46.63
Total	70369	100

The above table shows that the male and female population ratio are almost equal. Among the total population 0.01 % belong to Scheduled Tribes, 34.35 % are Scheduled Caste and the balance 65.64 % people belong to other castes. Among the total population, 64.79 % of the people are literate. The results are plotted in figures below.

Table 3.19 Population profile – Kanarpatti Village		
Particulars	No of Population	Percentage (%)
A. Population break-up by Gender		
Male Population	967	48.78
Female Population	1015	51.22
Total	1982	100
B. Population break-up by Caste		
Scheduled Caste	187	9.43
Scheduled Tribes	0	0
Others	1795	90.57
Total	1982	100
C. Literacy Level		
Total Literate Population	1498	75.58
Total Illiterate population	484	24.42
Total	1982	100
D. Occupational structure		
Main workers	1047	52.82
Marginal workers	40	2.01
Total Workers	1087	54.84
Total Non-workers	895	45.16
Total	1982	100

The above table shows that the male and female population ratio are almost equal. Among the total population 0 % belong to Scheduled Tribes, 9.43 % are Scheduled Caste and the balance 90.57 % people belong to other castes. Among the total population, 75.58 % of the people are literate.

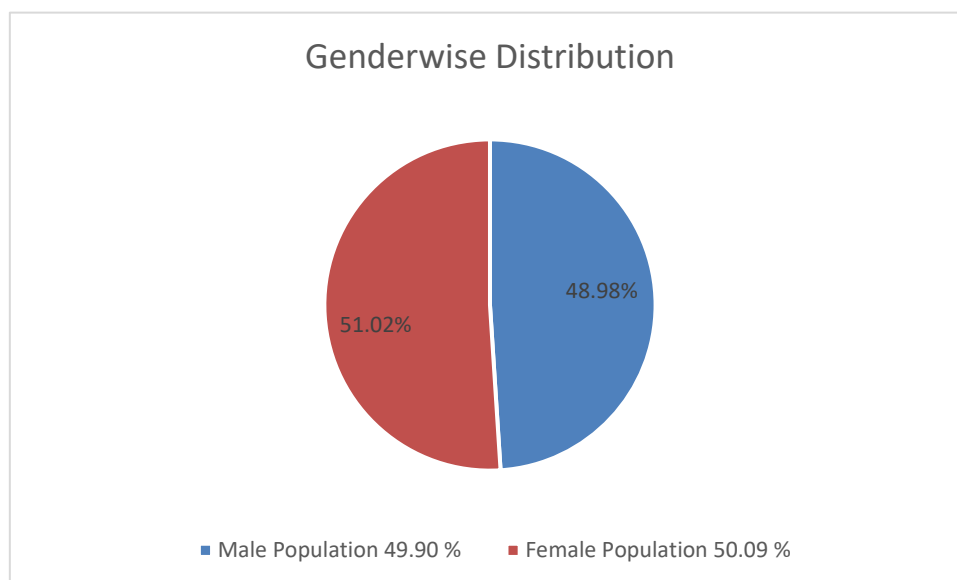


FIG 3.20 GENDER-WISE POPULATION DISTRIBUTION

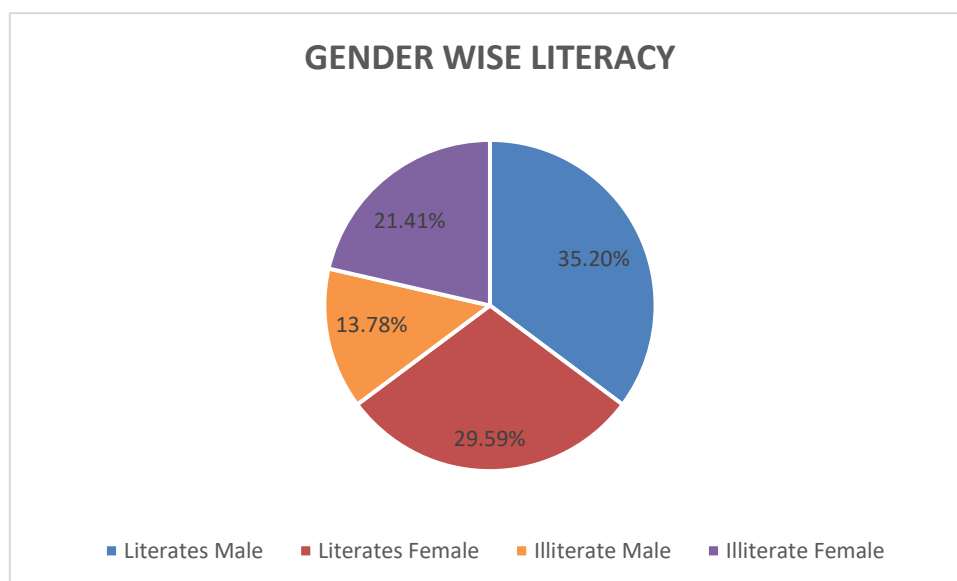


FIG 3.21 GENDER WISE LITERACY DISTRIBUTION

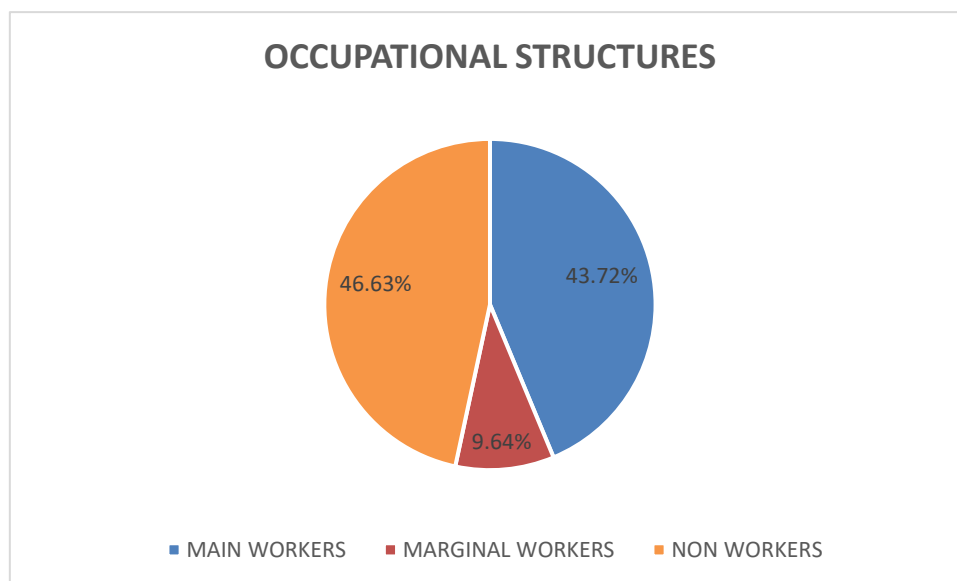


FIG 3.22 OCCUPATIONAL STRUCTURE WITHIN BUFFER ZONE

4.0 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.1 GENERAL

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

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

4.2 PROJECT SPECIFIC IMPACTS AND MITIGATION MEASURES

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

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

- Land environment
- Soil environment

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

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

4.2.1 LAND ENVIRONMENT

4.2.1.1 ANTICIPATED IMPACT

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

The entire mine lease area of 2.39.00 Ha. is Patta land. The project area of 2.39.00 Ha is proposed to be altered by effective quarrying operation such as excavation (1.86.0 Ha), Infrastructure (0.01 Ha), Road (0.01 Ha) and greenbelt (0.51.0 Ha). The ultimate depth of quarrying is proposed by formation of 1 pit with maximum depth of 47 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

Description	Present Area in Ha.	Area at the end of life of Quarry in Ha.
Quarrying pit	NIL	1.86.0
Infrastructure	NIL	0.01.0
Roads	NIL	0.01.0
Greenbelt	NIL	0.51.0
Unutilized	2.39.0	NIL
Total	2.39.0	2.39.0

- Change in topography of the mine lease area will change at the end of the life of the mine.
- At the end of life of mine, the excavated mine pit / void of 1.86.00 Ha. will act as artificial reservoir for collecting rain water and helps to meet out the demand or crises during drought season.
- After mine closure the greenbelt (0.51.0 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 provided to the adjoining patta) so as to help minimize dust emissions.

4.2.2 SOIL ENVIRONMENT

4.2.2.1 ANTICIPATED IMPACT

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

4.2.2.2 MITIGATION MEASURES FOR SOIL EROSION AND SOIL CONSERVATION

- Runoff water will be collected in bottom of the quarry and used for plantation and dust suppression during dry season. no run off water will be discharged beyond lease area.
- Wet drilling and haul road water sprinkling will be carried out to minimise air born dust at source level, which may cause soil pollution due to sedimentation.
- Garland drains will be constructed around the project area with silt traps to control the soil erosion during rainy seasons.
- Greenbelt development (0.51.0 Ha.) all along the periphery of the project area (i.e., 7.5 m safety barrier) will ensure binding strength and minimizes soil erosion.
- Soil sampling will be carried out in the core zone for every season to ensure the soil quality is not affected due to the quarrying activities.

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

4.2.3 WATER ENVIRONMENT

4.2.3.1 ANTICIPATED IMPACT ON SURFACE AND GROUND WATER

The impact due to quarrying on the water quality is expected to be insignificant because of no use of chemicals or hazardous substances during quarrying process. The quarrying activity will not intersect ground water table as quarrying is proposed upto a depth of 47m bgl and water table is found at a depth of 65 - 68 m BGL.

Chittar River is 1.60 km to the north. There is a canal 140 m to the southwest, a seasonal odai 550 m to the north, and a tank 755 m to the northwest. The drainage map of the study area is given in Figure 3.16. 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 6.0 KLD comprising Drinking and domestic 2.4 KLD, Dust suppression 1.6 KLD and Greenbelt 2.0 KLD. The water will be sourced initially from outside agencies. Later the rainwater collected in the mine pit sump will be used for this purpose. The water balance diagram for the same is shown in Figure No 4.1.

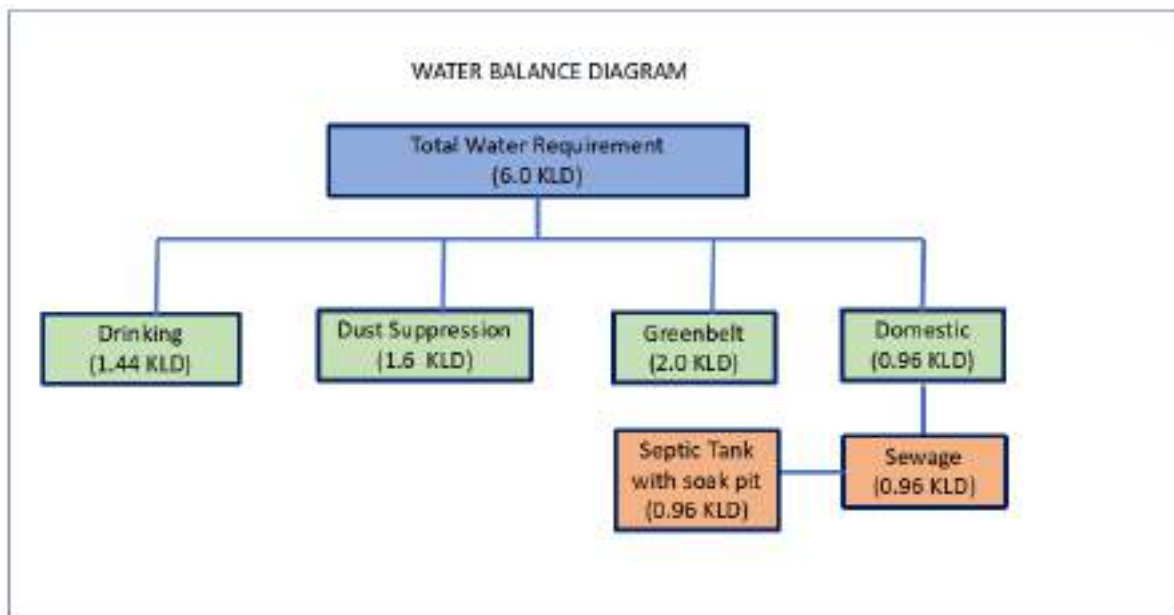


Figure 4.1 Water Balance Diagram

4.2.3.3 MITIGATION MEASURES

The following mitigation measures are suggested for water management

- Rainwater will be collected in lower part of the quarry pit by construction of garland drains to divert surface run-off and will be connected to settling tank 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 941 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	Total Mine Lease Area	23900	0.94	7863
Total Harvested Rainfall				7863

Total surface water runoff is 7863 Cum per Annum. 10% of this amount will be evaporated and rest 7077 m³ will be recharged in the rain water harvesting pit.

Two sumps will be proposed to harvest rain water and each sump capacity will be 4000 Cu.m. The rain water stored in the pond will be utilized for plantation, dust suppression activities. The capacity of Rain water harvesting post will be sufficient to arrest the surface runoff from the lease area considering the highest amount of rain fall.

4.2.4 AIR ENVIRONMENT

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

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

4.2.4.1 ANTICIPATED IMPACT

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

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

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

4.2.4.2 MITIGATION MEASURES

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

Table 4.3 Mitigative Measures for Air Environment

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

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			Vehicular emissions will be controlled through regular and proper preventive maintenance only PUC valid vehicles will be used for transportation.
5	Greenbelt	Dust emission, Gaseous Emission	Development of greenbelt / barriers around mine in the safety zone and carrying out plantation within the lease area.
6	Occupation Health	Dust emanation, Gaseous Emission	Dust mask will be provided to the workers and their use will be strictly monitored
			Annual medical checkups, trainings and campaigns will be arranged to ensure awareness about importance of wearing dust masks among all mine workers & tipper drivers
			Ambient Air Quality Monitoring will be conducted six months once to assess effectiveness of mitigation measures proposed.

4.2.4.3 AIR QUALITY IMPACT PREDICTION

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

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

ARRIVING EMISSION FACTOR

Emission factor for PM₁₀ for different activities are given below.

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

Source

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

EMISSIONS FROM THE PROPOSED PROJECT

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

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

MODEL INPUT DATA:

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

EMISSION ESTIMATION

The emission estimations for the activities are detailed below.

Table 4.7 - Area Emissions – Total Material handling

Quantity, TPA	Rough Stone: 3,92,550 m ³ of (Five Years) & Gravel: 37, 988 m ³ (First Five Years)
Operational Hours Per Year	2400
Activity Rate, t/hr.	390.142
Emission of dust, g/t.	0.17
Emission of dust, g /hr.	52.14371
Area of influence, m ²	620
Uncontrolled emission rate g/s/m ²	0.000062719
Controlled emission rate, PM10 g/s/m ²	0.000006271

Controlled emission rate, PM2.5 g/s/m ²	0.0000041813

Table 4.8 - Line Source – Transport of Rough Stone from Pit to Boundary

Quantity, TPA	Rough Stone: 3,92,550 m ³ of (Five Years) & Gravel: 37, 988 m ³ (Five Years)
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	31390
Lead length/trip, Km	0.15
Total VKT/Year	60231
Emission Kg/VKT	0.22
Total emission Kg/Year	13415.45
Uncontrolled emission rate g/s/m	3.76319
Controlled emission rate, PM10 g/s/m	0.376319
Controlled emission rate, PM2.5 g/s/m	0.104533

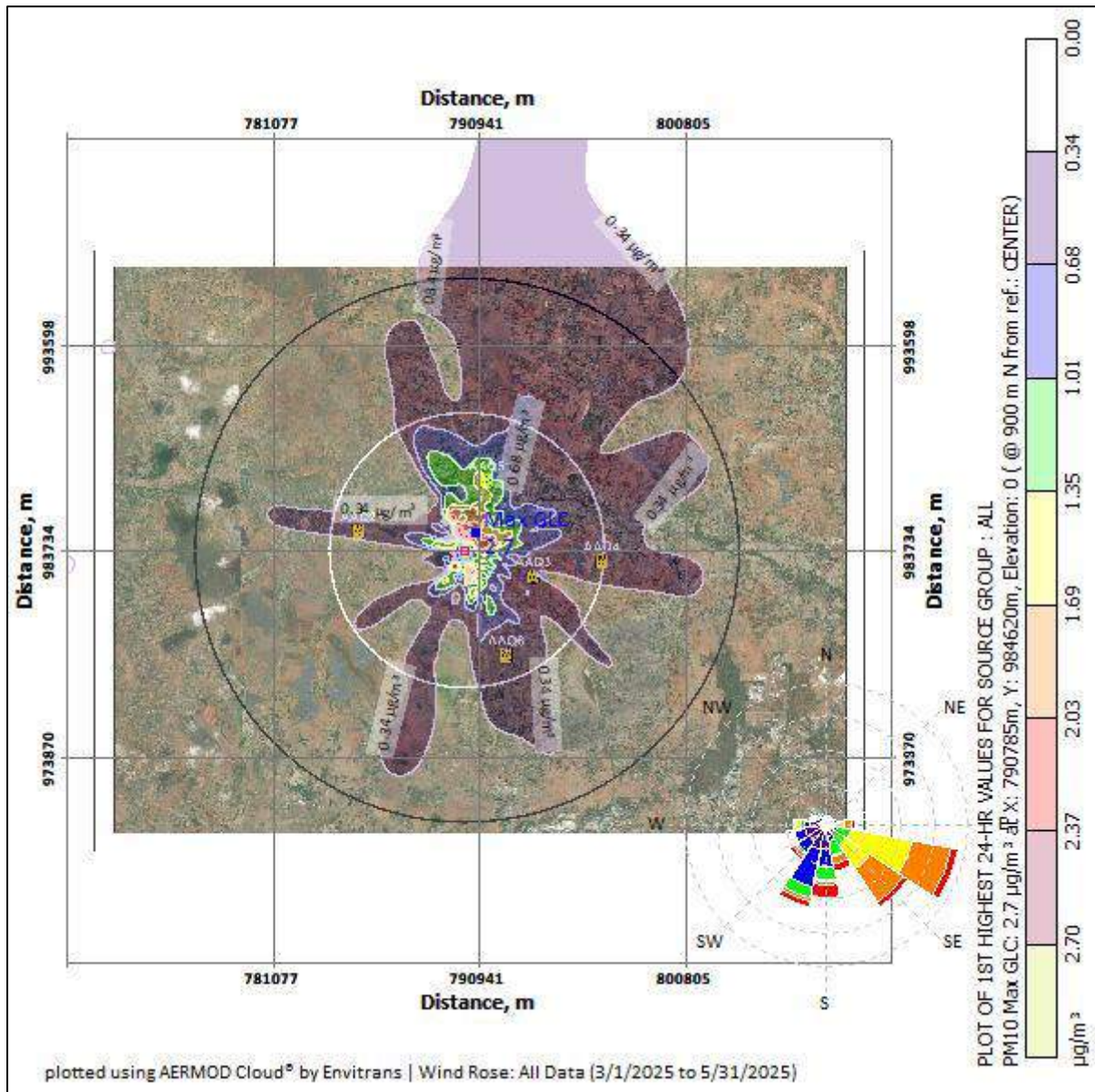


Figure 4.3 - Isoleth of GLC Prediction for PM10

PREDICTED AMBIENT AIR QUALITY:

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

Table4.9: Concentrations of PM_{2.5} after Project Implementation					
SL.No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	A1-Mine Lease Area	32.6	1.72	34.32	60
2	A2- Kalakudi	28.5	1.51	30.01	
3	A3- Kanarpatti	26.6	1.29	27.89	
4	A4- South Sezhilanallur	25.3	1.08	26.38	
5	A5- Alagiapandiapuram	34.0	<1.0	35.0	
6	A6 - Manur	31.5	<1.0	32.50	

Table4.10: Concentrations of PM₁₀ after Project Implementation					
SL.No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	A1-Mine Lease Area	74.1	2.70	76.80	100
2	A2- Kalakudi	63.3	2.37	65.67	
3	A3- Kanarpatti	57.3	2.03	59.33	
4	A4- South Sezhilanallur	54.9	1.69	56.59	
5	A5- Alagiapandiapuram	74	1.35	75.35	
6	A6 - Manur	65.6	1.01	66.61	

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 56.59 µg/m³ to 76.80 µg/m³ and for PM_{2.5} are in the range of 26.38 µg/m³ to 35.0 µg/m³ which are within the statutory limits in each case. The mitigation measures undertaken in the mine for control of air pollution are given below.

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

4.4.4 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 4.11 - 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;
- Secondary blasting will be totally avoided and hydraulic rock breaker are utilized for breaking boulders;
- Controlled blasting with proper spacing, burden, stemming and optimum charge/delay will reduce noise;

- The blasting will be carried out during favourable atmospheric condition and less human activity timings by using nonelectrical initiation system;
- Proper maintenance, oiling and greasing of machines will be done every week to reduce generation of noise;
- Provision of sound insulated chambers for the workers working on machines (HEMM) producing higher levels of noise;
- Green Belt will be developed around the project areas and along the haul roads. The plantation minimizes propagation of noise;
- Personal Protective Equipment (PPE) like ear muffs/ear plugs will be provided to the operators of HEMM and persons working near HEMM and their use will be ensured through training and awareness.
- Regular medical check-up and proper training to personnel to create awareness about adverse noise level effects

4.4.4.5 GROUND VIBRATION

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

Mitigative Measures

- Proper quantity of explosive, suitable stemming materials and appropriate delay system should be adopted to avoid overcharging and for safe blasting;
- Adequate safe distance from blasting should be maintained as per DGMS guidelines;
- Blasting shelter should be provided as per DGMS guidelines;
- Blasting operations shall be carried out only during day time;
- The charge per delay shall be minimized and preferably more number of delays will be used per blasts;
- During blasting, other activities in the immediate vicinity shall be temporarily stopped;

- Drilling parameters like depth, diameter and spacing will be properly designed to give proper blast;
- Blasting will be carried out under the supervision of statutory persons as approved by DGMS.
- A well-defined SOP will be framed under the leadership of top management and the same will be followed for each blasting.
- Regular PPV monitoring will be carried out to ensure PPV limits i.e., 0.5 mm/s.

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. 12 Ecological Impact Assessments and Its Mitigations -Part 1

S.NO	Issues	Assessment	Mitigations
1	Proximity to national park/ wildlife sanctuary / reserve forest / mangroves / coastline/estuary/se a	There is no reserve forest within 1 km radius. The R.F. in 10 km radius are given below, Kavalkutti Parambai R.F – 7.15km (SW), Kottamalai R.F – 8.50 km (SW), Uthumalai R.F – 9.80 km (NW), Thalaiyuthu R.F – 9.75 km (SE). The proposed project does not attract Forest Conservation Act, 1980. There is no wild life sanctuaries found around 10km radius and the area does not attract Wildlife Protection Act, 1972 and C.R.Z. Notification, 1991.	The fugitive dust generated by the mining activity will be suppressed by frequent sprinkling of water based on evaporation rate in the site specific.
2	Activities of the project	No breeding and nesting site was identified in mining lease	The noise due to the

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

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12	Forestland is to be diverted, has carbon high sequestration	„NO“. There is no forest land within the lease area.	NIL
13	The project likely to affect wetlands, fish breeding grounds, marine ecology	‘NO“. No wetland, fish breeding grounds, marine ecology present in core mining area.	NIL

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

Table 4.13 Ecological Impact Assessments and Its Mitigations -Part 2

Identified Impacts	Ecological Significance of impact	Magnitude	Phase / duration	Reversibility	Mitigation
Project site Habitat due to Site Clearance.	There are no trees in the core zone. The Mining activity will be carried within the lease area. No clearance of vegetation in the buffer zone	Low impact	Planning stage	Irreversible	The quarried-out pit will be used as water storage pond which increases agricultural activity in the buffer zone.
Impact on Surrounding habitat due to fugitive emission	The fugitive emission due to the mining activities such as drilling, blasting, loading and transportation on the haul road will be deposited on the flora and crop field in the buffer zone which affects growth and its productivity.	Temporary Impact	Operational stage	Reversible	The sprinkling of water over the haul road will be done. Then completely wet drilling will be take place. The transportation vehicles will be maintained and serviced Properly.
road construction	No Road construction is required to assess the project site. The existing internal Road connects the project site to the existing SH and NH	No Impact	-	-	-
Ecological Impact on Surrounding/ Eco sensitive habitat due to waste water generated from the project activity.	Since the proposed project is a mining activity no waste water generation is expected. Sewage will be generated due to the workers	No impact	-	-	-
Ecological Impact on Surrounding / Eco sensitive habitat due to Noise generated	During drilling or blasting, transportation of rough stone, noise will be generated and it may slightly affect the movement of fauna around the lease area.	Temporary impact	Only during drilling, blasting operation and	NO	Avenue trees will be planted along the lease area to minimize the noise level. Milli second detonators shall be used preferably 25-50ms per delay to control vibrations. Regular maintenance of

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from the project activity.			transportation period. (5 years)		vehicles and driving the tipper within specified limits also control the noise generations.
Ecological Impact on Surrounding/ Eco sensitive habitat due to Transportation	There is no eco sensitive habitat found around the lease area. The fugitive emission from drilling, blasting, vehicle movement will form layer in leaves thus reducing the gaseous exchange process. This ultimately affects the growth of plants. The animals like dog, cattle may get accident due to truck movement.	Temporary impact	During Operation Phase	NO	The truck driver will be advised to drive the vehicle within 20km/hr inside the lease area and 40km/hr outside the lease area. The sprinkling of water over the haul road will be done. Then completely wet drilling will be take place.

4.4.5.3 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 469 kg per day, 1,88,996 kg per year and 8,58,594 kg over five years, as provided in below Table.

Description	Per Day	Per year	For Five Years
Total fuel consumption in liters	175	64,074	3,20,371
Co ₂ emission in kg	469	1,88,996	8,58,594

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 – 4.14 GREENBELT DEVELOPMENT PLAN

Year	No. of trees proposed to be planted	Survival %	Name of the Species	No. of trees expected to be grown
I	510	80%	Neem, Casuarina, Pongamia pinnata, etc.,	408
II				
III				
IV				
V				

Nearly 0.51 Ha. of area is proposed for Greenbelt development by planting 510 Nos of trees and expected growth is around 408 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 30 persons directly and indirect basis through allied opportunities in logistics, trading, repairing works etc. good employment potential will arise, which will provide raising income levels and standards of living in the area through various service related activities connected with the project operations as shown under.

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

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

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

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

4.4.7 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 like blasting, loading, etc. are planned to be executed safely and with all precautionary measures as prescribed in Metalliferous Mines Regulations of 1961, so as to minimize hazards and incidences of health problems.

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

- Respiratory hazards
- Noise
- Explosive storage and handling

Respiratory Hazards

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

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

Noise

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

The following measures are proposed for implementation

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

Occupational Health Survey

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

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

The PP will establish first aid station within project site.

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

4.4.8 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 0.96 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.

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.

6 ENVIRONMENTAL MONITORING PROGRAMME

6.1 GENERAL

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

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

6.2 MONITORING MECHANISM

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

6.3 ENVIRONMENTAL MONITORING SCHEDULE AND FREQUENCY

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

modified / improved in consultation with local authorities. Monitoring may include socio-economic interaction, through local liaison activities or even assessment of complaints. The monitoring schedules to be adopted in this quarry are given below.

Table 6.1 Environmental Monitoring Schedule

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

6.4 BUDGET FOR IMPLEMENTAION

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

EMP COST (FOR 5 YEARS) in Lakhs		
Mitigation Measures	Capital cost	Recurring Cost /Annum
Air Environment	5.90	1.26

Noise Environment	0.30	0.02
Waste Management	0.25	0.12
Mine Closure	0.51	0.10
Implementation of EC, Mining Plan & DGMS Condition	0.79	0.75
Total	7.75	2.25
The total EMP Cost of 20.19 Lakhs for a period of five years have been proposed. i.e., Capital cost of Rs. 7.75 Lakhs + Recurring cost of Rs. 12.44 lakhs (@ 5% Escalation).		

The breakdown of EMP costs is detailed in Table 10.2 of Chapter 10, and this EMP cost includes environmental monitoring.

6.5 SUBMISSION OF PERIODICAL REPORTS

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

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

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

7 ADDITIONAL STUDIES

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

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

7.1 PUBLIC CONSULTATION

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

7.2 RISK ASSESSMENT

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

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

Table 7.1 Risk Assessment and Control Measures

S. N O	Risk Factor	Causes of risk	Control Measures
1	Accidents due to explosives and heavy mining machineries	Improper handling and unsafe working practice	All safety precautions and provisions of Mine Act, 1952, Metalliferous Mines Regulation, 1961 and Mines Rules, 1955 will be strictly followed during all mining operations. Entry of unauthorized persons will be prohibited. Fire-fighting and first-aid provisions in the mine office complex and mining area. Provisions of all the safety appliances such as safety boot, helmets, goggles etc. will be made available to the employees and regular check for their use. Quarry operation will be done as per approved mining plan and other applicable statutory guidelines issued by DGMS, Dept. of Mining & Geology-TamilNadu. Handling of explosives, charging and firing shall be carried out under competent statutory persons. A comprehensive standard operating procedure (SOP) will be prepared as per DGMS guidelines and the same will be circulated to all the employees and it will be strictly followed in the all face of mining operation.
2	Drilling	Improper and unsafe practices. Due to high pressure of compressed air, hoses may burst. Drill Rod may break.	Safe operating procedure established for drilling (SOP) will be strictly followed. Only trained operators will be deployed. No drilling shall be commenced in an area where shots have been fired until the blaster/blasting foreman has made a thorough Examination of all places. Drilling shall not be carried on simultaneously on the benches at places directly one above the other. Periodical preventive maintenance and replacement of worn-out accessories in the compressor and drill equipment as per operator manual. Drills unit shall be provided with wet drilling to ensure efficient working.
3	Blasting	Fly rock, ground vibration, Noise and dust. Improper charging, stemming & Blasting/ fining of blast holes.	Restrict maximum charge per delay as per approved mining plan. Proper blasting design with optimum spacing & burden, Charge per delay and stemming. SOP for Charging, Stemming & Blasting/Firing of Blast Holes will be followed by blasting crew during initial stage of operation. Shots are fired during day time only. Charging and firing shall be carried out in the same day. Siren will be done for each blasting. Blasting evacuation plan prepared and executed. The danger zone will be distinctly demarcated (by means of red flags).

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		Vibration due to movement of vehicles.	
5	Transportation	Potential hazards and unsafe workings contributing to accident and injuries. Overloading of material. While reversal & overtaking of vehicle. Operator of truck leaving his cabin when it is loaded.	Before commencing work, drivers personally check the dumper/truck/tipper for oil(s), fuel and water levels, tyre inflation, general cleanliness and inspect the brakes, steering system, warning devices including automatically operated audio-visual reversing alarm, rear view mirrors, side indicator lights etc., are in good condition. Unauthorized person will not be allowed to operate or ride on the vehicle. Loading according to the vehicle capacity. Periodical maintenance of vehicles as per operator manual.
6	Natural calamities	Unexpected happenings	An emergency management plan will be prepared considering all possible national calamity and the same will be executed if any such situation occurs. Escape Routes will be provided to prevent inundation of storm water. Fire Extinguishers & Sand Buckets in the designated areas.
7	Failure of Mine Benches and Pit Slope	Slope geometry, Geological structure	Ultimate or over all pit slope shall be below 60° and each bench height shall be 5m height.

7.3 DISASTER MANAGEMENT PLAN

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

7.3.1 MODEL DISASTER MANAGEMENT PLAN

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

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

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

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

- Training and refresher courses for all the employees working in hazardous premises. Working of mine, as per approved plans and regularly updating the mine plans.
- Handling of explosives, charging and blasting are carried out only by qualified persons following SOP.
- Checking and regular maintenance of garland drains and earthen bunds to avoid any inflow of surface water in the mine pit.
- Provision of high-capacity standby pumps with generator sets with enough quantity of diesel for emergency pumping especially during monsoon.
- A blasting SIREN is used at the time of blasting for audio signal.
- Before blasting and after blasting, red and green flags are displayed as visual signals. Warning notice boards indicating the time of blasting and NOT TO TRESPASS are displayed at prominent places.
- Regular maintenance and testing of all mining equipment were carried out as per manufacturer's guidelines.

7.3.2 OBJECTIVE OF DISASTER MANAGEMENT PLAN

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

Communication System

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

Facilities

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

Personnel

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

Operating Procedures

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

7.4 CUMULATIVE IMPACT STUDY

There are two existing Quarries 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, Tirunelveli stating the quarries detail within 500m radius is enclosed in Annexure – 4.

Table 7.2 Details of Quarries within 500m radius

S.No	Name of the Quarry Owner	S.F. Nos & Village	Lease Period	Area
Abandoned Quarry				
1.	Arulraj, S/o. Asaiah, Kanarpatti South, Manu Taluk, Tirunelveli District.	Kanarpatti Village, S.F.Nos. 97/1, 97/2 & 97/3.	29.09.2014 to 28.09.2019	2.68.00
2.	Thiru. A.Kanagaraj, S/o. Arumugam, 66, East Street, Notchikulam, Krishnapuram, Palayamkottai Taluk, Tirunelveli District.	Kanarpatti Village, S.F. Nos. 66/3 & 67/1.	10.06.2016 to 09.06.2021.	1.42.00
3	Thiru. M.Maridurai, S/o. Maruthappandian, 3/189, A.Maruthappapuram, Nettur Post, Alankulam Taluk, Tenkasi District.	Kanarpatti Village, S.F. No. 62	24.08.2016 to 23.08.2021	1.29.00
4	Thiru. Antonyraj, S/o. Kalimuthu, 5/60A, Vedakovil Street, Azhagiapandiapuram, Manur Taluk, Tirunelveli District.	Vagaikulam Village S.F. Nos. 493/2 & 493/3	20.08.2007 to 19.08.2012	2.06.50

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5.	Thiru. Antonyraj, S/o. Kalimuthu, 5/60A, Vedakovil Street, Azhagiapandiapuram, Manur Taluk, Tirunelveli District.	Vagaikulam Village S.F. Nos. 493/2 & 493/3	15.07.2013 to 14.07.2018	2.06.50
6	Thiru.K. Ariyanayagam, S/o. Komiah Pandian, 83, Sarangabani Street, Tuticorin	Vagaikulam Village S.F.Nos. 483/1 & 484/1	24.07.2013 to 23.07.2018	2.15.00
Existing Quarry				
1.	Thiru.B.Paramasivam, S/o. Balakrishnan, 249, Nellai Thiruthu, Thalaiyuthu, Sankar Nagar, Tirunelveli – 627357.	Kanarpatti Village, S.F.Nos. 105/6, 105/7, 106/3D,107/3C1, 107/3C2, 108/1, 108/2	Proceedings No.M1/17701/20 17, Dt. 07.09.2020 for five years from 16.09.2020 to 15.09.2025.	2.19.50 Ha
2.	Thiru.A.Densingh Babu, S/O. Arulraj, 276, Main Road, Kanarpatti, Manur	Vagaikulam Village S.F.Nos. 492/2	Proceedings No. 36244/MIN- 3/2019, dt. 07.01.2025 for five years from	1.83.5

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	Taluk, Tirunelveli District.		08.01.2025 to 07.01.2030	
Proposed Quarry				
1.	Thiru.B.Paramasivam, S/o. Balakrishnan, 249, Nellai Thiruthu, Pallikottai, Manur Taluk, Tirunelveli District	Kanarpatti Village, S.F. Nos. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 & 99/3	Present proposed	2.39.0
Total Area of Cluster		6.42.00 Ha		

As seen above, although the individual lease area of this project is less than 5 hectares, the one existing Quarries within a 500-meter radius, along with this subject project, add up to more than 5 hectares i.e. 6.42.00 Ha. A map showing the existing and proposed quarry located within 500m radius is given in Figure 1.1.

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

Table 7. 3 Salient Features of Existing & Proposed Quarries

Description		P1	P2	P3
Name of the Quarry		B.Paramasivam	Thiru.B.Paramasivam	A.Densingh Babu
Extent in Ha		2.39.00	2.19.50	1.83.50
Geological Resources in m3	Rough stone	10,73,250 m ³ / 29,51,437.50 Ts	10,62,300 m ³ / 29,21,325 Ts	4,20,320 m ³ / 11,55,880 Ts
	Gravel	47,700 m ³ / 95,400 Ts	21,246 m ³ / 42,492 Ts	1,05,080 m ³ / 2,10,160 Ts
	Weathered Rock	-	21,246 m ³ / 42,492 Ts	-
Mineable Reserves in m3	Rough stone	3,92,550 m ³ / 10,79,512.50 Ts	2,97,020 m ³ / 8,16,805 Ts	1,38,580m ³ / 3,81,095 TS
	Gravel	37, 988 m ³ / 75,976	4469 m ³ / 8938 Ts	75,330 m ³ / 1,50,660 Ts
	Weathered Rock	-	9142 m ³ / 18,284 Ts	-
Five years plan	Rough stone	3,92,550 m ³ / 10,79,512.50 Ts	2,97,020 m ³ / 8,16,805 Ts	1,38,580m ³ / 3,81,095 TS

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period as in the approved mining plan				
	Gravel	37, 988 m ³ / 75,976	4469 m ³ / 8938 Ts	75,330 m ³ / 1,50,660 Ts
	Weathered Rock		9142 m ³ / 18,284 Ts	-
Productio n in m3	Peak Production - rough stone	78,630 m ³ / 2,16,232.50 Ts	59,540 m ³ / 1,63,735 Ts	28,420 m ³ / 78,155 Ts
	Gravel	20,672 m ³ / 41,344 Ts	4469 m ³ / 8938 Ts	20,250 /40,500 Ts
	Weathered Rock	-	9142 m ³ / 18,284 Ts	-
Productio n per day in tons		859	637	396
Lorry Loads per day in Nos	-	86	64	40
Employm ent in Nos		30	18	10

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Proposed Depth in meters		47 BGL	52 m BGL	25 m BGL
Status of the quarry		Proposed	Existing	Existing

7.4.1 AIR ENVIRONMENT

Based on the above production quantities the emissions due to various activities in both 3 mines (2 Existing + 1 Proposed) includes various activities like ground preparation, excavation, handling and transport.

The data on the cumulative production resulting from the 2 projects have been given in Tables 7.4 and 7.5.

Table 7.4 Cumulative Production Load

Quarry	Total Mineral Production	Number of Lorry load per day
P1	859	86
P2	637	64
P3	396	40
Grand Total	1892	190

The cumulative study shows that the overall production of rough stone from the 3 quarries is 1892 tons per day with a capacity of 190 trips per day.

As two projects is an existing quarry, they are part of the current traffic. The proposed project will bring 86 trips per day. The existing road can absorb this additional traffic due to this project. Various measures like proper maintenance of road, covering of the loaded truck with tarpaulin, water sprinkling will be carried out to ensure no adverse impact on the logistical front. Traffic density study is detailed in section 2.12 of Chapter 2.

Ground Level Emission Calculation for Cluster

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

Table 7.5 Area Emissions – Total Material handling – Cluster

Quantity, TPA	Existing Quarries: Thiru.B.Paramasivam (Rough stone 2,97,020 m ³ & Gravel 4469 m ³), A.Densingh Babu (Rough stone 1,38,580 m ³ & Gravel 75,330 m ³). Proposed Quarry: B.Paramasivam (Rough Stone - 3,92,550 m ³ & Gravel - 37, 988 m ³)
Operational Hours Per Year	2400
Activity Rate, t/hr.	392.425
Emission of dust, g/t.	0.22
Emission of dust, g /hr.	61.242
Area of influence, m ²	629
Uncontrolled emission rate g/s/m ²	0.00075082
Controlled emission rate, PM10 g/s/m ²	0.0007508
Controlled emission rate, PM2.5 g/s/m ²	0.00005005

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

Quantity, TPA	Existing Quarries: Thiru.B.Paramasivam (Rough stone 2,97,020 m ³ & Gravel 4469 m ³), A.Densingh Babu (Rough stone 1,38,580 m ³ & Gravel 75,330 m ³). Proposed Quarry: B.Paramasivam (Rough Stone - 3,92,550 m ³ & Gravel - 37, 988 m ³)
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	37960
Lead length/trip, Km	0.11
Total VKT/Year	12145
Emission Kg/VKT	0.20
Total emission Kg/Year	234251

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Uncontrolled emission rate g/s/m	450493
Controlled emission rate, PM10 g/s/m	0.450493
Controlled emission rate, PM2.5 g/s/m	0.012513

Table 7. 7 Incremental & Resultant GLC within cluster for PM_{2.5}

SL.No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	A1-Mine Lease Area	32.6	2.20	34.80	60
2	A2- Kalakudi	28.5	1.92	30.42	
3	A3- Kanarpatti	26.6	1.65	28.25	
4	A4- South Sezhilanallur	25.3	1.37	26.67	
5	A5- Alagiapandiapuram	34.0	1.10	35.10	
6	A6 - Manur	31.5	<1.0	32.50	

Table 7. 8 Incremental & Resultant GLC within cluster for PM₁₀

SL.No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	A1-Mine Lease Area	74.1	3.73	77.83	100
2	A2- Kalakudi	63.3	3.26	66.56	
3	A3- Kanarpatti	57.3	2.79	60.09	
4	A4- South Sezhilanallur	54.9	2.33	57.23	
5	A5- Alagiapandiapuram	74	1.86	75.86	
6	A6 - Manur	65.6	1.40	67	



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 7.9 SOCIO ECONOMIC BENEFITS FROM 2 MINES

	Employment	Project Cost excluding EMP cost	CER
P1	30	Rs.99.34 Lakhs	Rs.3.0 Lakhs
P2	18	Rs. 62.78 Lakhs	Rs.1.34 Lakhs
P3	10	Rs. 78.63 Lakhs	Rs.8.0 Lakhs
Total	58	Rs.240.75 Lakhs	Rs.12.34 Lakhs

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

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

Mitigation Measures

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

8 PROJECT BENEFITS

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

The mining activity at proposed Rough Stone and Gravel Quarry of Thiru. B.Paramasivam will create direct employment opportunity for 30 local people. The PP has proposed CER amount of Rs. 3.0 Lakhs for surrounding schools development.

9 ENVIRONMENTAL COST BENEFIT ANALYSIS

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

10 ENVIRONMENTAL MANAGEMENT PLAN

The Environmental Management plan is a site-specific plan. It is developed to ensure that the project is implemented in an environmentally sustainable manner, where all contractors and subcontractors, including consultants if any, understand the potential environmental risks arising from the project and take appropriate actions to minimize those risks. EMP also ensures that the project implementation is carried out in accordance with the planned design and by taking appropriate mitigation measures to reduce adverse environmental impacts during project's life cycle.

10.1 ENVIRONMENTAL POLICY

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

The Proponent will:

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

10.2 ENVIRONMENTAL MANAGEMENT PLAN

The impacts due to this mining project are detailed in chapter 4. Mitigation measures at the source level and an overall Management Plan at the site level are elaborated in this chapter. Details of EMP measures for implementation in the mine are given in the table 10.1.

Table 10.1 - ENVIRONMENTAL MANAGEMENT PLAN

Environmental Parameter	Mitigation Measures
Air	Wet drilling to suppress the dust emission from drill machine
	Regular water sprinkling on haulage road through fixed water sprinkler.
	1.6 m ³ /day of water will be used for dust suppression.
	Avoiding blasting during high wind period, night times and temperature inversion periods.
	Regular grading of haul road to clear accumulation of loose material.
	It will be ensured that vehicles are properly maintained to comply with exhaust emission requirements
	Maintenance as per operator manual of the equipment and machinery in the mines to minimizing air pollution
	Ambient Air Quality Monitoring carried out in the project area and in surrounding villages to assess the impact due to the mining activities and the efficacy of the adopted air pollution control measures.
	Afforestation for control of dust.
Water	
Surface water	Chittar River is 1.60 km to the north. There is a canal 140 m to the southwest, a seasonal odai 550 m to the north, and a tank 755 m to the northwest. The drainage map of the study area is given in Figure 3.18. There is no effluent discharge from this proposed Quarry. So no impact is anticipated.

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	Surface runoff management structures like garland drain of required length which is connected to a settling pond will be constructed around the quarry to collect the rain water. Monthly or after rainfall, inspection for performance of water management structures and systems. There is no discharge of any effluent into nearby water bodies.
Ground Water	The quarrying operation is proposed upto a depth of 47 m maximum below ground level, the water table in the area is 65 m & 68 m below ground level, hence the project will not intersect the Gund water table during entire quarry period.
Water Consumption and Wastewater generation	The required water of 6.0 KLD will be procured from outside agencies initially and later rainwater harvested in the mine pit shall be used other than drinking purpose.
	Domestic wastewater generation of 0.96 KLD will be discharged in soak pit via septic tank.
	Conduct ground water and surface water monitoring for parameters specified by CPCB
Noise	The workers employed are provided with personal protective equipment (PPE) as such, earmuffs and ear- plugs for the protection from high noise level generated at the mine site wherever required.
	Noise levels are controlled by using optimum explosive charge, proper delay detonators and proper stemming to prevent blow out of holes.
	Development of thick greenbelt all along the Buffer Zone (7.5 Meters) of the project area to attenuate the noise and the same will be maintained.
	Preventive maintenance of mining machinery and replacement of worn-out accessories to control noise generation.
	Regular ambient noise level monitoring will be carried out in the project area and in surrounding villages to access the impact due to the mining activities and the efficacy of the adopted noise control measures.

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Ground Vibration and Fly Rock Control	Controlled blasting using delay detonators will be carried out to maintain the PPV value well within the prescribed standards of DGMS.
	Drilling and blasting will be carried under the supervision of qualified persons.
	ensure blast holes are adequately stemmed for the depth of the hole and stemmed with suitable angular material.
	Undertake noise or vibration monitoring.
Land Environment	There is no change will be in the land use pattern as mentioned in the approved mining plan a such mine pit, safety zone etc., At conceptual stage, the mining pits will be converted into Rain Water Harvesting. Remaining area will be converted into greenbelt area.
	Garland drains with catch pits / settlement traps to be provided all around the project area to prevent run off affecting the surrounding lands.
	The periphery of Project area will be planted with thick plantation to arrest the fugitive dust, which will also act as acoustic barrier.
	Frequent Soil and ground water testing as per Environmental Monitoring Plan.
Top Soil / Overburden	There is no waste anticipated in this rough stone Quarry. The entire quarried minerals will be utilized.
Biological Environment	During mining, three layer thick plantation will be carried out around the project periphery, on safety barrier zone, on top benches of quarried out area etc.,
	The main attributes that retard the survival of sapling is fugitive dust, this fugitive dust can be controlled by water sprinkling on the haul roads and installing a sprinkler unit near the newly planted area.
	Regular review on Greenbelt development programme.
	Year wise greenbelt development plan mentioned in Chapter IV

10.3 ADMINISTRATION AND TECHNICAL SETUP

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

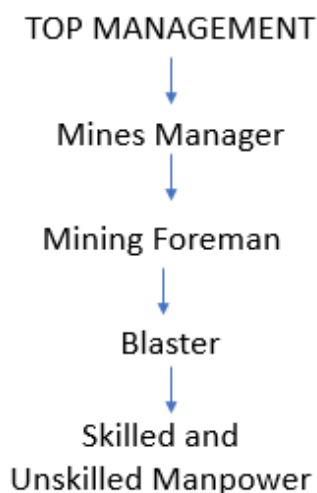


Figure 10.1 Organization Chart

The action plan for monitoring consists of monitoring of following environmental components.

- Monitoring of the water/ waste water quality, air quality and solid waste generated
- Analysis of the water and air samples collected through external laboratory
- Implementation and monitoring of the pollution control and protective measures/ devices which shall include financial estimation, ordering, installation of air pollution control equipment, waste water treatment plant, etc.

- Co-ordination of the environment related activities within the project as well as with outside agencies
- Green belt development
- Monitoring the progress of implementation of the environmental monitoring 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 environmental safeguards and recurring expenditure for successful monitoring and implementation of control measures.

Table 10.2 Environmental Management Plan Budget

Activities	Mitigation Measure	Capital cost	Recurring Cost per Annum
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	0.12	0.12
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	5.00	0.25
	Muffle blasting – To control fly rocks during blasting	0.00	0.05
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	0.50	0.10
	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	0.08	0.01
	Regular monitoring of exhaust fumes as per RTO norms	0.00	0.05
	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	0.00	0.48
	Installing wheel wash system near gate of quarry	0.20	0.05

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Sub-Total (A)		5.90	1.26
Noise Environment	Provision for Portable blaster shed	0.30	0.02
Sub-Total (B)		0.30	0.02
Activities	Mitigation Measure	Capital cost	Recurring Cost per Annum
Waste Management	Provision for domestic waste collection and disposal through authorized agency	0.20	0.10
	Installation of dust bins	0.05	0.02
Sub-Total (C)		0.25	0.12
Mine Closure	Plantation inside ML area (510 Nos.)	0.51	0.10
Sub-Total (D)		0.51	0.10
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	0.05	0.01
	Air, Water, Noise and Soil Quality Sampling every 6 Months for Compliance Report of EC Conditions	0.00	0.50
	Workers will be provided with Personal Protective Equipment's	0.30	0.03
	Health check up for workers will be provisioned	0.00	0.15
	First Aid facility Provision	0.00	0.02

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	Signage & boards for safety precautions	0.05	0.01
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles /HEMMs. Flaggers will be deployed for traffic management	0.24	0.01
	Installation of CCTV cameras in the mines and mine entrance	0.15	0.02
Sub-Total (E)		0.79	0.75
Grand Total		7.75	2.25
Total EMP Cost for 5 years is 20.19 lakhs			
i.e., 7.75 Lakhs of Capital Cost + 12.44 Lakhs of Recurring cost (For 5 Years)			

10.6 CONCLUSION

Various aspects of mining activities were considered and related impacts were evaluated. Considering all the possible ways to mitigate the environmental concerns, Environmental Management Plan was prepared and fund has been allocated for the same. The EMP is dynamic, flexible and subjected to periodic review. For project where the major environmental impacts are associated, EMP will be under regular review. Senior Management responsible for the project will conduct a review of EMP and its implementation to ensure that the EMP remains effective and appropriate. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will bring the positive impact in the study area.

11. SUMMARY AND CONCLUSION

11.1 INTRODUCTION

This EIA Report is prepared for Thiru.B.Paramasivam Rough Stone and Gravel Quarry over an extent of 2.39.00 Ha of Patta land in S.F. No. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3 of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State in compliance with ToR obtained vide ToR identification number TO25B0108TN5926769N, Dated 20.06.2025.

Although the individual lease area of this project is less than 5 hectares, the two existing Quarries within a 500-meter radius, along with this subject project, add up to more than 5 hectares i.e. 6.42.00 Ha. A map showing the existing and proposed quarry located within 500m radius is given in Figure 1.1.

This project proposed to produce 3,92,550 m³ of Rough Stone and 37,988 m³ of Gravel for the period of first 5 years with ultimate depth up to 47 m BGL.

11.2 PROJECT DESCRIPTION

Table 11.1 Salient Features of the Project

Description	Salient Feature
Name of the Project	Rough Stone and Gravel Quarry of Thiru.B.Paramasivam
Location of the Project	S.F. No. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3 of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State.
Latitude & Longitude	Latitude: 08°53'17.20"N to 08°53'23.44"N Longitude: 77°38'20.53"E to 77°38'27.15"E
Toposheet No.	58- H/09
ML Area	2.39.00 Ha

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Type of Land	It is a Patta land in the name of Thiru. Saravanan & Thiru.B. Paramasivam (Applicant) vide Patta Nos. 1355, 1352, 1572, 2034. The applicant has obtained the consent from the other Pattadhar and the same has been registered.
Geological Resource	Rough Stone – 10,73,250 m ³ Gravel - 47,700 m ³
Mineable Reserves	Rough Stone – 3,92,550 m ³ Gravel - 37,988 m ³
Proposed Production for Five years	Rough Stone – 3,92,550 m ³ Gravel - 37,988 m ³
Life of the mine	5 years
Proposed depth of mining	47 m bgl
Method of Mining	Opencast mechanized mining involving drilling and blasting
Proposed bench height and width	Bench Height & Width – 5m.
Total Waste	There is no waste generation from this quarry.
Top Soil / Overburden	There is no waste / over burden generation from this quarry, entire mined out mineral will be directly transported to the needy customer.
Water Requirement & source	Total – 6.0 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	30 Nos
Total Project Cost	Rs. 122.53 Lakhs (including EMP & CER cost.)
Nearest Highway	The National Highway (NH-44) Tirunelveli – Salem is about 13.5km on east side of the area. The State Highway (SH-41) Tirunelveli – Sankarankovil is about 1.3Km on east side of the area.
Nearest Railway Station	Thalaiyuthu Railway Station – 15.20 km – SE.

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	The Nearest Railway line is Tirunelveli to Kovilpatti line which is about 15Km on southeast side of the area.
Nearest Airport	Tuticorin Airport - 46.20 km - SE
Nearest Major Water bodies	Core Zone – NIL Buffer Zone • Canal - 140m (SW), • Odai – 550m (N) • Tank – 755m (NW) • Tank – 1.2km (SE) • Chittar River – 1.60 km (N) • Manur Tank – 3.1 km (SW)
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 Gangaikondan Spotted Deer Sanctuary – 14.40 km (SE)
Reserved / Protected Forests	Kavalkutti Parambai R.F – 7.15km (SW), Kottamalai R.F – 8.50 km (SW), Uthumalai R.F – 9.80 km (NW), Thalaiyuthu R.F – 9.75 km (SE)
Nearest Village	Kanarpatti Habitations –1.70 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

Sl.No.	LAND USE / LAND COVER	Area in Sq.Km	Area in Percentage
1	Built-up land	7.83	2.44
2	Crop land	184.77	57.59
3	Existing Quarry	0.91	0.28
4	Fallow land	6.47	2.01
5	Hill & Forest	4.09	1.27
6	Land with scrub	6.22	1.94
7	Land without scrub	89.49	27.70
8	Plantations	0.29	0.09
9	Water bodies	20.76	6.48
	Total Area	320.83	100.00

Source: Survey of India Toposheet and Landsat Satellite Imagery

11.3.2 SOIL CHARACTERISTICS

Results of the soil samples show that the pH values were found to be 6.60 to 7.54 and Electrical Conductivity values were ranging between 72.16 – 125.08 $\mu\text{mhos/cm}$. Soils are generally Silt Loam. Organic matter values were ranging between 0.97 – 1.25 %. Total Nitrogen values were ranging between 175 – 238 mg/kg. Phosphorus values were ranging between 1.55 – 2.18 $\mu\text{g/g}$. Potassium values were ranging between 318 – 490 mg/kg. Sodium values were ranging between 466 – 682 mg/kg.

Total Sulphate values were observed to be BDL. The soil quality data for the 6 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 PM₁₀, PM_{2.5}, SO₂, NO₂, CO studied at 6 locations as per prescribed guidelines/ methods. As per the monitoring data, the PM₁₀ values were in the range of 46.3 – 74.1 µg/m³. PM_{2.5} values were in the range of 21.3 – 34.0 µg/m³. SO₂ levels were ranging from 4.5 – 7.9 µg/m³. NO₂ levels were ranging from 6.6 – 15.9 µg/m³. While comparing with the NAAQ Norms laid by MoEF, all monitored values of PM₁₀, PM_{2.5}, SO₂, NO₂ & CO were found to be well within the prescribed standards. The CO values in the all locations found to be below detectable limit (DL – 1144 µg/m³).

11.3.4 WATER ENVIRONMENT

Surface Water

The pH varied from 6.94 to 7.66 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 95 to 170 mg/l. Chloride varied between 29.4 mg/l and 59.7 mg/l. Nitrates varied from 2.35 to 3.58 mg/l, while sulphates varied from 10.9 to 38.9 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 7.38 to 7.81, Chlorides Ranges From 126- 386 mg/l, Sulphates value found to be between 96.8 - 321 mg/l, Fluoride Ranges low in lease area i.e. 0.21 – 0.46, Hardness varies from 254 – 490 mg/l, and Total dissolved solid 520 – 1150 mg/l. The ground water has been analyzed as per IS10500: 2012 and found to be suitable for drinking purpose. So the results of chemical and bacteriological analysis of water samples are classified under good class for drinking purpose with respect to total dissolved solids. Total hardness of the samples ranged from soft to moderately hard waters and can be fairly used for drinking. Regular ground water monitoring is suggested as the quality of ground water may fluctuate with groundwater consumption and seasonal variations.

11.3.5 NOISE ENVIRONMENT

From the table 3.11, it is observed that the day Equivalent Noise (Leq-d) level were ranging from 46.0 to 50.8 dB(A) and Night Equivalent Noise (Leq-n) level were ranging from 40.4 to 39.1 (A). Day and Night Equivalent Noise (Leq-n) level were ranging from 44.0 to 42.1 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 Kanarpatti Village on Socioeconomic aspect of the study area. The various attributes that have been taken into account are population composition, employment generation, occupational shift, household income and consumption pattern. Implementation of the Proposed Mine Project will generate both direct and indirect employment. Besides, Mining operation will be legally valid and it will bring income to the state exchequer.

11.4 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The main scope of the EIA study is to quantify the cumulative impact in the study area due to cluster quarries and formulate the effective mitigation measures for each individual leases. A detailed account of the emission sources, emissions control equipment, background Air quality levels, Meteorological measurements, Dispersion model and all other aspects of pollution like effluent discharge, Dust generation etc., have been discussed in Chapter 4 of this report.

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

Anticipated Impacts & Mitigation Measures

Impact	Mitigation Measures
Land Environment	
❖ Destruction of natural landscapes ❖ Changes in soil characteristics ❖ Soil erosion and slope instability ❖ Problems to agricultural land and human habitations due to dust, and noise caused by movement of heavy vehicles.	❖ Rough stone does not produce any toxic effluents in the form of solids, liquids, or gases. ❖ At the end of life of mine, the excavated mine pit / void of 1.86.00 Ha. will act as artificial reservoir for collecting rain water and helps to meet out the demand or crises during drought season. ❖ After mine closure the greenbelt (0.51.0 Ha.) will be developed along the safety barrier and top benches and 0.02 ha are approach road and Infrastructure. ❖ The periphery of the mining lease area will be converted to a greenbelt to prevent Noise and sound propagation to the nearby lands. ❖ Entire mined out area will be properly fenced to prevent inadvertent entry of human and animals. ❖ Construction of garland drains all around the quarry pit and construction of settling traps at strategic location in lower elevations to prevent soil erosion due to surface runoff during rainfall and also to collect the storm water for various uses within the proposed area.
Water Environment	
❖ Impact due to Usage of Water in mines ❖ Generation of waste water from vehicle washing ❖ Domestic sewage	❖ Chittar River is 1.60 km to the north. There is a canal 140 m to the southwest, a seasonal odai 550 m to the north, and a tank 755 m to the

❖ Washouts from surface exposure or working areas ❖ Impact on Surface Water Resources ❖ Impact on Ground water ❖ Impact on Water Quality ❖	northwest. The drainage map of the study area is given in Figure 3.16. ❖ There is no proposal for discharging of wastewater outside the project area. ❖ There is no proposal for a rough stone processing or workshop within the project area, so no effluent is anticipated in the mine. ❖ The required water (6.0 KLD) will be sourced initially from outside agencies. Later the rainwater collected in the mine pit sump will be used for this purpose. ❖ Regular water quality will be carried in nearby villages to ensure the water quality is not affected due to the quarrying activities. ❖ Domestic sewage from site office & urinals/latrines provided in project area will be discharged through septic tank followed by soak pit system. ❖ Only clear and settled water free from silt content will be used for dust suppression and greenbelt development. ❖ De-silting will be carried out before and immediately after the monsoon season and the settling tank and drains will be cleaned weekly, especially during monsoons. ❖ Two sumps with each capacity 4000 Cu.m will be proposed for harvesting rain water. The rain water stored in the pond will be utilized for plantation, dust suppression activities.

Air Environment	
❖ Generation of Fugitive Dust ❖ Dust will be generated mainly during excavation, loading & unloading activities. ❖ Reduction in visibility due to dust plumes. ❖ Coating of vegetation leading to reduced photosynthesis. ❖ Inhibited growth, destroying of foliage, degradation of crops; ❖ Increase in health hazards due to inhalation of dust.	❖ Using Wet drilling methods, Allowing drilling only with PPE, Carrying out blasting only during specified times, Avoiding blasting during unfavourable weather conditions, Using explosives of good quality, Using mist sprayers Regular wetting of transport, Covering the materials carried in tippers with tarpaulin, Proper maintenance of vehicles used for transportation, Conducting regular emission tests for vehicles used for transport. ❖ Speed restrictions will be imposed to avoid spillage of loaded materials upon the road and to reduce wear and tear of the road. ❖ Weekly inspections of the condition of the access road by competent person employed, and immediate action will be taken to address any potholes or damage to the road surface. ❖ Development of greenbelt is proposed in the safety zone of 10m and 7.5m barriers in the lease area. ❖ Personal Protective Equipment's will be provided to all workers
Noise & Vibration	
❖ The main noise generating source during mining operation and related activities are drilling, excavation, loading, unloading and transportation.	❖ Usage of sharp drill bits while drilling which will help in reducing noise; ❖ Secondary blasting will be totally avoided and hydraulic rock breaker are utilized for breaking boulders; ❖ Controlled blasting with proper spacing, burden, stemming and optimum charge/delay will reduce noise; ❖ The blasting will be carried out during favourable atmospheric condition and

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

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

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

11.5 ANALYSIS OF ALTERNATIVES

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

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

11.6 ENVIRONMENTAL MONITORING PROGRAM

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

PP will supervise the overall environmental management plan of the project during operation. The capital cost of Rs. 7.75 Lakhs and the recurring cost of Rs. 12.44 Lakhs (5 years) have been allocated under the EMP budget which includes Environmental Monitoring Cost.

11.7 ADDITIONAL STUDIES

Risk Analysis & Disaster Management Plan

The methodology for the risk assessment has been based on the specific risk assessment guidance issued by the Directorate General of Mine Safety (DGMS). The DGMS risk assessment process is intended to identify existing and probable hazards

in the work environment and all operations and assess the risk levels of those hazards in order to prioritize those that need immediate attention.

Further, mechanisms responsible for these hazards are identified and their control measures set to time table are recorded along with pinpointed responsibilities. In the unlikely event that a consequence has occurred, disaster management kicks in. This includes instituting procedures pertaining to a number of issues such as communication, rescue, and rehabilitation. These are addressed in the disaster management plan. Both, the RA and DMP, are living documents and need to be updated whenever there are changes in operations, equipment, or procedures. Assessment is all about preventing accidents and taking necessary steps to prevent it from happening.

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

Terms of Reference with Public Hearing (ToR) for the project was issued vide ToR identification number TO25B0108TN5926769N, Dated 20.06.2025. 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 two 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.

As two projects is an existing quarry, they are part of the current traffic. The proposed project will bring 86 trips per day. The existing road can absorb this additional traffic due to this project.

The existing projects provided employment opportunities for 28 people and this proposed will provide direct employment opportunities for 30 people.

The previous two projects had a CER budget of Rs. 9.34 Lakhs and this proposed project has allocated Rs. 3.0 Lakhs as the CER budget.

11.8 PROJECT BENEFITS

Financial benefits

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

Social benefits

- This project provides employment to 30 people directly. Local people will be hired for unskilled labour.
- Through CSR, nearby schools, hospitals will be benefitted.

11.9 CONCLUSION

EIA study was performed as per the approved ToR. Various environmental attributes were studied relating with aspects of mining activities. The related impacts were identified and evaluated. Considering all the possible ways to mitigate the environmental concerns, Environmental Management Plan was prepared and accordingly fund was allocated. The EMP has been dynamic, flexible and subject to periodic review.

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

The Mine Management will be responsible for the project review of EMP and its implementation to ensure that the EMP remains effective and appropriate. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will bring the positive impact in the study area.

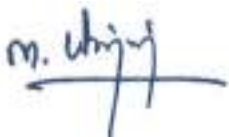
12 DISCLOSURE OF CONSULTANTS

Global Mining Solutions is a NABET Accredited EIA consultant as per NABET certificate NABET/EIA/2326/IA 0110. The registered office of Global Mining Solutions is at Plot No.6, S.F.No.13/2 A2, VS City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamilnadu-636455.

Declaration by Experts contributing to the proposed Rough Stone and Gravel Quarry over an extent of 2.39.00 Ha, while total cluster area of 6.42.00 Ha at Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State.

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

EIA Coordinator Name: Manikandan Manickam



Signature & Date

Period of involvement: March 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

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S. No.	Functional areas	Name of the expert/s	Involvement (period and task**)	Signature and Date
1	AP	Dhanalakshmi Ramanathan	Assessment of existing air quality, Impact of the project on ambient air and suggested mitigation measures for air pollution. <u>Period: March to May 2025</u>	R. Dhanu
2	WP	Abirami Kaliaperumal	Assessment of existing water quality, impact of the project on surface and ground water quality, suggested mitigation measures for minimizing the impact. <u>Period: March to May 2025.</u>	K. Abirami
3	SHW	Ramadoss N	Assessment of waste generated from the project, suggested waste management practices. <u>Period: March to May 2025.</u>	C. Ramadoss
4	SE	Sarasvathy K	Baseline SE study. Data compilation and assessment. Impact of the project on SE status of the area. Formulation of CER plan.	K. Sarasvathy

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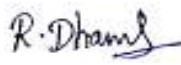
			<u>Period: March to May 2025.</u>	
5	EB	Saravanan S	Baseline data collection of related to ecology of the area. <u>Period: March to May 2025.</u>	
6	HG	Ravinthiran N	Hydrogeological feature of the area. Ground water depth and impact of project on ground water of the area. <u>Period: March to May 2025.</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>	
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>	Sprashant
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 of mining quarry and geological feature of the area. <u>Period: March to May 2025.</u>	Valliappan

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TM-EC:

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

TM- FAE:

S. No	Name of TM (FAE)	Functional Area	Approved FAE (to work under)	Period of involvement	Type of work	Signature
1	Kamaraj S	HG	Ashok Kumar Rajagopal	<u>March to May 2025.</u>	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.Sampatkumar	SE	Saraswathy K	<u>March to May 2025</u>	Assisted by the Expert in preparation of socio-economic report.	
		SC	Shishupal Singh	<u>March to May 2025</u>	Assisted by the Expert in interpretation of soil sampling and their quality involved in the project.	
3	Mownica Balaji	AP	Dhanalakshmi Ramanathan		Associated with expert team in assessing existing air quality, impact of the project on ambient air and suggesting mitigation measures for air pollution	
4	Balasubramani G	Geo	Valliappan Meyyappan	<u>March to May 2025</u>	Overall site investigation and Mining Plan preparation.	

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					Associated with the expert in preparing Geological map.	
5	Suresh Mani	LU	Srilatha Thiruveedhula	<u>March to May 2025</u>	Associated with Experts in preparing Land use map based on satellite imagery, Land use classification and analysis, Impact prediction on surrounding land environment.	M. Suresh
6	Asan Ali S	NV	Srilatha Thiruveedhula	<u>March to May 2025</u>	Associated with the expert in monitoring and analysis of blast induced ground vibration in order to develop the site-specific equation for its prediction, monitoring of fly rocks & air blast (noise), preparation of SOP's for the safety blasting practice in the mines.	S. Asan ali
7	Prabu M	Geo	Valliappan Meyyappan	<u>March to May 2025</u>	Associated with Experts and involved in Field Investigations, Mapping /Geo-referencing	M. Prabu
8	Abirami Kaliyaperumal	RH	S V Prashant	<u>March to May 2025</u>	Involved with Expert team and involved in identification of Risk / Hazards and Safety Measures for various activity	K. Prashant
9	Dhanalakshmi Ramanathan	AQ	Srilatha Thiruveedhula	<u>March to May 2025</u>	Involved with Expert team and involved in calculating air emission values using Meteorological data and Providing inputs for running modelling (ISCT3, AERMOD).	R. Dhanal
10	Manikandan Manickam	WP	Abirami Kaliyaperumal	<u>March to May 2025</u>	Associated with Identification of the source of water, impact and suggesting suitable mitigation measures for water pollution	M. Manikandan



ANNEXURE-1



सत्यमेव जयते

File No: 12015
Government of India

Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA),
TAMIL NADU)



Dated 20/06/2025



To,

Tthiru.PARAMASIVAM
Thiru.B.Paramasivam, S/o.Balakrishnan, No. 249, Nella: Tiruthu, Pallikottai, Manur Taluk, TAMIL
NADU, Tirunelveli - 628002
asavams89762@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 and Gravel Quarry lease over an extent 2.39.0 Ha at S.F.Nos.103/1A, 103/1B, 103/2A,
103/2B, 102/2, 102/3, 99/2 & 99/3, Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu
by Thiru. B. Paramasivam - "B1" and Schedule 5 - Not (a) - ToR issued, along with Public Hearing-
preparation of EIA report - Regarding.

Ref:

1. Online proposa. No. SIA/TN/MFN/53113/2025, Dated: 28.03.2025
2. Your application submitted for Terms of Reference dated: 02.04.2025.
3. Minutes of the 570th Meeting of SEAC held on 23.05.2025.
4. Minutes of the 840th Meeting of Authority held on 17.06.2025

2. The particulars of the proposal are as below:

(i) TOR Identification No.	TO25B0108TN5926769N
(ii) File No.	12015
(iii) Clearance Type	TOR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	(1a) Mining of minerals
(vi) Name of Project	Rough Stone and Gravel Quarry of Thiru.B. Paramasivam
(vii) Name of Company/Organization	PARAMASIVAM
(ix) Location of Project (District, State)	TIRUNELVELI, TAMIL NADU
(x) Issuing Authority	SEIAA
(xi) Applicability of General Conditions	no

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1 (Part A and B) were submitted to the SEIAA for an appraisal by the SEAC under the provision of EIA Notification 2006 and its subsequent amendments.
4. The above-mentioned proposal has been considered by SEIAA in the meeting held on 16.06.2025. The minutes of the meeting and all the Application and documents submitted [viz. Form 1 Part A, Part B,] are available on PARIVESH portal which can be accessed by scanning the QR Code above.
5. 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).
6. The SEIAA has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the SEAC hereby decided to issue the following Terms of Reference with public hearing for instant proposal Thiru. B. Paramasivam under the provisions of EIA Notification, 2006 and as amended thereof.
7. The Ministry/SEIAA-IN reserves the right to stipulate additional conditions, if found necessary.
8. 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.
9. This issues with the approval of the Competent Authority.
10. 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/EEMP report as per OM No.J-1101341/2006-1A-III(I)(part) dated 29th August, 2017.

Copy To

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. The Principal 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, CRD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
6. The Chair Person, TNPC Board, 76, Mount Salai, Guindy, Chennai-52.
7. The District Collector, Tirunelveli District.
8. The Commissioner of Geology and Mines, Guindy, Chennai-32.
9. Assistant Director, Department of Geology & Mining, Tirunelveli District.
10. E1 Division, Ministry of Environment & Forests, Paryavaran Bhawan, New Delhi.
11. File Copy.

Annexure 1

Specific Terms of Reference for (Mining Of Minerals)

1. Seiaa Specific Conditions:

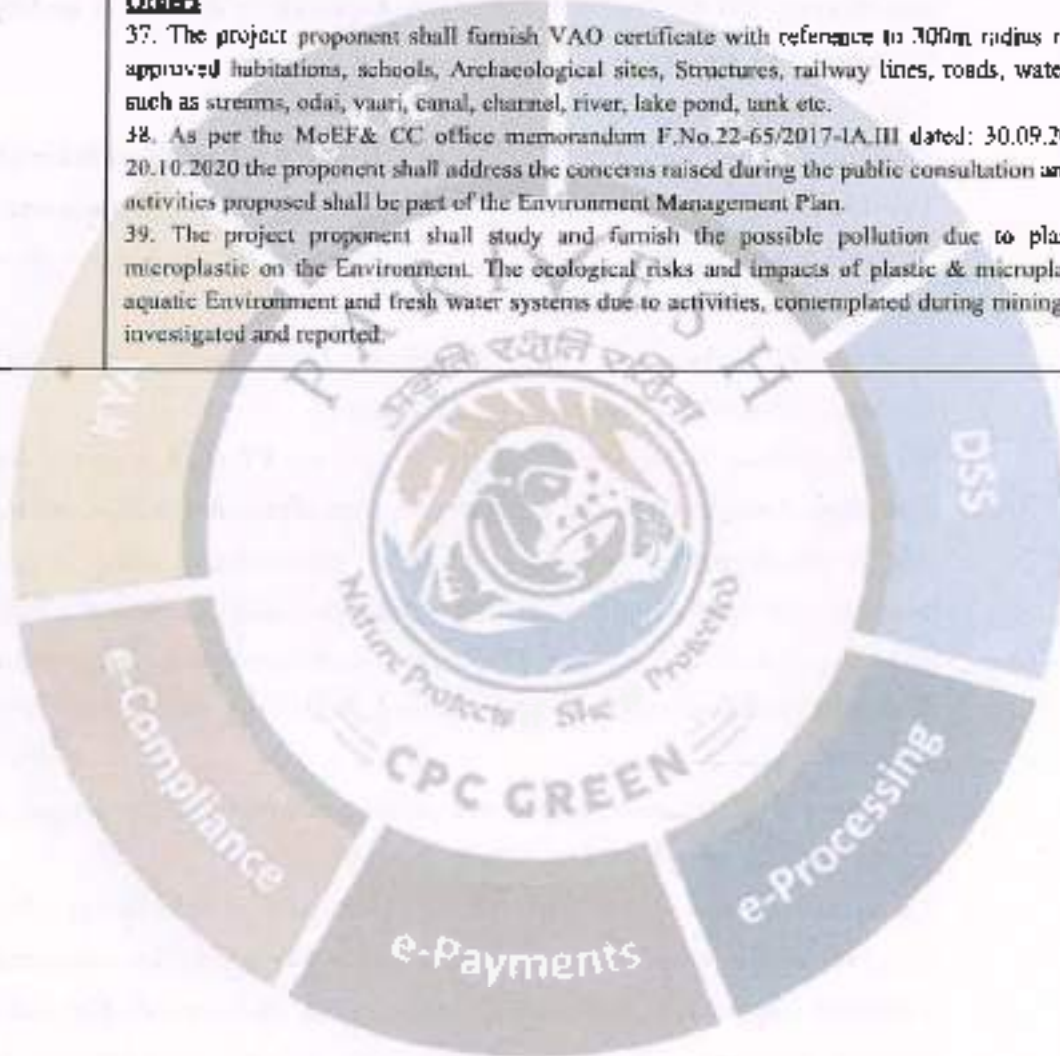
S. No	Terms of Reference
1.1	The authority noted that the subject was placed in the 570 th SEAC-II meeting held on 23.05.2023. After detailed discussions, the Authority accepts the recommendation of SEAC-II and decided to grant Terms of Reference (ToR) along with Public Hearing for the quantity of 3,92,550m ³ of Rough Stone and 37,988m ³ of Gravel up to the depth of 47m BGL. The annual peak production is 78,630m ³ of Rough Stone and 20,672m ³ of gravel as per the approved mining plan. under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC-II & normal conditions & the conditions mentioned below.

2. Selay Standard Conditions:

S. No	Terms of Reference
2.1	<u>Cluster Management Committee</u> 1. Cluster Management Committee shall be formed which must include all the proponents in the cluster as members including the existing as well as proposed quarry. 2. The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc., 3. The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines. 4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network. 5. The committee shall deliberate on risk & emergency management plan, fire safety & evacuation plan and sustainable development goals pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan. 6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the Environmental policy devised shall be given in detail in the EIA Report. 7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner. 8. The committee shall deliberate on the health of the worker/staff involved in the mining as well as the health of the public in the vicinity. <u>Agriculture & Agro-Biodiversity</u> 9. Impact on surrounding agricultural fields around the proposed mining Area. 10. Impact on soil flora & vegetation around the project site. 11. Details of type of vegetation including no. of trees & shrubs within the proposed mining area and if so, transplantation of such vegetation all along the boundary of the proposed mining area shall committed mentioned in EMP. 12. The Environmental Impact Assessment should study the agro-biodiversity, agro- forestry, horticultural plantations, the natural ecosystem, the soil macro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem. 13. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services. 14. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock. <u>Forests</u> 15. The project proponent shall detailed study on impact of mining on Reserve forests and trees

S. No	Terms of Reference
	running wildlife. 16. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna. 17. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection. 18. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site. <u>Water Environment</u> 19. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period. 20. Erosion Control measures. 21. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies, Rivers, & any ecological fragile areas. 22. The project proponent shall study impact on fish habitats and the food WEB: food chain in the water body and Reservoir. 23. The project proponent shall study and furnish the details on potential fragmentation impact on natural Environment, by the activities. 24. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts. 25. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components. 26. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and former sites. 27. The EIA shall include the impact of mining activity on the following: a) Hydrothermal/Geothermal effect due to destruction in the Environment. b) Bio-geochemical processes and its foot prints including Environmental stress. c) Sediment geochemistry in the surface streams. <u>Energy</u> 28. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished. <u>Climate Change</u> 29. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities. 30. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon sink, soil health and physical, chemical & biological soil features. 31. Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood. <u>Mine Closure Plan</u> 32. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued. <u>EMP</u> 33. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued and the scope for achieving SDGs. 34. The Environmental Impact Assessment should hold detailed study on EMP with budget for

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



SEAC SPECIFIC CONDITIONS:

1. **A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of statutory personnel, appropriate environmental monitoring, good maintenance of haul roads and village/panchayat roads, authorized blasting operation etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal:**
 - Copy of the agreement forming CMC.**
 - The Organisation chart of the Committee with defining the role of the members**
 - The 'Standard Operating Procedures' (SoP) executing the planned activities**
2. **The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report**
3. **Since the Power substation is located at a distance of 330m, the PP shall obtain NOC from the TANGEDCO along with the EIA report**
4. **Since three water bodies are located within 1km the PP shall submit a detailed hydrological report from any reputed educational/research institutions such as NIT Trichy, Alagappa Institution, CEERI, etc., indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks etc located within 1 km of the proposed quarry. Further, the PP shall provide the comprehensive data and related documentation supporting the observations made in the hydrogeology report furnished during the appraisal**
5. **The details of enumeration of structures including schools, colleges, primary health centres should be submitted along with the EIA report.**
6. **The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m & upto 1km shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc. and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations.**
7. **The proponent shall furnish photographs of adequate fencing, garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.**
8. **The Proponent shall carry out Bio diversity study as a part of EIA study and the same**

shall be included in the Report

9. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.
10. The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included Drilling & blasting, loading & hauling on the surrounding village and structures.
11. The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic/videographic evidence along with the EIA report

SEAC STANDARD CONDITIONS:

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/benchies
 - (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.
2. Details of habitations around the proposed mining area and latest VAO certificate regarding the location of habitations within 300m radius from the periphery of the site.
3. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.
4. The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the water bodies like lake, water tanks, etc are located within 1 km of the proposed quarry.
5. The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report.

6. The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.
7. In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.
8. However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.
9. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1963 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.
10. The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.
11. The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.
12. If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD mines.
 - Highest production achieved in any one year
13. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?
14. Quantity of minerals mined out.

- Detail of approved depth of mining.
 - Actual depth of the mining achieved earlier.
 - Name of the person already mined in that leases area.
 - If EC and CTO already obtained, the copy of the same shall be submitted.
 - Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.
15. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
 16. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc..
 17. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.
 18. The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same.
 19. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act 1952 and the MMR 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.
 20. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.

21. The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.
22. The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitats in the mind.
23. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.
24. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
25. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.
26. Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.
27. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
28. Impact on local transport infrastructure due to the Project should be indicated.
29. A tree survey study shall be carried out (nos., name of the species, age, diameter etc..) both within the mining lease applied area & 300m buffer zone and its management during mining activity.
30. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.

31. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.
32. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix-I in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.
33. Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proposal shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 5 meters wide and in between blocks in an organized manner.
34. A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.
35. A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.
36. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spell out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
37. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
38. The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence on the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
39. Details of litigation pending against the project, if any, with direction/order passed by any Court of Law against the Project should be given.

40. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.

41. If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MUEF&CC, Regional Office, Chennai (or) the concerned DEE/INPCB.

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.

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.

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 RFT 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, HLL, 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/judgement 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-11011/614/2010-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.

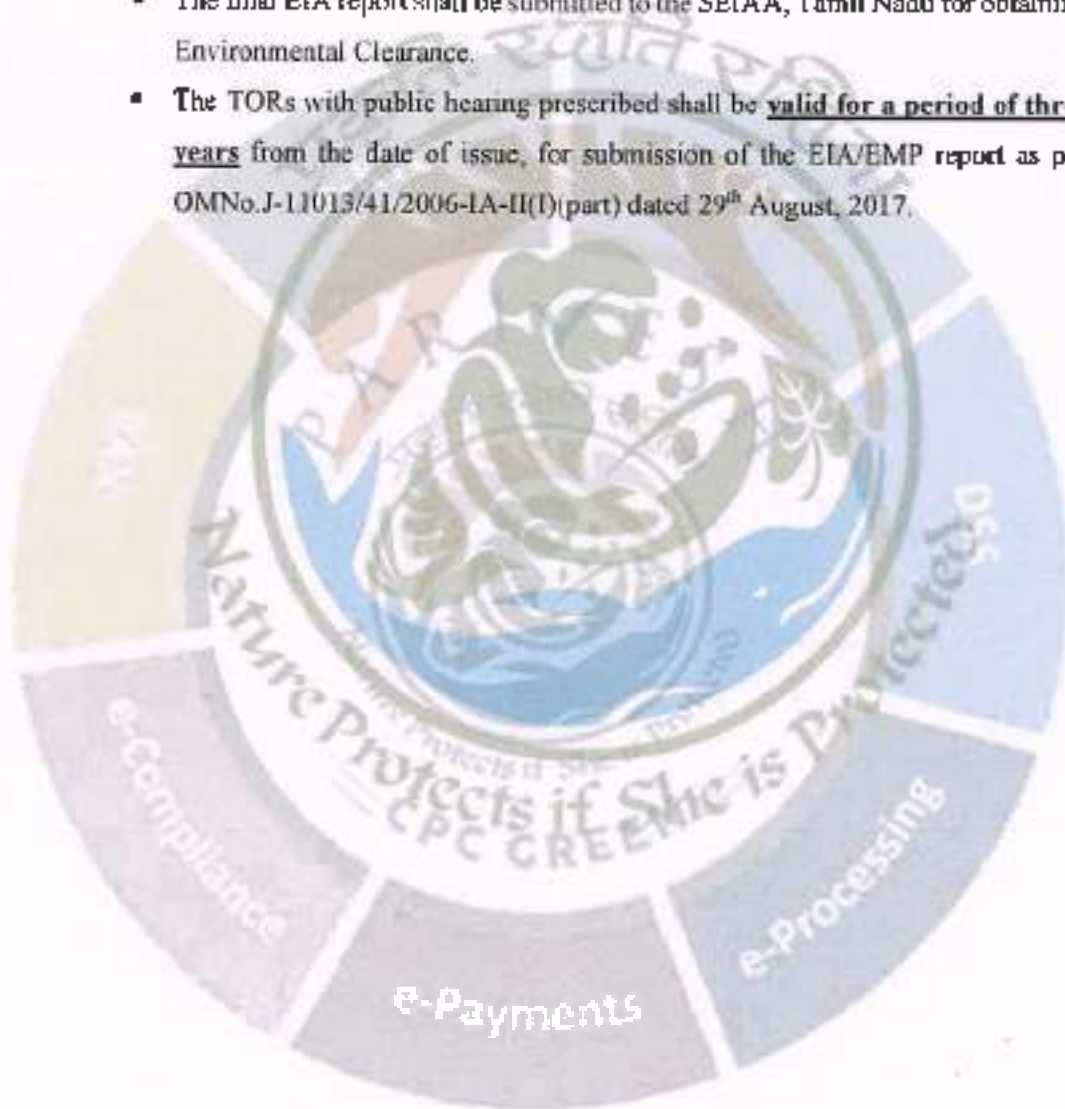
6. A detailed study of the lithology of the mining lease area shall be furnished
7. Details of village map, "A" register and FMB sketch shall be furnished
8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be submitted along with EIA report.
9. 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 its acquisition, nearby (in 2-3 km.) water body, population, within 10km other industries, forest, eco-sensitive zones, accessibility. (note - in case of industrial estate this information may not be necessary)
18. Baseline environmental data - air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
19. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
20. Likely impact of the project on air, water, land, flora-fauna and nearby population
21. Emergency preparedness plan in case of natural or in plant emergencies
22. Issues raised during public hearing (if applicable) and response given
23. CER plan with proposed expenditure.
24. Occupational Health Measures
25. Post project monitoring plan

26. The project proponent shall carry out detailed hydro geological study through institutions/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-LA.II (1) 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 to 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-LA-II(1) dated 2nd December, 2009, 18th March 2010, 28th May 2010, 29th June 2010, 31st December 2010 & 30th September 2011 posted on the Ministry's website <http://www.moef.nic.in/> may be referred.

- After preparing the EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above-mentioned points, the proponent 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 OM No. J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.



Signature valid

Digitally Signed by : A.R. Rahul Nadh IAS
Member Secretary, SEIAA

Date: 20/06/2025



ANNEXURE-2

அனுப்பநர்

திரு.அ.பாலமுருகன், எம்.எஸ்.சி,
எம்.பி.ஏ.,
உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
திருநெல்வேலி.

பெறுநர்

திரு.ப.பரமசிவம், த/பெ.பாலகிருஷ்ணன்,
எண்.249, நெல்லை திருத்து, பலலிக்கோட்டை, மாணார்
வட்டம், திருநெல்வேலி
மாவட்டம்.



ந.க.எண். 606/கனிமம்-1/2024
அய்யா,

நாள். 29.01.2025

பொருள்: கனிமம் மற்றும் சுரங்கம் - சிறுவகை
கனிமம் - சாதாரண கற்கள் மற்றும்
கிராவல் - திருநெல்வேலி மாவட்டம் -
மாணார் வட்டம் - கானார்பட்டி கிராமம் -
புல எண்கள். 103/1A (0.19.5), 103/1B
(0.21.0), 103/2A (0.34.5), 103/2B (0.30.5),
102/2 (0.21.0), 102/3 (0.38.0), 99/2
(0.22.5) மற்றும் 99/3 (0.52.0)-ல் 2.39.0
ஹெக்டேர் பரப்பில் சாதாரண கற்கள்
மற்றும் கிராவல் கனிமம் வெட்டி எடுக்க
குத்தகை உரிமம் வழங்கக்கோரி
திரு.ப.பரமசிவம், த/பெ.பாலகிருஷ்ணன்
என்பவர் விண்ணப்பம் செய்தது -
வருவாய் கோட்டாட்சியர், திருநெல்வேலி
அறிக்கை வரப்பெற்றது - குத்தகை
உரிமம் வழங்குவது தொடர்பாக
குத்தகை தேற்ற பரப்பு (Precise Area
Communication) நிரணயித்தல் -
தொடர்பாக.

- பாரவை:**
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(எம்.எம்.சி.1) துறை, நாள்.
04.08.2020.
 2. திரு.ப.பரமசிவம்,
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நெல்லை திருத்து, பலலிக்கோட்டை,
மாணார் வட்டம், திருநெல்வேலி
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நாள். 21.10.2024.
 3. மாவட்ட ஆட்சித்தலைவர்,
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ந.க.எண். 606/கனிமம்-1/2024, நாள்.
08.11.2024.
 4. திருநெல்வேலி, வருவாய்
கோட்டாட்சித்தலைவர் அவர்களின்
அறிக்கை ந.க.எண். அ5/5943/2024,
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23.01.2025.
 5. உதவி இயக்குநர், புவியியல் மற்றும்
சுரங்கத்துறை, திருநெல்வேலி
அவர்களின் புலத்தணிக்கை
அறிக்கை நாள். 27.01.2025.

B மகம்



திருநெல்வேலி மாவட்டம், மாணார் வட்டம், பல்லிக்கோட்டை, எண். 249, நெல்லை திருத்து என்ற முகவரியை சேர்ந்த திரு. B. பரமசிவம், த/பெ.பாலகிருஷ்ணன் என்பவர் திருநெல்வேலி மாவட்டம், மாணார் வட்டம், கானார்பட்டி கிராமம், பட்டா புல எண்கள். 103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) மற்றும் 99/3 (0.52.0)-ல் பரப்பு 2.39.0 ஹெக்டேர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க 5 ஆண்டுகளுக்கு 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் பிரிவு 19(1)-ன் படி குவாரி குத்தகை உரிமம் வழங்கக்கோரி விண்ணப்பம் செய்ததையடுத்து மேற்படி விண்ணப்பம் மீது விசாரணை மேற்கொண்டு அறிக்கை அனுப்பி வைத்திட வருவாய் கோட்டாட்சியர், திருநெல்வேலி அவர்களுக்கு பார்வை 3-ல் காணும் மாவட்ட ஆட்சித்தலைவர், திருநெல்வேலி அவர்களின் கடிதம் மூலம் கோரப்பட்டது.

2. பார்வை 4-ல் காணும் திருநெல்வேலி, வருவாய் கோட்டாட்சியர் அவர்களின் அறிக்கையில் விண்ணப்பம் தொடர்பாக மாணார் வருவாய் வட்டாட்சியர் அறிக்கை சமர்ப்பித்துள்ளதாக தெரிவித்து அவ்வறிக்கையில் மாணார் வட்டம், கானார்பட்டி கிராமம், புல எண்கள். 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 மற்றும் 99/3 மொத்தபரப்பு 2.39.0 ஹெக்டேர்ஸ் நிலங்கள் குத்தகை உரிமம் கோரியுள்ளார் என்றும், மேற்படி கானார்பட்டி கிராமம், புல எண். 103/1A-ல் 0.19.50 ஹெக்டேர் மற்றும் 103/1B-ல் 0.21.0 ஹெக்டேர் நிலம் பட்டா எண். 1572-ல் பதிவாகியுள்ளது எனவும், புல எண். 103/2A-ல் 0.34.50 ஹெக்டேர் நிலம் மற்றும் 103/2B-ல் 0.30.50 ஹெக்டேர் நிலம் பட்டா எண். 2034-ன் படி பதிவாகியுள்ளது எனவும், மேற்படி நிலங்கள் பூமியில் தரிசாக உள்ளது எனவும், புல எண். 102/2-ல் 0.21.0 ஹெக்டேர் மற்றும் 102/3-ல் 0.38.0 ஹெக்டேர் நிலம் பட்டா எண். 1352-ல் பதிவாகியுள்ளது எனவும், புல எண். 99/2-ல் 0.22.50 ஹெக்டேர் நிலம் மற்றும் புல எண். 99/3-ல் 0.52.0 ஹெக்டேர் நிலம் பட்டா எண். 1355-ல் பதிவாகியுள்ளது எனவும், மேற்படி பட்டா எண். 1352 மற்றும் 1355-ன் படி திரு.சரவணன், த/பெ.பாலகிருஷ்ணன் எனவும், பட்டா எண். 1572 மற்றும் 2034-ன் படி திரு.பரமசிவம், த/பெ.பாலகிருஷ்ணன் என விண்ணப்பதாரர் பெயரில் தாக்கலாகியுள்ளது எனவும், மேற்படி திரு.சரவணன் என்பவர் மனுதாரரின் சகோதரர் ஆவார் என்றும் மேற்படியாரிடம் குத்தகை ஆவணம் எண். 3946/2024, நாள். 25.11.2024-ன் படி 15

B மகன்



வருடங்களுக்கு குத்தகை பெற்றுள்ளார் எனவும், நிலங்கள் தரிசாக உள்ளது எனவும்,

புல எண்	பரப்பு (ஏர்ஸ்)	பட்டா எண் / பட்டாதாரர் பெயர்
103/1A	0.19.50	1572 - பாலகிருஷ்ணன் மகன் பரமசிவம்
103/1B	0.21.00	1572 - பாலகிருஷ்ணன் மகன் பரமசிவம்
103/2A	0.34.50	2034 - பாலகிருஷ்ணன் மகன் பரமசிவம்
103/2B	0.30.50	2034 - பாலகிருஷ்ணன் மகன் பரமசிவம்
102/2	0.21.00	1352 - பாலகிருஷ்ணன் மகன் சரவணன்
102/3	0.38.00	1352 - பாலகிருஷ்ணன் மகன் சரவணன்
99/2	0.22.50	1355 - பாலகிருஷ்ணன் மகன் சரவணன்
99/3	0.52.00	1355 - பாலகிருஷ்ணன் மகன் சரவணன்
மொத்த விஸ்தீரணம்	2.39.00	

மேற்படி பட்டியலில் குறிப்பிட்டுள்ள புல எண்களின் நான்கு மால் விபரங்கள் பின்வருமாறு

புல எண்	வடக்கு	தெற்கு	கிழக்கு	மேற்கு
103/1A	102/3	103/1B	106/1A	வாகைகுளம் கிராமம்
103/1B	103/1A	103/2A	106/1B	வாகைகுளம் கிராமம்
103/2A	103/1B	103/2B	106/2	வாகைகுளம் கிராமம்
102/2	102/3	102/2	99/1, 2	வாகைகுளம் கிராமம்
102/3	102/2	103/1A	99/3	வாகைகுளம் கிராமம்
99/2	99/1	99/3	98/1	102/2
99/3	99/2	106/1A	98/2, 3	102/3

மேற்படி கல்குவாரி அமைக்கக் கோரும் புல எண்கள் அனைத்தும் குடியிருப்பிலிருந்து 300 மீட்டர் தொலைவிற்கு அப்பால் உள்ளது எனவும், பிரஸ்தாப நிலத்தில் இருந்து 50 மீட்டரில் இருப்புப்பாதை, சாலை, மின் இணைப்புகள், குளம், ஓடை மற்றும் கால்வாய் ஆகியவைகள் இல்லை எனவும், பிரஸ்தாப புலமானது மாண்புமிகு உச்சநீதிமன்ற தீர்ப்பின் அடிப்படையில் PACL நிறுவனம் மற்றும் தமிழ்நாடு முதலீட்டாளர்கள் பாதுகாப்பு சட்டத்தில் கவரப்பட்ட சொத்தின்

B மலகம்



பட்டியலில் இடம் பெறவில்லை எனவும், பிரஸ்தாப புலத்தில் இருந்து **500** மீட்டருக்குள் பாலங்கள், நீரேற்று நிலையங்கள், புராதானச் சின்னங்கள் மற்றும் நினைவு சின்னங்கள் ஆகியவை ஏதும் இல்லை எனவும், பிரஸ்தாப புலத்தில் இருந்து **500** மீட்டருக்குள் கோவில், மகுதி மற்றும் இடுகாடு ஆகியவைகள் ஏதும் இல்லை எனவும், பிரஸ்தாப புல எண்கள் தடை ஆணை புத்தகத்தில் குறிப்பிடப்படவில்லை எனவும், பிரஸ்தாப புலத்தில் ஏற்கனவே கற்குடைவு செய்யப்பட்ட குழிகள் ஏதும் இல்லை எனவும், குவாரி செய்ய உத்தேசிக்கப்பட்டுள்ள விண்ணப்ப புலத்தின் நான்கு மால்களும் வகைபாடு மற்றும் பாதை வசதி அமைந்துள்ள புல எண்கள் ஆகியவற்றை காண்பிக்கும் வரைபடம், கிராம நிர்வாக அலுவலர், அளவர் கையொப்பம் இடப்பட்டுள்ளது எனவும், பிரஸ்தாப புலம் ஒன்றுக்கு மேற்பட்டதாக இருப்பதால் கூட்டு வரைபடம், தயார் செய்து மேலொப்பமிடப்பட்டுள்ளது எனவும், மனுதாரரிடம் இருந்து கனிம பாக்கி மற்றும் வருவாய் வசூல் சட்டத்தின் படி வசூலிக்கப்பட வேண்டிய நிலுவைத் தொகை ஏதும் இல்லை எனவும், பிரஸ்தாப நிலத்தில் நீர்நிலைகள், நிலவியல் ஓடைகள் ஏதும் இல்லை எனவும், பிரஸ்தாப நிலத்தின் அருகில் வன உயிரின சரணாலயம் மற்றும் தேசிய பூங்கா, சூழலியல் அதிர்வ தாங்கு மண்டலம் ஏதும் இல்லை எனவும், கானார்பட்டி கிராமத்தில் **16.11.2024** அன்று **அ1** அறிவிப்பு பிரசுரம் செய்யப்பட்டது எனவும், மேற்கண்ட இடத்தில் குவாரி செய்ய உரிமம் வழங்கிட பொதுமக்கள் கடிதம் மூலமாகவோ, நேரிலோ, எழுத்து பூர்வமாகவோ நாளது தேதி வரை ஆட்சேபனை ஏதும் வரவில்லை எனவும், புல எண். **99/1**-ல் கிராம கணக்கில் தண்ணீர் செல்லும் விளக்கியாக காண்பிக்கப்பட்டுள்ளது எனவும், ஆனால் நிலவியல் ஓடை எதுவும் இல்லை எனவும், பிரஸ்தாப புலத்திலிருந்து சுமார் **20** மீட்டர் தொலைவில் மனுதாரர் திரு.பரமசிவம் என்பவர் பெயரில் கல்குவாரி செயல்பட்டு வருகிறது எனவும், புல எண்கள். **99/2** மற்றும் **99/3**-ல் சிறு சிறு கருங்கல் மற்றும் சரள் குவித்து வைக்கப்பட்டுள்ளது எனவும், குவாரி செய்து கனிமம் கொண்டு வர சங்கரன்கோவில் மெயின் ரோட்டில் இருந்து புல எண்கள். **125/3, 124/3, 121/2, 120/2, 117/3** ஆகிய ஊராட்சிக்கு உட்பட்ட பாதை அரசு புறம்போக்கு என கிராம கணக்குகளில் உள்ளது எனவும், புல எண். **117/3**-லிருந்து புல எண். **117/1B2**-ல் **0.01.0** ஏர்ஸ் **117/1C2, 0.08.5** ஏர்ஸ் பட்டா எண். **1462, 1780** மனுதாரரின் சகோதரர் திரு.சரவணன் பெயரில் உள்ளது எனவும், புல எண். **116/2A**-ல் **0.05.05** ஏர்ஸ் பட்டா எண். **1680**, புல எண். **113/2**-ல் **0.05.0** ஏர்ஸ் பட்டா எண். **1680**, புல எண். **112/2**-ல் **0.07.0** ஏர்ஸ் பட்டா எண்.

B மகன்



1680, புல எண். 109/2B-ல் 0.14.0 ஏர்ஸ் பட்டா எண். 1680, புல எண்கள். 110/1B1-ல் 0.03.0 ஏர்ஸ் பட்டா எண். 1680, புல எண். 110/2-ல் 0.83.0 ஏர்ஸ், 110/3-ல் 0.86.0 ஏர்ஸ் பட்டா எண். 1680 ஆகியவை திரு.சரவணன் (1) மற்றும் திரு.பரமசிவம் (2) ஆகியோர்கள் பெயரில் உள்ளது எனவும், மேற்படி புல எண்கள். 125/3, 124/3, 121/2, 120/2, 117/3, 117/1C2, 117/1B2, 116/2A, 113/2, 112/2, 109/2B, 110/1B1, 110/2, 110/3, 107/1, 106/1A ஆகியவற்றில் மனுதாரர் பாதையாக பயன்படுத்த உள்ளார் எனவும், மேற்படி பட்டாவில் உள்ள மனுதாரரின் சகோதரர் திரு.சரவணன் என்பவரிடம் பாதை வசதி உபயோகிக்கும் வகைக்கு சம்மத கடிதம் மற்றும் வாக்குமூலம் கொடுத்துள்ளார் எனவும், கானார்பட்டி கிராமம், A1 அறிவிப்பு செய்யப்பட்டது எனவும், நாளது வரை எவ்வித ஆட்சேபனையும் வரப்பெறவில்லை எனவும், மேலும் மேற்கண்ட புலங்களில் குத்தகை உரிமம் வழங்கிட பொதுமக்கள் ஆட்சேபனை இல்லை என வாக்குமூலம் அளித்துள்ளனர் எனவும், விண்ணப்ப புலத்தில் பழையகுழி / குழிகள் ஏதும் இல்லை எனவும், விண்ணப்ப புலங்களுக்கு கூட்டு வரைபடம் தயார் செய்யப்பட்டு மேலொப்பம் இடப்பட்டுள்ளது எனவும், தனியரிடமிருந்து கனிமபாக்கி மற்றும் வருவாய் வசூல் சட்டத்தின் படி வசூலிக்கப்பட வேண்டிய நிலுவைத் தொகை ஏதும் இல்லை எனவும், பிரஸ்தாப புல எண்கள் அனைத்தும் நீண்ட காலமாக தரிசு நிலங்களாக உள்ளன எனவும், பாதுகாக்கப்பட்ட வனப்பகுதி, வன விலங்குள், மான்கள் சரணாலயம் ஏதும் அருகில் இல்லை, பிரஸ்தாப நிலத்தில் நீர்நிலைகள், நிலவியல்கள், ஓடைகள் எதுவும் இல்லை எனவும், மனுதாரர் மொத்த பரப்பிலும் குவாரி செய்ய உள்ளார் எனவும், எனவே மனுதாரர் அனுமதி கோரிய மானார் வட்டம், கானார்பட்டி கிராமம், பட்டா புல எண்கள். 103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) & 99/3 (0.52.0)-ல் மொத்தம் 2.39.0 ஹெக்டேர் பரப்பில் திரு.பரமசிவம், த/பெ.பாலகிருஷ்ணன் என்பவருக்கு சாதாரண சுற்கள் மற்றும் கிராவல் வெட்டி எடுக்க குத்தகை உரிமம் வழங்க பரிந்துரை செய்வதாகவும், இத்துடன் வட்டாட்சியர் அறிக்கை, புலத்தணிக்கை அறிக்கை மற்றும் ஆவணங்கள் இணைத்து அனுப்பியுள்ளதாகவும் தெரிவித்துள்ளார்.

3. பார்வை 5-ல் காணும் திருநெல்வேலி மாவட்டம், புவியியல் மற்றும் சுரங்கத்துறை, உதவி இயக்குநர் அவர்களால் 27.01.2025 அன்று விண்ணப்பிக்கப்பட்ட புலத்தை கள ஆய்வு

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செய்ததாக தெரிவித்து அறிக்கை சமர்ப்பித்துள்ளார். அவ்வுறிக்கையில் குத்தகை உரிமம் வழங்க அனுமதி கோரிய திருநெல்வேலி மாவட்டம், மானூர் வட்டம், கானார்பட்டி கிராமம், புல எண்கள். **103/1A (0.19.5), 103/1B (0.21.0)**-ல் உள்ள நிலமானது பட்டா எண். **1572**-ன் படி மனுதாரர் திரு.பரமசிவம், த/பெ.பாலகிருஷ்ணக் கோனார் என்பவர் பெயரில் தனி பட்டாவாக தாக்கலாகியுள்ளது எனவும், புல எண்கள். **103/2A (0.34.50), 103/2B (0.30.50)**-ல் உள்ள நிலமானது பட்டா எண். **2034**-ன் படி மனுதாரர் திரு.பரமசிவம், த/பெ.பாலகிருஷ்ணக் கோனார் என்பவர் பெயரில் தனி பட்டாவாக தாக்கலாகியுள்ளது எனவும், புல எண்கள். **102/2 (0.21.0), 102/3 (0.38.0)**-ல் உள்ள நிலமானது பட்டா எண். **1352**-ன் படி திரு.சரவணன், த/பெ.பாலகிருஷ்ணக் கோனார் என்பவர் பெயரில் தனி பட்டாவாக தாக்கலாகியுள்ளது எனவும், புல எண்கள். **99/2 (0.22.50), 99/3 (0.52.0)**-ல் உள்ள நிலமானது பட்டா எண். **1355**-ன் படி திரு.சரவணன், த/பெ.பாலகிருஷ்ணக் கோனார் என்பவர் பெயரில் தனி பட்டாவாக தாக்கலாகியுள்ளது எனவும், விண்ணப்பதாரர் மேற்படி பட்டாதாரரான திரு.சரவணன், த/பெ.பாலகிருஷ்ணக் கோனார் என்பவரிடமிருந்து குவாரி பணிகள் மேற்கொள்ள குத்தகை ஆவணம் எண். **3948/2024**, நாள். **25.11.2024**-ன் படி **15** வருடங்களுக்கு குத்தகை பெற்றுள்ளார் எனவும், மேற்படி புலத்தினை தணிக்கை செய்ததில் விண்ணப்பித்த புலமானது சமதளமாக உள்ளது எனவும், மேற்படி புலத்தில் உள்ள பாறைகள் சார்னகைட் வகையை சார்ந்தது எனவும், இவை சாதாரண கற்கள், ஜல்லி, எம்-சாண்ட் ஆகியவை தயாரிக்க உகந்த பாறைகள் ஆகும் எனவும், விண்ணப்ப புலத்தில் சுமார் **2** மீட்டர் ஆழம் வரை கிராவல் / சரள் காணப்படுகிறது எனவும், விண்ணப்பித்த புலத்திலிருந்து **300** மீட்டர் சுற்றளவிற்குள் அங்கீகரிக்கப்பட்ட வீட்டு மனைகள், நத்தம், குடியிருப்புகள் ஏதுமில்லை எனவும், மேற்படி புலத்திலிருந்து **50** மீட்டர் தொலைவில் நெடுஞ்சாலை, இருப்புப்பாதை, சுடுகாடு மற்றும் இடுகாடு ஏதும் இல்லை எனவும், விலை உயர்ந்த மரங்களோ, காப்பு காடுகளோ இல்லை எனவும், புல எண்கள். **99/2** மற்றும் **99/3**-ல் கருங்கள் மற்றும் சரள் குவித்து வைக்கப்பட்டுள்ளது எனவும், விண்ணப்ப புலத்திற்கு கிழக்கு திசையில் புல எண்கள். **105/6, 105/7, 106/30, 107/3C1, 107/3C2, 108/1, 108/2** ஆகியவற்றில் **2.19.5** ஹெக்டேர் பரப்பில் விண்ணப்பதாரர் திரு.பரமசிவம் என்பவர் பெயரில் உதவி இயக்குநர், புனியியல் மற்றும் சுரங்கத்துறை அவர்களின் செயல்முறை ஆணை எண். **M1/17701/2017**, நாள். **07.09.2020**-ன் படி அனுமதிக்கப்பட்ட **16.09.2020** முதல் **15.09.2025** வரை

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அனுமதிகாலம் கொண்ட சாதாரண கல்குவாரியானது செயல்பட்டில் உள்ளது எனவும், மேற்படி புலத்திலிருந்து கனிமங்களை கொண்டு செல்ல புல எண்கள். 117/1B2 மற்றும் 117/1C2 ஆனது பட்டா எண்கள். 1462 மற்றும் 1780-ன் படி திரு.சரவணன் என்பவர் பெயரில் தாக்கலாகியுள்ளது எனவும், புல எண்கள். 116/2A, 113/2, 112/2, 109/2B, 110/1B1, 110/2 மற்றும் 110/3 பட்டா எண். 1680-ன் படி மனுதாரர் திரு.பரமசிவம் மற்றும் திரு.சரவணன் என்பவர்கள் பெயரில் கூட்டாக தாக்கலாகியுள்ளது எனவும், விண்ணப்பதாரர் மேற்படி பட்டாதாரர் திரு.சரவணன் என்பவரிடமிருந்து மேற்படி புலங்களில் பாதையாக பயன்படுத்திக் கொள்ள சம்மதக் கடிதம் பெற்றுள்ளார் எனவும், மேலும் ஊராட்சிக்கு உட்பட்ட அரசு புறம்போக்கு புல எண்கள். 125/3, 124/3, 121/2, 120/2 மற்றும் 117/3-ன் வழியாக பாதை வசதி உள்ளது எனவும், எனவே கள ஆய்வின் அடிப்படையில் குவாரி குத்தகை உரிமம் வழங்க அனுமதி கோரிய திரு.நெல்வேலி மாவட்டம், மாணார் வட்டம், கானார்பட்டி கிராமம், புல எண்கள். 103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) மற்றும் 99/3 (0.52.0)-ல் மொத்தம் 2.39.0 ஹெக்டேர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க 5 ஆண்டுகளுக்கு தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959, விதி 19(1) மற்றும் 20-ன் படி விண்ணப்பதாரர் திரு.பரமசிவம், த/பெ.பாலகிருஷ்ணன் என்பவருக்கு கீழ்க்கண்ட நிபந்தனைகளுக்குட்பட்டு குத்தகை உரிமம் வழங்கலாம் என பரிந்துரைத்து அறிக்கை செய்துள்ளார்கள்.

நிபந்தனைகள்

1. அருகில் உள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி அமைத்து குவாரி பணிகள் மேற்கொள்ளப்பட வேண்டும்.
2. பொதுமக்களுக்கும் அருகிலுள்ள நிலங்களுக்கும் எவ்வித பாதிப்பும் ஏற்படுத்தக்கூடாது.
3. குவாரிப்பணி தொடங்குவதற்கு முன்பாக குவாரியை சுற்றி முள் கம்பிவேலி அமைத்து குவாரிப்பணி தொடங்க வேண்டும்.
4. முறைப்படியும், விஞ்ஞான பூர்வமாகவும் குவாரிப்பணி செய்ய வேண்டும்.
5. சான்றிதழ் பெறப்பட்ட போர்மேன், வெடிப்பாளர் மற்றும் சுரங்க மேலாளர் மூலம் முறையே குவாரிப்பணி செய்யப்பட வேண்டும்.

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6. வரைவு சுரங்கத்திட்டம் பிரஸ்தாப புலத்தின் அளவீட்டின் அடிப்படையில் தயாரித்து நாட்களுக்குள் சமர்ப்பித்திடவேண்டும்.
7. குவாரிப்பணி தொடங்குவதற்கு முன் சுரங்க பாதுகாப்பு இயக்குநர், சென்னை அவர்களுக்கு தகவல் தெரிவிக்கப்பட வேண்டும்.
8. பாறைகளை தகர்க்க கைத்துளைப்பான்களை கொண்டு பாறைகளை துளையிட்டு குறைவான வெடிப்பொருட்கள் பயன்படுத்த வேண்டும்.

4. அரசாணை எண். 169 தொழில் (எம்.எம்.சி.1) துறை, நாள். 04.08.2020 மூலம் திருத்தம் செய்யப்பட்ட 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகளில் விதிகள் 8-ல் உபவிதி 8-A மற்றும் 8-C-ல் உள்ளடக்கிய கனிமம் நீங்கலாக இதர சிறுகனிமங்களுக்கு வரப்பெற்ற விண்ணப்பங்கள் மீது உரிய நடவடிக்கை மேற்கொண்டு உத்தரவு பிறப்பிக்க உதவி இயக்குநருக்கு அதிகாரம் அளிக்கப்பட்டுள்ளது.

5. தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதிகள் 41 மற்றும் 42-ன் படி கல் மற்றும் இதர சிறுகனிமங்களுக்கு குவாரி குத்தகை உரிமம் வழங்கும் முன்பு ஒப்புதல் பெறப்பட்ட சுரங்கத்திட்ட அறிக்கை மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணைய தடையின்மைச் சான்று பெறப்பட வேண்டும் என வரையறுக்கப்பட்டுள்ளது.

எனவே வருவாய் கோட்டாட்சியர், திருநெல்வேலி, உதவி இயக்குநர், புனியியல் மற்றும் சுரங்கத்துறை, திருநெல்வேலி ஆகியோர்களின் பரிந்துரை அறிக்கை மற்றும் விண்ணப்பதாரரின் கோரிக்கையின் அடிப்படையில் திருநெல்வேலி மாவட்டம், மாணார் வட்டம், கானார்பட்டி கிராமம், புல எண்கள். 103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) மற்றும் 99/3 (0.52.0)-ல் மொத்தம் 2.39.0 ஹெக்டேர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க குத்தகை உரிமம் வழங்க "குத்தகை தேற்ற பரப்பளவு" (Precise Area) என தீர்மானித்து தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி எண். 41 மற்றும் 42-ன் படி ஒப்புதல் பெறப்பட்ட சுரங்கத்திட்ட அறிக்கை மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணை தடையின்மை சான்று பெற்று சமர்ப்பிக்க ஏதுவாக தெரிவிக்கப்படுகிறது.

B மகம்



நிபந்தனைகள்

1. அருகில் உள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி அமைத்து குவாரி பணிகள் மேற்கொள்ளப்பட வேண்டும்.
2. பொதுமக்களுக்கும் அருகிலுள்ள நிலங்களுக்கும் எவ்வித பாதிப்பும் ஏற்படுத்தக்கூடாது.
3. குவாரிப்பணி தொடங்குவதற்கு முன்பாக குவாரியை சுற்றி முன் கம்பிவேலி அமைத்து குவாரிப்பணி தொடங்க வேண்டும்.
4. முறைப்படியும், விஞ்ஞான பூர்வமாகவும் குவாரிப்பணி செய்ய வேண்டும்.
5. சாந்திதழ் பெறப்பட்ட பேர்மேன், வெடிப்பாளர் மற்றும் சுரங்க மேனாளர் மூலம் முறையே குவாரிப்பணி செய்யப்பட வேண்டும்.
6. வரைவு சுரங்கத்திட்டம் பிரஸ்தாப புலத்தின் DGPS அளவிட்டின் அடிப்படையில் தயாரித்து 90 நாட்களுக்குள் சமர்ப்பித்திட வேண்டும்.
7. குவாரிப்பணி தொடங்குவதற்கு முன் சுரங்க பாதுகாப்பு இயக்குநர், சென்னை அவர்களுக்கு தகவல் தெரிவிக்கப்பட வேண்டும்.
8. பாறைகளை தகர்க்க னகத்துளைப்பான்களை கொண்டு பாறைகளை துளைப்பிட்டு குளாவான வெடிப்பொருட்கள் பயன்படுத்த வேண்டும்.

மேலும் இவ்வறிவிப்பு கிடைக்கப்பெற்ற 90 நாட்களுக்குள் மேற்கொள்ள நிபந்தனைகளையும் குறிக்கும் வகையில் வரைவு சுரங்கத்திட்ட அறிக்கை தயார் செய்து உதவி இயக்குநர், புனியியல் மற்றும் சுரங்கத்துறை, திருநெல்வேலி அலுவலகிடம் ஒப்பதல் பெற சமர்ப்பிக்குமாறு அறிவுறுத்தப்படுகிறது.


உதவி இயக்குநர்,
புனியியல் மற்றும் சுரங்கத்துறை,
திருநெல்வேலி.


29/01/25

B மகன்



ANNEXURE-3

From

Thiru.A.Balamurugan, M.Sc, MBA.,
Assistant Director,
Geology and Mining,
Tirunelveli.

To

Thiru.B.Paramasivam,
S/o.Balakrishnan,
No.249, Nellai Thiruthu, .
Pallikottai,
Manur Taluk,
Tirunelveli District.

Rc.No.606/MIN-1/2024

dated,28.02.2025

Sir,

Sub: Mines and Minerals - Minor Minerals -
Roughstone and Gravel - Tirunelveli District -
Quarry lease application preferred by
Thiru.B.Paramasivam, S/o.Balakrishnan for the
grant of lease to quarry roughstone and gravel
over an extent of 2.39.0 hectares of patta lands
in SF. Nos.103/1A (0.19.5), 103/1B (0.21.0),
103/2A (0.34.5), 103/2B (0.30.5), 102/2
(0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) and 99/3
(0.52.0) of Kanarpatti Village - Manur Taluk -
precise area communicated - Mining plan
submitted - Approval accorded - Reg.

- Ref :**
1. Quarry lease application preferred by
Thiru.B.Paramasivam, S/o.Balakrishnan,
No.249, Nellai Thiruthu, Pallikottai, Manur
Taluk, Tirunelveli District, dated.
21.10.2024.
 2. Precise Area Communication letter in Rc.
No.606/MIN-2/2024, dated.29.01.2025.
 3. Letter received from the applicant
Thiru.B.Paramasivam, S/o.Balakrishnan,
dated.03.02.2025.
 4. Tahsildar, Manur certificate Rc. No.
A6/752/2025, dated.21.02.2025.

B. Paramasivam

Thiru.B.Paramasivam, S/o.Balakrishnan, No.249, Nellai Thiruthu, Palilkottai, Manur Taluk, Tirunelveli District has applied for the grant of lease to quarry Roughstone and Gravel over an extent of 2.39.0 hectares of patta land in SF. Nos. 103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) and 99/3 (0.52.0) of Kanarpatti Village, Manur Taluk, Tirunelveli District for a period of 5 years under Rule 19(1) & 20 of Tamil Nadu Minor Mineral Concession Rules, 1959.

2. Based on the recommendations of the Revenue Divisional Officer, Tirunelveli and the Assistant Director of Geology and Mining, Tirunelveli, the application of Thiru.B.Paramasivam, S/o.Balakrishnan for the grant of lease to quarry roughstone and gravel in the subject area was considered as the area available for the grant of lease for a period of 5 years. Accordingly precise area was communicated for an extent of 2.39.0 hectares of patta land in SF. Nos.103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) and 99/3 (0.52.0) of Kanarpatti Village, Manur Taluk, Tirunelveli District vide reference 2nd cited.

3. In response to the precise area communication, 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 3rd cited.

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4. The draft Mining Plan submitted in respect of the area communicated as precise area has been verified with reference to field conditions. All the conditions stipulated in the precise area communication have been incorporated in the Mining Plan. The required safety distance of 7.5 meters to the adjacent patta lands have been clearly demarcated. Since, the Tahsildar, Manur has stated that in the reference 4th cited, the SF. Nos. 493/5 (0.63.0 hectares) stands registered in the name of Thiru.Densingh Babu, S/o.Arulraj vide patta No. 2618 of Vagaikulam Village, Manur Taluk and SF. No.494/1A1 (1.39.0 hectares) stands jointly registered in the name of Thiru.Davidson, S/o.Ahasaperumal and 2 others vide patta No. 2367 and the SF. No.494/1A2 (2.07.0 hectares) stands jointly registered in the name of Thiru.Saravanan, S/o.Balakrishnan and Thiru.Paramasivam, S/o.Balakrishnan. In the above SF. Nos, the water body detail marked in the village fmb. But, no nilaviyal odai and water bodies not present in the applied area in the filed conditions. Further, the SF. No.99/1 (0.44.50 hectares) stands registered in the name of Tmt.Chandrika, W/o.Yesudasan vide patta No. 224 and SF. No.100/1 (1.34.0 hectares) stands registered in the name of Thiru.Samson vide patta no. 1821, SF. No.100/2 (0.02.0 hectares) stands jointly registered in the name of Thiru.Samson and Pilli J vide patta no.1822, SF. No.100/3 (0.26.0 hectares) stand jointly registered in the name of Thiru.Michael Antony and Antony vide patta no. 602 of Kanarpatti Village in Manur

B. N. S. S. S.

Taluk. In the above SF Nos, water body detail marked in the village fmb. There is no nilaviyal odai and waterbodies in the applied area. This certified only for the grant of quarry lease in SF. Nos, 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 & 99/3 of Kanarpatti Village, Manur Taluk.

5. The applicant has proposed to quarry 37,988 cbm 75,976 Ts of gravel and 3,92,550 cbm 10,79,512.50 Ts of Rough Stone for 5 years upto a depth of 47 meters below ground level. The year wise production of Roughstone and Gravel are given below;

Year	Proposed Production of Rough stone (in Ts)	Proposed Production of Gravel (in Ts)
1 year	2,15,435	34,632
2 year	2,16,232.50	41,344
3 year	2,16,122.50	-
4 year	2,16,067.50	-
5 year	2,15,655	-
Total	10,79,512.50	75,976

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, in respect of an extent of 2.39.0 hectares of land in SF. Nos.103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0),

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99/2 (0.22.5) and 99/3 (0.52.0) for a period of five years 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. Quarrying operations should be carried out in accordance with the Approved Mining Plan.
- v. The applicant is entitled for a production of 75,976 Ts of Gravel for the first two years and 10,79,512.50 Ts of Roughstone upto a depth of 47 meters below ground level for a period of 5 years as per the Mining Plan.
- vi. A safety distance of 7.5 meters shall be provided for the adjacent patta lands.
- vii. No hindrance shall be caused to the adjacent patta land and the public.
- viii. Before commencing quarrying operation in the area granted on lease, Wire fencing should be made all along the boundary of the leased area.

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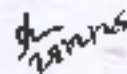
- ix. Scientific and systematic quarrying shall be carried out.
- x. Mining Engineer/ Foreman, Licensed Blaster should be appointed to supervise quarrying operations.
- xi. Opening notice may be given to the Director General of Mines Safety, Chennai Region.
- xii. In order to break rock formation minimum explosive shall be used.
- xiii. Environmental Clearance shall be obtained from the State Level Environment Impact Assessment Authority, Chennai.

6. As directed in the reference 2nd cited, you are hereby requested to obtain and produce Environmental Clearance to be obtained from the State Level Environment Impact Assessment Authority (SEIAA), Chennai as per 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.


**Assistant Director,
Geology and Mining,
Tirunelveli.**


28/02/25


28/02/25

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APPROVAL MINING PLAN

MINING PLAN FOR PADIYUR ROUGH STONE & GRAVEL QUARRY



(Prepared under rule 19(1), 41 & 42 of Tamil Nadu
Minor Mineral Concession Rules, 1959)

LOCATION OF THE QUARRY LEASE APPLIED AREA

STATE : TAMIL NADU
DISTRICT : TIRUNELVELI
TALUK : MANUR
VILLAGE : KANARPATTI
S.F.NOS : 103/1A, 103/1B, 103/2A,
103/2B, 102/2, 102/3, 99/2
and 99/3
EXTENT : 2.39.0Ha

ECO-FRIENDLY



SUSTAINABILITY



SAFETY



PREPARED BY

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

Qualified Person

No.93/36E2, Subramaniyar Kovil Street,
Omair Taluk, Salem District, Tamil Nadu,
Pin code-636 455.

MOBILE: 97502 23535 & 94446 54520.

B. Natarajan

(PPE)



B.Paramasivam,
S/o. Balakrishnan,
No. 249, Nellai Tiruthu, Pallikottai,
Manur Taluk, Tirunelveli District.

CONSENT LETTER FROM THE APPLICANT

The Mining Plan in respect of **Rough Stone and Gravel** quarry over an extent of 2.39.0hectares of Patta lands in S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3 of Kanarpatti Village, Manur Taluk, Tirunelveli 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, Tirunelveli 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,
Omatur 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 binding on me in all respects.

Signature of the Applicant

B Paramasivam

B.Paramasivam,

Place: Tirunelveli

Date: 30.01.2025

B Paramasivam



B.Paramasivam,
S/o. Balakrishnan,
No. 249, Nellai Tiruthu, Pallikottai,
Manur Taluk, Tirunelveli District.

DECLARATION

The Mining Plan in respect of **Rough Stone and Gravel** quarry over an extent of 2.39.0hectares of Patta lands in S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3 of Kanarpatti Village, Manur Taluk, Tirunelveli 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

B. Paramasivam

B.Paramasivam,

Place: Tirunelveli

Date: 30.01.2025

B. Paramasivam



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 under rules, 19, 41 & 42 as Amended in under Tamil Nadu Minor Mineral Concession Rules, 1959, have been observed in the Mining Plan for the grant of **Rough Stone and Gravel** quarry lease over an extent of 2.39.0hectares of Patta lands in S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3 of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State applied by Thiru.B.Paramasivam, 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: 31.01.2025

B. 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 and Gravel** quarry over an extent of 2.39.0hectares of Patta lands in S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3 of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State for Thiru.B.Paramasivam, covers all the provisions of Mines Act, Rules, and Regulations etc., made there under and whenever specific permission are required, the applicant will approach the Director General of Mines Safety, Chennai. The standards prescribed by DGMS in respect of Mines Health will be strictly implemented.

Certified

Signature of Qualified Person.


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

Qualified Person

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

Qualified Person

Place: Salem

Date: 31.01.2025

B. Natarajan

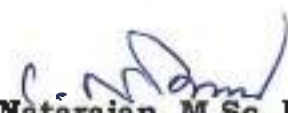
CERTIFICATE



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 and Gravel quarry lease applied for an extent of 2.39.5hectares of Patta land in S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3 of Kanarpatti Village, Manur Taluk, Tirunelveli District, by Thiru.B.Paramasivam, for a period of five years. Since the Mining Plan is prepared as per the provisions contained in Rule 15(1) (a) and (b) of Minerals (Other than Atomic, Hydro Carbons Energy Minerals) concession Rules 2016, the same may be approved by the Competent Authority.


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

Qualified Person

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

Qualified Person

Place: Salem

Date: 31.01.2025

B. Natarajan



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10.0	Environment Management Plan	20
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Annexure

S. No.	Description	Annexure No.
1.0	Precise Area Communication letter issued by the Assistant Director Department of Geology and Mining.	I
2.0	Copy of FMB	II
3.0	Copy of village map	III
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LIST OF PLATES

S. No.	Description	Plate No.
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2.0	Environmental Plan	I-A
3.0	Satellite imagery map	I-B
4.0	Topo sketch of Quarry lease applied area for 10Km Radius	I-C
5.0	Key Plan	I-D
6.0	Quarry lease & Surface plan	II
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8.0	Mineable Plan & Sections	IV
9.0	Yearwise Development, Production Plan & Sections	V
10.0	Conceptual Plan & Sections	VI

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MINING PLAN FOR MINOR MINERALS

ROUGH STONE AND GRAVEL

Over an extent of 2.39.0 hectares of Patta land in S.F.Nos.103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3 of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu State.

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

1.0 Introduction and Executive Summary:

1. The present Mining Plan is prepared for Thiru.B.Paramasivam, S/o.Halakrishnan, residing at No. 249, Nellai Thuthu, Pallikottai, Manur Taluk, Tirunelveli District.
2. The application was processed by the Assistant Director, Department of Geology and Mining, Tirunelveli, and passed an order vide Rc.No.606/Kanimam-1/2021 dated 29.01.2025 directing the applicant to produce approved Mining Plan under Rule 41(5) of the Tamil Nadu Minor Mineral Concession Rules, 1959 and Environmental Clearance Certificate under Rule 42 from the State Level Environmental Impact Assessment Authority (SEIAA) for the grant of quarry lease to quarry Rough Stone and Gravel over an extent of 2.39.0 hectares of Patta lands in S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3 of Kanarpatti Village, Manur Taluk, Tirunelveli District of Tamil Nadu State for a period of five years.
3. Accordingly, Mining Plan is prepared under the provisions of rule 19(1), 41 and 42 as per the amendments under Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating following the conditions imposed in the precise area communication letter.
 - a) 7.5 meters of safety distance should be left out for the adjacent patta lands while quarrying operation
 - b) The applicant should not cause any hindrance to public people and adjacent lands near by the area while quarrying operations.

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- c) Barbed wire fencing should be erected all along the boundary of the granted area before quarrying operation.
- d) Quarrying operation should be done proper scientific method only.
- e) The applicant will engage should have valid certified persons (Mines Manager, Foreman, Mate).
- f) The draft mining plan should be prepared based on DGPS survey details and submitted within 90 days.
- g) Before the quarrying operation applicant will intimate to the Director of Mines safety, Chennai.
- h) Applicant should use jackhammer and mild explosive during blasting in quarry.
- 4. Geological Resources is estimated at 29,51,437.50Ts of Rough stone and 95,400Ts of gravel formation and Mineable Reserves is estimated at 10,79,512.50Ts of Rough Stone and 75,976Ts of gravel formation and after leaving necessary safety distance from the lease boundary as indicated in the precise area letter and relevant mining laws in force.
- 5. The production schedule is proposed production 10,79,512.50Ts of Rough Stone and 75,976Ts of gravel formation for the period of five years.
- 6. The applicant ensured that, child labours under 18 years of age will not be engaged for quarrying operation.
- 7. The applicant ensure that will appoint should have valid certified persons (Mines Manager, Foreman, Mate) during quarrying operation.
- 8. Environmental parameters,
 - i) The area does not attract the Forest Conservation Act, 1980 as there is no forest around 150m radius.
 - ii) There is no interstate boundary around 10Kms radius.
 - iii) There is no wild life animal sanctuary within 10kms radius from the project site area under the Wildlife (Protection) Act, 1972.

Therefore the project seeks clearance only from State Level Environmental Impact Assessment Authority (SEIAA).



9. Environmental measures to be adopted shall be,

- i) Dust Control at source while drilling and blasting.
- ii) Dust suppression at loading point and transport haul roads,
- iii) Noise Control in blasting, control of fly rock missiles and vibration by doing peak particle velocity with in standard as prescribed by the DGMS and MOEF.
- iv) Unnecessary land degradation should be avoided or damaged land should be reclaimed or rehabilitated.
- v) Avoid uneven rat hole mining and follow scientific and systematic mining by safe bench system of open cast mining.
- vi) Mining near major fracture zones if any should be avoided to control ground water fluctuation in the adjacent agricultural lands.
- vii) Emission test of vehicles should be in tack to maintain minimum emission level of flue gases.
- viii) Noise level should not exceed 80db and the vehicles should use only permitted Air Horn while on road near residential areas.
- ix) Safety zones as prescribed by the Department of Geology and Mining from adjacent infrastructures should be strictly adhere to.
- x) And any other conditions as stipulated by the concerned authorities should be followed to protect the environment.

B. N. S. S.



EXECUTIVE SUMMARY:

a.	Name of the Village Panchayat	:	Kanarpatti																																														
b.	Name of the Panchayat Union	:	Manur																																														
c.	The proposed total Minable Reserves	:	10,79,512.50Ts of Rough Stone 75,976Ts of gravel formation																																														
d.	The proposed quantity of reserves (level of production) for Five years to be mined is(Recoverable reserves)	:	10,79,512.50Ts of Rough Stone 75,976Ts of gravel formation																																														
e.	Total extent of the area	:	2.39.0Ha																																														
f.	Proposed Period of mining	:	Five Years																																														
g.	Existing depth	:	It is fresh quarry lease applied area																																														
h.	Proposed Depth of mining	:	47m (below ground level) for the proposed mining plan.																																														
i.	Method of mining/level of mechanization	:	Open cast, Semi mechanized Mining with a bench height of 5m and bench width of 5m is proposed.																																														
j.	Types of Machineries used in the quarry	:	Machineries like Tractor mounted compressor attached with Jack hammers, Excavators are proposed to deploy for quarrying operation.																																														
k.	Cost of the Project A. Fixed Assets Cost B. Operational Cost C. EMP Cost		Rs. 17,34,000/- Rs. 82,00,000/ Rs. 6,20,000/- Total Project cost(A+B+C)- Rs.1,05,54,000/-																																														
l.	The area applied for lease is bounded by ten corners and the coordinates are clearly marked in plate no II.																																																
<table><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><tr><td>1</td><td>08° 53' 17.39"N</td><td>77° 38' 20.94"E</td><td>1-2 = 34.8m</td></tr><tr><td>2</td><td>08° 53' 18.49"N</td><td>77° 38' 20.66"E</td><td>2-3 = 7.6m</td></tr><tr><td>3</td><td>08° 53' 18.70"N</td><td>77° 38' 20.53"E</td><td>3-4 = 85.6m</td></tr><tr><td>4</td><td>08° 53' 21.47"N</td><td>77° 38' 20.85"E</td><td>4-5 = 60.8m</td></tr><tr><td>5</td><td>08° 53' 23.44"N</td><td>77° 38' 21.00"E</td><td>5-6 = 91.6m</td></tr><tr><td>6</td><td>08° 53' 23.27"N</td><td>77° 38' 24.00"E</td><td>6-7 = 96.6m</td></tr><tr><td>7</td><td>08° 53' 23.24"N</td><td>77° 38' 27.15"E</td><td>7-8 = 82.2m</td></tr><tr><td>8</td><td>08° 53' 20.57"N</td><td>77° 38' 26.99"E</td><td>8-9 = 100.2m</td></tr><tr><td>9</td><td>08° 53' 20.99"N</td><td>77° 38' 23.74"E</td><td>9-10 = 116.8m</td></tr><tr><td>10</td><td>08° 53' 17.20"N</td><td>77° 38' 23.40"E</td><td>10-1 = 75.4m</td></tr></table>				Corners	Co- ordinates		Distance between the corners	Latitude	Longitude	1	08° 53' 17.39"N	77° 38' 20.94"E	1-2 = 34.8m	2	08° 53' 18.49"N	77° 38' 20.66"E	2-3 = 7.6m	3	08° 53' 18.70"N	77° 38' 20.53"E	3-4 = 85.6m	4	08° 53' 21.47"N	77° 38' 20.85"E	4-5 = 60.8m	5	08° 53' 23.44"N	77° 38' 21.00"E	5-6 = 91.6m	6	08° 53' 23.27"N	77° 38' 24.00"E	6-7 = 96.6m	7	08° 53' 23.24"N	77° 38' 27.15"E	7-8 = 82.2m	8	08° 53' 20.57"N	77° 38' 26.99"E	8-9 = 100.2m	9	08° 53' 20.99"N	77° 38' 23.74"E	9-10 = 116.8m	10	08° 53' 17.20"N	77° 38' 23.40"E	10-1 = 75.4m
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10	08° 53' 17.20"N	77° 38' 23.40"E	10-1 = 75.4m																																														

B. N. S. S. S.



2.0 General Information:

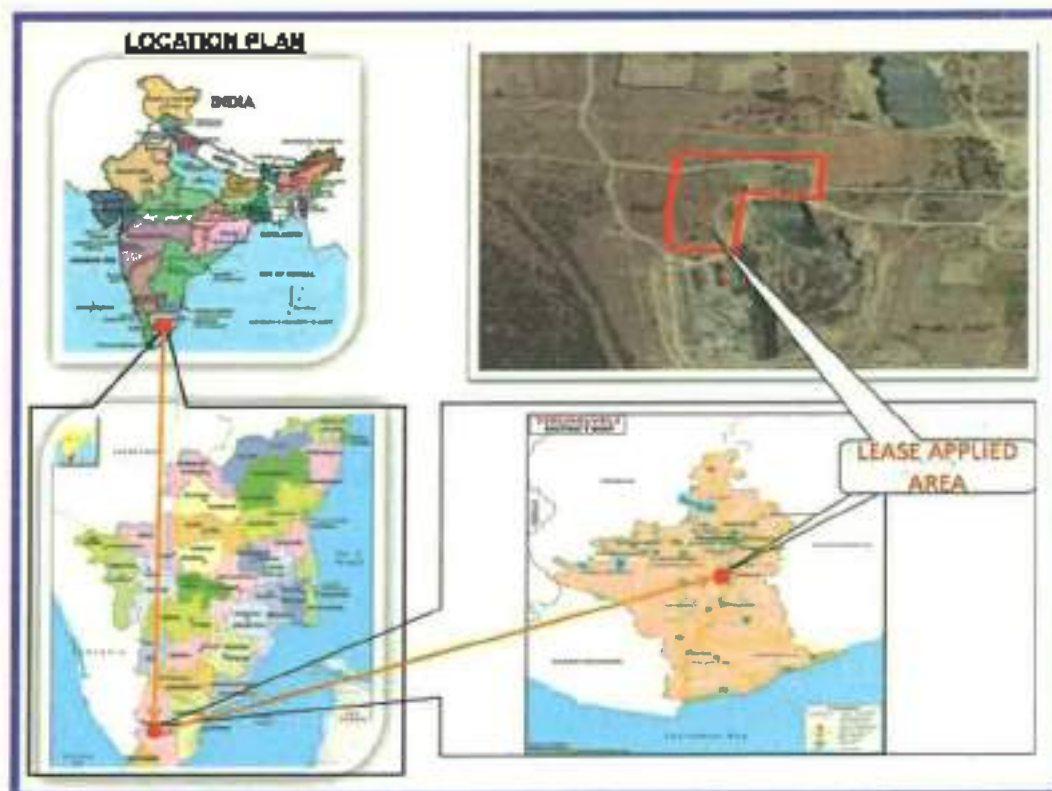
2.1	a.	Name of the Applicant	:	Thiru B.Paramasivam,
	b.	Address of the Applicant with phone No and e-mail id if any	:	S/o. Balakrishnan. No. 249, Nellai Tiruthu, Pallikottai, Mamur Taluk, Tirunelveli District. Pin Code- 628002 Cell No.:7010380806
	c.	Status of the Applicant	:	Individual
2.2	a.	Mineral Which the applicant intends to mine	:	Rough Stone and Gravel,
	b.	Precise area communication letter No.	:	Precise area communication letter received from the Assistant Director, Department of Geology and Mining, Tirunelveli, vide Rc.No.606/Karimaru : /2024 dated 29.01.2025.
	c.	Period of permission / lease granted	:	The Assistant Director, Department of Geology and Mining, Tirunelveli, has grant of lease period for five years .
	d.	Name and Address of the QP preparing Mining Plan	:	C.Natarajan, M.Sc.,M.Phil., Qualified Person No.93/36E2, Subramaniyar Kovil Street, Omatur Taluk, Salem District, Tamil Nadu, Pin-636 155. Mobile: 97502 23535 & 94446 54520.

B. Natarajan



3.0 Location:

S.No	Details of the Area:	
1	Corner Coordinates	Latitude : 08°53'17.20"N to 08°53'23.44"N Longitude : 77°38'20.53"E to 77°38'27.15"E
2	Toposheet Number	58- H/09
3	The altitude of the area	104m (MSL)
4	Extent	2.39.0Ha
5	Survey Nos	103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3
6	Village	Kanarpatti
7	Taluk	Manur
8	District	Tirunelveli
9	State	Tamil Nadu



a.	Classification of the Area (Ryotwari / poramboke / others)	:	Patta land
b.	Ownership / Occupancy of the Applied area (Surface rights)	:	It is patta land registered in the name of Thiru.Paramasivan (applicant) and Thiru.Saravanan, vide patta no. 1572, 2034, 1352 and 1355 the applicant has obtained consent from the pattadar Please refer Annexure No: IV & VII.
c.	Toposheet No. with Latitude and Longitude	:	Topo Sheet No: 58-H/ 09 Latitude : 08°53'17.20"N to 08°53'23.41"N Longitude : 77°38'20.53"E to 77°38'27.15"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 Manur -Alagiyapandiyapuram village on east side of the area. The Nearest Railway line is Tirunelveli to Kovilpatti line which is about 15Km on southeast side of the area.

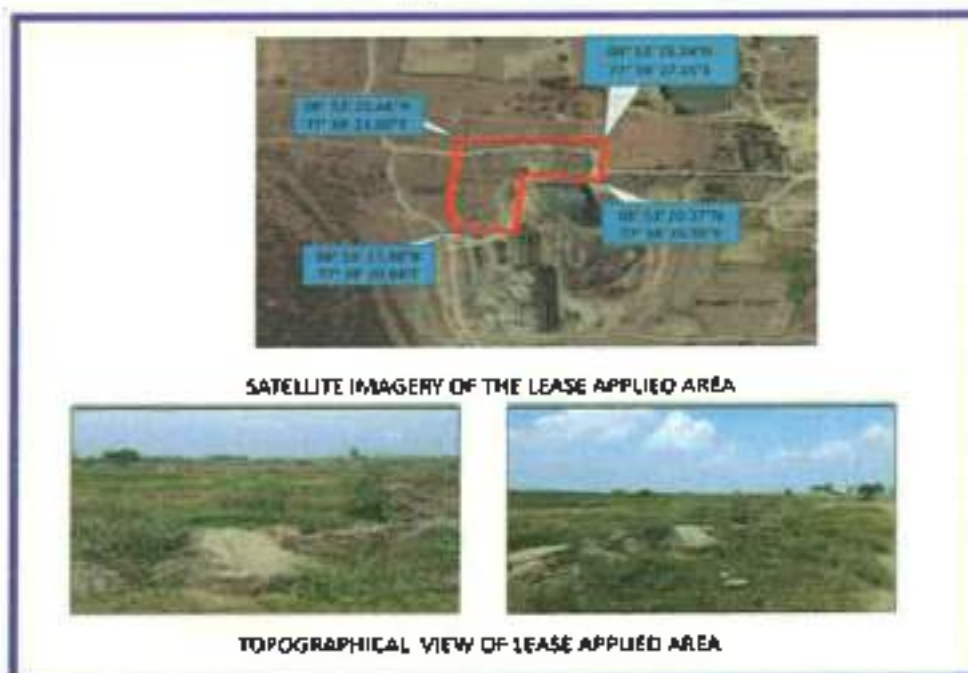


Fig. Location of the lease applied area

B. N. S. S.



PART - A

4.0 Geology and Mineral Reserves:

4.1	a.	Topography	➤ The area applied for quarry lease is exhibits almost plain covered by Gravel formation. The massive Charnockite formation is noticed below 2m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 104m (maximum) from MSL. ➤ No major river is found nearby the lease applied area. ➤ Water table is found at a depth of 68m in summer and 65m in rainy seasons. ➤ Temperature of the area is reported to be 18°C to a maximum of 42°C during summer. ➤ Rainfall of this area is about 800mm to 900 mm during the both NE & SW monsoons.						
	b.	General Geology of the Area	The area is underlain by the wide range of metamorphic rocks of peninsular gneissic complex. These rocks are extensively weathered and overlain by the recent valley fills and alluvium at places. The geological formations found in the district are Archaean rocks like Gneisses, Granites, Charnockites, basic granulites and calc-gneisses. The younger formations are Quartz veins and pegmatite. The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Charnockite is part of peninsular Gneisses, a high grade metamorphic rock. The strike of the Charnockite formation is N50°E –S50°W with dipping towards SE 60°. The general geological succession of the area is given as under. <table><thead><tr><th><u>AGE</u></th><th><u>ROCK TYPE</u></th></tr></thead><tbody><tr><td>Recent</td><td>Gravelly soil Unconformity</td></tr><tr><td>Archaean</td><td>Dolerite dyke Charnockite. Peninsular Gneissic complex and Calc Gneiss</td></tr></tbody></table>	<u>AGE</u>	<u>ROCK TYPE</u>	Recent	Gravelly soil Unconformity	Archaean	Dolerite dyke Charnockite. Peninsular Gneissic complex and Calc Gneiss
<u>AGE</u>	<u>ROCK TYPE</u>								
Recent	Gravelly soil Unconformity								
Archaean	Dolerite dyke Charnockite. Peninsular Gneissic complex and Calc Gneiss								

B. N. S. S.



4.2		Details of Exploration already carried out if any	:	No exploration was carried out, as the Rough stone formations are clearly visible from adjacent existing quarry pit.
4.3	a.	Estimation of Reserves	:	The Geological and Recoverable reserves are estimated by cross sectional method. Totally three sections have been drawn, two sections drawn length wise as (X Y), (X1 Y1) and another one section drawn width wise as (A B), 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.

B. N. S. S.

a. Geological Resources

The quarrying is restricted up to a depth of 47m (below ground level) only, availability of resources is given below.

Table No-1

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in T's	Geological Resources of Rough stone in T's
XY-AB	I	186	86	2	31992	-	2	63984	
	II	186	86	5	-	79980	2.75		219945
	III	186	86	5	-	79980	2.75		219945
	IV	186	86	5	-	79980	2.75		219945
	V	186	86	5	-	79980	2.75		219945
	VI	186	86	5	-	79980	2.75		219945
	VII	186	86	5	-	79980	2.75		219945
	VIII	186	86	5	-	79980	2.75		219945
	IX	186	86	5	-	79980	2.75		219945
	X	186	86	5	-	79980	2.75		219945
Total					31992	719820	-	63984	1979505
XIVI- AB	I	77	102	2	15708	-	2	31416	
	II	77	102	5	-	39270	2.75		107992.50
	III	77	102	5	-	39270	2.75		107992.50
	IV	77	102	5	-	39270	2.75		107992.50
	V	77	102	5	-	39270	2.75		107992.50
	VI	77	102	5	-	39270	2.75		107992.50
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	VIII	77	102	5	-	39270	2.75		107992.50
	IX	77	102	5	-	39270	2.75		107992.50
	X	77	102	5	-	39270	2.75		107992.50
Total					15708	353430	-	31416	971932.50
Grand Total					47700	1073250	-	95400	2951437.50

Gravel Formation

The Geological Resources of Rough stone

95,400 T's

29,51,437.50 T's





2. Geological Resources
The quarrying is restricted up to a depth of 47m (below ground level) only, availability of resources is given below.

Table No-1

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in Ts	Geological Resources of Rough stone in Ts
XY-AB	I	186	86	2	31992	-	2	63984	
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	VIII	186	86	5	-	79980	2.75		219945
	IX	186	86	5	-	79980	2.75		219945
	X	186	86	5	-	79980	2.75		219945
Total					31992	719920	-	63984	1979505
X1Y1 AB	I	77	102	2	15708	-	2	31416	
	II	77	102	5	-	39270	2.75		107992.50
	III	77	102	5	-	39270	2.75		107992.50
	IV	77	102	5	-	39270	2.75		107992.50
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	VIII	77	102	5	-	39270	2.75		107992.50
	IX	77	102	5	-	39270	2.75		107992.50
	X	77	102	5	-	39270	2.75		107992.50
Total					15708	353430	-	31416	936594.00
Grand Total					47700	1073250	-	95400	2916099

Gravel Formation : 95,400 Ts
The Geological Resources of Rough stone : 29,16,099 Ts

B. N. S. S. S.



b. Mineable Reserve

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

Table No-2

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in Ts	Mineable Reserves of Rough stone in Ts
XY-AB	I	170	78	2	26520	-	2	53040	
	II	165	76	5	-	62700	2.75		172425.00
	III	155	71	5	-	55025	2.75		151318.75
	IV	145	66	5	-	47850	2.75		131587.50
	V	135	61	5	-	41175	2.75		113231.25
	VI	125	56	5	-	35000	2.75		96250.00
	VII	115	51	5	-	29325	2.75		80643.75
	VIII	105	41	5	-	21825	2.75		59193.75
	IX	95	31	5	-	14725	2.75		40493.75
	X	85	21	5	-	8925	2.75		24543.75
XIY1-AB	Total				26520	316250	-	53040	869687.50
	I	61	94	2	11468	-	2	22936	
	II	56	92	5	-	25760	2.75		70840.00
	III	46	87	5	-	20610	2.75		55027.50
	IV	36	82	5	-	14760	2.75		40590.00
	V	26	77	5	-	10610	2.75		27527.50
	VI	16	72	5	-	5750	2.75		15840.00
Grand Total					11468	76300	-	22936	209825.00
					37988	392550	.	75976	1079912.50

The mineable reserve is computed as 10,79,512.50Ts of Rough stone and 75,976Ts of Gravel formation upto a depth 47m (below ground level) only.

B. N. S. S. S.



5.0 Mining:		
5.1	Method of Mining	: 1. Opencast method of semi mechanized mining with 5.0m height 5m width of the bench. 2. However, as far as the quarrying of Rough stone is concerned, observance of the provisions of Regulation 106(2) (b) as above is seldom possible due to various inherent petrogenetic factors coupled with mining difficulties. Hence it is proposed to obtain relaxation to the provisions of the above regulation from the Director of mines safety for which necessary provision is available with the regulation 106 (2) (b) of MMR-1961, under Mine Act 1952
5.2	Mode of Working	: The rough stone is proposed to quarry 5m bench height, 5m width with conventional opencast semi-Mechanized method The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, loading and transportation of Rough stone to the needy crushers/other buyers. The production of Rough stone in this quarry involves the following method which is typical for Rough Stone quarrying in contrast to other major mineral mining. Splitting of rock mass of considerable volume from the parent rock mass by jackhammer drilling and blasting, hydraulic excavators are used for loading the Rough Stone from pithead to the needy crushers/other buyers. Occasionally hydraulic excavators are attached with rock breakers for fragmentation to avoid secondary blasting. The primary boulders thus splitted are removed from the pits by excavators and further made to smaller sizes by rock breakers attached in excavators. It is a conventional opencast semi mechanized method of mining.
5.3	Proposed bench height & Width	: Quarrying of Rough Stone is proposed bench height of 5m and bench width of 5m.
5.4	Details of Overburden / Mineral Production proposed for the first 5 years.	: The overburden in the form of Gravel, after the excavation of Gravel and Rough stone will be directly loaded into tipper to the needy crushers/other buyers for road project and construction works for filling and leveling of low lying areas.



The Yearwise Production and Development Table

Table No -3

Year	Section	Bench	Length in fm	Width in fm	Depth in fm	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel in Ts	Mineable Reserves of Rough stone in Ts
I	XY-AB	I	111	78	2	17316	-	2	34632	-
		II	109	76	5	-	41420	2.75	-	113905.00
		III	104	71	5	-	36920	2.75	-	101530.00
		Total				17316	78340	-	34632	215435.00
II	XY-AB	I	59	78	2	9204	-	2	18408	-
		II	56	76	5	-	21280	2.75	-	58520.00
		III	51	71	5	-	18105	2.75	-	49788.75
XIV	XIV1-AB	I	61	54	2	11468	-	2	22936	-
		II	56	52	5	-	25760	2.75	-	70840.00
		III	31	57	5	-	13485	2.75	-	37083.75
		Total				20672	78630	-	41344	216232.50
III	XIV1-AB	III	15	57	5	-	6525	2.75	-	17943.75
		IV	36	52	5	-	14760	2.75	-	40590.00
		IV	145	56	5	-	47850	2.75	-	131587.50
IV	XY-AB	V	31	51	5	-	9455	2.75	-	26091.25
		Total				-	78590	-	-	216122.50
V	XY-AB	V	104	51	5	-	31720	2.75	-	87230.00
		VI	111	56	5	-	31080	2.75	-	55470.00
		V	26	77	5	-	10010	2.75	-	27527.50
V	XY1-AB	VI	16	72	5	-	5760	2.75	-	15840.00
		Total				-	78570	-	-	216067.50
V	XY-AB	VI	14	56	5	-	3920	2.75	-	10790.00
		VII	115	51	5	-	29325	2.75	-	80643.75
		VIII	105	41	5	-	21525	2.75	-	59193.75
V	XY-AB	IX	95	31	5	-	14725	2.75	-	40493.75
		X	85	51	5	-	8925	2.75	-	21343.75
		Total				-	78420	-	-	215655.00
		Grand Total				37988	392550	-	75976	1079512.50

The applicant has proposed to carry out 10,79,512.50Ts of Rough Stone and 75,976Ts of gravel formation for the period of five years.

B. N. S. S. S.

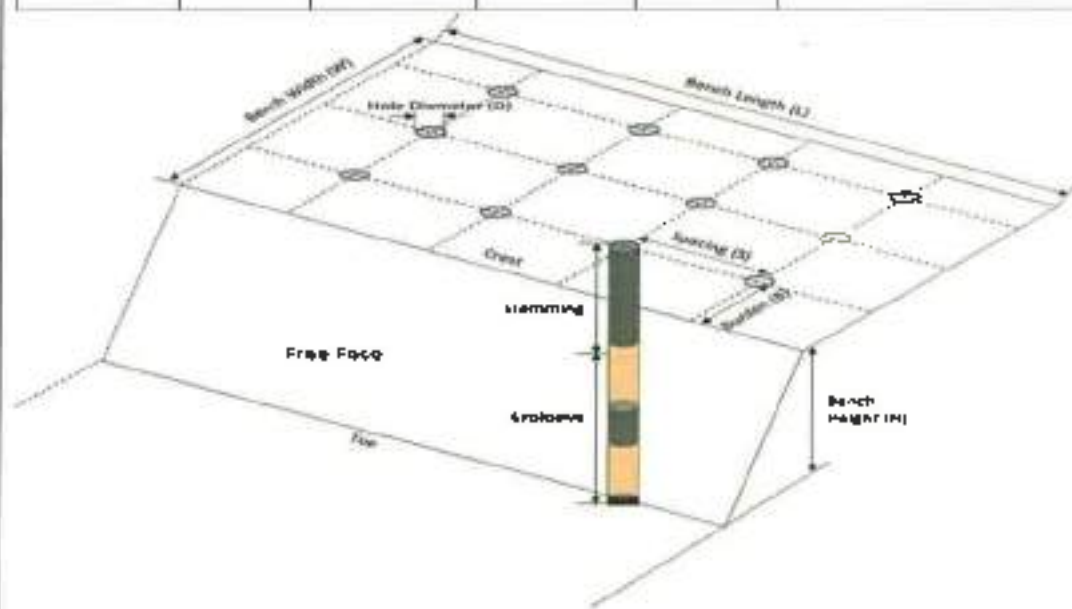


5.5		Machineries to be used																	
	a.	Drilling	:	It is proposed to use following machineries for quarrying rough stone															
		S.No	Type	Nos	Dia Hole mm	Make	Motive power												
		1	Jack hammer	5	32	Atlas Copco	Compressed air												
		2	Compressor	2	-	Atlas Copco	Diesel Drive												
	b.	Loading	:	Excavator of 0.90m ³ bucket capacity (with Rock breaker attachment) (2No).															
	c.	Transportation	:	Tipper 4Nos (5/10Ts) capacity.															
5.6		Disposal of Overburden	:	The overburden in the form of Gravel, after the excavation gravel will be directly loaded into tipper to the needy buyers for road project and construction works for filling and leveling of low lying areas.															
5.7		Brief Note on Conceptual Mining Plan for the entire lease period	:	Conceptual Mining Plan is prepared with an object of five years of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructures etc. Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc. Ultimate Pit dimension is given as under, <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>172</td><td>108</td><td>47</td></tr></table> Afforestation has been proposed on all along the boundary barrier by planting trees. All the baseline information studies like Air Quality monitoring, Noise and Vibration monitoring, Water Analysis studies will be carried out every year as per the MOEF norms.				Ultimate Pit dimension (M) end of Mining plan Period				Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in (m)	I	172	108	47
Ultimate Pit dimension (M) end of Mining plan Period																			
Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in (m)																
I	172	108	47																

6.0 Blasting:

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

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



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



6.3	Measures proposed to minimize ground vibration due to blasting	➤ Controlled blasting measures will be adopted for minimizing ground vibration and fly rock. ➤ Shallow depths jackhammer drilling and blasting is proposed to be carried out with minimum use of explosive mainly to give shattering effect in rough stone for easy excavation and to control fly rock. <table><tr><td>Number of holes</td><td>: 226</td></tr><tr><td>Powder factor</td><td>: 4Ts/Kg of explosives</td></tr><tr><td>Total explosive required</td><td>: 113Kg slurry explosives</td></tr><tr><td>Charge / hole</td><td>: 0.5Kg</td></tr><tr><td>Blasting time</td><td>: 12-2 Pm</td></tr></table>	Number of holes	: 226	Powder factor	: 4Ts/Kg of explosives	Total explosive required	: 113Kg slurry explosives	Charge / hole	: 0.5Kg	Blasting time	: 12-2 Pm
Number of holes	: 226											
Powder factor	: 4Ts/Kg of explosives											
Total explosive required	: 113Kg slurry explosives											
Charge / hole	: 0.5Kg											
Blasting time	: 12-2 Pm											
6.4	Storage of Explosives and safety measures to be taken while blasting.	➤ The applicant will engage an authorized explosive agency to carry out the small amount of blasting and it will be supervised by competent and statutory foreman/ mines manager. ➤ The applicant ensure that will appoint the Mate (Should have Valid Blaster Certificate) during Blasting Operation.										
7.0 Mine Drainage:												
7.1	Depth of Water table	The ground water table is reported as 68m below ground level. In the proposed mining plan only 47m (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										

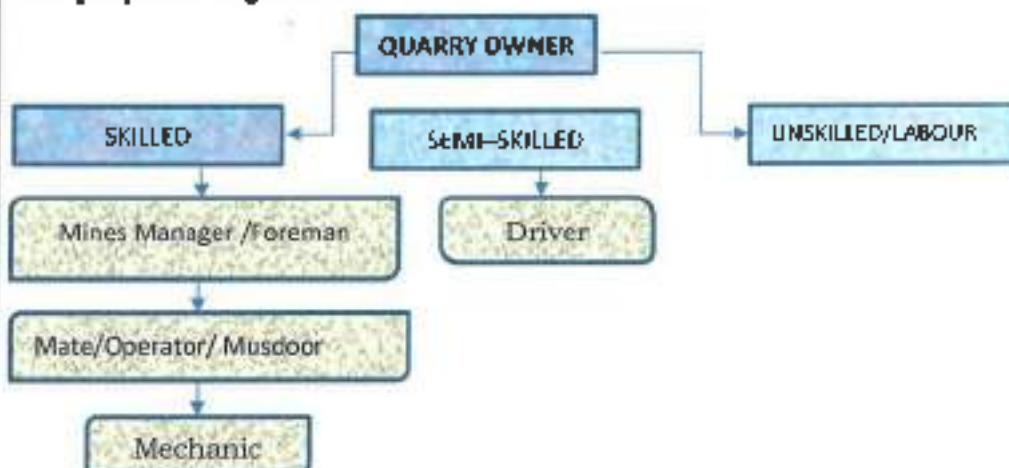


8.0 Other Permanent Structures:		
8.1	Habitations / Village	: There is no habitations situated within a radius of 300m.
8.2	Power lines (HT/LT)	: There is no Power line (HT/LT) passing within a radius of 50m.
8.3	Water bodies (River, Pond, Lake, Odai, Channel etc)	: There is a channel passing on southwest side of the area and is 140m away from the lease applied area.
8.4	Archeological / Historical Monuments	: There are no Archaeological / Historical Monuments within a radius of 300m.
8.5	Road (NH, SH, Village Road etc)	: The National Highway (NH-44) Tirunelveli - Salem is about 13.5km on east side of the area. The State Highway (SH-41) Tirunelveli - Sankarankovil is about 1.3Km on east 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 southvagaikulam reserve forest situated on southwest side at a distance of 150m. There is no Wild Life Sanctuary within a radius of 1Km.
8.8	Any Interstate Border, Protected areas under the Wild Life (Protection) Act, 1972, Critically Polluted Areas as Identified by Central Pollution Control Board and Notified Eco sensitive areas	: There are No inter State border within a radius of 10Kms.
8.9	Any Other Structures	: Nil

9.0 Employment Potential & Welfare Measures:

9.1 Employment Potential (Management & Supervisory personnel)

The proposed organization chart



1.	Skilled	Mines Manager	1 No.
		Foreman / Mate	2 No.
		Operator	10 No.
		Mechanic	1 No.
2.	Semi-skilled	Driver	4 No
3.	Unskilled	Labours	12Nos
Total ~			30Nos

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

The above man power is adequate to meet out the production schedule and the machinery strength envisaged in the mining plan and to comply the statutory provisions of Mines Safety Regulations.

- It is been ensured that, child labours under 18 years of age will not be engaged for quarrying operation.
- Necessary life insurance policies will be taken by the applicant to all the employees up to the end of the lease period.

9.2 Welfare Measures

- a. Drinking Water : Packaged drinking water is available from the nearby approved water vendors in Kanarpatti village which is about 2.2Km on southeast 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 4Km (SE) in Manur the competent and Statutory foreman/ permit manager will be in charge of first aid.
d.	Labour Health	:	As per Mines Rule. Periodic medical examination related to occupational health safety will be conducted to all the workers in applicant's own cost.
e.	Precautionary safety measures to the Labourers:		
			Safety provisions like helmet, goggles, safety shoes, Dust mask, Ear muffs etc., have to be provided as per the circulars and amendments made for Mine labours under the guidance of DGMS being a mechanized operation. Necessary training will be conducted once in a year to all the employees with the help of qualified and experienced officers to train about the safe and systematic quarrying operation.  



PART - B

10.0 Environmental Management Plan:

10.1	Existing Land Use Pattern	:	1. The area exhibits almost plain topography covered by Gravel formation. 2. Quarrying operation is proposed up to a depth of 47m (below ground level) for the proposed mining plan period. 3. Fluctuation of Water table in this area is in between 68m and 65m during a year. 4. This region receives the average annual rainfall of 800mm to 900mm. The surrounding area is practiced by the seasonal cultivation. The existing land use pattern is given as under. Table No-4 <table border="1"> <thead> <tr> <th>Sl No.</th><th>Land Use</th><th>Present Area (Ha)</th><th>Area in use during the quarrying period (Ha)</th></tr> </thead> <tbody> <tr> <td>1.</td><td>Quarrying Pit</td><td>Nil</td><td>1.86.0</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>Nil</td><td>0.01.0</td></tr> <tr> <td>4.</td><td>Green Belt</td><td>Nil</td><td>0.51.0</td></tr> <tr> <td>5.</td><td>Unutilized</td><td>2.39.0</td><td>Nil</td></tr> <tr> <td></td><td>Total =</td><td>2.39.0</td><td>2.39.0</td></tr> </tbody> </table>	Sl No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)	1.	Quarrying Pit	Nil	1.86.0	2.	Infrastructure	Nil	0.01.0	3.	Roads	Nil	0.01.0	4.	Green Belt	Nil	0.51.0	5.	Unutilized	2.39.0	Nil		Total =	2.39.0	2.39.0
Sl No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)																												
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3.	Roads	Nil	0.01.0																												
4.	Green Belt	Nil	0.51.0																												
5.	Unutilized	2.39.0	Nil																												
	Total =	2.39.0	2.39.0																												
10.2	Water Regime	:	Water table in this area is noticed at a depth of 68m and presently, in the proposed mining plan only 47m (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.																												

B. N. S. S.



10.4	Climatic conditions	: Generally subtropical climatic condition prevails throughout the year and there is no sharp variation in climate. This District receives rain both in south west and north east monsoon. The average rainfall is about 800mm to 900mm and the temperature ranges from 18°C during winter and to a maximum of 42°C during the summer.																				
10.5	Human Settlement	: The nearest habitations with the population is given as under. Table No-5 <table><tr><th>S. No</th><th>Name of the Village</th><th>Approximate distance & Direction from lease applied area</th><th>Approximate population</th></tr><tr><td>1.</td><td>Alagiyapondravapuram</td><td>2.1km - NE</td><td>2000</td></tr><tr><td>2.</td><td>Southvagankulam</td><td>1.9km - NW</td><td>1000</td></tr><tr><td>3.</td><td>Kansupatti</td><td>2.2km - SE</td><td>1500</td></tr><tr><td>4.</td><td>Ettankulam</td><td>3.3km - SW</td><td>800</td></tr></table>	S. No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population	1.	Alagiyapondravapuram	2.1km - NE	2000	2.	Southvagankulam	1.9km - NW	1000	3.	Kansupatti	2.2km - SE	1500	4.	Ettankulam	3.3km - SW	800
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1.	Alagiyapondravapuram	2.1km - NE	2000																			
2.	Southvagankulam	1.9km - NW	1000																			
3.	Kansupatti	2.2km - SE	1500																			
4.	Ettankulam	3.3km - SW	800																			
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, goggle etc., as per the Mines Act.																				
10.7	Plan for Noise Control	: Quarrying of Rough Stone will be carried out by drilling and blasting by using low power explosives, and hence, noise will be very minimum. However, periodical noise level monitoring will be carried out to check the noise level in and around the quarry site. Nowhere the noise level should exceed the permissible limit of 80db during the quarry working hours.																				



10.8	Environmental Impact Assessment Statement Describing Impact on mining on the next Five years	:	The mining plan proposed is for a small production of Rough stone without involving deep hole drilling and heavy blasting. Such limited mining activity is not likely to cause any impact adversely on environment as far as pollution of air, water and noise is concerned. anyhow environmental impact studies will be conducted as per EIA notification issued by MOEF.
10.9	Proposal for Waste Management	:	There is no waste anticipated in this rough stone quarry operation.
10.10	Proposal of Reclamation of Land affected during mining activities and at the end of mining.	:	In the proposed mining plan 47m (below ground level) 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 47m depth, fencing will be constructed around the quarried pits to prevent inherent entry of the public and cattle.
10.11	Program for Afforestation	:	The 7.5m safety distance along the lease boundary has been identified to be utilized for afforestation. Appropriate native species of Neem/Pungan trees will be planted in the first year. Nearly 5100Sq.m area is proposed to use under afforestation by planting 612nos of Neem/Pungan trees during first year with an anticipated survival rate of 80%. The Quarry Landuse, layout and afforestation plan is shown in Plate No.III.
10.12	Proposed Financial Estimate / Budget for (EMP) Environment Management		
	A. Fixed Asset Cost:		
	1. Land Cost (600000/1Ha)-		Rs. 14,34,000
	2. First aid room and accessories		Rs. 1,00,000
	3. Labour Shed		Rs. 1,00,000
	4. Sanitary Facility		Rs. 1,00,000
	Total=		Rs. 17,34,000/-

B. No. 10



B. Operational Cost:		
1. Machineries	:	Rs. 80,00,000/-
2. Fencing cost	:	Rs. 2,00,000
Total	:	Rs. 82,00,000/-
C. EMP Cost:		Budget Provision for the entire quarrying period.
	:	Air Quality Sampling = Rs. 40,000/-
	:	Water Quality Sampling = Rs. 40,000/-
	:	Noise Monitoring = Rs. 20,000/-
	:	Ground vibration test = Rs. 20,000/-
Expenditure		
1. Drinking water facility		Rs. 1,50,000/-
2. Sanitary Arrangements		Rs. 50,000/-
3. Safety kids		Rs. 50,000/-
4. Water sprinkling		Rs. 1,50,000/-
5. Afforestation		Rs. 1,00,000/-
Total=		Rs. 6,20,000/-
Total Project Cost (A+B+C)	:	Rs. 1,05,54,000/-
CSR Cost(2% of Total Project Cost)	:	Rs. 2,11,080/-
11.0 Mine Closure Plan:		
11.1	Steps proposed for phased restoration, reclamation of already mined out area.	There is no proposal for back filling, reclamation and rehabilitation. The quarried pits after the end of the life of lease will be fenced to prevent inherent entry of public and cattles.
11.2	Measures to be under taken on mine closure as per Act & Rules	Measures will be taken as per the Acts and Rules. The quarried pit will be fenced by using Barbed wire fencing to prevent inherent entry of public and cattle.
11.3	Mitigation measures to be undertaken for safety and restoration/ reclamation of the already mined out area	Mitigation measures: Drilling will be carried out by wet drilling mode to control the dust propagation into the air. Blasting will be carried out on limited scale. Mist Water spraying on haul road is proposed to prevent the dust propagation into the air.

B. N. S. S. S.



12.0 Any Other Details Intend to Furnish by the Applicant:

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

Prepared by

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

Place : Salem.

Date : 31.01.2025

This Mining Plan is approved Subject to the
Conditions / Stipulation Indicated in the Mining
Plan Approval

Letter Roc.No. 606/19111-1/2024

Dated 29.01.2025

[Signature]
Assistant Director
Dept. of Geology and Mining
Tirunelveli - 9

A. 20/1/25

B. Natarajan

அனுப்புநர்

திரு.அ.பாலமுருகன், எம்.எஸ்.சி,
எம்.பி.ஏ.,
உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
திருநெல்வேலி.

பெறுநர்

திரு.ப.பரமசிவம், த/பெ.பாலகிருஷ்ணன்,
எண்.249, நெல்லை திருத்து, பலலிக்கோட்டை, மாணார்
வட்டம், திருநெல்வேலி
மாவட்டம்.



ந.க.எண். 606/கனிமம்-1/2024
அய்யா,

நாள். 29.01.2025

பொருள்: கனிமம் மற்றும் சுரங்கம் - சிறுவகை
கனிமம் - சாதாரண கற்கள் மற்றும்
கிராவல் - திருநெல்வேலி மாவட்டம் -
மாணார் வட்டம் - கானார்பட்டி கிராமம் -
புல எண்கள். 103/1A (0.19.5), 103/1B
(0.21.0), 103/2A (0.34.5), 103/2B (0.30.5),
102/2 (0.21.0), 102/3 (0.38.0), 99/2
(0.22.5) மற்றும் 99/3 (0.52.0)-ல் 2.39.0
ஹெக்டேர் பரப்பில் சாதாரண கற்கள்
மற்றும் கிராவல் கனிமம் வெட்டி எடுக்க
குத்தகை உரிமம் வழங்கக்கோரி
திரு.ப.பரமசிவம், த/பெ.பாலகிருஷ்ணன்
என்பவர் விண்ணப்பம் செய்தது -
வருவாய் கோட்டாட்சியர், திருநெல்வேலி
அறிக்கை வரப்பெற்றது - குத்தகை
உரிமம் வழங்குவது தொடர்பாக
குத்தகை தேற்ற பரப்பு (Precise Area
Communication) நிரணயித்தல் -
தொடர்பாக.

- பாரவை:**
1. அரசாணை (Ms) எண். 169, தொழில்
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 2. திரு.ப.பரமசிவம்,
த/பெ.பாலகிருஷ்ணன், எண்.249,
நெல்லை திருத்து, பலலிக்கோட்டை,
மாணார் வட்டம், திருநெல்வேலி
மாவட்டம் என்பவரது விண்ணப்பம்
நாள். 21.10.2024.
 3. மாவட்ட ஆட்சித்தலைவர்,
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08.11.2024.
 4. திருநெல்வேலி, வருவாய்
கோட்டாட்சித்தலைவர் அவர்களின்
அறிக்கை ந.க.எண். அ5/5943/2024,
நாள். 08.01.2025. கிடைக்கப்பெற்றது.
23.01.2025.
 5. உதவி இயக்குநர், புவியியல் மற்றும்
சுரங்கத்துறை, திருநெல்வேலி
அவர்களின் புலத்தணிக்கை
அறிக்கை நாள். 27.01.2025.

B மகம்



திருநெல்வேலி மாவட்டம், மாணார் வட்டம், பல்லிக்கோட்டை, எண். 249, நெல்லை திருத்து என்ற முகவரியை சேர்ந்த திரு. B. பரமசிவம், த/பெ.பாலகிருஷ்ணன் என்பவர் திருநெல்வேலி மாவட்டம், மாணார் வட்டம், கானார்பட்டி கிராமம், பட்டா புல எண்கள். 103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) மற்றும் 99/3 (0.52.0)-ல் பரப்பு 2.39.0 ஹெக்டேர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க 5 ஆண்டுகளுக்கு 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் பிரிவு 19(1)-ன் படி குவாரி குத்தகை உரிமம் வழங்கக்கோரி விண்ணப்பம் செய்ததையடுத்து மேற்படி விண்ணப்பம் மீது விசாரணை மேற்கொண்டு அறிக்கை அனுப்பி வைத்திட வருவாய் கோட்டாட்சியர், திருநெல்வேலி அவர்களுக்கு பார்வை 3-ல் காணும் மாவட்ட ஆட்சித்தலைவர், திருநெல்வேலி அவர்களின் கடிதம் மூலம் கோரப்பட்டது.

2. பார்வை 4-ல் காணும் திருநெல்வேலி, வருவாய் கோட்டாட்சியர் அவர்களின் அறிக்கையில் விண்ணப்பம் தொடர்பாக மாணார் வருவாய் வட்டாட்சியர் அறிக்கை சமர்ப்பித்துள்ளதாக தெரிவித்து அவ்வறிக்கையில் மாணார் வட்டம், கானார்பட்டி கிராமம், புல எண்கள். 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 மற்றும் 99/3 மொத்தபரப்பு 2.39.0 ஹெக்டேர்ஸ் நிலங்கள் குத்தகை உரிமம் கோரியுள்ளார் என்றும், மேற்படி கானார்பட்டி கிராமம், புல எண். 103/1A-ல் 0.19.50 ஹெக்டேர் மற்றும் 103/1B-ல் 0.21.0 ஹெக்டேர் நிலம் பட்டா எண். 1572-ல் பதிவாகியுள்ளது எனவும், புல எண். 103/2A-ல் 0.34.50 ஹெக்டேர் நிலம் மற்றும் 103/2B-ல் 0.30.50 ஹெக்டேர் நிலம் பட்டா எண். 2034-ன் படி பதிவாகியுள்ளது எனவும், மேற்படி நிலங்கள் பூமியில் தரிசாக உள்ளது எனவும், புல எண். 102/2-ல் 0.21.0 ஹெக்டேர் மற்றும் 102/3-ல் 0.38.0 ஹெக்டேர் நிலம் பட்டா எண். 1352-ல் பதிவாகியுள்ளது எனவும், புல எண். 99/2-ல் 0.22.50 ஹெக்டேர் நிலம் மற்றும் புல எண். 99/3-ல் 0.52.0 ஹெக்டேர் நிலம் பட்டா எண். 1355-ல் பதிவாகியுள்ளது எனவும், மேற்படி பட்டா எண். 1352 மற்றும் 1355-ன் படி திரு.சரவணன், த/பெ.பாலகிருஷ்ணன் எனவும், பட்டா எண். 1572 மற்றும் 2034-ன் படி திரு.பரமசிவம், த/பெ.பாலகிருஷ்ணன் என விண்ணப்பதாரர் பெயரில் தாக்கலாகியுள்ளது எனவும், மேற்படி திரு.சரவணன் என்பவர் மனுதாரரின் சகோதரர் ஆவார் என்றும் மேற்படியாரிடம் குத்தகை ஆவணம் எண். 3946/2024, நாள். 25.11.2024-ன் படி 15

B மகன்



வருடங்களுக்கு குத்தகை பெற்றுள்ளார் எனவும், நிலங்கள் தரிசாக உள்ளது எனவும்,

புல எண்	பரப்பு (ஏர்ஸ்)	பட்டா எண் / பட்டாதாரர் பெயர்
103/1A	0.19.50	1572 - பாலகிருஷ்ணன் மகன் பரமசிவம்
103/1B	0.21.00	1572 - பாலகிருஷ்ணன் மகன் பரமசிவம்
103/2A	0.34.50	2034 - பாலகிருஷ்ணன் மகன் பரமசிவம்
103/2B	0.30.50	2034 - பாலகிருஷ்ணன் மகன் பரமசிவம்
102/2	0.21.00	1352 - பாலகிருஷ்ணன் மகன் சரவணன்
102/3	0.38.00	1352 - பாலகிருஷ்ணன் மகன் சரவணன்
99/2	0.22.50	1355 - பாலகிருஷ்ணன் மகன் சரவணன்
99/3	0.52.00	1355 - பாலகிருஷ்ணன் மகன் சரவணன்
மொத்த விஸ்தீரணம்	2.39.00	

மேற்படி பட்டியலில் குறிப்பிட்டுள்ள புல எண்களின் நான்கு மால் விபரங்கள் பின்வருமாறு

புல எண்	வடக்கு	தெற்கு	கிழக்கு	மேற்கு
103/1A	102/3	103/1B	106/1A	வாகைகுளம் கிராமம்
103/1B	103/1A	103/2A	106/1B	வாகைகுளம் கிராமம்
103/2A	103/1B	103/2B	106/2	வாகைகுளம் கிராமம்
102/2	102/3	102/2	99/1, 2	வாகைகுளம் கிராமம்
102/3	102/2	103/1A	99/3	வாகைகுளம் கிராமம்
99/2	99/1	99/3	98/1	102/2
99/3	99/2	106/1A	98/2, 3	102/3

மேற்படி கல்குவாரி அமைக்கக் கோரும் புல எண்கள் அனைத்தும் குடியிருப்பிலிருந்து 300 மீட்டர் தொலைவிற்கு அப்பால் உள்ளது எனவும், பிரஸ்தாப நிலத்தில் இருந்து 50 மீட்டரில் இருப்புப்பாதை, சாலை, மின் இணைப்புகள், குளம், ஓடை மற்றும் கால்வாய் ஆகியவைகள் இல்லை எனவும், பிரஸ்தாப புலமானது மாண்புமிகு உச்சநீதிமன்ற தீர்ப்பின் அடிப்படையில் PACL நிறுவனம் மற்றும் தமிழ்நாடு முதலீட்டாளர்கள் பாதுகாப்பு சட்டத்தில் கவரப்பட்ட சொத்தின்

B மலகம்



பட்டியலில் இடம் பெறவில்லை எனவும், பிரஸ்தாப புலத்தில் இருந்து **500** மீட்டருக்குள் பாலங்கள், நீரேற்று நிலையங்கள், புராதானச் சின்னங்கள் மற்றும் நினைவு சின்னங்கள் ஆகியவை ஏதும் இல்லை எனவும், பிரஸ்தாப புலத்தில் இருந்து **500** மீட்டருக்குள் கோவில், மகுதி மற்றும் இடுகாடு ஆகியவைகள் ஏதும் இல்லை எனவும், பிரஸ்தாப புல எண்கள் தடை ஆணை புத்தகத்தில் குறிப்பிடப்படவில்லை எனவும், பிரஸ்தாப புலத்தில் ஏற்கனவே கற்குடைவு செய்யப்பட்ட குழிகள் ஏதும் இல்லை எனவும், குவாரி செய்ய உத்தேசிக்கப்பட்டுள்ள விண்ணப்ப புலத்தின் நான்கு மால்களும் வகைபாடு மற்றும் பாதை வசதி அமைந்துள்ள புல எண்கள் ஆகியவற்றை காண்பிக்கும் வரைபடம், கிராம நிர்வாக அலுவலர், அளவர் கையொப்பம் இடப்பட்டுள்ளது எனவும், பிரஸ்தாப புலம் ஒன்றுக்கு மேற்பட்டதாக இருப்பதால் கூட்டு வரைபடம், தயார் செய்து மேலொப்பமிடப்பட்டுள்ளது எனவும், மனுதாரரிடம் இருந்து கனிம பாக்கி மற்றும் வருவாய் வசூல் சட்டத்தின் படி வசூலிக்கப்பட வேண்டிய நிலுவைத் தொகை ஏதும் இல்லை எனவும், பிரஸ்தாப நிலத்தில் நீர்நிலைகள், நிலவியல் ஓடைகள் ஏதும் இல்லை எனவும், பிரஸ்தாப நிலத்தின் அருகில் வன உயிரின சரணாலயம் மற்றும் தேசிய பூங்கா, சூழலியல் அதிர்வ தாங்கு மண்டலம் ஏதும் இல்லை எனவும், கானார்பட்டி கிராமத்தில் **16.11.2024** அன்று **அ1** அறிவிப்பு பிரசுரம் செய்யப்பட்டது எனவும், மேற்கண்ட இடத்தில் குவாரி செய்ய உரிமம் வழங்கிட பொதுமக்கள் கடிதம் மூலமாகவோ, நேரிலோ, எழுத்து பூர்வமாகவோ நாளது தேதி வரை ஆட்சேபனை ஏதும் வரவில்லை எனவும், புல எண். **99/1**-ல் கிராம கணக்கில் தண்ணீர் செல்லும் விளக்கியாக காண்பிக்கப்பட்டுள்ளது எனவும், ஆனால் நிலவியல் ஓடை எதுவும் இல்லை எனவும், பிரஸ்தாப புலத்திலிருந்து சுமார் **20** மீட்டர் தொலைவில் மனுதாரர் திரு.பரமசிவம் என்பவர் பெயரில் கல்குவாரி செயல்பட்டு வருகிறது எனவும், புல எண்கள். **99/2** மற்றும் **99/3**-ல் சிறு சிறு கருங்கல் மற்றும் சரள் குவித்து வைக்கப்பட்டுள்ளது எனவும், குவாரி செய்து கனிமம் கொண்டு வர சங்கரன்கோவில் மெயின் ரோட்டில் இருந்து புல எண்கள். **125/3, 124/3, 121/2, 120/2, 117/3** ஆகிய ஊராட்சிக்கு உட்பட்ட பாதை அரசு புறம்போக்கு என கிராம கணக்குகளில் உள்ளது எனவும், புல எண். **117/3**-லிருந்து புல எண். **117/1B2**-ல் **0.01.0** ஏர்ஸ் **117/1C2, 0.08.5** ஏர்ஸ் பட்டா எண். **1462, 1780** மனுதாரரின் சகோதரர் திரு.சரவணன் பெயரில் உள்ளது எனவும், புல எண். **116/2A**-ல் **0.05.05** ஏர்ஸ் பட்டா எண். **1680**, புல எண். **113/2**-ல் **0.05.0** ஏர்ஸ் பட்டா எண். **1680**, புல எண். **112/2**-ல் **0.07.0** ஏர்ஸ் பட்டா எண்.

B மகன்



1680, புல எண். 109/2B-ல் 0.14.0 ஏர்ஸ் பட்டா எண். 1680, புல எண்கள். 110/1B1-ல் 0.03.0 ஏர்ஸ் பட்டா எண். 1680, புல எண். 110/2-ல் 0.83.0 ஏர்ஸ், 110/3-ல் 0.86.0 ஏர்ஸ் பட்டா எண். 1680 ஆகியவை திரு.சரவணன் (1) மற்றும் திரு.பரமசிவம் (2) ஆகியோர்கள் பெயரில் உள்ளது எனவும், மேற்படி புல எண்கள். 125/3, 124/3, 121/2, 120/2, 117/3, 117/1C2, 117/1B2, 116/2A, 113/2, 112/2, 109/2B, 110/1B1, 110/2, 110/3, 107/1, 106/1A ஆகியவற்றில் மனுதாரர் பாதையாக பயன்படுத்த உள்ளார் எனவும், மேற்படி பட்டாவில் உள்ள மனுதாரரின் சகோதரர் திரு.சரவணன் என்பவரிடம் பாதை வசதி உபயோகிக்கும் வகைக்கு சம்மத கடிதம் மற்றும் வாக்குமூலம் கொடுத்துள்ளார் எனவும், கானார்பட்டி கிராமம், A1 அறிவிப்பு செய்யப்பட்டது எனவும், நாளது வரை எவ்வித ஆட்சேபனையும் வரப்பெறவில்லை எனவும், மேலும் மேற்கண்ட புலங்களில் குத்தகை உரிமம் வழங்கிட பொதுமக்கள் ஆட்சேபனை இல்லை என வாக்குமூலம் அளித்துள்ளனர் எனவும், விண்ணப்ப புலத்தில் பழையகுழி / குழிகள் ஏதும் இல்லை எனவும், விண்ணப்ப புலங்களுக்கு கூட்டு வரைபடம் தயார் செய்யப்பட்டு மேலொப்பம் இடப்பட்டுள்ளது எனவும், தனியரிடமிருந்து கனிமபாக்கி மற்றும் வருவாய் வசூல் சட்டத்தின் படி வசூலிக்கப்பட வேண்டிய நிலுவைத் தொகை ஏதும் இல்லை எனவும், பிரஸ்தாப புல எண்கள் அனைத்தும் நீண்ட காலமாக தரிசு நிலங்களாக உள்ளன எனவும், பாதுகாக்கப்பட்ட வனப்பகுதி, வன விலங்குள், மான்கள் சரணாலயம் ஏதும் அருகில் இல்லை, பிரஸ்தாப நிலத்தில் நீர்நிலைகள், நிலவியல்கள், ஓடைகள் எதுவும் இல்லை எனவும், மனுதாரர் மொத்த பரப்பிலும் குவாரி செய்ய உள்ளார் எனவும், எனவே மனுதாரர் அனுமதி கோரிய மானார் வட்டம், கானார்பட்டி கிராமம், பட்டா புல எண்கள். 103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) & 99/3 (0.52.0)-ல் மொத்தம் 2.39.0 ஹெக்டேர் பரப்பில் திரு.பரமசிவம், த/பெ.பாலகிருஷ்ணன் என்பவருக்கு சாதாரண சுற்கள் மற்றும் கிராவல் வெட்டி எடுக்க குத்தகை உரிமம் வழங்க பரிந்துரை செய்வதாகவும், இத்துடன் வட்டாட்சியர் அறிக்கை, புலத்தணிக்கை அறிக்கை மற்றும் ஆவணங்கள் இணைத்து அனுப்பியுள்ளதாகவும் தெரிவித்துள்ளார்.

3. பார்வை 5-ல் காணும் திருநெல்வேலி மாவட்டம், புவியியல் மற்றும் சுரங்கத்துறை, உதவி இயக்குநர் அவர்களால் 27.01.2025 அன்று விண்ணப்பிக்கப்பட்ட புலத்தை கள ஆய்வு

B மகன்



செய்ததாக தெரிவித்து அறிக்கை சமர்ப்பித்துள்ளார். அவ்வுறுக்கையில் குத்தகை உரிமம் வழங்க அனுமதி கோரிய திருநெல்வேலி மாவட்டம், மானூர் வட்டம், கானார்பட்டி கிராமம், புல எண்கள். **103/1A (0.19.5), 103/1B (0.21.0)**-ல் உள்ள நிலமானது பட்டா எண். **1572**-ன் படி மனுதாரர் திரு.பரமசிவம், த/பெ.பாலகிருஷ்ணக் கோனார் என்பவர் பெயரில் தனி பட்டாவாக தாக்கலாகியுள்ளது எனவும், புல எண்கள். **103/2A (0.34.50), 103/2B (0.30.50)**-ல் உள்ள நிலமானது பட்டா எண். **2034**-ன் படி மனுதாரர் திரு.பரமசிவம், த/பெ.பாலகிருஷ்ணக் கோனார் என்பவர் பெயரில் தனி பட்டாவாக தாக்கலாகியுள்ளது எனவும், புல எண்கள். **102/2 (0.21.0), 102/3 (0.38.0)**-ல் உள்ள நிலமானது பட்டா எண். **1352**-ன் படி திரு.சரவணன், த/பெ.பாலகிருஷ்ணக் கோனார் என்பவர் பெயரில் தனி பட்டாவாக தாக்கலாகியுள்ளது எனவும், புல எண்கள். **99/2 (0.22.50), 99/3 (0.52.0)**-ல் உள்ள நிலமானது பட்டா எண். **1355**-ன் படி திரு.சரவணன், த/பெ.பாலகிருஷ்ணக் கோனார் என்பவர் பெயரில் தனி பட்டாவாக தாக்கலாகியுள்ளது எனவும், விண்ணப்பதாரர் மேற்படி பட்டாதாரரான திரு.சரவணன், த/பெ.பாலகிருஷ்ணக் கோனார் என்பவரிடமிருந்து குவாரி பணிகள் மேற்கொள்ள குத்தகை ஆவணம் எண். **3948/2024**, நாள். **25.11.2024**-ன் படி **15** வருடங்களுக்கு குத்தகை பெற்றுள்ளார் எனவும், மேற்படி புலத்தினை தணிக்கை செய்ததில் விண்ணப்பித்த புலமானது சமதளமாக உள்ளது எனவும், மேற்படி புலத்தில் உள்ள பாறைகள் சார்னகைட் வகையை சார்ந்தது எனவும், இவை சாதாரண கற்கள், ஜல்லி, எம்-சாண்ட் ஆகியவை தயாரிக்க உகந்த பாறைகள் ஆகும் எனவும், விண்ணப்ப புலத்தில் சுமார் **2** மீட்டர் ஆழம் வரை கிராவல் / சரள் காணப்படுகிறது எனவும், விண்ணப்பித்த புலத்திலிருந்து **300** மீட்டர் சுற்றளவிற்குள் அங்கீகரிக்கப்பட்ட வீட்டு மனைகள், நத்தம், குடியிருப்புகள் ஏதுமில்லை எனவும், மேற்படி புலத்திலிருந்து **50** மீட்டர் தொலைவில் நெடுஞ்சாலை, இருப்புப்பாதை, சுடுகாடு மற்றும் இடுகாடு ஏதும் இல்லை எனவும், விலை உயர்ந்த மரங்களோ, காப்பு காடுகளோ இல்லை எனவும், புல எண்கள். **99/2** மற்றும் **99/3**-ல் கருங்கள் மற்றும் சரள் குவித்து வைக்கப்பட்டுள்ளது எனவும், விண்ணப்ப புலத்திற்கு கிழக்கு திசையில் புல எண்கள். **105/6, 105/7, 106/30, 107/3C1, 107/3C2, 108/1, 108/2** ஆகியவற்றில் **2.19.5** ஹெக்டேர் பரப்பில் விண்ணப்பதாரர் திரு.பரமசிவம் என்பவர் பெயரில் உதவி இயக்குநர், புனியியல் மற்றும் சுரங்கத்துறை அவர்களின் செயல்முறை ஆணை எண். **M1/17701/2017**, நாள். **07.09.2020**-ன் படி அனுமதிக்கப்பட்ட **16.09.2020** முதல் **15.09.2025** வரை

B மலர்



அனுமதிகாலம் கொண்ட சாதாரண கல்குவாரியானது செயல்பட்டில் உள்ளது எனவும், மேற்படி புலத்திலிருந்து கனிமங்களை கொண்டு செல்ல புல எண்கள். 117/1B2 மற்றும் 117/1C2 ஆனது பட்டா எண்கள். 1462 மற்றும் 1780-ன் படி திரு.சரவணன் என்பவர் பெயரில் தாக்கலாகியுள்ளது எனவும், புல எண்கள். 116/2A, 113/2, 112/2, 109/2B, 110/1B1, 110/2 மற்றும் 110/3 பட்டா எண். 1680-ன் படி மனுதாரர் திரு.பரமசிவம் மற்றும் திரு.சரவணன் என்பவர்கள் பெயரில் கூட்டாக தாக்கலாகியுள்ளது எனவும், விண்ணப்பதாரர் மேற்படி பட்டாதாரர் திரு.சரவணன் என்பவரிடமிருந்து மேற்படி புலங்களில் பாதையாக பயன்படுத்திக் கொள்ள சம்மதக் கடிதம் பெற்றுள்ளார் எனவும், மேலும் ஊராட்சிக்கு உட்பட்ட அரசு புறம்போக்கு புல எண்கள். 125/3, 124/3, 121/2, 120/2 மற்றும் 117/3-ன் வழியாக பாதை வசதி உள்ளது எனவும், எனவே கள ஆய்வின் அடிப்படையில் குவாரி குத்தகை உரிமம் வழங்க அனுமதி கோரிய திரு.நெல்வேலி மாவட்டம், மாணார் வட்டம், கானார்பட்டி கிராமம், புல எண்கள். 103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) மற்றும் 99/3 (0.52.0)-ல் மொத்தம் 2.39.0 ஹெக்டேர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க 5 ஆண்டுகளுக்கு தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959, விதி 19(1) மற்றும் 20-ன் படி விண்ணப்பதாரர் திரு.பரமசிவம், த/பெ.பாலகிருஷ்ணன் என்பவருக்கு கீழ்க்கண்ட நிபந்தனைகளுக்குட்பட்டு குத்தகை உரிமம் வழங்கலாம் என பரிந்துரைத்து அறிக்கை செய்துள்ளார்கள்.

நிபந்தனைகள்

1. அருகில் உள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி அமைத்து குவாரி பணிகள் மேற்கொள்ளப்பட வேண்டும்.
2. பொதுமக்களுக்கும் அருகிலுள்ள நிலங்களுக்கும் எவ்வித பாதிப்பும் ஏற்படுத்தக்கூடாது.
3. குவாரிப்பணி தொடங்குவதற்கு முன்பாக குவாரியை சுற்றி முள் கம்பிவேலி அமைத்து குவாரிப்பணி தொடங்க வேண்டும்.
4. முறைப்படியும், விஞ்ஞான பூர்வமாகவும் குவாரிப்பணி செய்ய வேண்டும்.
5. சான்றிதழ் பெறப்பட்ட போர்மேன், வெடிப்பாளர் மற்றும் சுரங்க மேலாளர் மூலம் முறையே குவாரிப்பணி செய்யப்பட வேண்டும்.

B மகம்



6. வரைவு சுரங்கத்திட்டம் பிரஸ்தாப புலத்தின் அளவீட்டின் அடிப்படையில் தயாரித்து நாட்களுக்குள் சமர்ப்பித்திடவேண்டும்.
7. குவாரிப்பணி தொடங்குவதற்கு முன் சுரங்க பாதுகாப்பு இயக்குநர், சென்னை அவர்களுக்கு தகவல் தெரிவிக்கப்பட வேண்டும்.
8. பாறைகளை தகர்க்க கைத்துளைப்பான்களை கொண்டு பாறைகளை துளையிட்டு குறைவான வெடிப்பொருட்கள் பயன்படுத்த வேண்டும்.

4. அரசாணை எண். 169 தொழில் (எம்.எம்.சி.1) துறை, நாள். 04.08.2020 மூலம் திருத்தம் செய்யப்பட்ட 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகளில் விதிகள் 8-ல் உபவிதி 8-A மற்றும் 8-C-ல் உள்ளடக்கிய கனிமம் நீங்கலாக இதர சிறுகனிமங்களுக்கு வரப்பெற்ற விண்ணப்பங்கள் மீது உரிய நடவடிக்கை மேற்கொண்டு உத்தரவு பிறப்பிக்க உதவி இயக்குநருக்கு அதிகாரம் அளிக்கப்பட்டுள்ளது.

5. தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதிகள் 41 மற்றும் 42-ன் படி கல் மற்றும் இதர சிறுகனிமங்களுக்கு குவாரி குத்தகை உரிமம் வழங்கும் முன்பு ஒப்புதல் பெறப்பட்ட சுரங்கத்திட்ட அறிக்கை மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணைய தடையின்மைச் சான்று பெறப்பட வேண்டும் என வரையறுக்கப்பட்டுள்ளது.

எனவே வருவாய் கோட்டாட்சியர், திருநெல்வேலி, உதவி இயக்குநர், புனியியல் மற்றும் சுரங்கத்துறை, திருநெல்வேலி ஆகியோர்களின் பரிந்துரை அறிக்கை மற்றும் விண்ணப்பதாரரின் கோரிக்கையின் அடிப்படையில் திருநெல்வேலி மாவட்டம், மாணார் வட்டம், கானார்பட்டி கிராமம், புல எண்கள். 103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) மற்றும் 99/3 (0.52.0)-ல் மொத்தம் 2.39.0 ஹெக்டேர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க குத்தகை உரிமம் வழங்க "குத்தகை தேற்ற பரப்பளவு" (Precise Area) என தீர்மானித்து தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி எண். 41 மற்றும் 42-ன் படி ஒப்புதல் பெறப்பட்ட சுரங்கத்திட்ட அறிக்கை மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணை தடையின்மை சான்று பெற்று சமர்ப்பிக்க ஏதுவாக தெரிவிக்கப்படுகிறது.

B மகம்



நிபந்தனைகள்

1. அருகில் உள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி அமைத்து குவாரி பணிகள் மேற்கொள்ளப்பட வேண்டும்.
2. பொதுமக்களுக்கும் அருகிலுள்ள நிலங்களுக்கும் எவ்வித பாதிப்பும் ஏற்படுத்தக்கூடாது.
3. குவாரிப்பணி தொடங்குவதற்கு முன்பாக குவாரியை சுற்றி முன் கம்பிவேலி அமைத்து குவாரிப்பணி தொடங்க வேண்டும்.
4. முறைப்படியும், விஞ்ஞான பூர்வமாகவும் குவாரிப்பணி செய்ய வேண்டும்.
5. சாந்திதழ் பெறப்பட்ட பேர்மேன், வெடிப்பாளர் மற்றும் சுரங்க மேனாளர் மூலம் முறையே குவாரிப்பணி செய்யப்பட வேண்டும்.
6. வரைவு சுரங்கத்திட்டம் பிரஸ்தாப புலத்தின் DGPS அளவிட்டின் அடிப்படையில் தயாரித்து 90 நாட்களுக்குள் சமர்ப்பித்திட வேண்டும்.
7. குவாரிப்பணி தொடங்குவதற்கு முன் சுரங்க பாதுகாப்பு இயக்குநர், சென்னை அவர்களுக்கு தகவல் தெரிவிக்கப்பட வேண்டும்.
8. பாறைகளை தகர்க்க னகத்துளைப்பான்களை கொண்டு பாறைகளை துளைப்பிட்டு குளாவான வெடிப்பொருட்கள் பயன்படுத்த வேண்டும்.

மேலும் இவ்வறிவிப்பு கிடைக்கப்பெற்ற 90 நாட்களுக்குள் மேற்கொள்ள நிபந்தனைகளையும் குறிக்கும் வகையில் வரைவு சுரங்கத்திட்ட அறிக்கை தயார் செய்து உதவி இயக்குநர், புனியியல் மற்றும் சுரங்கத்துறை, திருநெல்வேலி அலுவலகிடம் ஒப்பதல் பெற சமர்ப்பிக்குமாறு அறிவுறுத்தப்படுகிறது.


உதவி இயக்குநர்,
புனியியல் மற்றும் சுரங்கத்துறை,
திருநெல்வேலி.


29/01/25

B மகம்

மாவட்டம் : திருச்செங்கல்பட்டி

வட்டம் : மாணாறு

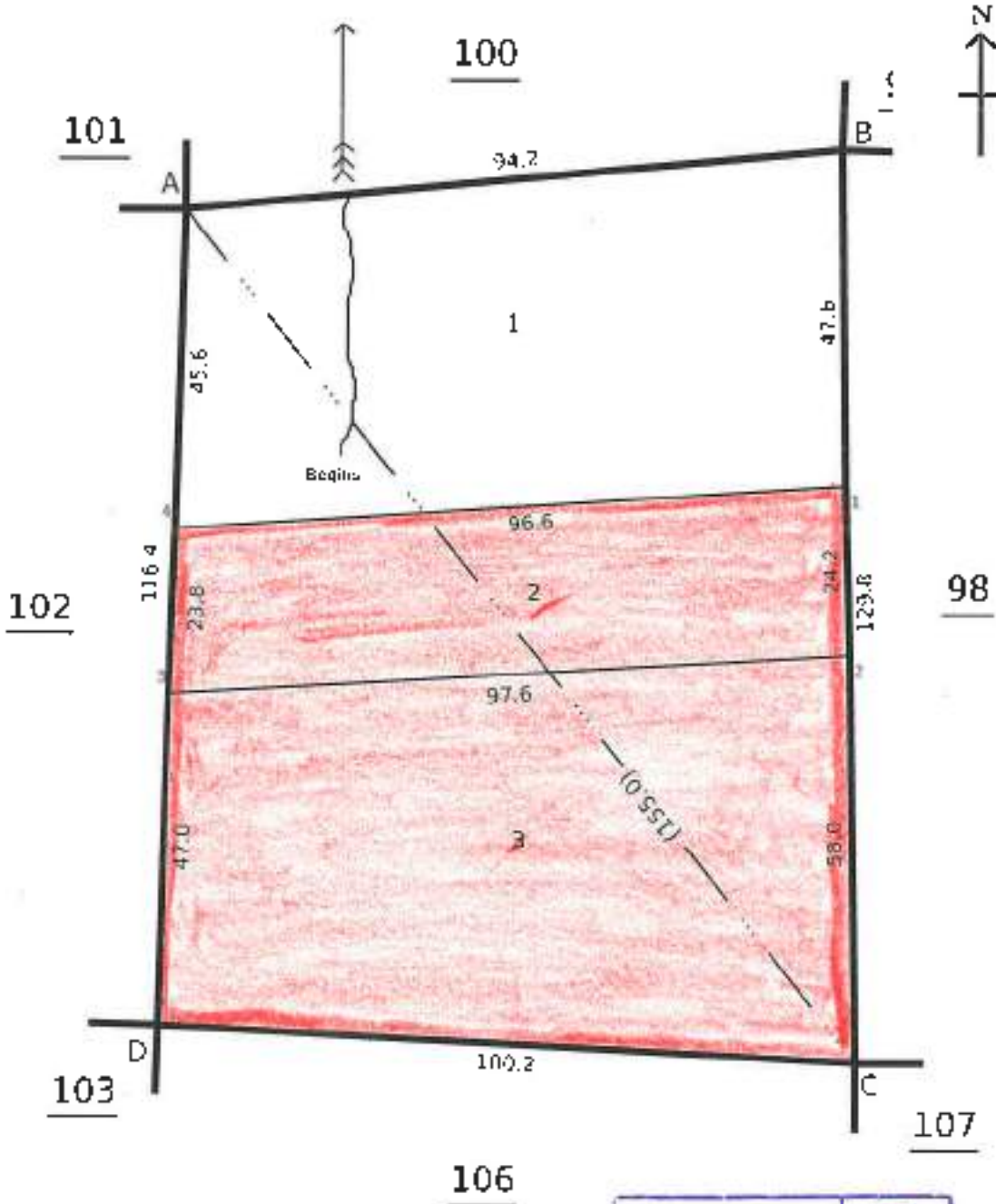
சிறுநெல் : கானம் [29]



பு.எண் : 99

அ.எண் : 81

அளவு : 1 : 928



LEASE APPLIED AREA

B. முத்து

Signed By Tahsildar

Name of approver : dura

Date of Approval 09-08-2017

Date of Issue: 22-11-2024 19:28:18



மாஸ்டம் : சிபுசெல்வேரி

லட்டம் : மாசூர்

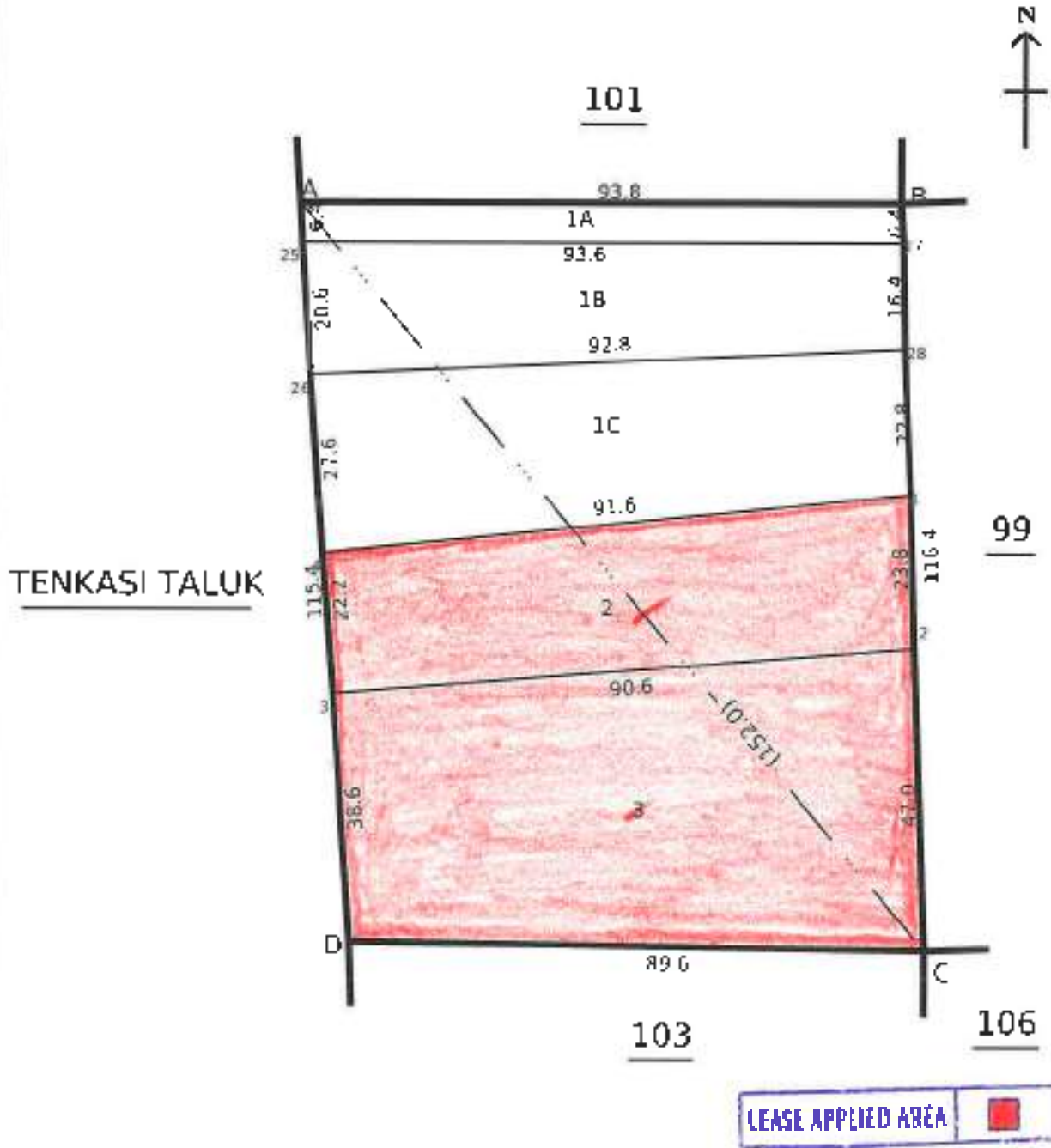
கிராமம் : காளையார் [29]



பல எண் : 102

பரப்பளவு : ஈச்டர் 01 ஈ 5-50

எண் : 1 : 958



B. Muthulakshmi

Data Digitally Signed By
MUTHULAKSHMI KARUNANITHI

Date of Issue: 22-11-2024 19:29:45





மாவட்டம் : திருநெல்வேலி

வட்டம் : மாணூர்

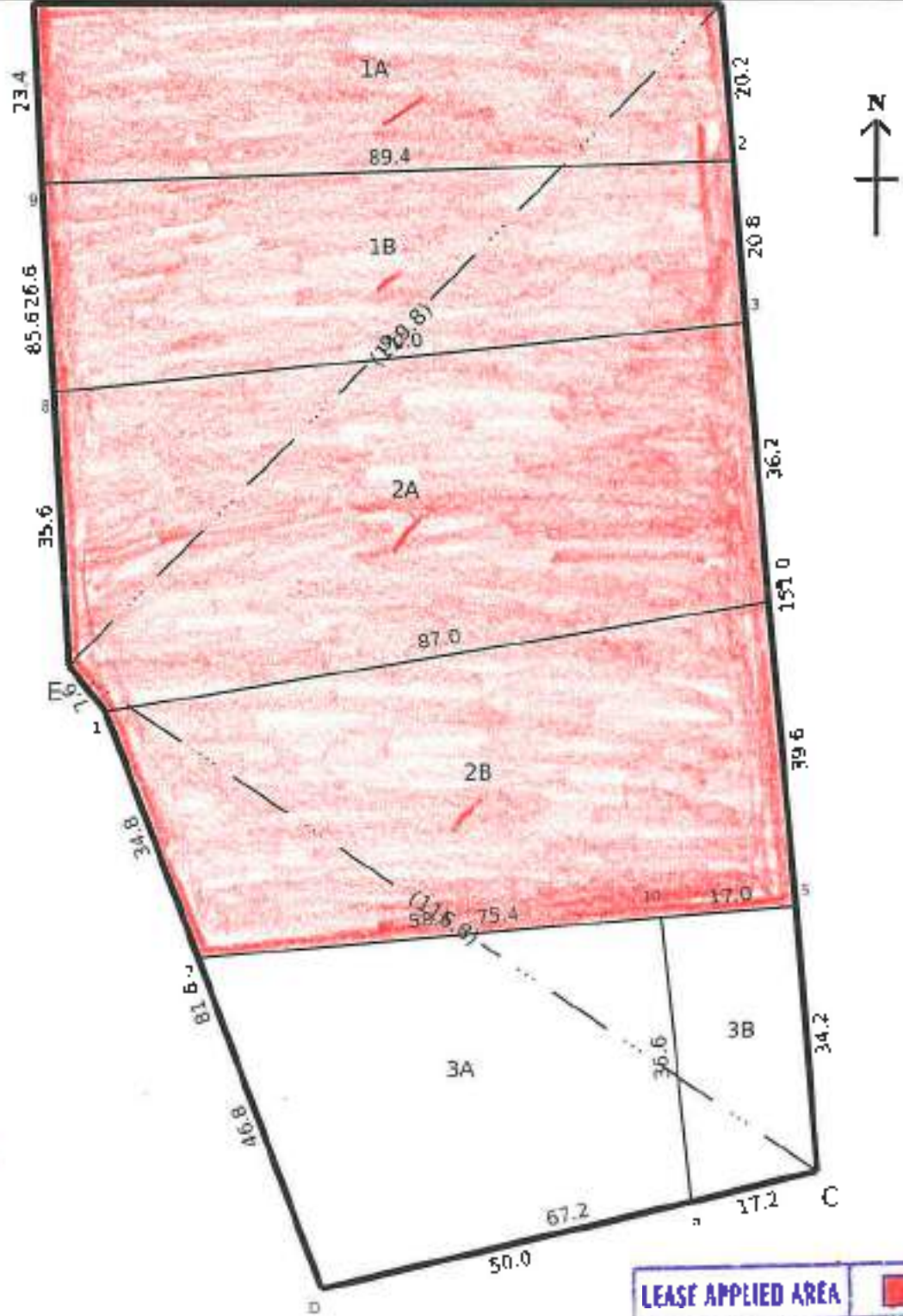
கிராமம் : காளார்பட்டி [29]



பல எண் : 103

பரப்பளவு : எக்டர் 01 ஏ. 34.50

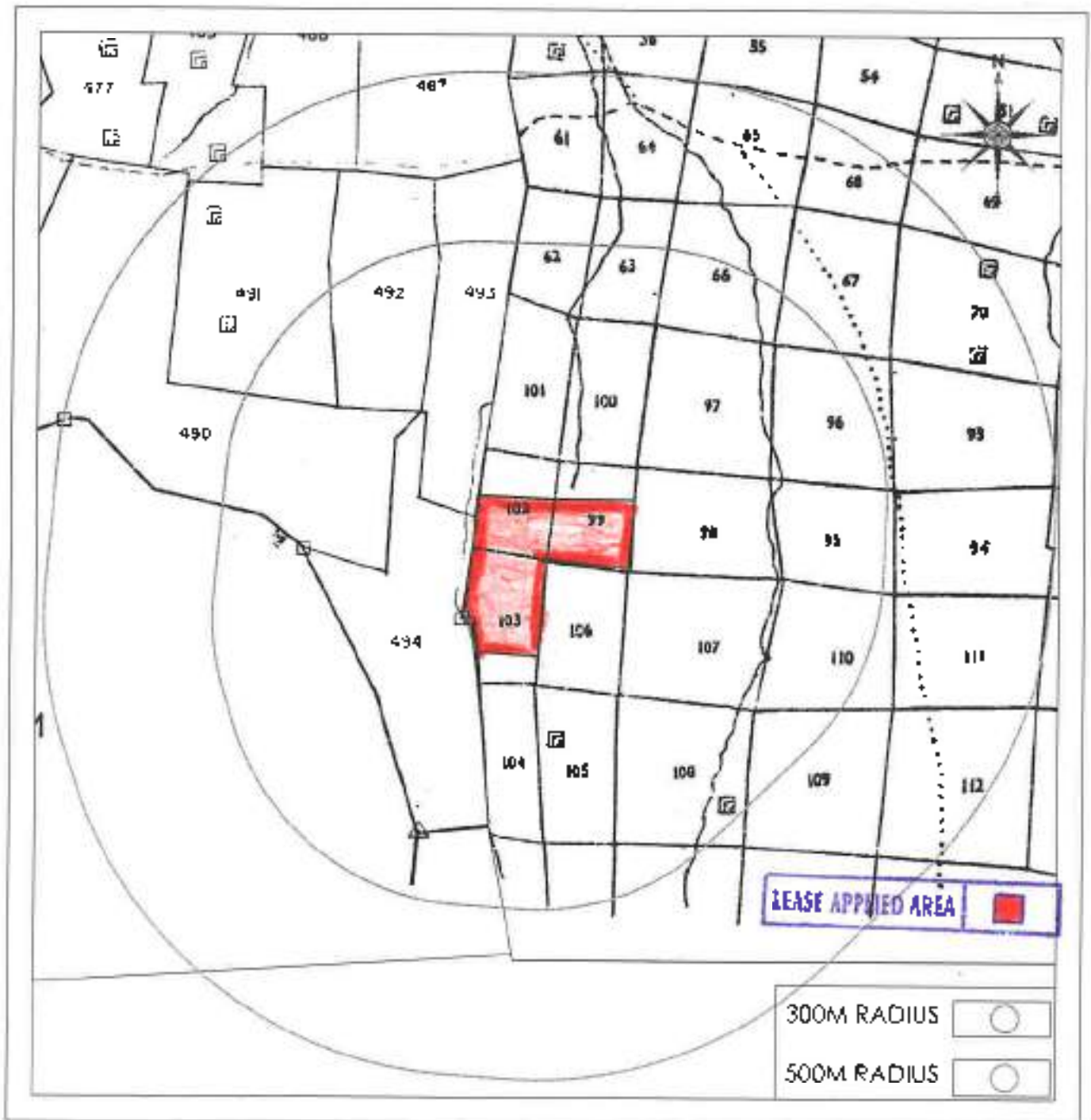
அளவு : 1 : 797



B. முத்து

Signed By Tahsildar
Name of approver : durai
Date of Approval : 09-08-2017

Date of Issue: 22-11-2024 19:31:11



B. N. S. S.



தமிழ்நாடு அரசு

வருவாய்த் துறை

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

மாவட்டம் : திருநெல்வேலி

வட்டம் : மானூர்

வருவாய் கிராமம் : காளையாபட்டி

பட்டா எண் : 1355

உரிமையாளர்கள் பெயர்

1. பாலகிருஷ்ணகோனார்

மகன்

சரவணன்

புல எண்	உட்பிரிவு	புள்கொய்		நன்கொய்		மறிதொய்		குறிப்பு
		பரப்பு	நீர்வை	பரப்பு	நீர்வை	பரப்பு	நீர்வை	
		ஹெக்டே - ஏர்	சூ - ஈப	ஹெக்டே - ஏர்	சூ - ஈப	ஹெக்டே - ஏர்	சூ - ஈப	
107	20	0.28.50	0.78	-	-	-	-	R422/08- 28-03-21
99	2	0.22.50	0.14	-	-	-	-	R422/08- 30-11-20
99	3	0.52.00	0.32	-	-	-	-	R422/08- 17-04-20
		1.03.00	0.64					

குறிப்பு



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 29/14/029/01355/2 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
- இந்த தகவல்கள் 05-10-2024 அன்று 09:37:55 AM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 30/09/25 வழி இணையதளத்தில் சரிபார்க்கவும்.

13/09/2024ம் நாள் 3946 ஆவணம்
தகவல் கொண்டு
வசுதாள் பதிவு அலுவலர்



B மகன்



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

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

மாவட்டம் : திருநெல்வேலி

வட்டம் : மானூர்

வருவாய் இராமம் : கானார்பட்டி

பட்டா எண் : 1352

உரிமையாளர்கள் பெயர்

1. பாவசிறுஷ்ணக்கோனார்

மகன

சரவணன்



புல எண்	உட்பிரிவு	புன்செய்		தன்செய்		மற்றதவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்டர் - ஏர்	ரூ - பை	ஹெக்டர் - ஏர்	ரூ - பை	ஹெக்டர் - ஏர்	ரூ - பை	
102	2	0 - 21.00	0.13	--	--	--	--	423/03--- ----- Digitally signed:Bagavathy Perumal G Tahsildar 13/06/2016 05:15:18:PM
102	3	0 - 36.00	0.24	--	--	--	--	423/08--- ----- Digitally signed:Bagavathy Perumal G Tahsildar 13/06/2016 05:15:19:PM
		0 - 54.00	0.37					

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 29/14/029/01352/20961 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 31-01-2025 அன்று 01:55:54 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைபிடி (சி) கேமராவின் 2D barcode படிப்பான மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சர்ட் பார்க்கவும்

B மகன்



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

நில உரிமை விபரங்கள் : து. ஏண் 10(1) பிரிவு

மாவட்டம் : திருநெல்வேலி

வட்டம் : மாதூர்

வருவாய் கிராமம் : கானார்பட்டி

பட்டா எண் : 1572

உரிமையாளர்கள் பெயர்

1. பாவசிறுவுணக் கோனார்

மகன்

பரமசிவம்



பட்டா எண்	உட்பிரிவு	புன்செய்		குன்செய்		மற்றுவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்டர் - ஏர்	ரூ - பை	ஹெக்டர் - ஏர்	ரூ - பை	ஹெக்டர் - ஏர்	ரூ - பை	
103	1A	0 - 19.50	0.12	--	--	--	--	JP116-13--- ----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:15:18:PM
103	1B	0 - 21.00	0.13	--	--	--	--	JP118-13--- ----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:15:18:PM
106	1A	0 - 20.50	0.13	--	--	--	--	JP116-13--- ----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58:PM
106	1B	0 - 17.00	0.12	--	--	--	--	JP118-13--- ----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58:PM
108	2	0 - 78.50	0.50	--	--	--	--	JP118-13--- ----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58:PM

B 1705/16



107	1	1 - 8.50	0.69	--	--	--	JP118-13----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58 PM
107	2A	0 - 22.00	0.14	--	--	--	JP118-13----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58 PM
107	2B	0 - 11.50	0.07	--	--	--	JP118-13----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58 PM
107	3A	0 - 9.00	0.06	--	--	--	JP118-13----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58 PM
		3 - 7.50	1.95				

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 29/14/029/01572/20965 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 31-01-2025 அன்று 01:51:45 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- காகப்பேசி தேமராவின் 2D barcode பட்டிண ஸலம் அடித்து 3G/GPRS வழி இணையதளத்தில் சர் பார்க்கவும்

B மகன்



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

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

மாவட்டம் : திருநெல்வேலி

வட்டம் : மானூர்

வருவாய் கிராமம் : காணார்பட்டி

பட்டா எண் : 2034

உரிமையாளர்கள் பெயர்

1. பாலகிருஷ்ணன்

மகன்

பிராசிவம்



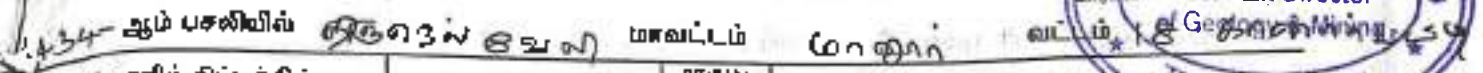
டவு எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
103	2A	0 - 34.50	0.21	--	--	--	--	2023/0103/29/343481 Digitally signed: murugesan G Zonal Deputy Tahsildar 05/04/2023 09:04:48:PM
103	2B	0 - 36.50	0.19	--	--	--	--	2023/0103/29/343481 Digitally signed: murugesan G Zonal Deputy Tahsildar 05/04/2023 09:04:48:PM
		0 - 65.00	0.40					

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 29/14/029/02034/30989 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 31-01-2025 அன்று 01:54:02 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- கூகிள் கோராஸின் 2D Barcode படிப்பான மூலம் படத்து 3G/GPRS வழி இணையதளத்தில் சரி பாராகவும்

B மகன்



மாண்புமிகு
மதுரைநகராட்சி
மேயர்.

முதல் பாகம்.

380/18-RF-III-A-10-20,00,000: Cpa.-GBP.-MDU.-7-2019.

B. n. 10210



B. prolixo



79 12

1	2	3	4	5	6	7	8	9	10	11	12
99	3	023	4	12	8-5	7	0 62	0 32 0	0 32	1018 சத்திரம்	
								1 19.0	0 74		
100	100	100	4	14	8-5	7	0 62	1 62.0	1 00	672 வேர், அத் தோணி மிக்ரோ (1), மி. அத்தோணி யார் (2).	
101	101	101	4	14	8-5	7	0 62	1 66.5	1 06	602 வேர், அத் தோணி மிக்ரோ (1), மி. அத்தோணி யார் (2).	
102	1	102-1	4	14	8-5	7	0 62	0 46.5	0 29	296 ச. குளம்தட்ட.	
	2	-2	4	14	8-5	7	0 62	0 21.0	0 13	16 ச. அருளப்பள்ள.	
	3	-3	4	14	8-5	7	0 62	0 38 0	0 24	1018 சத்திரம்.	
								1 05.5	0 66		
103	1A	103-1A	4	14	8-5	7	0 62	0 19.5	0 12	912 அ. மிக்ரோ மற்றும் தாங்கு பேர்க்கு. *	
	1B	-1B	4	14	8-5	7	0 62	0 21.0	0 13	251 ச. எரடுவேல்.	
	2A	-2A	4	14	8-5	7	0 62	0 34.5	0 21	782 ச. சாளுவேல்(1), வேர், அத்திரி யார் (2), ஜார், பாக்கிய மணி (3).	
	2B	-2B	4	14	8-5	7	0 62	0 30.5	0 19	253 ச. சாளுவேல்.	
	3A	3A	4	14	8-5	7	0 62	0 23.0	0 11	910 அ. வேலவர் மற்றும் தாங்கு பேர்க்கு. *	
	3B	3B	4	14	8-5	7	0 62	0 16.0	0 06	78 அ. ஆரோடாக்க.	
								1 34.5	0 83		
								0 62		859 அ. ஆரோடாக்க மற்றும் தாங்கு பேர்க்கு. *	

①

MANUFACTURED BY THE GOVERNMENT OF TAMIL NADU

1. சாளுவேல்

B மெஸ்



39



தமிழ்நாடு தமிழ்நாடு TAMILNADU

ரூபாய் :- 100 =

நாள் :- 4.10.2024

சு. பரமசிவம்

குத்தகை நிதித் துறை.

எஸ்.எம். அப்துல் அன்
ஸ்டாம்பு வென்டர்
கீழவிராகவபுரம்
உ.எ. 17805 / 88

குத்தகை பத்திரம்

2024ம் வருடம் அக்டோபர் மாதம் 07ம் தேதி.

தமிழ்நாடு.627357, திருநெல்வேலி மாவட்டம், மானூர் தாலுகா, பல்விக்கோட்டை கிராமம், நெல்லையிருந்து, சுதவு எண்.249 என்ற விலாசத்தில் வசித்து வரும், திரு.பாலகிருஷ்ணன் அவர்கள் குமாரர் 45 வயதுள்ள பா.பரமசிவம் (ஆதார் எண்.3536 7434 6729) (குத்தகை பெறுபவர்) அவர்களுக்கு,

தமிழ்நாடு.627357, திருநெல்வேலி மாவட்டம், மானூர் தாலுகா, பல்விக்கோட்டை கிராமம், நெல்லையிருந்து, மெயின் ரோடு, சுதவு எண்.249 என்ற விலாசத்தில் வசித்து வரும், திரு.பாலகிருஷ்ணன் அவர்கள் குமாரர் 49

சு. பரமசிவம்
குத்தகை பெறுபவர்

B. S.

குத்தகை கொடுப்பவர்

1. பட்டம் 2024-25-ம் ஆண்டு 3946-ம் கட்ட
2. அண்மை
3. வது நாள் பதிவு செய்யப்பட்டது

B. பரமசிவம்



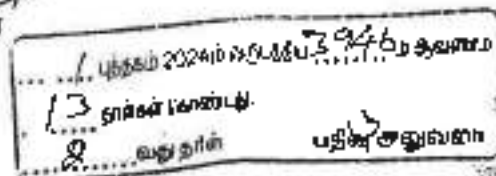
-2-

வயதுள்ள பா.சரவணன் (ஆதார் எண்.8245 8277 4589) (குத்தகை கொடுப்பவர்) ஆகிய நான் எழுதிக்கொடுத்த குத்தகைப்பத்திரம்.

என்னவென்றால், என் பெயருக்கு 21.11.2005ம் தேதியில் எழுதி, திருநெல்வேலி 2 நிர் இணை சார்பதிவாளர் அலுவலகத்தில் 1புத்தகம், 2005ம் வருடத்திய 5368ம் நம்பராக பதிவு செய்யப்பட்டுள்ள கிரையப்பத்திரத்தின்படி பாத்தியப்பட்ட சொத்துக்களில் இதன் 1வது அயிட்ட சொத்தும், 22.11.2005ம் தேதியில் எழுதி, திருநெல்வேலி 2 நிர் இணை சார்பதிவாளர் அலுவலகத்தில் 1புத்தகம், 2005ம் வருடத்திய 5383ம் நம்பராக பதிவு செய்யப்பட்டுள்ள கிரையப்பத்திரத்தின்படி பாத்தியப்பட்டு, அதுமுதல் நான் சர்வசுதந்திரமாகவும், வில்லங்க சுத்தமாகவும் ஆண்டனுபவித்து வரும் இதன் தபசில் கண்ட சொத்துக்களை தாங்கள் 'அரசு அனுமதி பெற்ற கணிமம்' சார்ந்த தொழில் செய்வதற்காக குத்தகைக்கு வேண்டும் என கேட்டதை ஏற்று நாளது தேதி முதல் வருடம் ஒன்றுக்கு ரூபாய்.20,000/- (ரூபாய் இருபதாயிரம்) குத்தகை தொகையாக நிர்ணயித்து 15 வருடங்களுக்கு தங்களுக்கு குத்தகைக்கு விட சம்மதித்துள்ளேன்.

நாளது தேதி முதல் இதன் கண்ட சொத்தைப்பொறுத்து உங்கள் தொழிலுக்கு தேவையான மாற்றங்களை தபசில் கண்ட சொத்தில் நீங்களே உங்கள் பொறுப்பில் செய்து கொள்ள வேண்டியது. மின் இணைப்பு, வண்டி வாகனங்கள் போன்றவற்றை நீங்களே ஏற்பாடு செய்து கொண்டு அரசு ஆலுவலகங்களில் உங்கள் பெயரிலோ, உங்கள் நிறுவனத்தின் பெயரிலோ நீங்கள் கையொப்பம் செய்து கொண்டு தபசில் கண்ட சொத்தில் தொழிலுக்கு தேவையான கட்டிடங்களை அரசு அனுமதியுடன் அமைத்துக் கொள்ள வேண்டியது.

B. Saravanan
குத்தகை பெறுபவர்



B. Saravanan
குத்தகை கொடுப்பவர்

B. Saravanan



-3-

இதன் தபசில் கண்ட சொத்தில் அரசின் சட்டத்திட்டங்களுக்கு பாதகமாக நீங்களோ ஊங்களது வாரிசுகளோ செய்யக்கூடாது. கணிம வளம் எடுக்கும் போது அரசின் சட்டம் மற்றும் விதிமுறைகளுக்கு உட்பட்டு மட்டுமே தபசில் சொத்தின் நிலத்திலிருந்து கணிம வளங்களை எடுக்க வேண்டும்.

இதன் தபசில் கண்ட சொத்தினை குத்தகை காலம் முடியும் தருணத்தில் குத்தகையை நீடித்துக்கொள்ள நாம் இரு தரப்பினரும் விரும்பாத நிலையில் பீண்டும் என்னிடத்தில் நல்ல நிலைமையில் கட்டிடத்தோடு சுவாதினத்தை வழங்கி விட வேண்டியது. குத்தகை நீட்டிப்பு செய்யும் பட்சத்தில் அதற்கு தனியாக ஒரு ஆவணம் எழுதி அதனை பதிவு செய்து கொள்ள வேண்டும்.

இந்தப்படி எனது முழு மனநிறைவுடன் எழுதிக்கொடுத்த குத்தகைப் பத்திரம் படிக்க கேட்டேன். சரி

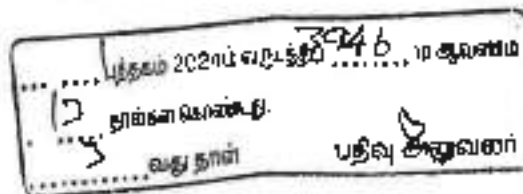
தபசில் சொத்து விபரம்

1) திருநெல்வேலி பதிவு மாவட்டம், மேற்படி 2 நிர் இணைசார்பதிகம், சரகம் திருநெல்வேலி தாலுகா, கானார்பட்டி கிராமம், பட்டா எண்.1355, அயன் புஞ்சை சர்வே.99/2 நம்பர் செண்டு 55, லை சர்வே.99/3 நம்பர் ஏக்கர் 1 செண்டு 28 ஆக மொத்தம் ஏக்கர் 1 செண்டு 83 உள்ள புஞ்சை மற்றும் அதற்குரிய சகல மாமூல் பாத்தியங்கள், உரிமைகள் உள்படவும் இதுவும்

2) திருநெல்வேலி பதிவு மாவட்டம், மேற்படி 2 நிர் இணைசார்பதிகம், சரகம் திருநெல்வேலி தாலுகா, கானார்பட்டி கிராமம், பட்டா எண்.1352,

B. பழனிசெல்வம்
குத்தகை பெறுபவர்

B. S. ———
குத்தகை கொடுப்பவர்



B. பழனிசெல்வம்



-4-

அயன் புஞ்சை சர்வே.102/2 நம்பர் செண்டு 52, ஹை சர்வே.102/3 நம்பர் செண்டு 94 ஆக மொத்தம் ஏக்கர் 1 செண்டு 48 உள்ள புஞ்சை நிலமும் மற்றும் அதற்குரிய சகல மாமூல் பாத்தியங்கள், உரிமைகள் உள்படவும் தபசில் விபரம் சரி. தபசில் சொத்து மானூர் யூனியனைச் சேர்ந்த கானார்பட்டி பஞ்சாயத்து எல்லைக்குள்பட்டது.

B. S. S. S.

B. S. S. S.

சாட்சிகள்:

1) திரு. ராமர்

திரு. ராமர் யாதவ், துபெ.காலங்கரையான் (ஆதார் எண் 3530 4761 2293) 81, கிருஷ்ணன் கோவில் தெரு, நெல்லை திருத்து, பல்விக்கோட்டை, திருநெல்வேலி-627357

2) திரு. ராஜா

திரு. ராஜா கிருஷ்ணன், துபெ.பால்சாமி (ஆதார் எண் 4840 9989 0350) 251, கடலை கோவில் தெரு, நெல்லை திருத்து, பல்விக்கோட்டை, திருநெல்வேலி-627357

... புதுமை 2024 பவந்திய 2046 கிருஷ்ணன்
... 17 திருநெல்வேலி.
... 4/... கிருஷ்ணன் பதிவு அலுவலர்

Drafted by

I. Vijayan

I. VIJAYAN, M.A., B.L.,
ADVOCATE (MS. No: 1383/2003)
27, MKP HOSPITAL COMPLEX
TIRUCHENDUR ROAD
PALAYAMKOTTAI
TIRUNELVELI - 627002



B. S. S. S.



CERTIFICATE UNDER SECTION 42 OF THE INDIAN STAMP ACT 1899

SNo 2727 of 2024

I hereby certify that a sum of ₹ 2,900/- (Rupees Two Thousand Nine Hundred only) on account of deficit stamp duty has been levied under section 41 of the Stamp Act in respect of this Instrument from Mr. பரமசிவம் residing at 249, MAIN ROAD, NELLAI THIRUTHU, PALLIKOTTAI, Tirunelveli, Tamil Nadu, India, 627357.

Sub Registrar: Tirunelveli Joint II
Date: 07/10/2024



Signature of Sub Registrar and Collector under Section
42 of the Indian Stamp Act

Presented in the office of the Sub Registrar of Tirunelveli Joint II and fee of ₹ 3,310/- paid at 02:54 PM on the 07/10/2024 by

Left Thumb



புத்தம் 2024-07-07 3,310/-
தமிழ்நாடு அரசு
பதிவு செய்தது
பதிவு செய்தது

Admissions as per recitals of document

Execution admitted by
Left Thumb



Identity of the person verified through Consent based Aadhaar Authentication using Thumb Impression with UIDAI reference No. UKC 285803ad1f4467fa9c4049bfa025e3177c81c2 (Details from UIDAI : Saravanan Balakrishnayadhar S/O Balakrishnayadhar, 07-05-1975, xxxxxxxx4589)



Claim admitted by
Left Thumb



Identity of the person verified through Consent based Aadhaar Authentication using Thumb Impression with UIDAI reference No. UKC:97327407a7a0d29f084d1aa01c9c6b75a3029 (Details from UIDAI : Perumayyavar S/O Balakrishnan, 04-09-1973, xxxxxxxx6723)





आयकर विभाग
INCOME TAX DEPARTMENT

भारत सरकार
GOVT. OF INDIA

स्थायी लेखा संख्या कार्ड
Permanent Account Number Card
AGOPP8958N

नाम / Name
PARAMASIVAM

पिता का नाम / Father's Name
BALAKRISHNAN

जन्म की तारीख / Date of Birth
04/09/1979

हस्ताक्षर / Signature

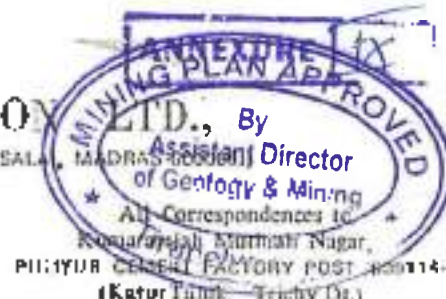
12/05/2016

B. N. S. S.

CHETTINAD CEMENT CORPORATION LTD.,

(Regd. Office: RAM SEETHAI HALL BUILDING IV & V FLOORS, 603, ANNA SALA, MADRAS-600 001)
WORKS OFFICE: PULIYUR.

TELE: 21144
PHONE 22744 KARNI
21745
GRAM "CEMENT" PULIYUR C.E.
Telex: 0456-210.
STD Code: 04524



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

22nd September, 1987.

CERTIFICATE.

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

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

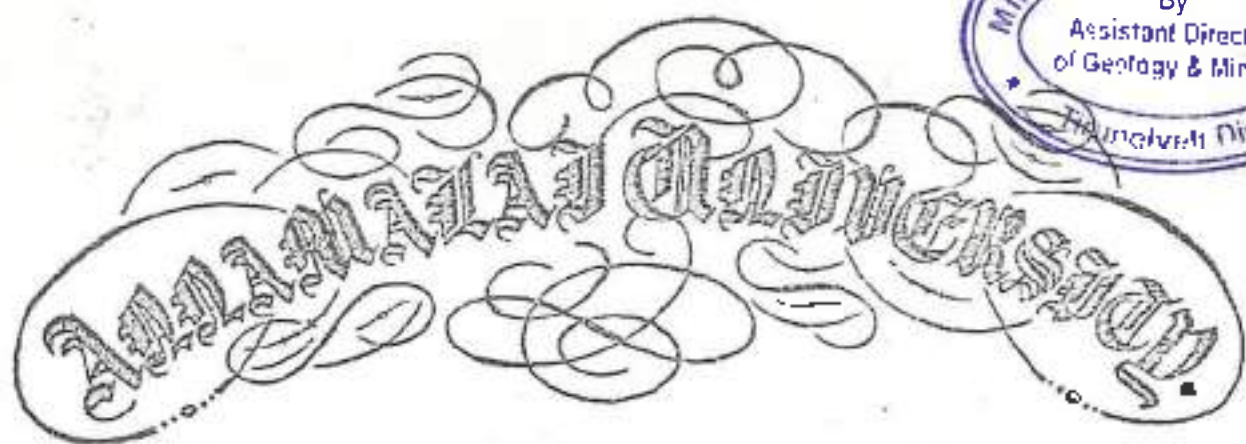
He has got nearly Eight years of total experience in our Mines in the above supervisory capacity.

for CHETTINAD CEMENT CORPORATION LTD.,

(T. RAJU).

Mines Manager & Dy. General Manager.

B. Natarajan



Faculty of Science

The Senate of the Annamalai University hereby makes known that B. Narayan has been admitted to the Degree of Master of Science (by Examination) in Zoology, 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.

Annamalaiunagar

24th December, 1976

B. Narayan

A. Chandrasekhar
Vice-Chancellor



PLATE NO-I

DATE OF SURVEY : 30.01.2025

APPLICANT:

THIRU J BALAKRISHNAN,
S/O BALAKRISHNAN,
NO 45, NEELAI STREET,
PALLIKOTTAI, MANUR TALUK,
TIRUNELVELI DISTRICT

QUARRY APPLIED LEASE AREA:

S.F.NO'S : 103/1A, 103/1R, 103/2A, 103/2B,
102/2, 102/3, 99/2 & 59/3

EXTENT : 2.39.0 Ha.

VILLAGE : KANAKPATTI.

TALUK : MANUR

DISTRICT : TIRUNELVELI

INDEX

Q.L. APPLIED AREA : ●

TOPO SHEET NO : 58 H / 09

LATITUDE : 08°53'17.20"N to 08°53'23.44"N

LONGITUDE : 77°38'20.53"E to 77°38'27.5"E

LOCATION PLAN

NOT TO SCALE

PREPARED BY:

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

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

B Natarajan 1.55.38.82.77

77°38'27.15"E

QUARRY APPLIED LEASE AREA:S.F.NO'S : 103/1A, 103/1B, 103/2A, 103/2B,
102/2, 102/3, 99/2 & 99/3.

EXTENT : 2.39.0 Ha.

VILLAGE : KANARPATTI,

TALUK : MANUR,

DISTRICT : TIRUNELVELI.

PLATE NO-1A

DATE OF SURVEY : 30.01.2025

APPLICANT:THIRU.B.PARAMASIVAM,
S/o SAIKRISHNAN,
NO.249, NELLAI TRUTHU,
PALL KOTTAI, MANUR TALUK,
TIRUNELVELI DISTRICT.**INDEX**

TOPO SHEET NO : 58 H / 05

LATITUDE : 08°53'17.20"N to 08°53'23.44"N

LONGITUDE : 77°38'20.53"E to 77°38'27.15"E

G.L.APPLIED AREA

7.5m SAFETY DISTANCE

300M RADIUS

500M RADIUS

1KM RADIUS

APPROACH ROAD

BARREN LAND

TREES

AGRICULTURAL LAND

HABITATIONS

ODAI

CHANNEL

SOUTH VAGAIKULAM R.F.

WIND MILL

POWER STATION

CRUSHER PLANT

QUARRY PIT

TANK

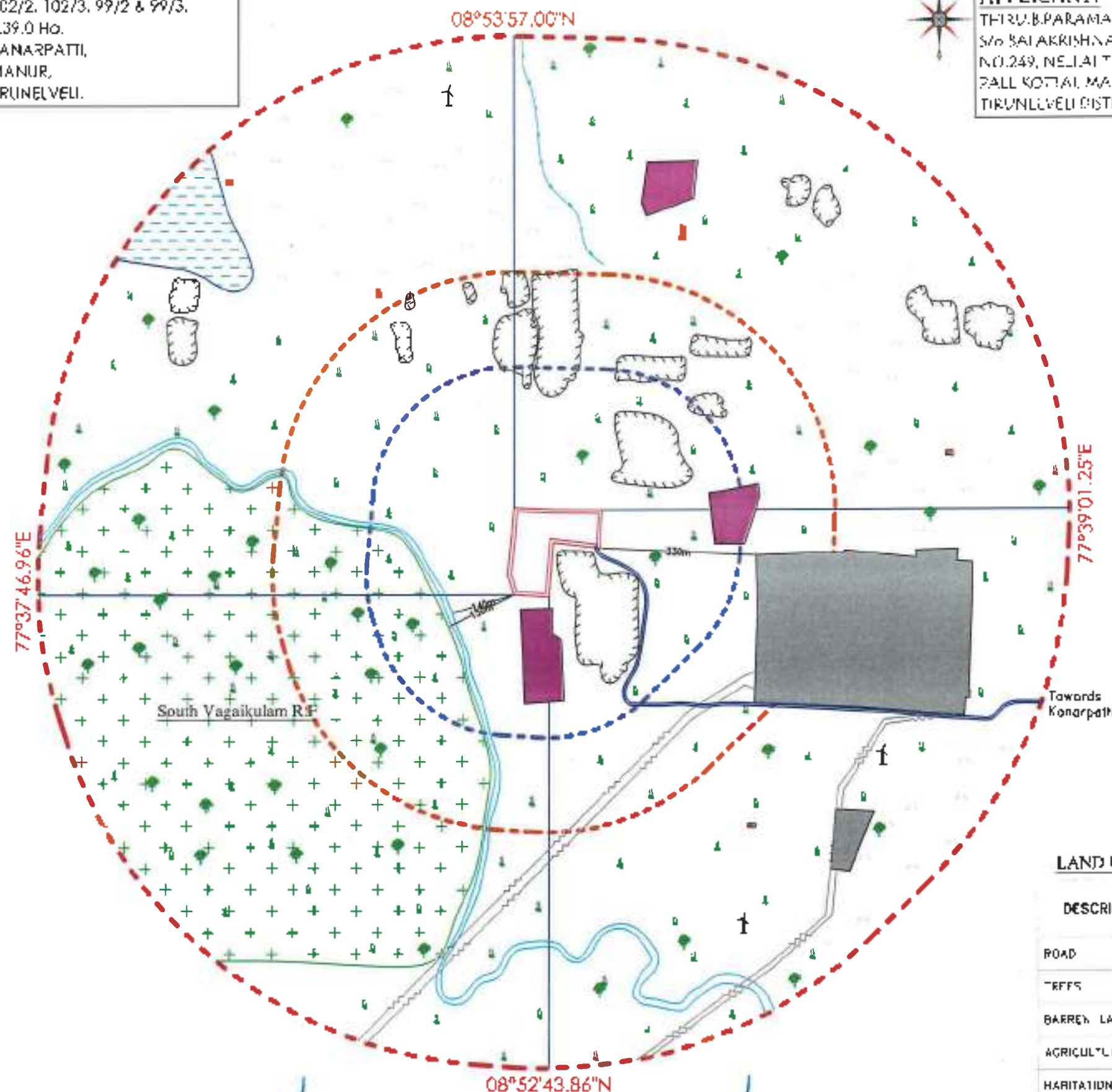
HT LINE

LAND USE PATTERN

DESCRIPTION	AREA IN (%)
ROAD	01
TREES	12
BARREN LAND	40
AGRICULTURAL LAND	15
HABITATIONS	01
WATER BODIES	05
RESERVED FOREST	25
WIND MILL	01

ENVIRONMENTAL PLAN

SCALE 1:10,000

PREPARED BY :THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENTC. NATARAJAN, M.Sc., M.Phil.,
QUALIFIED PERSON

B. Natarajan

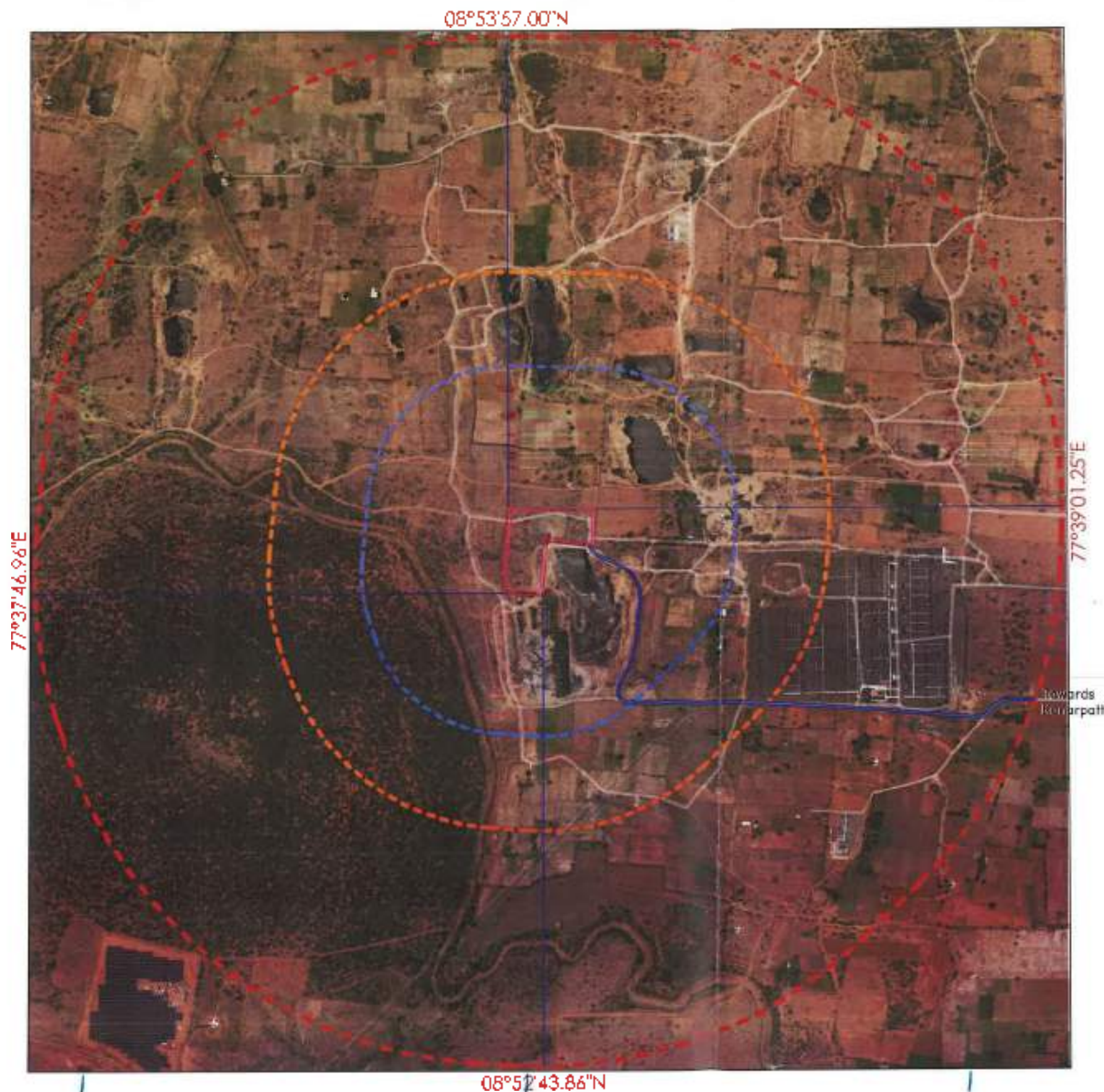


PLATE NO-IB

DATE OF SURVEY : 30.01.2025

APPLICANT:

THIRU.E.PARAMASIVAM,
S/o BALAKRISHNAN,
NO 249, NELLA, THIRUTHU,
PALLAKOTTAI, MANUR TALUK,
TIRUNELVELI DISTRICT

QUARRY APPLIED LEASE AREA:

S.F.NO'S : 103/1A, 103/1B, 103/2A, 103/2B,
102/2, 102/3, 99/2 & 99/3,

EXTENT : 2.39.0 Ha.

VILLAGE : KANARPATTI,

TALUK : MANUR,

DISTRICT : TIRUNELVELI.

INDEX

TOPO SHEET NO : 58 H / 09

LATITUDE : 08°53'17.20"N to 08°53'23.44"N

LONGITUDE : 77°38'20.53"E to 77°38'27.15"E

Q.L APPLIED AREA



7.5m SAFETY DISTANCE



300M RADIUS



500M RADIUS



1KM RADIUS



APPROACH ROAD



SATELLITE IMAGERY MAP

SCALE 1:10,000

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GOVERNMENT

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

B. Natarajan



QUARRY APPLIED LEASE AREA:
S.F.NO'S : 103/1A, 103/1B, 103/2A, '03/2B,
102/2, 102/3, 99/2 & 99/3.
EXTENT : 2.39.0 Ha.
VILLAGE : KANARPATTI,
TALUK : MANUR,
DISTRICT : TIRUNELVELI.

TOPIC SHEET NO : 5814 / 02

LATITUDE :08°53'17.20"N to 08°53'23.44"N
LONGITUDE:77°38'20.53"E to 77°38'27.15"E

Q.L. APPLIED AREA

10KM RADIUS

[illegible]

TOPO SKETCH OF QUARRY LEASE

APPLIED AREA FOR

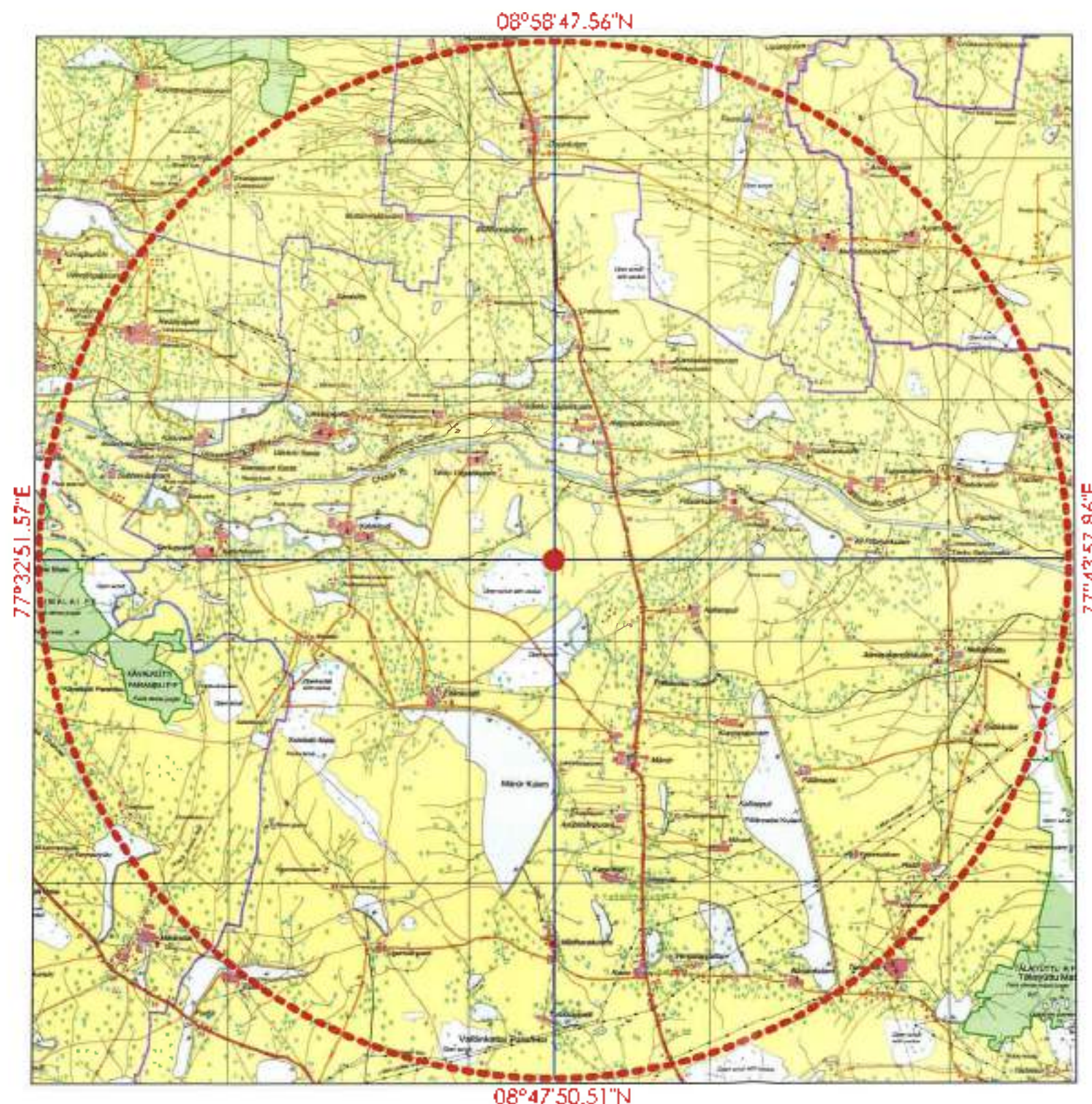
10Km RADIUS

SCALE - 1:100000

PREPARED BY:	

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

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



B. noivio

B. Nagaraj

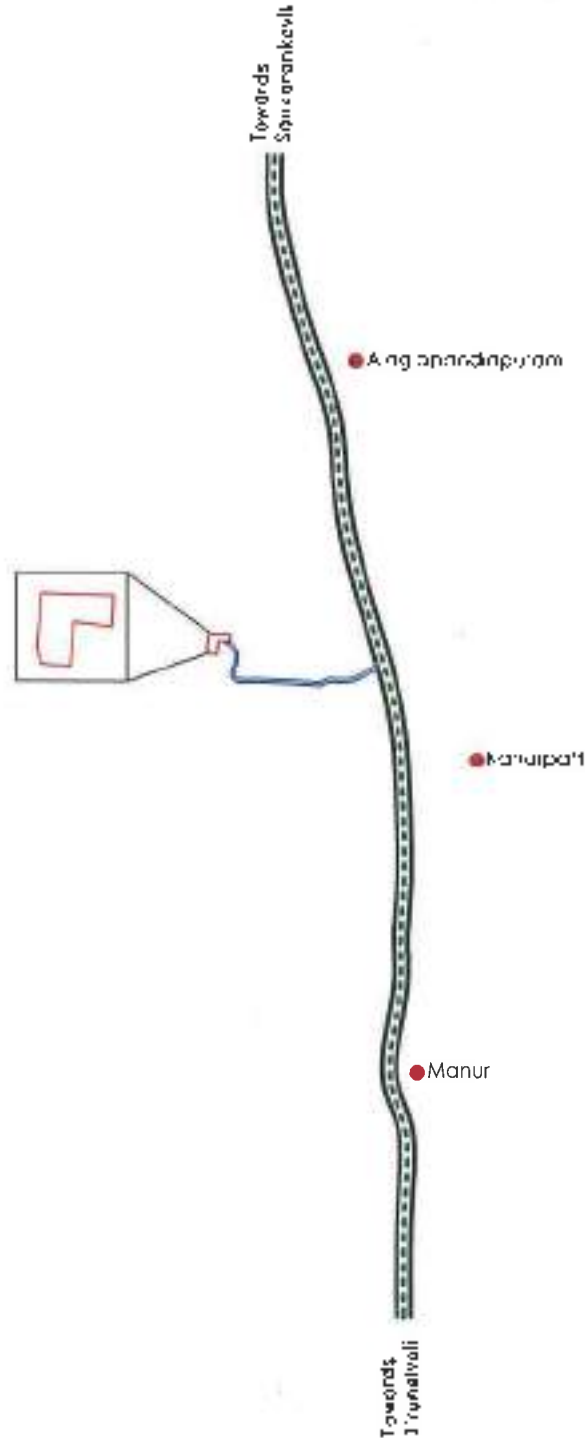


PLATE NO-10

DATE OF SURVEY 30.01.2025

APPLICANT:

THIRU. PARAMASIVAM,
S/O BALAKRISHNAN,
NO 249, NELLAI THUTHU,
PALLIKOTTAI, MANUR TALUK,
TIRUNELVELI DISTRICT.

QUARRY APPLIED LEASE AREA:

S.F.NO'S : 103/1A, 103/1B, 103/2A, 103/2B,
102/2, 102/3, 99/2 & 99/3,

EXTENT : 2.39.0 Ha,
VILLAGE : KANARPATTI,
TALUK : MANUR,
DISTRICT : TIRUNELVELI.

INDEX

Q.L. APPLIED AREA



APPROACH ROAD



STATE HIGHWAY



HABITATIONS



KEY PLAN

Not To Scale

PREPARED BY:

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THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT


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

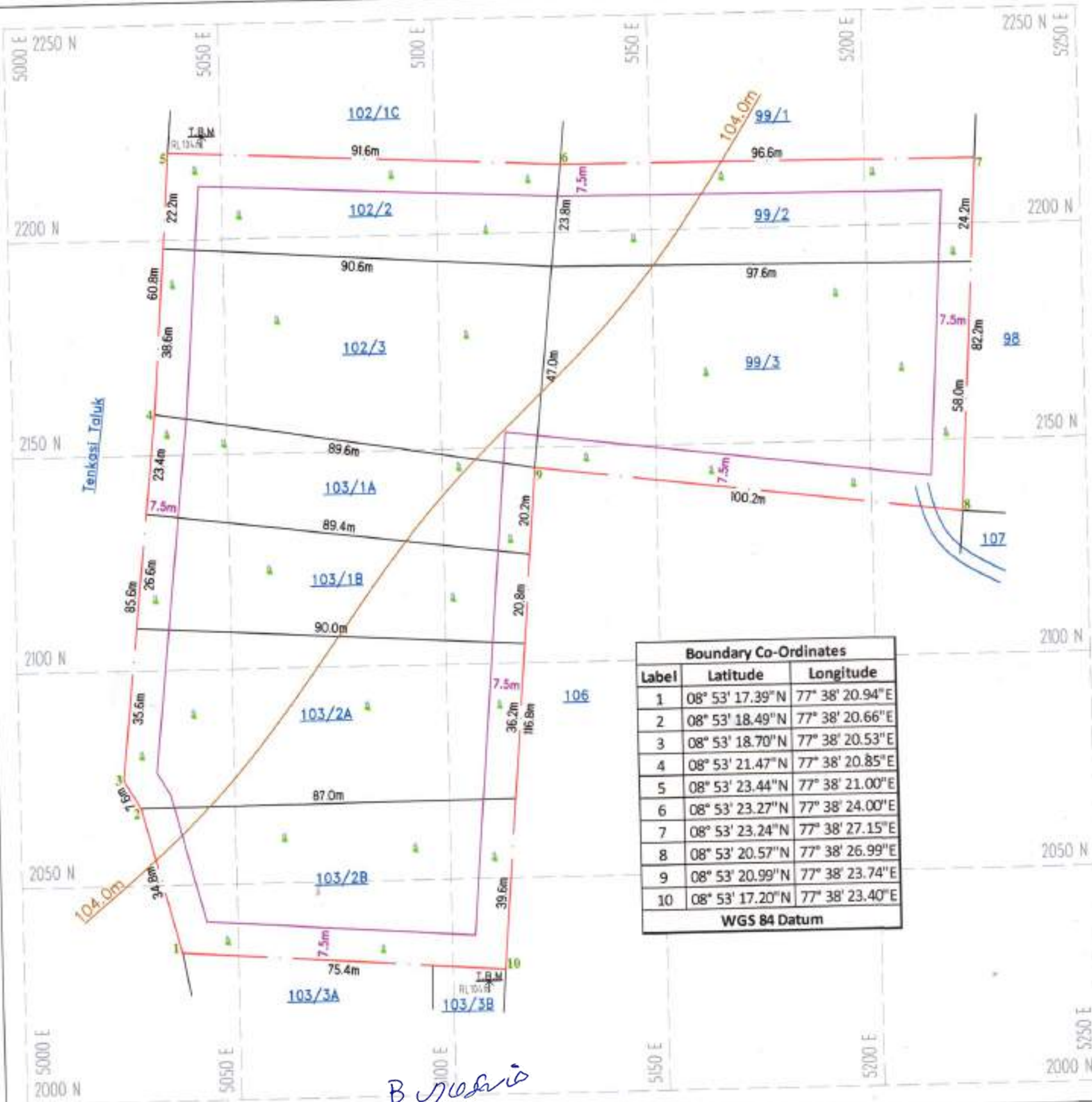


PLATE NO-II

DATE OF SURVEY : 30.01.2025

APPLICANT:

THIRU.B.PARAMASIVAM,
S/o.BALAKRISHNAN,
NO.249, NELLAI TIRUTHU,
PALLIKOTTAI, MANUR TALUK,
TIRUNELVELI DISTRICT.

QUARRY APPLIED LEASE AREA:

S.F.NO'S : 103/1A, 103/1B, 103/2A, 103/2B,
102/2, 102/3, 99/2 & 99/3.

EXTENT : 2.39.0 Ha,

VILLAGE : KANARPATTI,

TALUK : MANUR,

DISTRICT : TIRUNELVELI.

INDEX

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

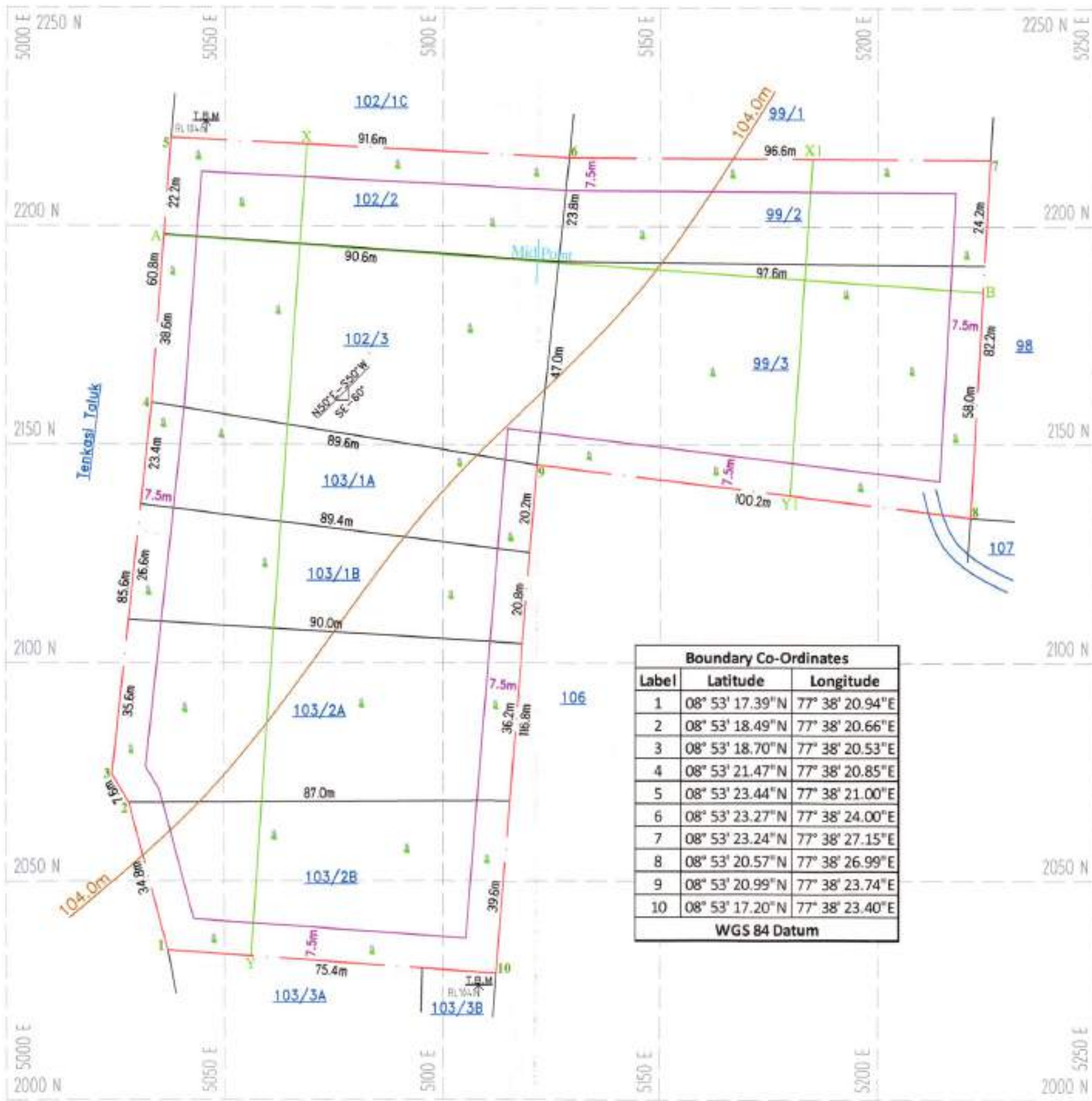
QUARRY LEASE & SURFACE PLAN

SCALE 1 : 1000

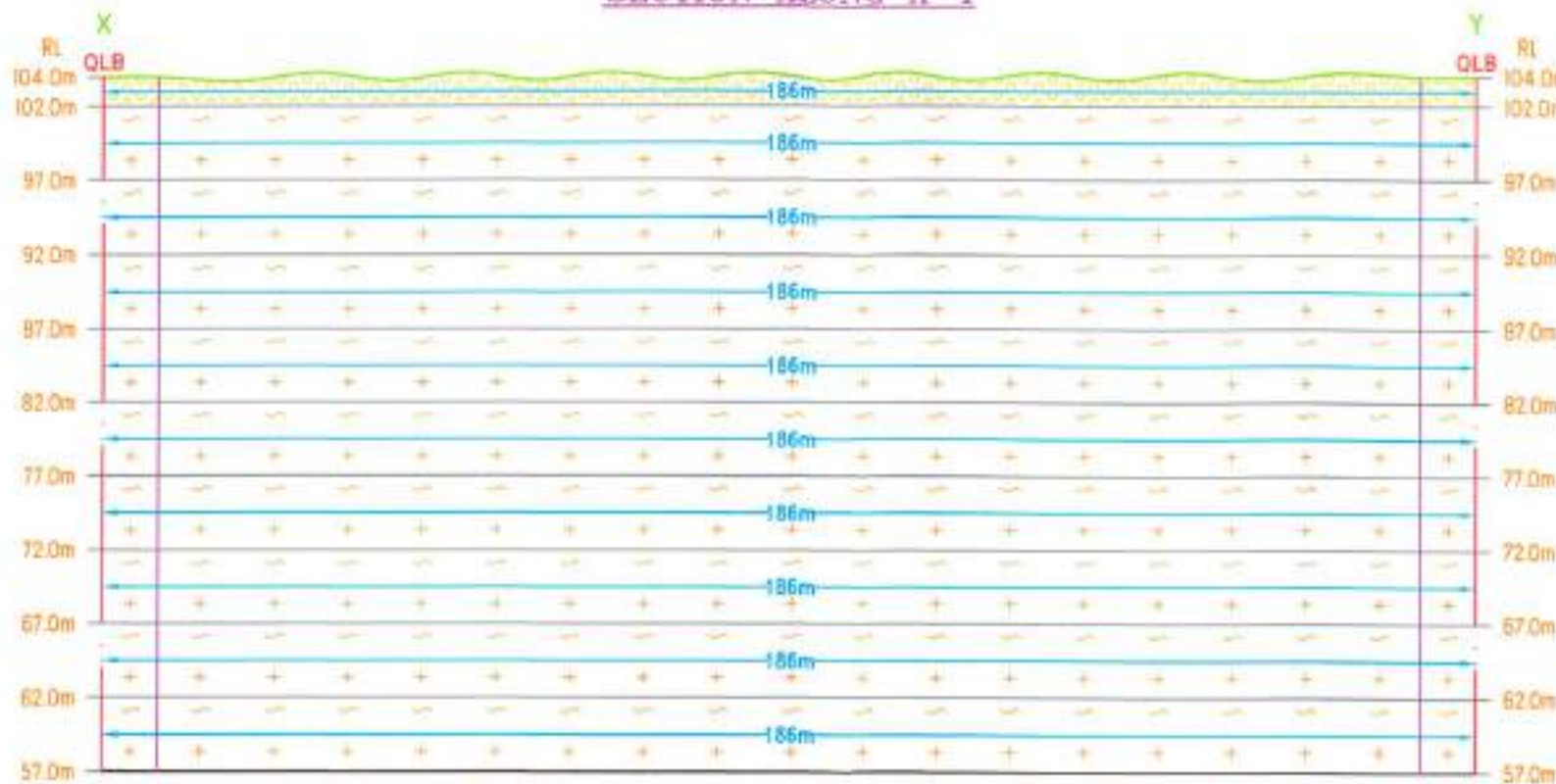
PREPARED BY:

THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
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GOVERNMENT

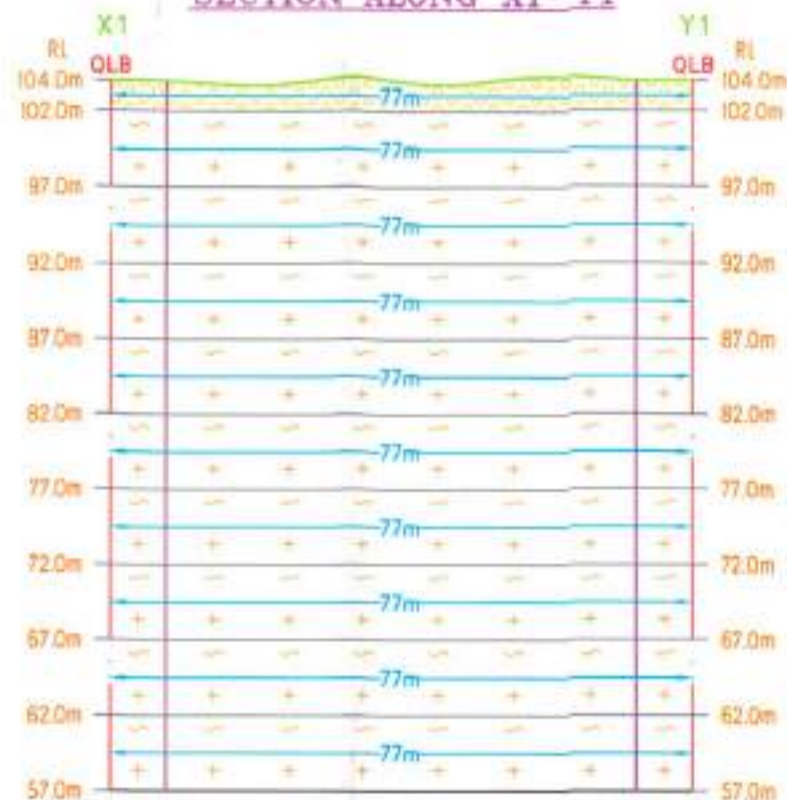
C.NATARAJAN, M.Sc., M.Phil.,
QUALIFIED PERSON



SECTION ALONG X-Y



SECTION ALONG X1-Y1



SECTION ALONG A-B

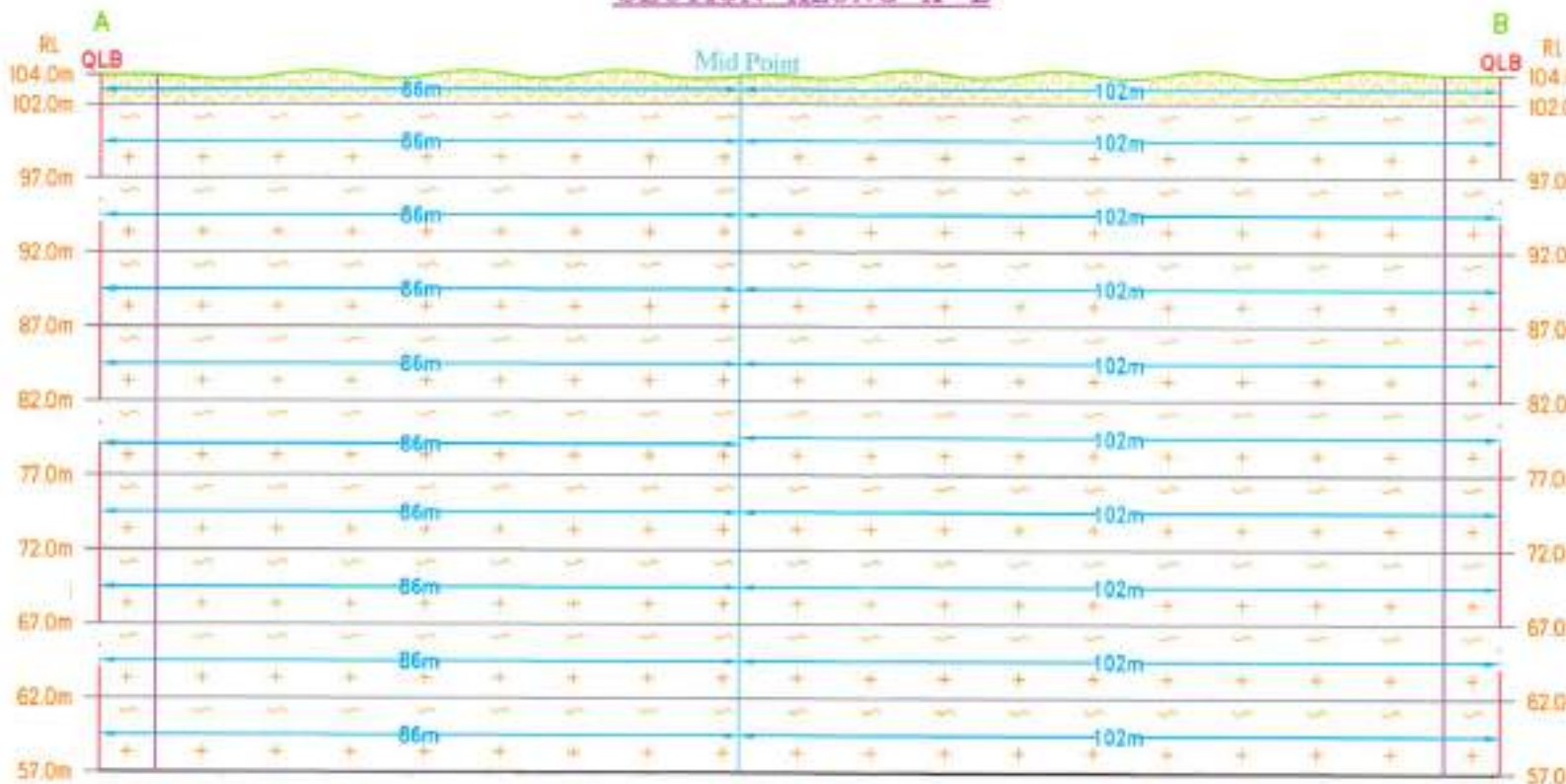


PLATE NO-III
DATE OF SURVEY : 30.01.2025

APPLICANT: THIRU. S. PARASURAM, By S/o. BALAKRISHNAN, Assistant Director NO.249, NELLAI NORTHERN Geology & Mining PALLIKOTTAI, MANUR TALUK, TIRUNELVELI DISTRICT.

QUARRY APPLIED LEASE AREA:
S.F.NO'S : 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 & 99/3,
EXTENT : 2.39.0 Ha.
VILLAGE : KANARPATTI,
TALUK : MANUR,
DISTRICT : TIRUNELVELI.

INDEX

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

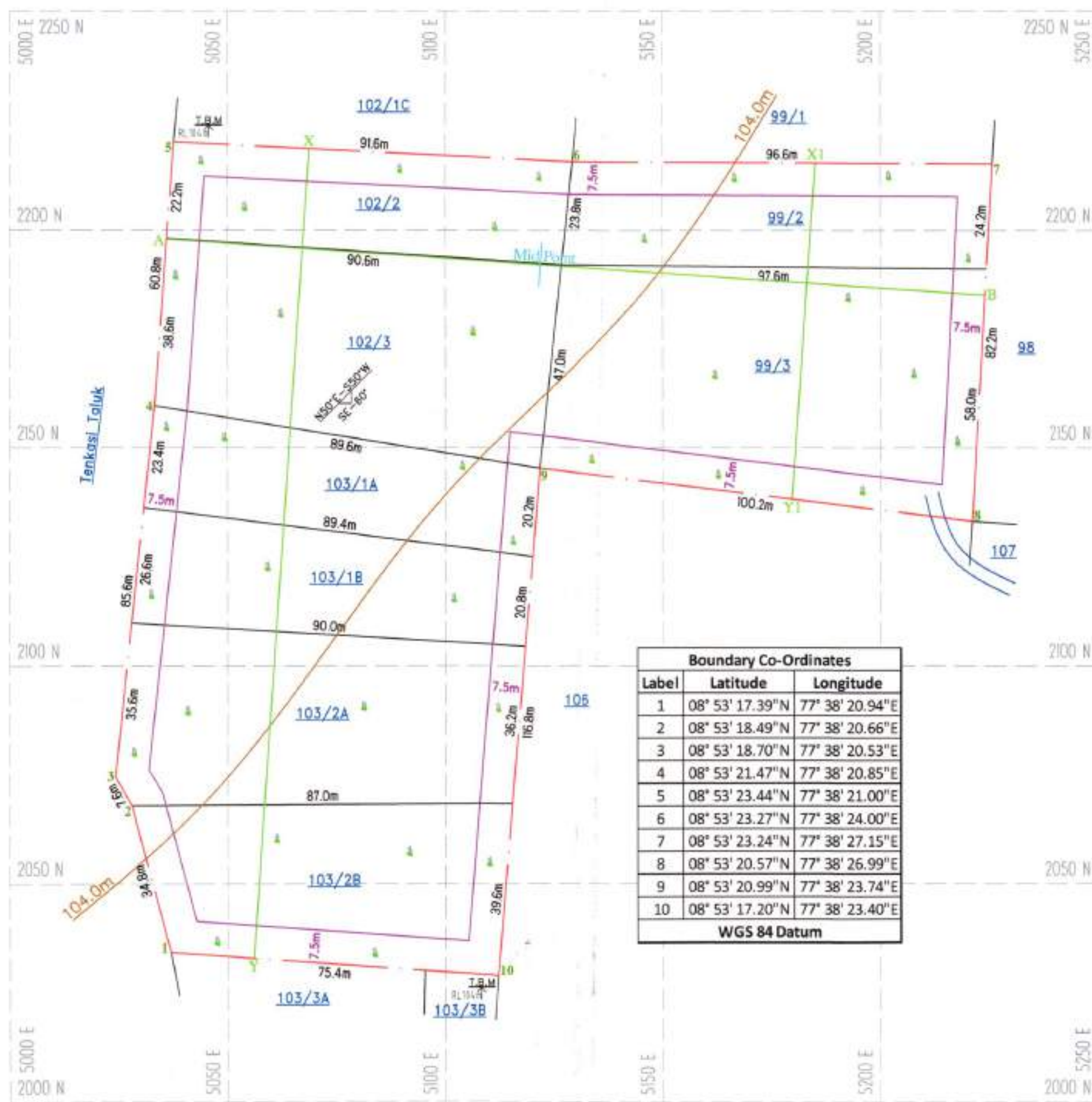
TOPOGRAPHY, GEOLOGICAL PLAN & SECTIONS

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

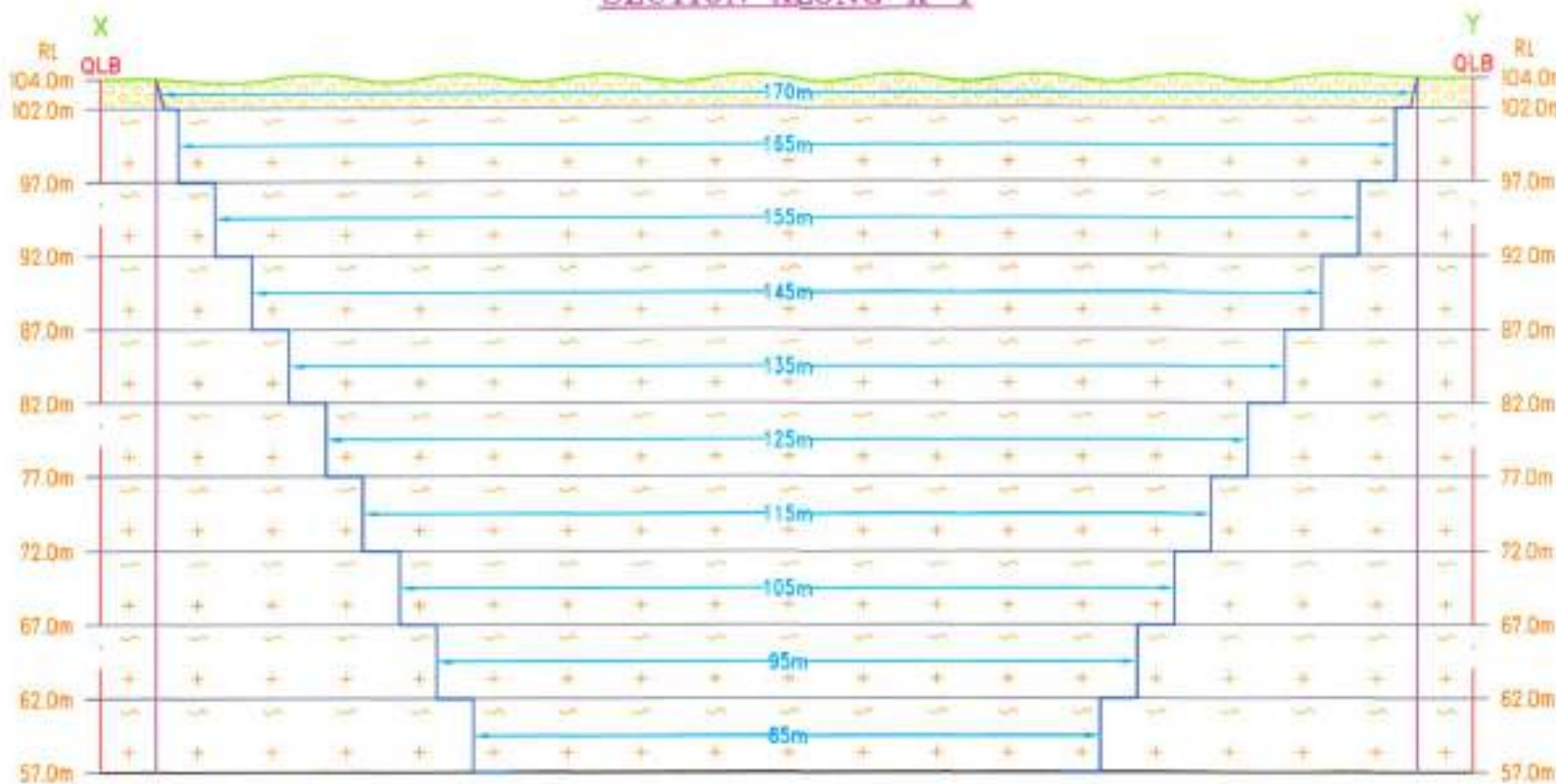
C. NATARAJAN, M.Sc., M.Phil.,
QUALIFIED PERSON

B. Natarajan

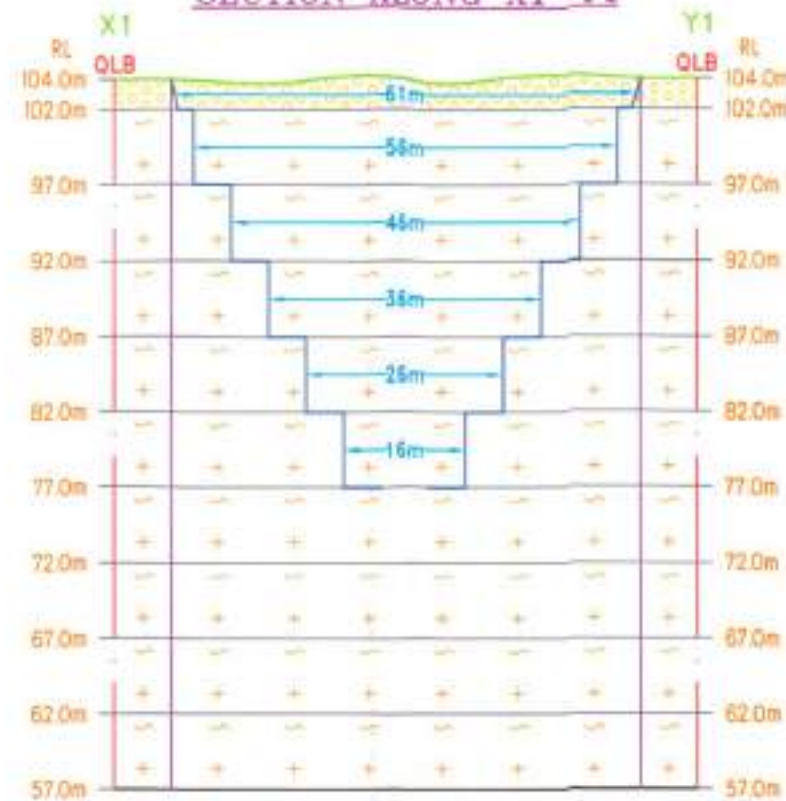


Boundary Co-Ordinates		
Label	Latitude	Longitude
1	08° 53' 17.39"N	77° 38' 20.94"E
2	08° 53' 18.49"N	77° 38' 20.66"E
3	08° 53' 18.70"N	77° 38' 20.53"E
4	08° 53' 21.47"N	77° 38' 20.85"E
5	08° 53' 23.44"N	77° 38' 21.00"E
6	08° 53' 23.27"N	77° 38' 24.00"E
7	08° 53' 23.24"N	77° 38' 27.15"E
8	08° 53' 20.57"N	77° 38' 26.99"E
9	08° 53' 20.99"N	77° 38' 23.74"E
10	08° 53' 17.20"N	77° 38' 23.40"E
WGS 84 Datum		

SECTION ALONG X-Y



SECTION ALONG X1-Y1



SECTION ALONG A-B

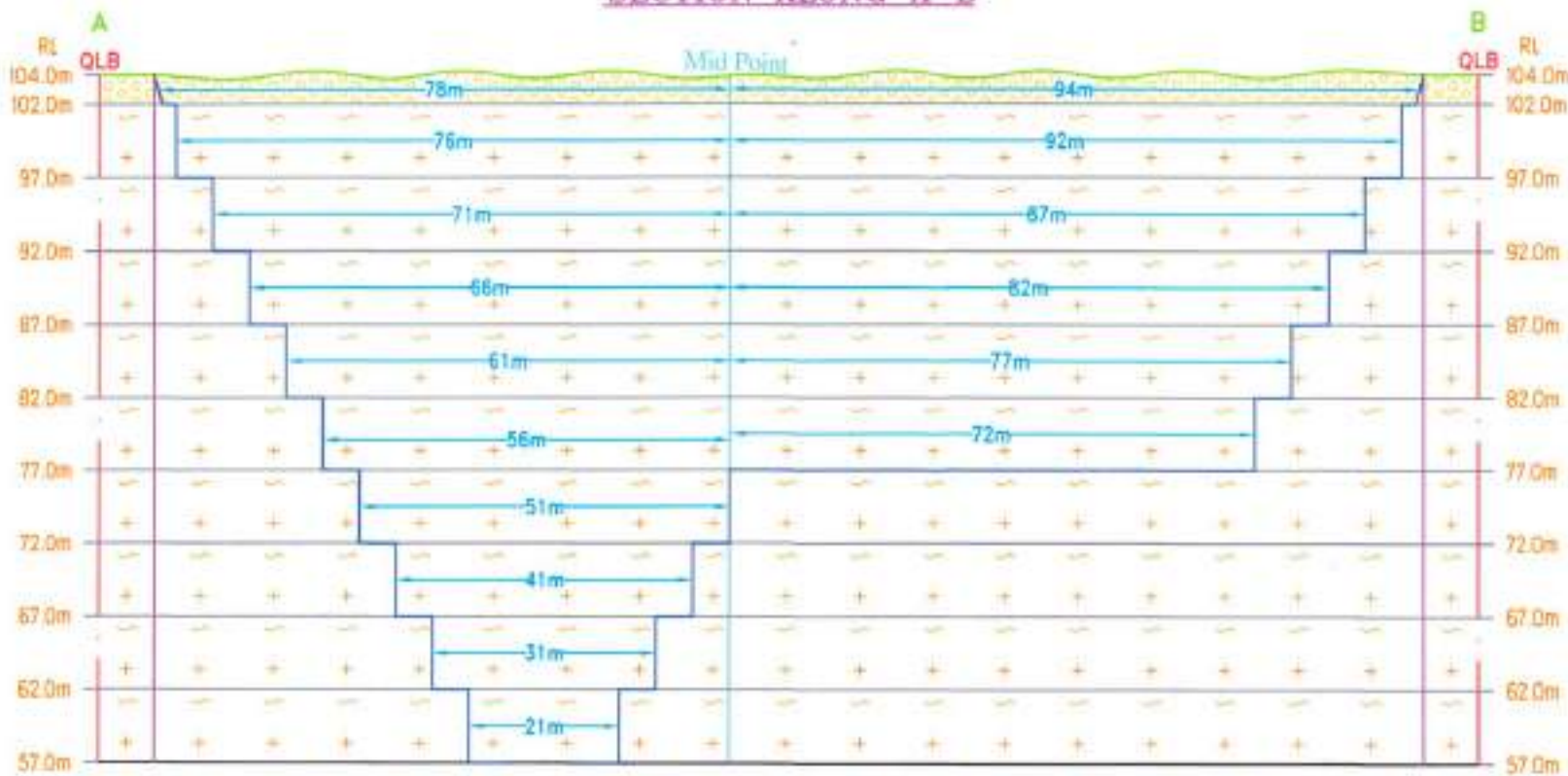


PLATE NO-IV

DATE OF SURVEY : 30.01.2025

APPLICANT:

THIRU. S. PARAMASIVAM,
S/o. BALAKRISHNAIAH,
NO. 249, NELLAI TIRUPATHI,
PALLIKOTTAI, MANUR TALUK,
TIRUNELVELI DISTRICT, Tirunelveli Dist

QUARRY APPLIED LEASE AREA:

S.F. NO'S : 103/1A, 103/1B, 103/2A, 103/2B,
102/2, 102/3, 99/2 & 99/3,

EXTENT : 2.39.0 Ha,

VILLAGE : KANARPATTI,

TALUK : MANUR,

DISTRICT : TIRUNELVELI.

INDEX

Q.L. APPLIED BOUNDARY

7.5m SAFETY DISTANCE

TEMPORARY BENCH MARK

APPROACH ROAD

CONTOUR

SCRUB

GRAVEL

ROUGH STONE

STRIKE & DIP

MINEABLE
PLAN & SECTIONS

SCALE 1:1000

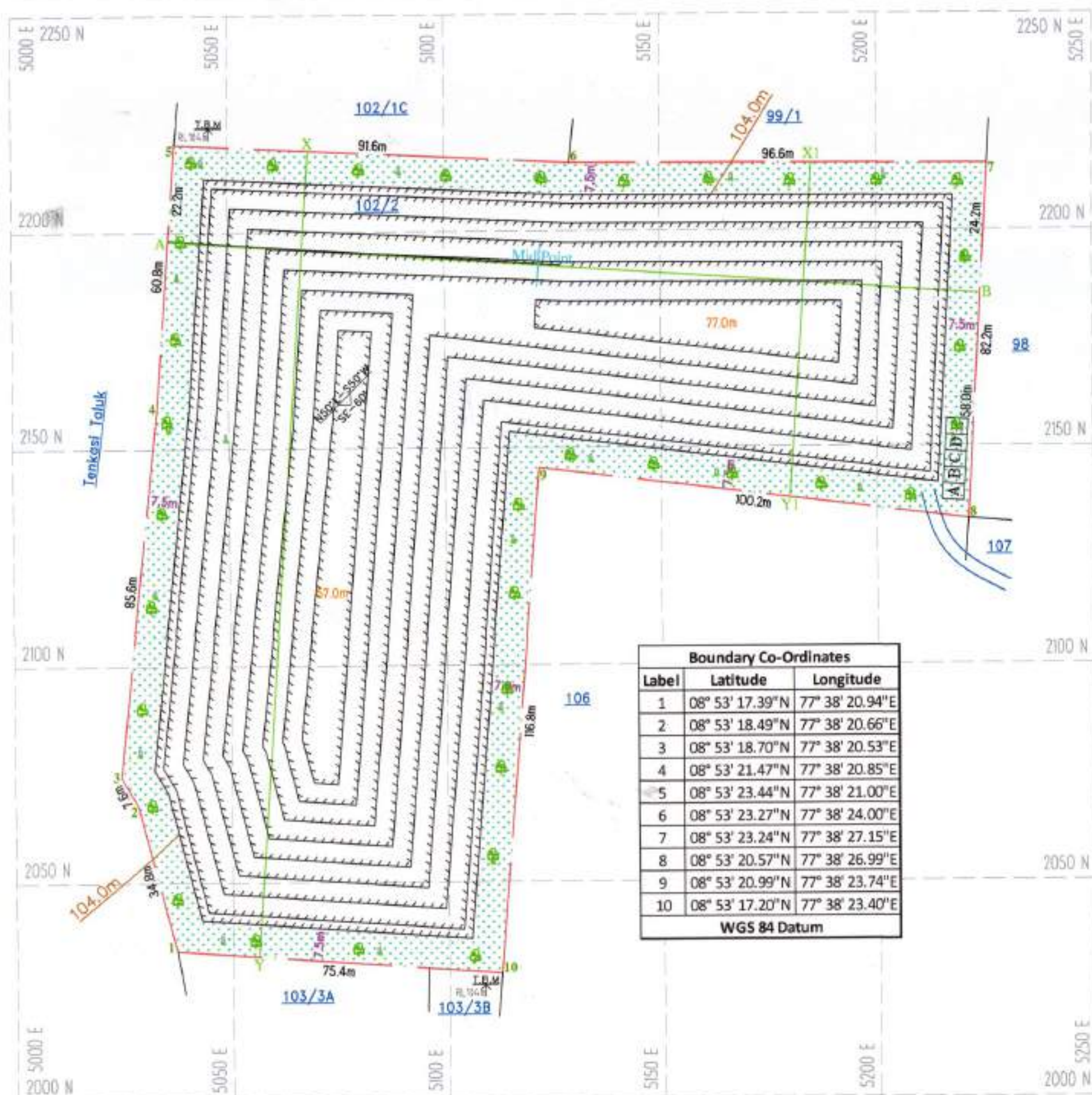
SECTIONS HOR 1:1000, VER 1:500

PREPARED BY:

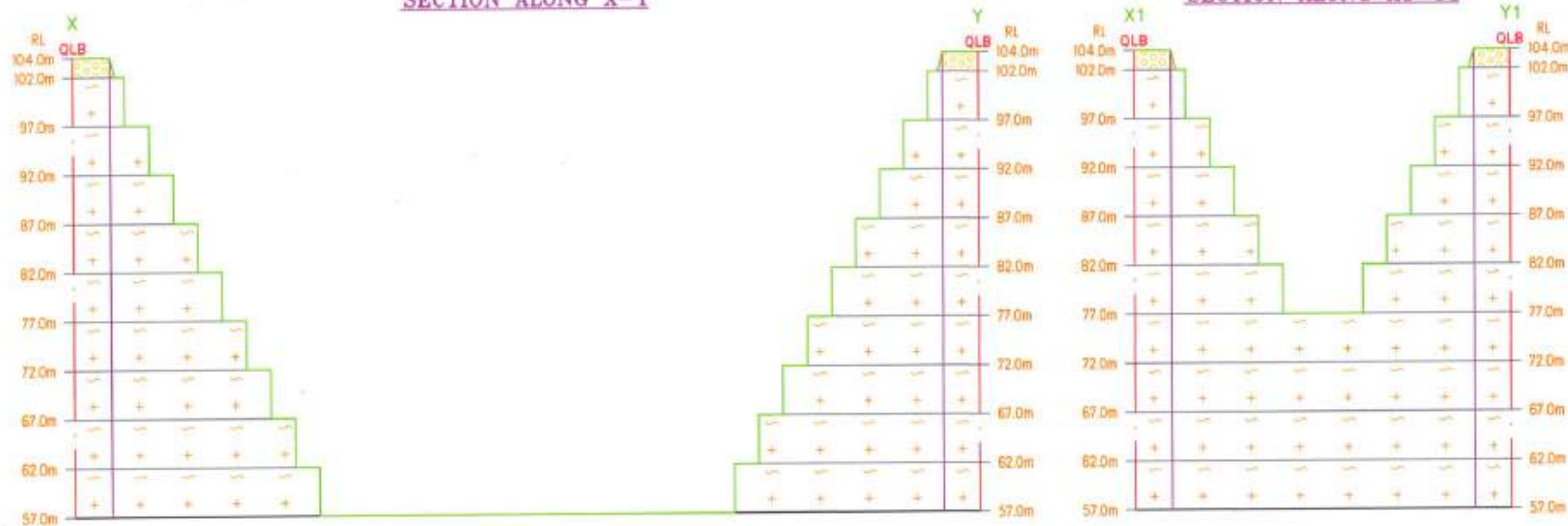
THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

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

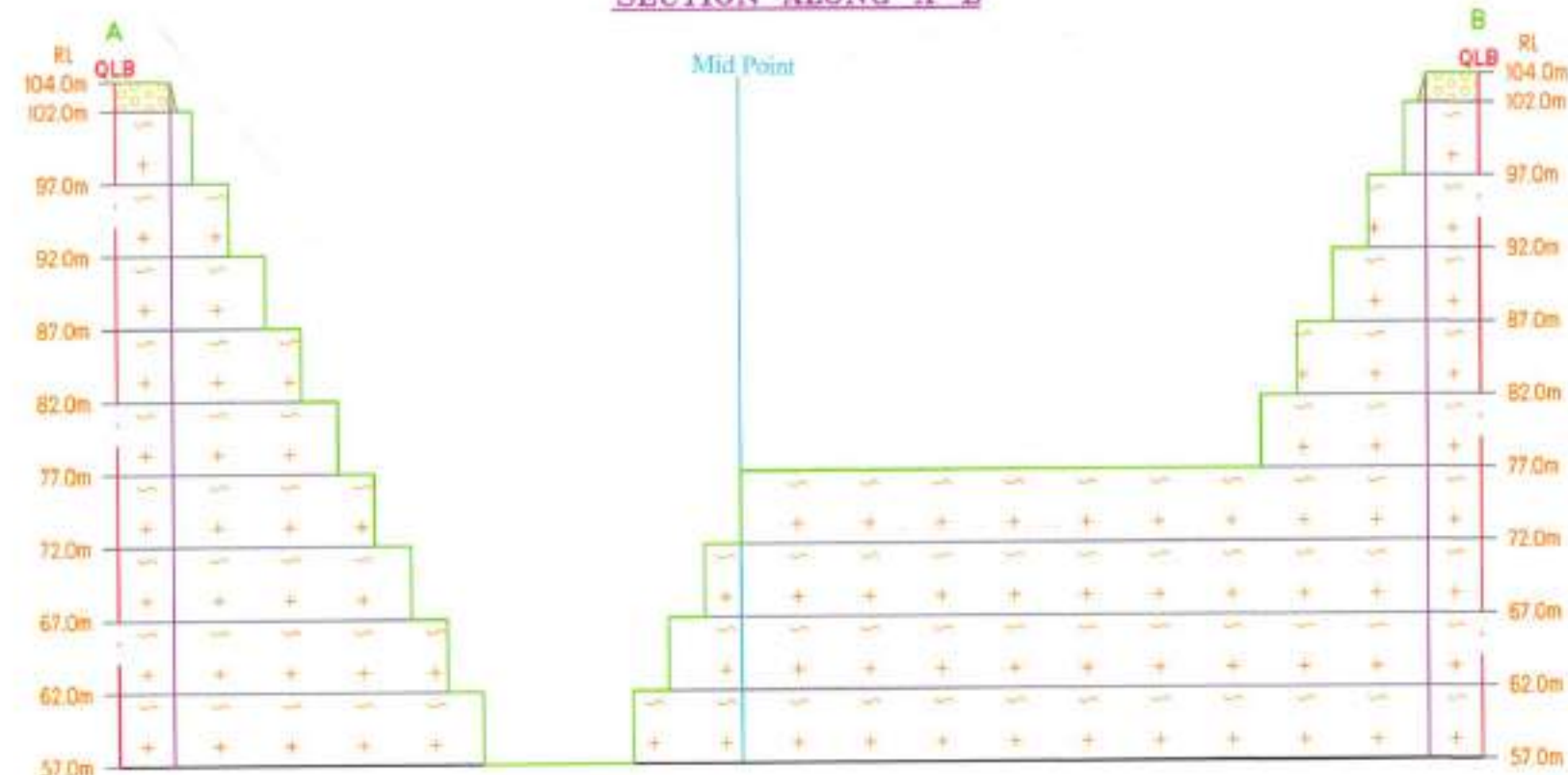
B. Natarajan



SECTION ALONG X1-Y1



SECTION ALONG A-B

Preposed area to be Planted

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

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



ANNEXURE-4

From

Thiru.A.Balamurugan, M.Sc, MBA.,
Assistant Director,
Geology and Mining,
Tirunelveli.

To

Thiru.B.Paramasivam,
S/o.Balakrishnan,
No.249, Nellai Thiruthu,
Pallikottai,
Manur Taluk,
Tirunelveli District.

Rc.No. 606/MIN-1/2024**dated.28.02.2025****Sir,**

Sub: Mines and Minerals - Minor Minerals -
Roughstone and Gravel - Tirunelveli District -
Quarry lease application preferred by
Thiru.B.Paramasivam, S/o.Balakrishnan for the
grant of lease to quarry roughstone and gravel
over an extent of 2.39.0 hectares of patta lands in
SF. Nos.103/1A (0.19.5), 103/1B (0.21.0), 103/2A
(0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3
(0.38.0), 99/2 (0.22.5) and 99/3 (0.52.0) of
Kanarpatti Village - Manur Taluk - Certain
Particulars requested - for obtaining Environmental
Clearance - furnished - reg.

- Ref:**
1. Quarry lease application preferred by
Thiru.B.Paramasivam, S/o.Balakrishnan,
No.249, Nellai Thiruthu, Pallikottai, Manur
Taluk, Tirunelveli District, dated. 21.10.2024.
 2. Precise Area Communication letter in Rc.
No.606/MIN-2/2024, dated.29.01.2025.
 3. Mining Plan Approval letter No. 606/MIN-
1/2024, dated.28.02.2025.
 4. Letter received from the applicant
Thiru.B.Paramasivam, S/o.Balakrishnan,
dated.03.02.2025.

Thiru.B.Paramasivam, S/o.Balakrishnan, No.249, Nellai
Thiruthu, Pallikottai, Manur Taluk, Tirunelveli District has applied for
the grant of lease to quarry Roughstone and Gravel over an extent

B. Paramasivam

of 2.39.0 hectares of patta land in SF. Nos. 103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) and 99/3 (0.52.0) of Kanarpatti Village, Manur Taluk, Tirunelveli District for a period of 5 years under Rule 19(1) & 20 of Tamil Nadu Minor Mineral Concession Rules, 1959.

2. Based on the recommendations of the Revenue Divisional Officer, Tirunelveli and the Assistant Director of Geology and Mining, Tirunelveli, the application of Thiru.B.Paramasivam, S/o.Balakrishnan for the grant of lease to quarry roughstone and gravel in the subject area was considered as the area available for the grant of lease for a period of 5 years. Accordingly precise area was communicated for an extent of 2.39.0 hectares of patta land in SF. Nos.103/1A (0.19.5), 103/1B (0.21.0), 103/2A (0.34.5), 103/2B (0.30.5), 102/2 (0.21.0), 102/3 (0.38.0), 99/2 (0.22.5) and 99/3 (0.52.0) of Kanarpatti Village, Manur Taluk, Tirunelveli District vide reference 2nd cited.

3. The Mining Plan submitted by the lessee, Thiru.B.Paramasivam, S/o.Balakrishnan for quarrying roughstone has been approved vide this office letter No. 606/MIN-1/2024, dated.28.02.2025 for obtaining Environmental Clearance as per the newly Introduced Rule 41 and 42 of Tamil Nadu Minor Mineral Concession Rules, 1959.

4. In the reference 4th cited, Thiru.B.Paramasivam, S/o.Balakrishnan has requested to furnish certain particulars such as existing / proposed / abandoned mines within a radial distance of 500 meters from the periphery of the existing mining lease hold area for obtaining environmental clearance from the State Level Environment Impact Assessment Authority, Chennai.

B. N. S. S. S.

5. The details of quarry leases falling within a radial distance of 500 meters from the subject leasehold area are furnished below:-

Sl. No	Name of the Lessee	Village & SF. No.	Extent - hec	Lease status
1. Existing quarries				
1.	Thiru.B.Paramasivam, S/o. Balakrishnan, 249, Nellai Thiruthu, Thalaiyuthu, Sankar Nagar, Tirunelveli - 627357.	Kanarpatti (V), SF. Nos. 105/6, 105/7, 106/3D, 107/3C1, 107/3C2, 108/1, 108/2	2.19.5	Proceedings No. M1/17701/2017, dt.07.09.2020 for a period of 5 years from 16.09.2020 to 15.09.2025
2.	Thiru.A.Densingh Babu, S/o.Arulraj, 276, Main Road, Kanarpatti, Manur Taluk, Tirunelveli District.	Vagaikulam (V), SF. No. 492/2	1.83.5	Proceedings No. 36244/MIN-3/2019, dt.07.01.2025 for a period of 5 years from 08.01.2025 to 07.01.2030
Total			4.03.0	
2. Abandoned quarries				
1.	Arulraj, S/o.Asaiah, Kanarpatti South, Manur Taluk, Tirunelveli District.	Kanarpatti (V), SF. Nos.97/1, 97/2 & 97/3	2.68.0	Proceedings No. M1/27276/2013, dt.29.09.2014 for a period of 5 years from 29.09.2014 to 28.09.2019
2.	Thiru.A.Kanagaraj, S/o.Arumugam, 66, East Street, Notchikulam, Krishnapuram, Palayamkottai Taluk, Tirunelveli District.	Kanarpatti (V), SF. Nos.66/3, 67/1	1.42.0	Proceedings No. M1/20703/2014, dt.16.02.2016 for a period of 5 years from 10.06.2016 to 09.06.2021
3.	Thiru. M.Maridurai, S/o. Maruthappapandian, 3/189, A.Maruthappapuram, Nettur Post, Alankulam Taluk, Tenkasi District.	Kanarpatti (V), SF. No.62	1.29.0	Proceedings No. M1/43605/2014, dt.24.08.2016 for a period of 5 years from 24.08.2016 to 23.08.2021
4.	Thiru.K.Antonyraj, S/o.Kalimuthu, 5/60A, Vedakovil Street, Azhagiapandiapuram, Manur Taluk, Tirunelveli District.	Vagaikulam (V), SF. Nos. 493/2, 493/3	2.06.5	Proceedings No. M2/17727/2007, dt.14.07.2007 for a period of 5 years from 20.08.2007 to 19.08.2012

B. N. S. S. S.

5.	Thiru.K.Antonyraj, S/o.Kalimuthu, 5/60A, Vedakovil Street, Azhagiapandiapuram, Manur Taluk, Tirunelveli District.	Vagalkulam (V), SF. Nos. 493/2, 493/3	2.06.5	Proceedings No. M1/26994/2012, dt.15.07.2013 for a period of 5 years from 15.07.2013 to 14.07.2018
6.	Thiru.K.Arlyanayagam, S/o.Kombiah Pandian, 83, Sarangabani Street, Tuticorin,	Vagalkulam (V), SF. Nos. 483/1, 484/1	2.15.0	Proceedings No. M1/78645/2011, dt.24.07.2013 for a period of 5 years from 24.07.2013 to 23.07.2018
Total			11.67.0	
3. proposed quarries				
1.	Thiru.B.Paramasivam, S/o.Balakrishnan, No.249, Nellai Thiruthu, Pallikottai, Manur Taluk, Tirunelveli District.	Kanarpatti (V), SF. Nos. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3	2.39.0	Proposed quarry
Total extent of proposed quarries			2.39.0	

[Signature]
28/2/15
Assistant Director,
Geology and Mining,
Tirunelveli.

[Signature]
28/2/15

B. N. S. S. S.



ANNEXURE-5

சீர்தரவு

திருநெல்வேலி மாவட்டம் மானூர் வட்டம்

எண் 249 முதல் திருத்த பன்னிகோட்டை என்ற
பிரதானியச் சேர்ந்து சில பரமசிவம் 1/100 பரமசிவம்
என்பவர் காரணப்பட்டு கிராமம் புத்தக புலன்கள்
99/2 0.22.5, 99/3 0.52.0, 102/2 0.21.0
102/3 0.38.0, 103/1A 0.19.5, 103/1B 0.21.0
103/2A 0.34.5, 103/2B 0.30.5 ஸ் தொத்தம்
2.39.0 எஜக்கடன் பதப்பின் குவாடி உரிமை பெற

அண்ணப்பெருக்கள்ள நிலத்தில் புல லன்கள் 99/2, 3
102/3, 103/1A, 103/1B, 103/2A, 103/2B
102/2 }
குவாடி உரிமை
குவாடி அமைப்புகள் புல லன்களை சந்தித்து
500 டீடர் சந்தரணம் குடியிருப்புகள் இவை
நீர் நிலைகள் இவை. அரண்மனை சிறப்பு மக்க
புத்தக இன்கங்கள் மந்தம் கோயில்கள் இவை
என்ற அபகுத்திக்கு மட்டுமே என்ற வடிவப்படுகிறது.

Relevant

சீராம நிரவாடி அனுவலர்
18. காரணப்பட்டு சீராமம்
மானூர் வட்டம்
திருநெல்வேலி மாவட்டம்

B மலர்



ANNEXURE-6



தமிழ்நாடு அரசு

வருவாய்த் துறை

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

மாவட்டம் : திருநெல்வேலி

வட்டம் : மானூர்

வருவாய் கிராமம் : காளையாபட்டி

பட்டா எண் : 1355

உரிமையாளர்கள் பெயர்

1. பாலகிருஷ்ணகோனார்

மகன்

சரவணன்

புல எண்	உட்பிரிவு	புள்கொய்		நன்கொய்		மறிதொய்		குறிப்பு
		பரப்பு	நீர்வை	பரப்பு	நீர்வை	பரப்பு	நீர்வை	
		ஹெக்டர் - ஏர்	சூ - பை	ஹெக்டர் - ஏர்	சூ - பை	ஹெக்டர் - ஏர்	சூ - பை	
107	20	0.28.50	0.78	-	-	-	-	R422/08- 28-03-21
99	2	0.22.50	0.14	-	-	-	-	R422/08- 30-11-20
99	3	0.52.00	0.32	-	-	-	-	R422/08- 17-04-20
		1.03.00	0.64					

குறிப்பு



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 29/14/029/01355/2 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 05-10-2024 அன்று 09:37:55 AM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 30/09/25 வழி இணையதளத்தில் சரிபார்க்கவும்.

13/09/2024ம் தேதி 3946 ஆவணம்
தகவல் கொண்டு
வசுதாள் பதிவு அலுவலர்



B மகன்



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரீடர் மேலாண்மைத் துறை

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

மாவட்டம் : திருநெல்வேலி

வட்டம் : மானூர்

வருவாய் இராமம் : கானார்பட்டி

பட்டா எண் : 1352

உரிமையாளர்கள் பெயர்

1. பாவசிறுஷ்ணக்கோனார்

மகன

சரவணன்



புல எண்	உட்பிரிவு	புன்செய்		தன்செய		மற்றதவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
102	2	0 - 21.00	0.13	--	--	--	--	423/03--- ----- Digitally signed:Bagavathy Perumal G Tahsildar 13/06/2016 05:15:18:PM
102	3	0 - 36.00	0.24	--	--	--	--	423/08--- ----- Digitally signed:Bagavathy Perumal G Tahsildar 13/06/2016 05:15:18:PM
		0 - 54.00	0.37					

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 29/14/029/01352/20961 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 31-01-2025 அன்று 01:55:54 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைபிடி (சி) கேமராவின் 2D barcode படிப்பான மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சர்ட் பார்க்கவும்

B மகன்



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

நில உரிமை விபரங்கள் : து. ஏண் 10(1) பிரிவு

மாவட்டம் : திருநெல்வேலி

வட்டம் : மாதூர்

வருவாய் கிராமம் : கானார்பட்டி

பட்டா எண் : 1572

உரிமையாளர்கள் பெயர்

1. பாவசிறுவுணக் கோனார்

மகன்

பரமசிவம்



பட்டா எண்	உட்பிரிவு	புன்செய்		குன்செய்		மற்றுவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்டர் - ஏர்	ரூ - பை	ஹெக்டர் - ஏர்	ரூ - பை	ஹெக்டர் - ஏர்	ரூ - பை	
103	1A	0 - 19.50	0.12	--	--	--	--	JP116-13--- ----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:15:18:PM
103	1B	0 - 21.00	0.13	--	--	--	--	JP118-13--- ----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:15:18:PM
106	1A	0 - 20.50	0.13	--	--	--	--	JP116-13--- ----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58:PM
106	1B	0 - 17.00	0.12	--	--	--	--	JP118-13--- ----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58:PM
108	2	0 - 78.50	0.50	--	--	--	--	JP118-13--- ----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58:PM

B 1705/16



107	1	1 - 8.50	0.69	--	--	--	JP118-13----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58:PM
107	2A	0 - 22.00	0.14	--	--	--	JP118-13----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58:PM
107	2B	0 - 11.50	0.07	--	--	--	JP118-13----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58:PM
107	3A	0 - 9.00	0.06	--	--	--	JP118-13----- Digitally signed: Bagavathy Perumal G Tahsildar 13/06/2016 05:17:58:PM
		3 - 7.50	1.95				

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 29/14/029/01572/20965 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 31-01-2025 அன்று 01:51:45 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- காகப்பேசி தேமராவின் 2D barcode பட்டிண ஸலம் அடித்து 3G/GPRS வழி இணையதளத்தில் சர் பார்க்கவும்

B மகன்



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

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

மாவட்டம் : திருநெல்வேலி

வட்டம் : மானூர்

வருவாய் கிராமம் : காணார்பட்டி

பட்டா எண் : 2034

உரிமையாளர்கள் பெயர்

1. பாலமருங்குண்ணன்

மகன்

பராசிவம்



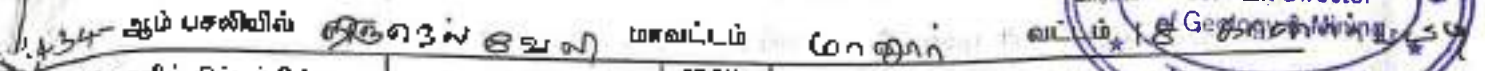
டவு எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
103	2A	0 - 34.50	0.21	--	--	--	--	2023/0103/29/343481 Digitally signed: murugesan G Zonal Deputy Tahsildar 05/04/2023 09:04:48:PM
103	2B	0 - 36.50	0.19	--	--	--	--	2023/0103/29/343481 Digitally signed: murugesan G Zonal Deputy Tahsildar 05/04/2023 09:04:48:PM
		0 - 65.00	0.40					

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 29/14/029/02034/30989 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 31-01-2025 அன்று 01:54:02 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- கூடுதல் கேமராவின 2D Barcode படிப்பான மூலம் பட்டி 3G/GPRS வழி இணையதளத்தில் சரி பாராகவும்

B மருகன்



முதல் போகம்.

380/18-RF-III-A-10-20,000,000. Cps.-GBP.-MDU.-7-2019.

B. nobile



1	2	3	4	5	6	7	8	9	10	11	
95	3	95-3	r	y	...	8-5	7	0 62	0 62.0	0 38	13 ர. அத்தாண்டி
	4	-4	r	y	...	8-5	3	0 62	0 07.0	0 06	11 அத்தாண்டி
								1 75.0	1 06		
96	1A	96-1A	r	y	...	8-5	7	0 62	0 33.0	0 20	442 மனுபலம்
	1B	-1B	r	y	...	8-5	7	0 62	0 44.0	0 27	14 த. அள்ளி மயிலம்
	2A	-2A	r	y	...	8-5	7	0 62	0 48.0	0 30	139 ச. எண்ணா.
	3A	-3A	r	y	...	8-5	7	0 62	0 48.0	0 30	1075 ச. எண்ணா. தாமிர.
	4A	-4A	r	y	...	8-5	7	0 62	0 38.5	0 24	5 ச. அருளப்பம்.
	4B	-4B	r	y	...	8-5	7	0 62	0 38.5	0 17	5 ச. அருளப்பம்
								2 40.0	1 48		
97	1	97-1	r	y	...	8-5	7	0 62	0 45.0	0 25	131 ரூ. ஜார் பண்ணாடி.
	2	-2	r	y	...	8-5	7	0 62	0 77.0	0 53	251 ரூ. சாமி தாமி.
	3	-3	r	y	...	8-5	7	0 62	0 48.0	0 57	131 ரூ. ஜார் பண்ணாடி.
								1 68.0	1 62		
98	1	98-1	r	y	...	8-5	7	0 62	0 84.0	0 50	233 பர. சங்கரம் மார்.
	2	-2	r	y	...	8-5	7	0 62	0 91.0	0 56	233 பர. சங்கரம் மார்.
	3	-3	r	y	...	8-5	7	0 62	0 46.0	0 31	912 அ. பிச்சை மதிலும் தாமிர பேரணும்.
								2 21.0	1 37		
99	1	99-1	r	y	...	8-5	7	0 62	0 14.5	0 28	224 சலிமுத்து.
	2	-2	r	y	...	8-5	7	0 62	0 22.5	0 14	5 ச. அருளப்பம்

REVENUE INSPECTOR
THALAYUTHU FIRKA
MANUR TAL.

* விவரப்படியானவை பக்கக்கவும்.

B மகன்



	1	2	3	4	5	6	7	8	9	10	11	12
99	3	02-3	r	12	"	8-5	7	0 62	0 32 0	0 32	1018 ரத்திரம்	
									1 19.0	0 74		
100	(O)	100	r	14	"	8-5	7	0 62	1 62.0	1 00	672 கோ. அத் தொணி மிகச்சேல் (1), பி. அத்தொணி யான் (2).	
101	(O)	101	r	4	"	8-5	7	0 62	1 66.5	1 06	602 கோ. அத் தொணி மிகச்சேல் (1), பி. அத்தொணி யான் (2).	
102	1	102-1	r	4	"	8-5	7	0 62	0 46.5	0 29	296 ச. குளசு முதல.	
	2	-2	r	4	"	8-5	7	0 62	0 21.0	0 13	16 சா. அருள்பள்ள.	
	3	-3	r	4	"	8-5	7	0 62	0 38 0	0 21	1018 ரத்திரம்.	
									1 05.5	0 66		
103	1A	103-1A	r	4	"	8-5	7	0 62	0 19.5	0 12	912 அ. மிகச்சேல் மற்றும் தானது போர்க்கு. *	
	1B	-1B	r	4	"	8-5	7	0 62	0 21.0	0 13	252 ச. கார்புவேல்.	
	2A	-2A	r	4	"	8-5	7	0 62	0 34.5	0 21	782 ச.கார்புவேல்(1), கோ. கித்திரி யான் (2) ஜூ. பாக்கிய மணி (3).	
	2B	-2B	r	4	"	8-5	7	0 62	0 30.5	0 19	253 ச. கார்புவேல்.	
	3A	3A	r	4	"	8-5	7	0 62	0 23.0	0 11	910 அ. யோவான் மற்றும் தானது போர்க்கு. *	
	3B	3B	r	4	"	8-5	7	0 62	0 16.0	0 06	78 அ. ஆரோதாம்.	
									1 34.5	0 83		
									0 62			
									1 15.5			
									18. கண்ணாய்டி. மாணவர் எட்டம்.			
											859 அ. ஆரோதாம் மற்றும் ஸ்தந்து போர்க்கு. *	



39



தமிழ்நாடு TAMILNADU

ரூபாய் :- 100 =

நாள் :- 4.10.2024

சு. பரமசிவம்

குத்தகை நிதித் துறை

எஸ்.எம். அப்துல் அன்
ஸ்டாம்பு வென்டர்
கீழவிராகவபுரம்
உ.எ. 17805 / 88

குத்தகை பத்திரம்

2024ம் வருடம் அக்டோபர் மாதம் 07ம் தேதி.

தமிழ்நாடு.627357, திருநெல்வேலி மாவட்டம், மானூர் தாலுகா, பல்விக்கோட்டை கிராமம், நெல்லையிருந்து, சுதவு எண்.249 என்ற விலாசத்தில் வசித்து வரும், திரு.பாலகிருஷ்ணன் அவர்கள் குமாரர் 45 வயதுள்ள பா.பரமசிவம் (ஆதார் எண்.3536 7434 6729) (குத்தகை பெறுபவர்) அவர்களுக்கு,

தமிழ்நாடு.627357, திருநெல்வேலி மாவட்டம், மானூர் தாலுகா, பல்விக்கோட்டை கிராமம், நெல்லையிருந்து, மெயின் ரோடு, சுதவு எண்.249 என்ற விலாசத்தில் வசித்து வரும், திரு.பாலகிருஷ்ணன் அவர்கள் குமாரர் 49

சு. பரமசிவம்
குத்தகை பெறுபவர்

B. S.

குத்தகை கொடுப்பவர்

1. பட்டியல் எண்	3946
2. துறை	சு. பரமசிவம்
3. வகுதான்	பதிவு செய்யப்பட்டவர்

B. S.



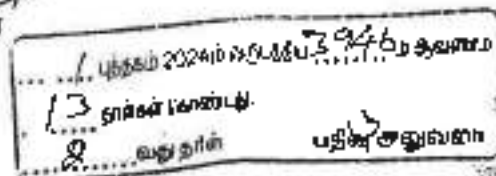
-2-

வயதுள்ள பா.சரவணன் (ஆதார் எண்.8245 8277 4589) (குத்தகை கொடுப்பவர்) ஆகிய நான் எழுதிக்கொடுத்த குத்தகைப்பத்திரம்.

என்னவென்றால், என் பெயருக்கு 21.11.2005ம் தேதியில் எழுதி, திருநெல்வேலி 2 நிர் இணை சார்பதிவாளர் அலுவலகத்தில் 1புத்தகம், 2005ம் வருடத்திய 5368ம் நம்பராக பதிவு செய்யப்பட்டுள்ள கிரையப்பத்திரத்தின்படி பாத்தியப்பட்ட சொத்துக்களில் இதன் 1வது அயிட்ட சொத்தும், 22.11.2005ம் தேதியில் எழுதி, திருநெல்வேலி 2 நிர் இணை சார்பதிவாளர் அலுவலகத்தில் 1புத்தகம், 2005ம் வருடத்திய 5383ம் நம்பராக பதிவு செய்யப்பட்டுள்ள கிரையப்பத்திரத்தின்படி பாத்தியப்பட்டு, அதுமுதல் நான் சர்வசுதந்திரமாகவும், வில்லங்க சுத்தமாகவும் ஆண்டனுபவித்து வரும் இதன் தபசில் கண்ட சொத்துக்களை தாங்கள் 'அரசு அனுமதி பெற்ற கணிமம்' சார்ந்த தொழில் செய்வதற்காக குத்தகைக்கு வேண்டும் என கேட்டதை ஏற்று நாளது தேதி முதல் வருடம் ஒன்றுக்கு ரூபாய்.20,000/- (ரூபாய் இருபதாயிரம்) குத்தகை தொகையாக நிர்ணயித்து 15 வருடங்களுக்கு தங்களுக்கு குத்தகைக்கு விட சம்மதித்துள்ளேன்.

நாளது தேதி முதல் இதன் கண்ட சொத்தைப்பொறுத்து உங்கள் தொழிலுக்கு தேவையான மாற்றங்களை தபசில் கண்ட சொத்தில் நீங்களே உங்கள் பொறுப்பில் செய்து கொள்ள வேண்டியது. மின் இணைப்பு, வண்டி வாகனங்கள் போன்றவற்றை நீங்களே ஏற்பாடு செய்து கொண்டு அரசு ஆலுவலகங்களில் உங்கள் பெயரிலோ, உங்கள் நிறுவனத்தின் பெயரிலோ நீங்கள் கையொப்பம் செய்து கொண்டு தபசில் கண்ட சொத்தில் தொழிலுக்கு தேவையான கட்டிடங்களை அரசு அனுமதியுடன் அமைத்துக் கொள்ள வேண்டியது.

B. Saravanan
குத்தகை பெறுபவர்



B. Saravanan
குத்தகை கொடுப்பவர்

B. Saravanan



-3-

இதன் தபசில் கண்ட சொத்தில் அரசின் சட்டத்திட்டங்களுக்கு பாதகமாக நீங்களோ ஊங்களது வாரிசுகளோ செய்யக்கூடாது. கணிம வளம் எடுக்கும் போது அரசின் சட்டம் மற்றும் விதிமுறைகளுக்கு உட்பட்டு மட்டுமே தபசில் சொத்தின் நிலத்திலிருந்து கணிம வளங்களை எடுக்க வேண்டும்.

இதன் தபசில் கண்ட சொத்தினை குத்தகை காலம் முடியும் தருணத்தில் குத்தகையை நீடித்துக்கொள்ள நாம் இரு தரப்பினரும் விரும்பாத நிலையில் பீண்டும் என்னிடத்தில் நல்ல நிலைமையில் கட்டிடத்தோடு சுவாதினத்தை வழங்கி விட வேண்டியது. குத்தகை நீட்டிப்பு செய்யும் பட்சத்தில் அதற்கு தனியாக ஒரு ஆவணம் எழுதி அதனை பதிவு செய்து கொள்ள வேண்டும்.

இந்தப்படி எனது முழு மனநிறைவுடன் எழுதிக்கொடுத்த குத்தகைப் பத்திரம் படிக்க கேட்டேன். சரி

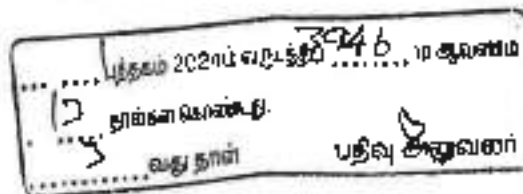
தபசில் சொத்து விபரம்

1) திருநெல்வேலி பதிவு மாவட்டம், மேற்படி 2 நிர் இணைசார்பதிகம், சரகம் திருநெல்வேலி தாலுகா, கானார்பட்டி கிராமம், பட்டா எண்.1355, அயன் புஞ்சை சர்வே.99/2 நம்பர் செண்டு 55, லை சர்வே.99/3 நம்பர் ஏக்கர் 1 செண்டு 28 ஆக மொத்தம் ஏக்கர் 1 செண்டு 83 உள்ள புஞ்சை மற்றும் அதற்குரிய சகல மாமூல் பாத்தியங்கள், உரிமைகள் உள்படவும் இதுவும்

2) திருநெல்வேலி பதிவு மாவட்டம், மேற்படி 2 நிர் இணைசார்பதிகம், சரகம் திருநெல்வேலி தாலுகா, கானார்பட்டி கிராமம், பட்டா எண்.1352,

B. பழமதிசம்
குத்தகை பெறுபவர்

B. S. ———
குத்தகை கொடுப்பவர்



B. பழமதிசம்



-4-

அயன் புஞ்சை சர்வே.102/2 நம்பர் செண்டு 52, ஹை சர்வே.102/3 நம்பர் செண்டு 94 ஆக மொத்தம் ஏக்கர் 1 செண்டு 48 உள்ள புஞ்சை நிலமும் மற்றும் அதற்குரிய சகல மாமூல் பாத்தியங்கள், உரிமைகள் உள்படவும் தபசில் விபரம் சரி. தபசில் சொத்து மானூர் யூனியனைச் சேர்ந்த கானார்பட்டி பஞ்சாயத்து எல்லைக்குள்பட்டது.

B. S. S. S.

B. S. S. S.

சாட்சிகள்:

1) திரு. ராமர்

திரு. ராமர் யாதவ், துபெ.காலங்கரையான் (ஆதார் எண் 3530 4761 2293) 81, கிருஷ்ணன் கோவில் தெரு, நெல்லை திருத்து, பல்விக்கோட்டை, திருநெல்வேலி-627357

2) திரு. ராஜா

திரு. ராஜா கிருஷ்ணன், துபெ.பால்சாமி (ஆதார் எண் 4840 9989 0350) 251, கடலை கோவில் தெரு, நெல்லை திருத்து, பல்விக்கோட்டை, திருநெல்வேலி-627357

... புதுமை 2024 பவந்திய 2046 ...
... 17 ...
... 4 ...
... 4 ...

Drafted by

I. Vijayan

I. VIJAYAN, M.A., B.L.,
ADVOCATE (MS. No: 1383/2003)
27, MKP HOSPITAL COMPLEX
TIRUCHENDUR ROAD
PALAYAMKOTTAI
TIRUNELVELI - 627002



B. S. S. S.



CERTIFICATE UNDER SECTION 42 OF THE INDIAN STAMP ACT 1899

SNo 2727 of 2024

I hereby certify that a sum of ₹ 2,900/- (Rupees Two Thousand Nine Hundred only) on account of deficit stamp duty has been levied under section 41 of the Stamp Act in respect of this Instrument from Mr. பரமசிவம் residing at 249, MAIN ROAD, NELLAI THIRUTHU, PALLIKOTTAI, Tirunelveli, Tamil Nadu, India, 627357.

Sub Registrar: Tirunelveli Joint II
Date: 07/10/2024



Signature of Sub Registrar and Collector under Section
42 of the Indian Stamp Act

Presented in the office of the Sub Registrar of Tirunelveli Joint II and fee of ₹ 3,310/- paid at 02:54 PM on the 07/10/2024 by

Left Thumb



புத்தகம் 2024-ம் வருடத்து 3946-ம் பக்கம்
13
தமிழக சர்க்கார்
பதிவு செய்தவர்
பதிவு செய்தவர்

Attestations as per recitals of document

Execution admitted by
Left Thumb



Identity of the person verified through Consent based Aadhaar Authentication using Thumb Impression with UIDAI reference No. UKC 285803ad1f4467fa9c4049bfa025e3177c81c2 (Details from UIDAI : Saravanan Balakrishnayadhas S/O Balakrishnayadhas, 07-05-1975, xxxxxxxx4589)



Claim admitted by
Left Thumb



Identity of the person verified through Consent based Aadhaar Authentication using Thumb Impression with UIDAI reference No. UKC:97327407a7a0d29f084d1aa01c9c6b075a3029 (Details from UIDAI : Perumayyavar S/O Balakrishnan, 04-09-1973, xxxxxxxx6723)





ANNEXURE-7



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0924	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0924	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	04.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	73.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	32.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues&Complaints: technical@shrientanalytical.com

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www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0925	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0925	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	04.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0926	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0926	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	05.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	65.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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/25/0927	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0927	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	05.03.2025	Test Completed on	17.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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/25/0928	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti VILLAGE
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0928	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	06.03.2025	Test Completed on	17.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/0929	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

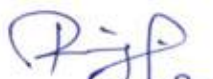
Sample Location	A4-South Sezhilanallur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0929	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	06.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/0930	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti VILLAGE
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0930	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	07.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/0931	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0931	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	07.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/0932	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0932	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	08.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/0933	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0933	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	08.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	63.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/0934	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0934	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	09.03.2025	Test Completed on	17.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	64.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/0935	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

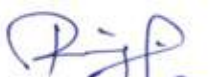
Sample Location	A6-Manur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0935	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	09.03.2025	Test Completed on	17.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	64.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/0972	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0972	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	11.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	70.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	32.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/0973	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0973	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	11.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/0974	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0974	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	12.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	68.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/0975	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0975	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	12.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	62.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/0976	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti VILLAGE
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0976	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	13.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/0977	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0977	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	13.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	6.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/0978	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti VILLAGE
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0978	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	14.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/0979	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0979	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	14.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/0980	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0980	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	15.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	67.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/00981	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

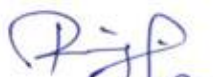
Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0981	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	15.03.2025	Test Completed on	24.03.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/0982	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0982	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	16.03.2025	Test Completed on	24.03.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	61.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

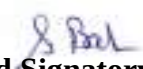
Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/0983	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0983	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	16.03.2025	Test Completed on	24.03.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1020	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

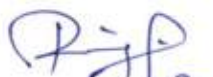
Sample Location	A1-Within Mine Lease area
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1020	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	18.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	73.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	32.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	15.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1021	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

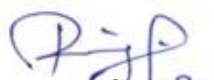
Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1021	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	18.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1022	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1022	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	19.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	70.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1023	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1023	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	19.03.2025	Test Completed on	31.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1024	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Karasanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1024	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	20.03.2025	Test Completed on	31.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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/25/1025	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

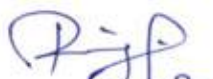
Sample Location	A4-South Sezhilanallur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1025	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	20.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1026	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Karasanur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1026	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	21.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1027	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1027	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	21.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.
CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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Report No.	SARL/25/1028	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1028	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	22.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	65.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1029	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1029	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	22.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1030	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1030	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	23.03.2025	Test Completed on	31.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1031	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

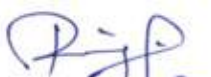
Sample Location	A6-Manur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1031	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	23.03.2025	Test Completed on	31.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1068	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1068	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	25.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1069	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1069	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	25.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	64.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1070	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1070	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	26.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory

S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1071	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1071	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	26.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1072	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1072	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	27.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1073	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

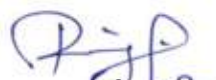
Sample Location	A4-South Sezhilanallur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1073	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	27.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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/25/1074	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1074	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	28.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1075	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1075	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	28.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1076	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1076	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	29.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1077	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1077	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	29.03.2025	Test Completed on	07.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1078	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1078	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	30.03.2025	Test Completed on	07.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

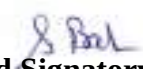
Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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TEST REPORT

Report No.	SARL/25/1079	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1079	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	30.03.2025	Test Completed on	07.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1092	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

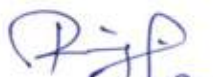
Sample Location	A1-Within Mine Lease area
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1092	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	01.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

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

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/25/1093	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1093	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	01.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	63.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1094	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1094	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	02.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1095	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1095	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	02.04.2025	Test Completed on	14.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	61.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1096	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1096	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	03.04.2025	Test Completed on	14.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1097	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

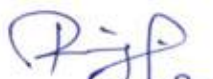
Sample Location	A4-South Sezhilanallur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1097	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	03.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	6.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1098	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1098	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	04.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1099	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1099	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	04.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1100	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1100	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	05.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	65.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1101	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1101	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	05.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1102	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1102	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	06.04.2025	Test Completed on	14.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1103	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

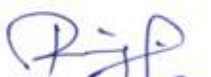
Sample Location	A6-Manur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1103	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	06.04.2025	Test Completed on	14.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1140	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1140	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	08.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	74.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	34.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1141	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1141	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	08.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1142	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1142	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	09.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	67.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory

S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1143	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1143	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	09.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1144	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1144	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	10.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1145	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1145	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	10.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1146	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1146	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	11.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1147	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1147	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	11.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1148	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1148	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	12.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	69.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1149	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

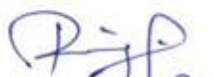
Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1149	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	12.04.2025	Test Completed on	21.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1150	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1150	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	13.04.2025	Test Completed on	21.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	74.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	32.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	15.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1151	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1151	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	13.04.2025	Test Completed on	21.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1188	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

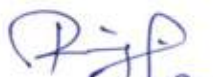
Sample Location	A1-Within Mine Lease area
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1188	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	15.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	71.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1189	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1189	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	15.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1190	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1190	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	16.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1191	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1191	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	16.04.2025	Test Completed on	28.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1192	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1192	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	17.04.2025	Test Completed on	28.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1193	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

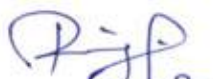
Sample Location	A4-South Sezhilanallur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1193	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	17.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1194	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1194	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	18.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1195	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1195	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	18.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1196	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1196	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	19.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1197	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1197	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	19.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1198	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

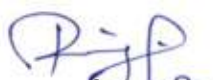
Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1198	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	20.04.2025	Test Completed on	28.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1199	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

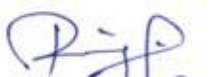
Sample Location	A6-Manur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1199	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	20.04.2025	Test Completed on	28.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	61.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1236	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1236	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	22.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1237	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1237	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	22.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	65.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1238	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1238	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	23.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1239	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1239	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	23.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1240	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

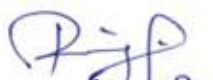
Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1240	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	24.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1241	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

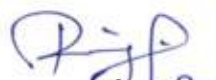
Sample Location	A4-South Sezhilanallur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1241	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	24.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1242	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1242	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	25.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1243	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1243	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	25.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1244	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1244	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	26.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	64.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1245	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

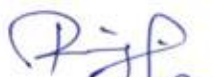
Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1245	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	26.04.2025	Test Completed on	05.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1246	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1246	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	27.04.2025	Test Completed on	05.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	67.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1247	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1247	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	27.04.2025	Test Completed on	05.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1284	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

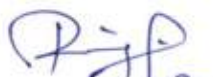
Sample Location	A1-Within Mine Lease area
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1284	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	29.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1285	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1285	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	29.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	62.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1286	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1286	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	30.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	66.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1287	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1287	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	30.04.2025	Test Completed on	12.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1288	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1288	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	01.05.2025	Test Completed on	12.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1289	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

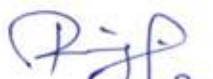
Sample Location	A4-South Sezhilanallur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1289	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	01.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1290	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1290	Sample Received on	05.05.2025
Sample Collected by	02.05.2025	Test Commenced on	05.05.2025
Sample Collected on	18.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1291	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1291	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	02.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1292	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1292	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	03.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1293	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1293	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	03.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1294	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1294	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	04.05.2025	Test Completed on	12.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1295	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

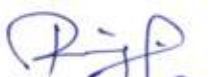
Sample Location	A6-Manur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1295	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	04.05.2025	Test Completed on	12.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	64.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1332	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1332	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	06.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	66.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1333	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1333	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	06.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1334	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1334	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	07.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	61.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1335	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1335	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	07.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1336	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1336	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	08.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1337	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

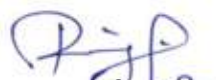
Sample Location	A4-South Sezhilanallur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1337	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	08.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1338	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1338	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	09.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/1339	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1339	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	09.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1340	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1340	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	10.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	73.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	32.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	15.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1341	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1341	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	10.05.2025	Test Completed on	19.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1342	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1342	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	11.05.2025	Test Completed on	19.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	69.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

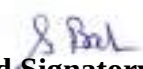
Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1343	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1343	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	11.05.2025	Test Completed on	19.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1380	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

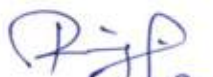
Sample Location	A1-Within Mine Lease area
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1380	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	13.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	67.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1381	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1381	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	13.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1382	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1382	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	14.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	62.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1383	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1383	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	14.05.2025	Test Completed on	26.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1384	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1384	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	15.05.2025	Test Completed on	26.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1385	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

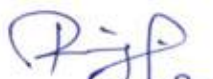
Sample Location	A4-South Sezhilanallur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1385	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	15.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1386	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1386	Sample Received on	19.05.2025
Sample Collected by	02.05.2025	Test Commenced on	19.05.2025
Sample Collected on	16.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1387	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1387	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	16.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1388	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1388	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	17.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1389	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1389	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	17.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1390	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1390	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	18.05.2025	Test Completed on	26.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1391	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

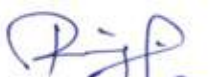
Sample Location	A6-Manur village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1391	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	18.05.2025	Test Completed on	26.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	63.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1428	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1428	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	20.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	68.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1429	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1429	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	20.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	64.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1430	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Alagiapandiapuram village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1430	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	21.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	62.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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/25/1431	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1431	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	21.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1432	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1432	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	22.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1433	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

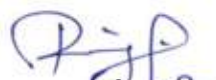
Sample Location	A4-South Sezhilanallur Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1433	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	22.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1434	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Kanarpatti Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1434	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	23.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1435	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1435	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	23.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/1436	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1436	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	24.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1437	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1437	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	24.05.2025	Test Completed on	02.06.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1438	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1438	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	63.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

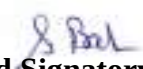
Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1439	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Kalakudi Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1439	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	61.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/1494	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	WATER
Sample Mark	W1-Within Mine Lease area

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1494	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.63	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1345	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	810	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	490	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	98.0	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	58.8	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	245	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	245	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	209	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	245	1000



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TEST REPORT

Report No.

SARL/25/1494

Report Date.

02.06.2025

Sl. No .	Parameters	Protocol	Unit	Result	*Limits Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	204	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.05	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	2.72	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.37	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).



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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1495	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	WATER
Sample Mark	W2-Pillaiyarkulam Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1495	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.38	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1520	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	915	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	338	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	105	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	18.2	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	262	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	76.0	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	338	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	182	1000



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TEST REPORT

Report No.	SARL/25/1495	Report Date.	02.06.2025

Sl. No .	Parameters	Protocol	Unit	Result	*Limits Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	321	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.04	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	2.45	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.46	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).



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Authorized Signatory
S. BALAMURUGAN
Asst.Technical Manager

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

Page 2 of 2

TEST REPORT

Report No.	SARL/25/1496	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	WATER
Sample Mark	W3-Kalakudi Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1496	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.69	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1502	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	902	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	394	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	78.4	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	47.5	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	196	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	198	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	384	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	248	1000



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TEST REPORT

Report No.	SARL/25/1496

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	236	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.06	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	1.69	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.39	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS - 10500:2012. BDL - Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1497	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	WATER
Sample Mark	W4-South Sezhilanallur Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1497	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.38	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1120	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	674	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	452	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	124	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	34.1	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	310	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	142	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	276	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	126	1000

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

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TEST REPORT

Report No.	SARL/25/1497

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	154	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.08	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	2.11	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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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1498	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	WATER
Sample Mark	W5-Alagiapandiapuram Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1498	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.81	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1915	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	1150	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	254	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	50.4	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	30.7	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	126	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	128	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	394	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	386	1000



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TEST REPORT

Report No.	SARL/25/1498

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	305	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.06	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	2.46	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.21	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS - 10500:2012. BDL - Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/1499	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.		
Sample Description	WATER		
Sample Mark	W6-Manur Village		

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1499	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.57	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	864	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	520	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	274	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	52.8	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	34.1	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	132	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	142	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	150	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	140	1000

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.
CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 1 of 2

TEST REPORT

Report No.	SARL/25/1499	Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	96.8	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(DL-0.01)	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	2.36	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.22	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




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1500	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	WATER
Sample Mark	SW1-Chittar River – Up Stream

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1500	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
A.	Physical parameters			
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.66
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	262
B.	Chemical parameters			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	162
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	73.3
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	15.0
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	8.55
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	37.6
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	35.6
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	70.7
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	59.7



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TEST REPORT

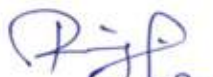
Report No.	SARL/25/1500

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	32.5
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.06
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	3.24
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.55
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(DL-0.05)
19	Chemical Oxygen Demand	APHA 24th Edition 5220 B: 2023	mg/L	BDL(DL-4.0)
20	Bio Chemical Oxygen Demand 3 Days at 27°C	IS 3025 (Part 44): 1993	mg/L	BDL(DL-2.0)
21	Total Suspended Solids	APHA 24th Edition 2540D: 2023	mg/L	BDL(DL-2.0)
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	6.1

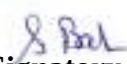
Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

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/25/1501	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	WATER
Sample Mark	SW2-Chittar River – Up Stream

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1501	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
A.	Physical parameters			
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.51
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	276
B.	Chemical parameters			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	170
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	77.2
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	16.6
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	8.55
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	41.6
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	35.6
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	74.7
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	57.7



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TEST REPORT

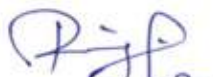
Report No.	SARL/25/1501

Report Date.	02.06.2025

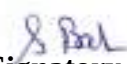
Sl. No	Parameters	Protocol	Unit	Result
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ - E: 2023	mg/L	38.9
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.06
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	3.58
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.58
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(DL-0.05)
19	Chemical Oxygen Demand	APHA 24th Edition 5220 B: 2023	mg/L	BDL(DL-4.0)
20	Bio Chemical Oxygen Demand 3 Days at 27°C	IS 3025 (Part 44): 1993	mg/L	BDL(DL-2.0)
21	Total Suspended Solids	APHA 24th Edition 2540D: 2023	mg/L	BDL(DL-2.0)
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	6.4

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




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1502	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	WATER
Sample Mark	SW3-Canal – SW – 140 m

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1502	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
A.	Physical parameters			
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	6.94
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	158.2
B.	Chemical parameters			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	95
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	39.6
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	4.75
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	6.65
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	11.9
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	27.7
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	32.3
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	29.4



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TEST REPORT

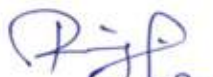
Report No.	SARL/25/1502

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ - E: 2023	mg/L	10.9
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.03
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	2.35
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.44
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(DL-0.05)
19	Chemical Oxygen Demand	APHA 24th Edition 5220 B: 2023	mg/L	BDL(DL-4.0)
20	Bio Chemical Oxygen Demand 3 Days at 27°C	IS 3025 (Part 44): 1993	mg/L	BDL(DL-2.0)
21	Total Suspended Solids	APHA 24th Edition 2540D: 2023	mg/L	BDL(DL-2.0)
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	5.8

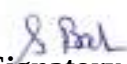
Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1503	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	SOIL
Sample Mark	S1-Within Mine Lease area

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1503	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	-	7.47
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	125.08
3	Dry matter content	IS 15106: 2002	%	97.55
4	Water Content	IS 15106: 2002	%	2.45
5	Organic Matter	IS 2720: Part 22: 1972	%	1.25
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	175
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	SANDY LOAM
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	62.45
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	26.62
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	10.93
	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	2.18
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	466
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	318
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	%	15.8
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	35

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/25/1504	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.		
Sample Description	SOIL		
Sample Mark	S2-Pillaiyarkulam Village		

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1504	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	-	6.6
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	85.88
3	Dry matter content	IS 15106: 2002	%	97.69
4	Water Content	IS 15106: 2002	%	2.31
5	Organic Matter	IS 2720: Part 22: 1972	%	0.97
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	238
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	%	46.92
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	36.55
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	16.53
	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	1.9
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	634
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	431
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL(D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	16.7
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	36

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues&Complaints: technical@shrientanalytical.com

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TEST REPORT

Report No.	SARL/25/1505	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.		
Sample Description	SOIL		
Sample Mark	S3-Kalakudi Village		

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1505	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	-	7.06
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	101.38
3	Dry matter content	IS 15106: 2002	%	98.55
4	Water Content	IS 15106: 2002	%	1.45
5	Organic Matter	IS 2720: Part 22: 1972	%	1.03
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	182
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	SILTY CLAY LOAM
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	20.36
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	40.65
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	38.69
	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	2.05
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	609
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	490
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	38

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1506	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.		
Sample Description	SOIL		
Sample Mark	S4-South Sezhilanallur Village		

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1506	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	-	7.54
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	72.16
3	Dry matter content	IS 15106: 2002	%	97.46
4	Water Content	IS 15106: 2002	%	2.54
5	Organic Matter	IS 2720: Part 22: 1972	%	0.99
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	194
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	%	47.67
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	30.36
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	21.97
	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	1.67
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	682
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	374
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL(D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	17.5
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	37

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues&Complaints: technical@shrientanalytical.com

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TEST REPORT

Report No.	SARL/25/1507	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.		
Sample Description	SOIL		
Sample Mark	S5-Alagiapandiapuram Village		

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1507	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	-	6.99
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	78.93
3	Dry matter content	IS 15106: 2002	%	96.54
4	Water Content	IS 15106: 2002	%	3.46
5	Organic Matter	IS 2720: Part 22: 1972	%	1.17
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	220
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	%	36.72
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	44.35
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	18.93
	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	1.55
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	576
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	332
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL(D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	16.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	36

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

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TEST REPORT

Report No.	SARL/25/1508	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.		
Sample Description	SOIL		
Sample Mark	S5-Manur Village		

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1508	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	-	7.06
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	101.38
3	Dry matter content	IS 15106: 2002	%	98.55
4	Water Content	IS 15106: 2002	%	1.45
5	Organic Matter	IS 2720: Part 22: 1972	%	1.03
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	182
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	SILTY CLAY LOAM
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	20.25
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	40.51
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	39.24
	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	2.05
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	602
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	490
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	38

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/1454

Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel Quarry Of Thiru.B. Paramasivam Over An Extent Of 2.39.00 Ha Located At The S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2BB, 102/2, 102/3, 99/2 And 99/3 Of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu.
Sample Description	NOISE LEVEL DATA

Customer Reference	As per work order	Sampling Method	SARL/IOP/023
Sample Reference No	SARL/NO/CHE-1454	Date of Monitoring	24.03.2025/ 25.03.2025
Sample Collected by	LABORATORY		

Time in hrs	N1	N2	N3	N4	N5	N6
06.00	40.2	44.1	43.9	43.4	39.7	45.7
07.00	40.9	45.9	43.5	44.7	41.6	43.4
08.00	45.0	47.3	45.0	45.5	45.4	46.0
09.00	47.3	45.7	50.4	50.6	49.6	47.9
10.00	53.4	50.4	52.5	52.6	49.9	48.0
11.00	53.9	46.7	51.6	47.5	45.7	46.9
12.00	51.5	47.3	52.2	46.7	47.8	45.9
13.00	53.4	49.2	51.4	53.7	45.6	45.1
14.00	49.9	46.6	51.0	53.9	46.4	43.4
15.00	49.5	47.0	50.4	51.6	48.6	45.3
16.00	53.5	44.3	43.2	53.4	50.7	49.1
17.00	54.7	46.5	42.6	52.0	51.9	45.9
18.00	51.6	45.0	45.0	48.0	49.6	43.4
19.00	49.9	43.4	46.6	45.0	50.4	44.9
20.00	41.6	44.1	43.1	43.2	46.3	46.0
21.00	40.9	41.5	41.6	42.7	45.7	44.3
22.00	40.4	42.1	42.2	41.4	43.4	43.4
23.00	39.9	43.2	41.4	40.0	42.6	44.1
24.00	39.7	40.3	40.2	40.9	40.7	41.0
01.00	39.2	42.0	39.6	40.7	39.6	42.9
02.00	40.0	39.9	39.7	40.1	39.7	42.3
03.00	41.3	39.0	40.0	39.2	40.9	39.1
04.00	41.4	40.3	40.3	41.9	42.2	40.2
05.00	40.8	42.2	39.2	43.1	41.4	41.3

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/25/1454

Report Date.	10.03.2025

	N1	N2	N3	N4	N5	N6
DAY EQUIVALENT	50.8	46.5	48.8	50.1	48.2	46.0
NIGHT EQUIVALENT	40.4	41.3	40.4	41.1	41.5	42.1
DAY & NIGHT EQUIVALENT	49.2	45.3	47.3	48.6	46.9	45.1

Remarks:

LOCATIONS:

N1-Within Mine Lease area

N2-Kalakudi

N3-Kanarpatti

N4-South Sezhilanallur

N5-Alagiapandiapuram

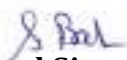
N6-Manur

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

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ANNEXURE-8



National Accreditation Board for
Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

**SHRIENT ANALYTICAL & RESEARCH LABS PRIVATE
LIMITED**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

416/15, DHARGAS ROAD, PERUNGALATHUR, WEST TAMBARAM, CHENNAI, KANCHIPURAM, TAMIL
NADU, INDIA

in the field of

TESTING

Certificate Number: TC-12339

Issue Date: 30/09/2023

Valid Until: 29/09/2025

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued
satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: SHRIENT ANALYTICAL AND RESEARCH LABS PRIVATE LIMITED

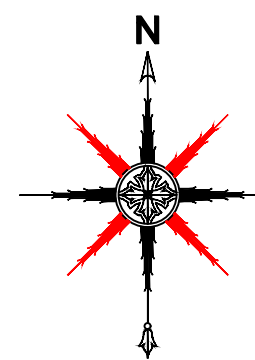
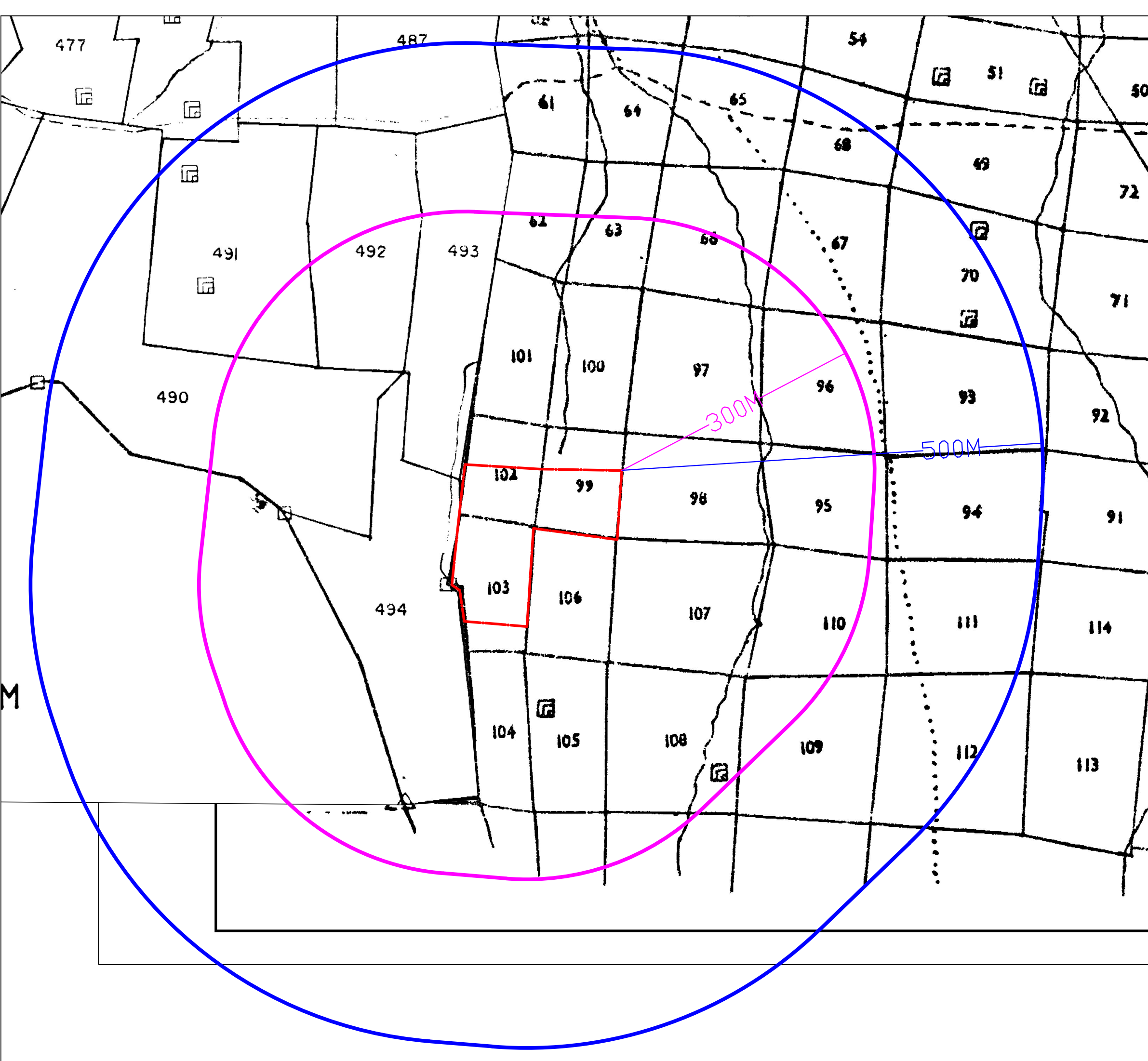
Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer



ANNEXURE-9



APPLICANT:

THIRU.B.PARAMASIVAM,
S/o.BALAKRISHNAN,
NO.249, NELLAI TIRUTHU,
PALLIKOTTAI, MANUR TALUK,
TIRUNELVELI DISTRICT.

QUARRY APPLIED LEASE AREA:

S.F.NO'S : 103/1A, 103/1B, 103/2A, 103/2B,
102/2, 102/3, 99/2 & 99/3,
EXTENT : 2.39.0 Ha,
VILLAGE : KANARPATTI,
TALUK : MANUR,
DISTRICT : TIRUNELVELI.

INDEX

TOPO SHEET NO : 58 H / 09

LATITUDE : 08°53'17.20"N to 08°53'23.44"N

LONGITUDE : 77°38'20.53"E to 77°38'27.15"E

Q.L.APPLIED AREA



300M RADIUS



500M RADIUS





ANNEXURE-10

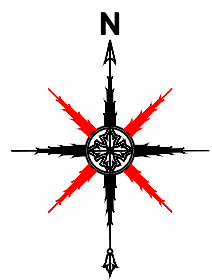
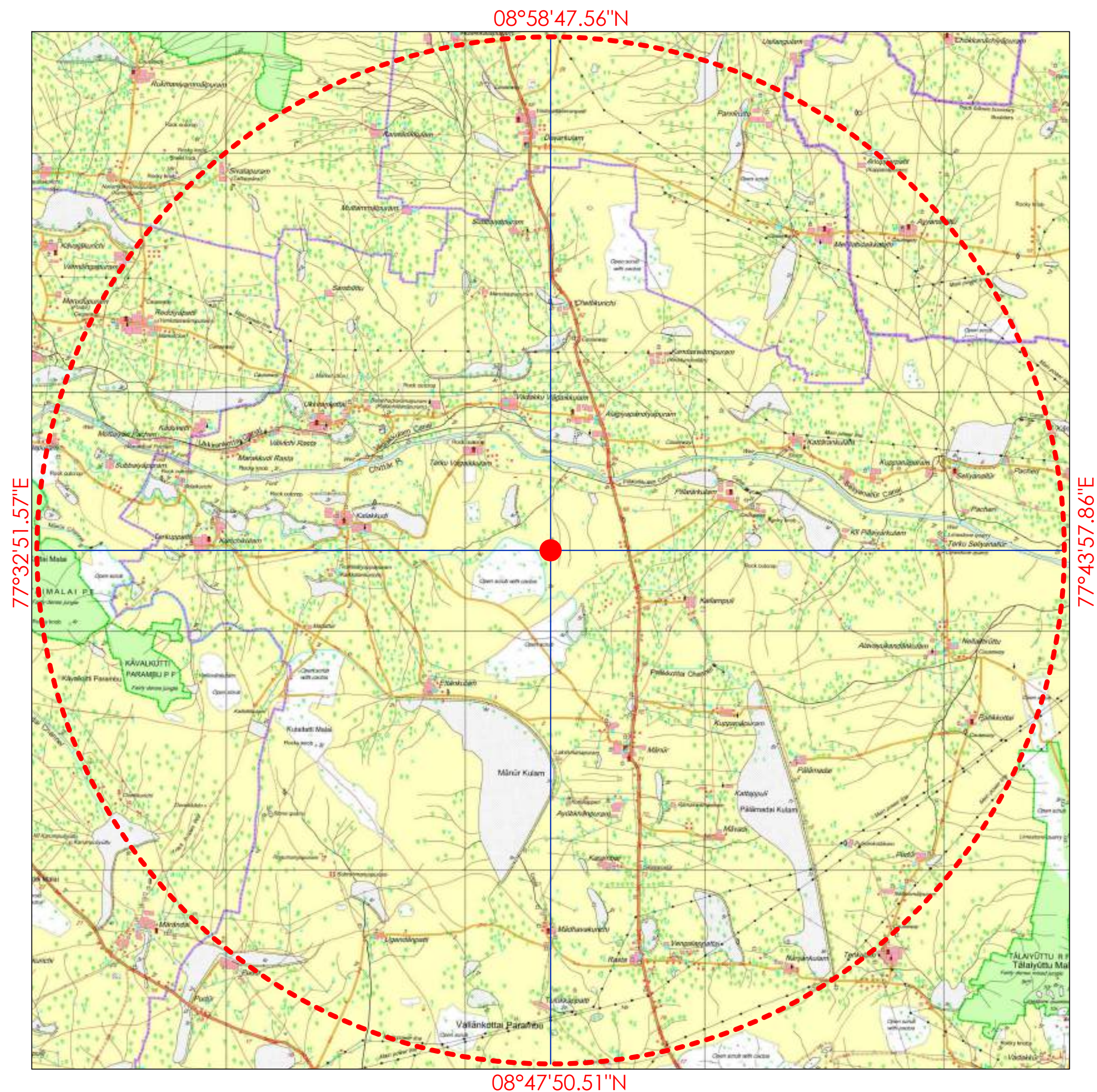


PLATE NO-IC

DATE OF SURVEY : 30.01.2025

APPLICANT:

THIRU.B.PARAMASIVAM,
S/o.BALAKRISHNAN,
NO.249, NELLAI TIRUTHU,
PALLIKOTTAI, MANUR TALUK,
TIRUNELVELI DISTRICT.

QUARRY APPLIED LEASE AREA:

S.F.NO'S : 103/1A, 103/1B, 103/2A, 103/2B,
102/2, 102/3, 99/2 & 99/3,
EXTENT : 2.39.0 Ha,
VILLAGE : KANARPATTI,
TALUK : MANUR,
DISTRICT : TIRUNELVELI.

INDEX

TOPO SHEET NO : 58 H / 09
LATITUDE :08°53'17.20"N to 08°53'23.44"N
LONGITUDE :77°38'20.53"E to 77°38'27.15"E

Q.L.APPLIED AREA

10KM RADIUS



TOPO SKETCH OF QUARRY LEASE

APPLIED AREA FOR

10Km RADIUS

SCALE— 1:100000

PREPARED BY :

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

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



ANNEXURE-11



தமிழ்நாடு தமில்நாடு TAMILNADU 19.3.2025

B. Paramasivam
Tirunelveli

EW 165734

M. J. J.

ம. ஜெ. (எ) தமிழ்நாடு, த.நா.கூ.
பி.எம். எண்: 6200-14/91
கச்சேரி வீதி, குமரபட்டி
சென்னை 600 002

AFFIDAVIT TO SEIAA - TAMIL NADU

I, B. Paramasivam, S/o. Balakrishnan, residing at No. 249, Nellai Tiruthu, Pathikottai, Manur Taluk, Tirunelveli District, Pin Code- 628 002, have applying for Terms of Reference to SEIAA - Tamil Nadu for our proposed Rough Stone and Gravel Quarry lease over an extent of 2.39.00 Ha of Patta land in the S.F. Nos. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3 of Kanarpatti Village, Manur Taluk, Tirunelveli District, Tamil Nadu, do hereby solemnly declare and sincerely affirm that;

1. There are no Protected areas notified under the Wildlife (Protection) Act, 1972 (NBWL) located within the 10km radius of the proposed quarry site.
2. There are no Critically polluted areas as notified by the central pollution control board constituted under Water (Prevention and Control of Pollution)

Act 1974.



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	Regular monitoring of exhaust fumes as per RTO norms	0.00	0.05
	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	0.00	0.48
	Installing wheel wash system near gate of quarry	0.50	0.20
Sub-Total (A)		10.19	1.82
Noise Environment	Provision for Portable blaster shed	0.50	0.02
	NONEL Blasting will be practiced to control Ground vibration and fly rocks	0.00	10.81
Sub-Total (B)		0.50	10.83
Waste Management	Provision for domestic waste collection and disposal through authorized agency	0.25	0.20
	Installation of dust bins	0.05	0.02
Sub-Total (C)		0.30	0.22
Mine Closure	Provision for garland drain @ Rs. 10,000/- per Hectare with maintenance of Rs. 5,000/- per annum	0.24	0.05
	Per Hectare fencing Cost @ Rs. 2,00,000/- with Maintenance of Rs 10,000/- per annum	4.78	0.10
	Plantation inside ML area (600 Nos.)	1.20	0.18
	Plantation outside ML area (600 Nos.)	1.80	0.18
Sub-Total (D)		8.02	0.51
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	0.10	0.01
	Air, Water, Noise and Soil Quality Sampling every 6 Months for Compliance Report of EC Conditions	0.00	0.50



B. N. S. S.

	Workers will be provided with Personal Protective Equipment's	1.20	0.30
	Health check up for workers will be provisioned	0.00	0.30
	First Aid facility Provision	0.00	0.05
	Signage & boards for safety precautions	0.10	0.02
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles /HEMMs. Flaggers will be deployed for traffic management	1.20	0.10
	Installation of CCTV cameras in the mines and mine entrance	0.30	0.05
	Implementation as per Mining Plan and ensure safe quarry working (Statutory)	0.00	10.80
	Slope Stability action plan	2.00	0.00
Sub-Total (€)		4.90	12.13
Total EMP Cost			
Sl. No	Mitigation Measure	Capital cost (Lakhs)	Recurring Cost per Annum (Lakhs)
A	Air Environment	10.19	1.82
B	Noise Environment	0.50	10.83
C	Waste Management	0.30	0.22
D	Mine Closure	8.02	0.51
E	Implementation of EC, Mining Plan & DGMS Condition	4.90	12.13
Grant Total (A+B+C+D+E)		23.91	25.51
Total EMP Cost for 5 years is 164.87 lakhs			
i.e., Rs.23.91 Lakhs of Capital Cost + Rs. 140.96 Lakhs of Recurring cost (For 5 Years)			



B. M. S. S.

5. Details of quarries located within a 500m radius from the applied mine lease area:

Sl. No	Name of the Lessee	Village & S. F. No.	Extent (Ha)	Lease Status
a. Abandoned Quarries				
1.	Thiru. Arulraj, S/o. Asaiah, Kanarpatti South, Manur Taluk, Tirunelveli District	Kanarpatti (V). S.F.Nos. 97/1, 97/2 & 97/3	2.68.00	Proceeding No. M1/27275/2013, dt: 29.09.2014 for a period of 5 Years from 29.09.2014 - 28.09.2019
2.	Thiru.A. Kanagaraj S/o. Arumugam, 66, East Street, Natchikulam, Krishnapuram, Palayamkottai Taluk, Tirunelveli District	Kanarpatti (V), S.F.Nos. 66/3, 67/1	1.42 00	Proceeding No M1/20703/2014, dt: 16.02.2016 for a period of 5 Years from 10.06.2016 - 09.06.2021
3.	Thiru M. Maridurai S/o. Maruthappapandian, 3/189, A. Maruthappapuram, Nettur Post, Alankulam Taluk, Tenkasi District	Kanarpatti (V). S.F.No. 62	1.29.00	Proceeding No. M1/43605/2014, dt: 24.08.2016 for a period of 5 Years from 24.08.2016 - 23.08.2021
4.	Thiru.K. Antonyraj S/o.Kalmuthu, 5/60A, Vedakovil Street, Azhagiapandiapuram, Manur Taluk, Tirunelveli District	Vagankulam (V), S.F.Nos. 493/2, 493/3	2 06.50	Proceeding No. M2/17727/2007, dt: 14.07.2007 for a period of 5 Years from 20.08.2007 - 19.08.2012



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5.	Thiru.K. Antonyraj S/o.Kalimuthu, 5/60A, Vedakovil Street, Azhagiapandiapuram, Manur Taluk, Tirunelveli District	Vagaikulam (V), S.F.Nos. 493/2, 493/3	2.06.50	Proceeding No. M1/26994/2012, dt: 15.07.2013 for a period of 5 Years from 15.07.2013 - 14.07.2018
6.	Thiru.K. Ariyanayagam S/o. Kombiah Pandian, 83, Sarangabani Street, Tuticorin	Vagaikulam (V), S.F.Nos. 483/1, 484/1	2.15.00	Proceeding No. M1/28645/2011, dt: 24.07.2013 for a period of 5 Years from 24.07.2013 - 23.07.2018
a. Existing Quarries				
1	Thiru.B. Paramasivam S/o. Balakrishnan, 249, Nellai Thiruthu. Thalaiyuthu, Sankar Nagar, Tirunelveli - 627 357.	Kanarpatti (V), S.F.Nos 105/6, 105/7, 106/3D, 107/3C1, 107/3C2, 108/1, 108/2	2.19.50	Proceeding No. M1/17701/2017, dt: 07.09.2020 for a period of 5 Years from 16.09.2020 - 15.09.2025
2	Thiru.A. Densingh Babu, S/o. Arulraj, 276, Main Road, Kanarpatti, Manur Taluk, Tirunelveli District	Vagaikulam (V), S.F. No. 492/2	1.83.50	Proceeding No. 36244/MIN-3/ 2019, dt: 07.01.2025 for a period of 5 Years from 08.01.2025 - 07.01.2030
b. Proposed Quarry				
1	Thiru.B. Paramasivam S/o. Balakrishnan. No. 249, Nellai Thiruthu, Pallikottai, Manur Taluk, Tirunelveli District	Kanarpatti (V), S.F.Nos. 103/1A, 103/1B, 103/2A, 103/2B, 102/2, 102/3, 99/2 and 99/3	2.39.00	Proposed Quarry

The total lease within the 500m radius (Proposed + Existing) (1 No + 2 Nos.) works out to 6.42.00 Ha including this lease area.



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6. There will be no hindrance/disturbance due to the proposed quarrying activities to the people living nearby my proposed quarry site.
7. There are no approved habitations within a 300m radius from the periphery of my proposed quarry lease.
8. I assure you that the greenbelt will be developed and maintained before commencing the quarrying operations as proposed in this ToR application.
9. I assure you that the required life insurance policy for the employees engaged in the quarrying operations will be taken without fail.
10. The existing main road connecting the quarry road will be maintained in good condition and it will be utilized for the mineral transportation.
11. I assure you that I will not engage any child for labor in the quarrying operations and I am aware that engaging child labor is punishable under the law.
12. Personnel Protective Equipment (PPE) will be provided to all the employees engaged in the quarrying operations.
13. No permanent structures are located within a 300-meter radius of the periphery of our quarry.
14. I will erect the wire fence with barbed wires all around the periphery of the quarry lease before the commencement of mining activities.
15. The mining operations will be carried out in a systematic and scientific manner by employing a qualified statutory person as per the requirement of the Mines Act, Mines Rules, and other Guidelines issued by Govt.
16. I will inform DGMS before the commencement of mining activities.
17. To the best of our knowledge, I ensure to do the social and environmental commitments as mentioned in the mining plan.



Notary Sign & Seal

K.P. Suresh, B.A. B.
ADVOCATE & NOTARY
Enroll No: 1771/2007
near Taluk Office, Omalur (Po) & (Tk),
Salem (Dt)-636 455
Cell: 77083 83857

Lessee Sign & Seal

B. Paramasivam

B. Paramasivam

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