

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

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

ToR I.No. TO24B0108TN5533139N DATED: 09.10.2024

PROPOSED QUARRY LEASE DETAILS	
SURVEY NOS	679/A, 679/B(P), 680/A(P) AND 680/B(P)
VILLAGE	THENNILAI WEST
TALUK	PUGALUR
DISTRICT	KARUR
EXTENT	4.23.80 Ha
PROPOSED PRODUCTION FOR FIVE YEARS	8,21,260 m³ OF ROUGH STONE & 1,69,200 m³ 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 – 8.71.30 Ha
Baseline Monitoring Period – October to December 2024

APPLICANT

**THIRU.T. PONNUSAMY,
S/O. THANGAVEL
DOOR NO.4, PAVITHIRAM,
PUGALUR TALUK, KARUR DISTRICT
PIN CODE– 639 002.**

ORGANIZATION

**M/s. GLOBAL MINING SOLUTIONS
(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)
PLOT NO.6, SF NO. 13/2, A2, VS CITY, RC CHETTYPATY,
KOTTAMETTUPATTY, OMALUR, SALEM, TAMIL NADU – 636 455
NABET ACCREDITATION NO – NABET/EIA/2326/IA 0110**

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MARCH - 2025



AMENDMENT PAGE

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

M/s. Global Mining Solutions, Salem is very much thankful to Thiru.T.Ponnusamy, Lessee for the confidence and trust placed on the organization for carrying out Environmental Impact Assessment (EIA) study for the proposed Rough Stone & Gravel Quarry over a lease extent of 4.23.80 Ha., & Cluster extent of 8.71.30 Ha., located at Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State and formulating the Environmental Management Plan (EMP). We also gratefully acknowledge the cooperation and assistance provided by concerned government authorities for collection of secondary information for the preparation of Draft EIA/EMP report. Our sincere thanks to the local people of Thennilai West and the nearby villages for their whole hearted cooperation and constant involvement during the entire field study without which the study would not have been possible.

For: M/s. Global Mining Solutions



(M. Prabu)

Managing Director

UNDERTAKING

In line with MoEF OM No. J – 11013/41/2006-IA.II (I) dated 5th October 2011, we hereby give our undertaking for owning the content and information in the EIA/EMP report submitted for EC of the proposed Rough Stone & Gravel Quarry over a lease extent of 4.23.80 Ha., & Cluster extent of 8.71.30 Ha., located at Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State.

For: M/s. Global Mining Solutions



Name: M. Manikandan

EIA Coordinator – Mining of Minerals

M/s. Global Mining Solutions

UNDERTAKING

In Line with OM no. J-11013/41/2006-IA.II (1) dated 4th Aug 2009 and its Amendments, we hereby confirm that all Terms of Reference issued by SEIAA- TN vide TOR Identification No. TO24B0108TN5533139N, dated 09.10.2024 for the preparation of Draft EIA/EMP report for the proposed Rough Stone & Gravel Quarry over a lease extent of 4.23.80 Ha., & Cluster extent of 8.71.30 Ha., located at Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State for the production of 5,65,550 m³ of Rough Stone (First five year) and 2,55,710 m³ of Rough Stone (Next five year) and 1,69,200 m³ of Gravel formation from the proposed lease area and the details has been complied in the Draft EIA/EMP report is factually correct.

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

For: M/s. Global Mining Solutions



Name: M. Manikandan

EIA Coordinator – Mining of Minerals

M/s. Global Mining Solutions

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Certificate of Accreditation

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

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1	Mining of minerals-opencast mining only	1	1 (a) (i)	A

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in IAAC minutes dated February 10, 2023, posted on the QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance with the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACO/23/2724 dated March 31, 2023. The accreditation needs to be renewed before the expiry date by Global Mining Solutions, Salem following the due process of assessment.


Sr. Director, NABET
Date: March 31, 2023

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

ANNEXURE - VII

Declaration by Experts contributing to the Proposed Rough Stone and Gravel Quarry of Thiru.T.Ponnusamy over a lease extent of 4.23.80 Ha., & Cluster extent of 8.71.30 Ha., located at Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State.

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

EIA Coordinator Name: M. Manikandan



Signature & Date

Period of involvement: October to December 2024.

Contact information:

M/s Global Mining Solutions

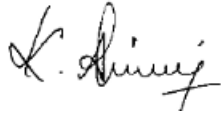
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Kottamettupatty, Omalur,

Salem, Tamil Nadu – 636 455

S. No.	Functional areas	Name of the expert/s	Involvement (period and task**)	Signature and Date
1	AP	Dhanalakshmi Ramanathan	Assessment of existing air quality, Impact of the project on ambient air and suggested mitigation measures for air pollution. <u>Period: Oct 2024 to Dec 2024.</u>	

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

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: Oct 2024 to Dec 2024.</u>	
3	SHW	Ramadoss N	Assessment of waste generated from the project, suggested waste management practices. <u>Period: Oct 2024 to Dec 2024.</u>	
4	SE	Saraswathy K	Baseline SE studies. Data compilation and assessment. Impact of the project on SE status of the area. Formulation of CER plan. <u>Period: Oct 2024 to Dec 2024.</u>	
5	EB	Saravanan S	Baseline data collection of related to ecology of the area. <u>Period: Oct 2024 to Dec 2024.</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: Oct 2024 to Dec 2024.</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: Oct 2024 to Dec 2024.</u>	

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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: Oct 2024 to Dec 2024.</u>	R. Dhananj
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: Oct 2024 to Dec 2024.</u>	T. Srilatha
10	RH	S.V. Prashant	Identification of the Risk related to the mining activities. Preparation of emergency disaster management plan. Plan for supply of safety equipment for the worker. <u>Period: Oct 2024 to Dec 2024.</u>	S. Prashant
11	SC	Shisu Pal Singh	Soil monitoring, secondary data collection on soil type, soil management practices, utilization of topsoil. <u>Period: Oct 2024 to Dec 2024.</u>	Shisu Pal Singh
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: Oct 2024 to Dec 2024.</u>	V. Meyyappan

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COMPLIANCE TO

TERMS OF REFERENCE

S.No	ToR Points	Reply	Pg. No
1. SEIAA Specific Conditions			
1	The PP shall furnish the revised Mining plan for the restricted depth upto 50m.	Agreed. Will be complied	-
2	The detailed studies on the Loss of Vegetation, Loss of Biodiversity shall be carried out and the action plan to prevent the same shall be included in the EIA report.	The lease area is a non-forest, Patta land with majority of the area is observed with hard rock formation and no specific fauna found. Hence, there is no major Loss of Vegetation & Loss of Biodiversity within the lease area. Study of Biological Environment and their mitigative measures including Vegetation details are given in section 3.3.6, Chapter-3 and section 4.6, Chapter- 4.	112, 139
3	The detailed studies on the Impact on water bodies and human health shall be carried out and the action plan to prevent the same shall be included in the EIA report.	The impact on water bodies are given in section 4.5, chapter-4 and impacts on human health are given in section 4.11, chapter- 4.	136, 155
4	The detailed studies on the Impact on Reserved Forests and Agriculture shall be carried out and the action plan to prevent the same shall be included in the EIA report.	There is no Reserve Forest located within 10km radius of the study area. The fauna commonly found in the core and buffer zone is given in section 3.3.6.2, Chapter-3.	115
5	The detailed studies on the Impact on Free ranging Wildlife & grazing domestic animals, cattle breeds and animal husbandry shall be carried out and the action plan to prevent the same shall be included in the EIA report.	During the study period, there is no specific Fauna found within ML area. Refer section 3.3.6.2, chapter- 3 for species in buffer zone and their impact due to mining activity given in section 4.6.4, chapter- 4.	115, 142, 175
6	The detailed studies on the Livelihood shall be carried out and the action plan to prevent the same shall be included in the EIA report.	The nearest habitation is located at a distance of 1.00 km (NE) and there will not be any disturbance to any livelihood and grazing land surrounding the project area. Action plan through EMP budget will be implement as given in chapter- 10.	
7	The PP shall carry out the scientific studies to assess the hydrogeological condition of the quarry by involving any one of the	Agreed. Will be complied in Final EIA/EMP report	-

	reputed Research and Academic Institution. A copy of such scientific study report shall be included in the EIA report.		
8	The PP shall carry out the scientific studies with prior permission from the DMS/Chennai Region, to design the controlled blast parameters for reducing the blast-induced ground/air vibrations and eliminating the fly rock from the blasting operations carried out in the quarry, by involving anyone of these reputed Research and Academic Institution. A copy of such scientific study report shall be included in the EIA report.	Agreed. The PP will use controlled blasting techniques with Nonel to ensure that dust generation, noise, and vibration levels remain within the prescribed limits.	-
9	The PP shall furnish the details of EMP addressing the re-vegetation and restoration activities proposed for the project activity.	• In the present stage, majority of the lease area is observed with hard rock formation. • In the post mining stage, an area of 0.82.40 Ha of safety zone will be developed with green belt/plantation with 1000 nos of saplings. • Additionally, it is also proposed to plant 1100 nos of saplings outside the lease area such as at project surrounding schools, temples, road sides, etc. Refer section 4.6, Chapter -4.	139
2. SEAC Conditions - Site Specific			
1	The PP shall submit the Development & Production Plan for the life / lease period of 10 years along with the prescribed EMP measures.	Refer Figure 2.11, section 2.11 of chapter- 2 for Development & Production Plan. Refer section 10.6, chapter 10 for the EMP measures & Budget for 10 years.	80, 82, 181
2	The PP shall provide the controlled blasting methodology design keeping the cluster of operating mines in mind which includes the procurement, transportation and storage of explosives and safe blasting procedures.	Agreed. By carrying out controlled blasting techniques with Nonel and blasting during different time intervals are suggested in the cluster mine.	-

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

3	The project proponent shall furnish the videos and photographs of the previous mine.	Agreed	-
4	The project proponent shall furnish the status of previous EC obtained vide Lr.No.SEIAATN/F.No.9908/1(a)/EC.No:5493/2023, dated:22.08.2023.	- The File No. 9908 with EC dated 22.08.2023 was obtained in the name of Thiru.T.Ponnusamy which is an existing quarry, that is located in the southern side of the present proposed quarry. - Details of the cluster quarries are given in Table 1.1, Figure 1.1, Chapter- 1.	54, 55, Annexure No-4
3. SEAC Standard Condition			
3.1	Terms of Reference		
1	In the case of existing/operation mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following: (i) Original pit dimension (ii) Quantity achieved Vs EC Approved Quantity (iii) Balance Quantity as per Mineable Reserve calculated (iv) Mined out Depth as on date Vs EC Permitted depth (v) Details of illegal/illicit mining (vi) Violation in the quarry during the past working (vii) Quantity of material mined out outside the lining lease area (viii) Condition of Safety zone/benches (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6m height and ultimate depth of not exceeding 50m.	Not applicable. This is a fresh quarry.	-
2	Details of habitations around the proposed mining area and latest VAO Certificate regarding the location of habitations within 300m radius from the periphery of the site.	The nearest habitation is located at a distance of 1.00 km (NE) and VAO certificate regarding the location of habitations within 300m radius is enclosed as Annexure – 5.	Annexure No-5

3	The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.	Agreed. Will be complied in Final EIA/EMP report	-
4	The PP shall submit a detailed hydrogeological report indicating the impact of proposed quarrying operations on the water bodies like lake, water tanks, etc are located within 1 km of the proposed quarry.	The study is under progress. It will be incorporated in the final EIA & EMP.	-
5	The Project Proponent shall carry out Bio-diversity study through reputed institution and the same shall be included in the EIA report.	• There is no Reserve Forest / Sanctuaries located within 10km radius of the study area. • The lease area is a non-forest, Patta land and during the study period, there is no specific Fauna found within ML area. • Study of Biological Environment (Flora and Fauna) and their mitigative measures including Vegetation details are given in section 3.3.6, Chapter-3 and section 4.6, Chapter- 4.	112, 139
6	The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries. Tiger reserve etc. upto a radius of 25 km from the proposed site.	There is no Reserve forest, National Parks, Corridors and Wildlife pathways in the core and buffer zone.	-
7	In case of proposed lease in an existing (or old) quarry where the benches are not formed(or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the	This is a new quarry. However, a slope stability study will be conducted once the quarry depth reaches 30m BGL.	-

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	working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic institutions-CSIR Central Institute of Mining & Fuel Research/Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Suratkal and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.		
8	However, in case of the fresh/virgin quarries, the project shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30m below ground level.		
9	The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent	Agreed. It will be incorporated in the final EIA & EMP.	-
10	The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site	Agreed. The PP will use and ensure with controlled blasting techniques using Nonel and by reducing the explosive charge per delay to minimum, so there will be no adverse impact due to blasting and vibration.	-
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.	Agreed.	-

12	If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines	Not applicable. This is a fresh quarry project.	-
13	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?	Not applicable. This is a fresh quarry project.	-
14	Quantity of minerals mined out. • 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	Not applicable. This is a fresh quarry project.	-
15	All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).	Complied. • Project coordinates superimposed in satellite imagery are given as Figure - 2.2, Chapter - 2. • The 10km Radius Index plan showing buffer zone is given as Figure - 3.1, Chapter - 3. • The geology and geomorphology map are provided in Figure - 3.24 & 3.25, Chapter - 3. • The Soil map is provided as Figure - 3.26, Chapter - 3.	64, 91, 92, 126 - 129

16	The PP shall carry out Drone video survey covering the cluster, green belt, fencing etc.,	This is fresh quarry. The condition will be complied after commencement of the mining operation.	-
17	The proponent shall furnish photographs of adequate fencing, greenbelt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan	There are no major trees within ML area. Fencing and plantations are under process. Greenbelt / Plantation will be carried out in the safety zone to enhance the vegetative growth and aesthetic in the safety zone area. In the post mining stage, an area of 0.82.40 Ha will be under greenbelt and plantation. Refer section 4.6.3, chapter-4.	140
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 are estimated to be 23,28,150 m ³ of Rough stone and 2,11,650 m ³ of Gravel. The mineable reserves of 8,21,260 m ³ of Rough Stone & 1,69,200 m ³ of Gravel are observed, in which 5,65,550 m ³ of Rough stone & 1,69,200 m ³ of Gravel will be mined out in first five years and remaining 2,55,710 m ³ rough stone will be mined out in second five year.	71, 74, 82 & 83
19	The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act'1952 and the MMR" 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.	Complied. Please refer Figure 10.1	179
20	The Project Proponent shall conduct the Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km	The study is under progress. It will be incorporated in the final EIA & EMP.	-

	(radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD/TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitoring data, it may clearly be shown whether working all intersect ground water. Necessary data and documentation in this regard may be provided.		
21	The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality& flora/fauna including traffic/vehicular movement study.	Baseline data for meteorology, ambient air quality, Water quality, noise level, soil and flora & fauna are collected during October 2024 to December 2024 and detailed in Chapter-3.	88 – 129
22	The Proponent shall carry out the cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of air pollution, water pollution, & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.	Detailed cumulative impact study has been carried and the same is incorporated in the section 7.3, Chapter - 7. The letter received from Dept. of Geology and Mining, Karur stating the quarries detail within 500m radius is enclosed in Annexure - 4. Accordingly, a detailed Environment Management Plan is prepared considering air, water, noise and soil environment and the details are given in Chapter - 10.	165 – 171, Annexure No-4, 175
23	Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	- The runoff water during rainy season will be collected in the bottom quarry through proper drainage pattern and the collected water will be used for plantation and dust suppression during dry season. - Rain water harvesting Plan is given in section 4.5.5 of chapter 4. - The water balance is given in Figure 4.1 of chapter 4.	138, 137

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.	Land use pattern of the study area is detailed in Section 3.3.7, Chapter - 3. The anticipated impact on land and its mitigative measure are detailed in Section 4.2, Chapter - 4.	116, 131
25	Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area distance from mine lease, its land use, R&R issues, if any, should be provided.	Not applicable. There is no generation of the OB & waste.	-
26	Proximity to Areas declared as 'Critically Polluted'(or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.	No proximity to Critically polluted areas.	-
27	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	The impact of the mining operations due to this quarry on water environment is studied and mitigation measures are proposed in Section 4.5, Chapter - 4. Rain water will be diverted into bottom of the project area by constructing drains to store and use for dust suppression and greenbelt development.	136 – 139
28	Impact on local transport infrastructure due to the Project should be indicated	Since the production is very less, only few trucks of 5/10T will be used for transport. The effect of transport on local transport will be negligible. Refer section 7.3.3, Chapter - 7.	170

29	A tree survey shall be carried out (Nos. name of species, age, diameter, etc) both within the mining lease applied area & 300m buffer zone and its management during mining activity	The details of flora in the core zone and the buffer zone are provided in section 3.3.6.1, Chapter - 3. There is no standing trees in proposed mine lease area.	112
30	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific	Complied. Mine Closure Plan has been incorporated in the approved Mining Plan and the same is incorporated in the section 7.7, Chapter - 7. Land use at mine closure stage are given in Table - 2.11 and Figure - 2.12 of Chapter 2.	172, 84, 85
31	As part of the study of flora and fauna around the vicinity of the proposed site, the EIA Coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, where ever possible	Accepted. It will be done.	-
32	The purpose of green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix - I in consultation with the DFO, State Agriculture University and local school/college authorities. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.	- Greenbelt/Plantation will be carried out in and around the lease area to enhance the vegetative growth and aesthetic in the area. - In the post mining stage, an area of 0.82.40 Ha of safety zone will be developed with green belt. Additionally, it is also proposed to plant outside the lease area such as at project surrounding schools, temples, road sides, etc. Hence percentage of Carbon Sequestration after plantation will be achieved to be about 29% for ten years. Refer section 4.6.2 & 4.6.3, Chapter -4.	139 – 141
33	Taller/one year old saplings raised in appropriate size of bags; preferably eco-friendly bags should be planted as per the advice of local forest authorities/botanist/horticulturist with regard to site-specific choices. The proponent shall earmark the	Accepted. Green belt development work is in progress. Photographs on green belt/plantation will be furnished in Final EIA EMP report.	-

	green belt area with GPS coordinates all along the boundary of the project site with at least 3 m wide and in between blocks in an organized manner		
34	A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.	A disaster management plan is prepared and the details are given in section 7.6, Chapter 7.	171
35	A risk assessment and Management plan shall be prepared and included in the EIA/EMP report for the complete life of the proposed quarry or till the end of the lease period	Risk assessment and its management is given in section 7.2, Chapter 7.	163
36	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Occupational Health Impacts of the project and preventive measures are detailed under section 4.11 of Chapter-4.	155
37	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	No major impact on public health will be there since the villages are located more than 1km from the lease area. Details of CER and CSR are discussed under Chapter- 8.	173
38	The Socio-economic studies should be carried out within a 5km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	Socio economic study is conducted both by visits and secondary data collection. Details are given in section 3.3.8, Chapter 3.	118

39	Details of litigation pending against the project, if any, with direction /order passed by any Court of law against the Project should be given.	No litigation is pending	-
40	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.	Benefits of the project is given in Chapter- 8.	173
41	If any quarrying operations were carried out in the proposed quarrying site for which now EC is sought, the project proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF & CC, Regional Office, Chennai or the concerned DEE/TNPCB.	Not applicable. This is a fresh quarry project.	-
42	The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	A detailed Environmental Management Plan considering entire life has been prepared and are detailed in section 10.6, chapter- 10. The sworn affidavit stating to abide the EMP for the entire life of mine will be submitted in Final EIA EMP report.	181 - 183
43	Concealing any factual information or submission of false/fabricated data and failure to comply with any of the condition mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986	Agreed	-
4. 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 one existing and one proposed quarry located within 500-metre radius. The proponent will take the initiative to form a cluster management committee once environmental clearance is obtained for this quarry.	-

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2	The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,	Agreed. Will be complied.	-
3	The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.	Agreed. The list of members of the committee formed will be submitted to AD/mines after obtaining Environmental Clearance.	-
4	Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.	Agreed. Details of the Operation plan for cluster mining operations will be submitted once we get environmental clearance for all quarries proposed in the cluster area.	-
5	The committee shall deliberate on risk & 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.	Risk management plan for the individual quarry is given in this report. As far as cluster working condition is concerned, once the committee is formed, risk management as a cluster including inundation of clusters and the evacuation plan will be elaborated and the same will be submitted to the EIA.	-
6	The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.	Environmental policy for the cluster will be framed by the cluster management committee and the policy will be in accordance with EPA Act, 1986 and its amendments, guidelines by MoEF&CC/SEIAA and other regulatory bodies. This policy will be displayed in the quarry.	-
7	The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.	Agreed. It will be complied as mentioned in the Point No.4	-
8	The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public in the vicinity.		

Agriculture & Agro-Biodiversity

9	Impact on surrounding agricultural fields around the proposed mining Area.	There are no forest area and traditional practices within the project area. However, there are some agricultural lands around the project site. It may be affected due to the quarry operation as such dust particles sedimentation in the agricultural land. It will be controlled at the source level by proper dust separation 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 0.5km radius. So, there is no impact for the Agriculture, Forestry, soil located within 10km radius.	-
10	Impact on soil flora & vegetation around the project site.		
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 in proposed 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.	Complied. The details are given in section 3.3.6, Chapter- 3 and section 4.6, Chapter 4.	112, 139
13	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	The detailed action plan has been described in the EMP (Chapter-10) for the sustainable management for the project area and its surroundings.	175
14	The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.	Complied. The details are given in section 4.6.3, Chapter- 4.	140
Forests			
15	The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.	There is no Reserve Forest located in the core and buffer zone area. The fauna commonly found in the	115

		core and buffer zone is given in section 3.3.6.2, Chapter- 3.	
16	The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.	Complied. The details are given in section 3.3.6, Chapter- 3 and section 4.6, Chapter 4.	112, 139
17	The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.	Not Applicable. This is a dry barren land.	-
18	The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.	There is no any Reserved Forest located in the core and buffer zone area. There is no, National Parks, Corridors and Wildlife pathways.	-

Water Environment

19	Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.	The hydrogeological study from a reputed institute is in progress; The Final EIA EMP report will be incorporated with hydrological studies.	-
20	Erosion Control measures.	There is no waste generation (OB) has been envisaged in this quarry. However, there may be erosion due to rainy season and that is limited within quarry area. The control measures are explained in section 4.2 to 4.5 of Chapter- 4.	131 - 139
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 baseline study details are incorporated in section 3.3, Chapter- 3. Anticipated impacts and its mitigation measures are detailed in section 4.5, Chapter- 4.	92 - 112 136

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

22	The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.	There is no wastewater generation from this Quarry, so this is not applicable.	-
23	The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities.	Fragmentation impact on environment may be due to drilling and blasting. The anticipated impacts and mitigation measures are discussed in Chapter- 4.	130 - 157
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 3.3.6.2 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 (refer Section 4.6.3, Chapter- 4).	115 140
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 4.3 under Chapter- 4.	135
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 4.5 of Chapter- 4.	136
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.	There is no wastewater generation from this Quarry, so this is not applicable.	-
Energy			
28	The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilize the Energy shall be furnished.	Complied. The details are described in section 4.6.2, chapter- 4.	140

Climate Change

29	The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.	- Only the best equipment will be used, and it will be properly and regularly maintained. Regular vehicular emission tests will be conducted on the transport vehicles to ensure minimal carbon emissions. - To further reduce carbon emissions, a good greenbelt has been planned. Refer Section 4.6.2, Chapter- 4.	140
30	The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and physical, chemical & biological soil features.		
31	Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood.		

Mine Closure Plan

32	Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.	Complied. Mine Closure Plan has been prepared incorporated in the approved Mining Plan/precise area communication order and the same is incorporated in the Chapters.	75, 172
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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.	175
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.	- Green belt development plan is being planned to develop inside the safety zone area of 0.82.40Ha with 1000 Nos of saplings and in addition, 1100 Nos of saplings outside the lease area. - For this capital cost of INR 5.30 Lakhs and recurring cost of INR 0.63 Lakhs per year has been earmarked.	181

		The breakup of the total EMP cost is detailed in Table 10.6 of Chapter 10.	
Risk Assessment			
35	To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.	Complied. The details are described in Chapter- 7.	163
Disaster Management Plan			
36	To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.	Complied. The details are described in Chapter- 7.	171
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, HT and LT lines, bird sanctuaries, and wildlife sanctuaries within 300 meters of the proposed project area (Refer section 3.2, chapter- 3). In this regard, the project proponent has received an official letter from the Village Administrative Officer, Thennilai Melpagam village, The letter copy enclosed as Annexure - 5.	89, Annexure No-5
38	As per the MoEF& CC office memorandum F.NO.22-65/2017-1A.11I dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.	Noted. It will be complied in the Final EIA/EMP report.	-
39	The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological	Complied. The PP has framed detail solid waste management system for the project area and the same will be executed by	-

	risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.	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.	
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Standard Terms of Reference for (Mining of minerals)

1.1	An EIA-EMP Report shall be prepared for peak capacity (.....MTPA)operation in an ML/project area of.....ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.	Complied.	-
1.2	An EIA-EMP Report would be prepared for peak capacity operation to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for.... MTPA of mineral production based on approved project/Mining Plan for.... MTPA. Baseline data collection can be for any season (three months) except monsoon.	Agreed.	-
1.3	Proper KML file with pin drop and coordinate of mine at 500-1000 m interval be provided.	Agreed	-
1.4	A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations,	- Topographical features of the core zone and 10 km area of the buffer zone is given in Figure 3.1, Table 3.1, of chapter- 3. - The drainage, geology, geomorphology and soil map are provided in Figure - 3.23 to 3.26, Chapter - 3. - It is observed that there are no	89 – 91, 126 – 129

	major constructions including railways, roads, pipelines, major industries, mines, and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given. The above details to be furnished in tabular form also	Reserve forests / Sanctuaries in the 10km buffer zone.	
1.5	Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.	The applied ML area is a patta land with no water bodies. Google image showing the project site and Topo map showing existing site features in 10km radius are given in Figure 2.2, 2.3 of chapter- 2.	64, 65
1.6	A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.	Contour map, Physiography and Drainage map are given in section 3.3.9, Chapter- 3.	125 - 129
1.7	Catchment area with its drainage map of 25 km area within and outside the mine shall be provided with names, details of rivers/ riverlet system and its respective order. The map should clearly indicate drainage pattern of the catchment area with basin of major rivers. Diversion of drains/ river need elaboration in form of length, quantity and quality of water to be diverted	Drainage map is given in Figure 3.23, Chapter-3.	126
1.8	Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working	Mineral reserves, geological status of the study area is given Table 2.4 & 2.5, chapter- 2.	72, 74

	scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.	- Geological plan and section are given as Figure 2.7, Chapter- 2. - Conceptual plan is given as Figure 2.12, Chapter- 2.	73 85
1.9	Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.	Method of mining details is given section 2.10, Chapter- 2.	75 - 81
1.10	Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.	Hydrogeology report is under progress. It will be furnished in Final EIA EMP report	-
1.11	A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channeling of the water courses, etc., approach	- The entire mine lease area is Patta land. The project area of 4.23.80 Ha is proposed to be altered by effective quarrying operation such as excavation (3.38.40 Ha), Infrastructure (0.01.0), Road (0.02.0 Ha) and green belt will be developed in the safety zone of 0.82.40 Ha. Detailed in section 4.2, Chapter- 4. - Land Use Pattern of the study area is given in Figure 3.17, chapter- 3.	131, 132 116

	roads, major haul roads, etc should be indicated.		
1.12	Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified. Area under Surface Rights Area under Surface Area Under Mining Rights(ha) S.N ML/Project Land use Rights(ha) (ha) Area under Both (ha) 1 Agricultural land 2 Forest Land 3 Grazing Land 4 Settlements 5 Others (specify) S.N. Details Area (ha) 1 Buildings 2 Infrastructur 3. Roads 4 Others (specify) Total		
1.13	Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted	Flora & fauna of 10 km Radial Buffer of Project Site is given in section 3.3.6 of chapter- 3.	112 - 115

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	with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.		
1.14	One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SOx, NOx and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided. The detail of NABL/MoEF&CC certification of the respective laboratory and NABET accreditation of the consultant to be provided.	- Baseline data for meteorology, ambient air quality, Water quality, noise level, soil and flora & fauna are collected during October 2024 to December 2024 are detailed in Chapter- 3. - NABL certificate of M/s. Shrient Analytical & Research Labs Private Limited and agreement copy is given in Annexure - 8. - NABET accreditation certificate of M/s. Global Mining Solutions is given in Annexure - 9.	92 - 112 Annexure No - 8, 9
1.15	Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.	Complied. The monitoring locations of air, water, noise, soil are given in Table 3.4, 3.6, 3.9 and Figure - 3.5, 3.12a, 3.12b, 3.14 & 3.16 of chapter- 3.	96, 97, 103, 104, 105, 109, 111
1.16	For proper baseline air quality assessment, Wind rose pattern in the area should be reviewed and accordingly location of AAQMS	Meteorological environment showing wind rose plot is given in section 3.3.1 of chapter- 3.	92 - 95

	shall be planned by the collection of air quality data by adequate monitoring stations in the downwind areas. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area. In case of expansion, the displayed data of CAAQMS and its comparison with the monitoring data to be provided	Ambient Air Monitoring Data with monitoring location and sampling analysis results are given in section 3.3.2 of chapter- 3.	96 - 101
1.17	A detailed traffic study along with presence of habitation in 100 mts distance from both side of road, the impact on the air quality with its proper measures and plan of action with timeline for widening of road. The project will increase the no. of vehicle along the road which will indirectly contribute to carbon emission so what will be the compensatory action plan should be clearly spell out in EIA/ EMP report	Impact on traffic due to mining activity are shown in section 7.3.3, chapter- 7. Some of the measures recommended to control carbon emission are given in section 4.6.2, chapter- 4.	170, 140
1.18	The socio-economic study to conducted with actual survey report and a comparative assessment to be provided from the census data should be provided in EIA/ EMP report also occupational status & economic status of the study area and what economically project will contribute should be clearly mention. The study should also include the status of infrastructural facilities and amenities present in the study area and a comparative assessment with census data to be provided and to link it with the initialization and quantification of need based survey for CSR activities to be followed.	Socio-economic study details are given in section 3.3.8, Chapter-3. As per MOEF & CC Notification the project proponent has proposed CER cost of INR 10.00 Lakhs @ 2% of the project cost for project surrounding schools development.	118, 154, 173
1.19	The Ecology and biodiversity study should also indicate the likely impact of change in forest area for surface infrastructural development or mining activity in relation to the climate change of that area and what will be the	Biological Environment details are given in section 3.3.6, Chapter- 3.	112 - 115

	compensatory measure to be adopted by PP to minimize the impact of forest diversion.		
1.20	Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.	Occupational structure within buffer zone is depicted in Figure 3.22, chapter- 3 and Occupational health and safety details are given in section 4.11, Chapter- 4.	123, 155
1.21	Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted	The hydrogeological study from a reputed institute is in progress; The Final EIA EMP report will be incorporated with hydrological studies.	-
1.22	Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.		
1.23	Study on land subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.	Detailed in section 4.2 & 4.3 chapter- 4.	131 - 135
1.24	Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.	Impact due to Water use in Mines and water balance given in section 4.5.2 & Figure 4.1 of chapter- 4.	136 & 137

1.25	PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs	Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan details given in chapter- 10.	175
1.26	PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of mineral. The measures adopted to conserve energy or use of renewable sources shall be explored	The measures adopted to conserve energy in the mining operations are given in section 4.6.2, chapter- 4.	140
1.27	PP to evaluate the greenhouse emission gases from the mine operation and corresponding carbon absorption plan.	Regular vehicular emission tests will be done for the transport vehicles to ensure minimal impact due to carbon emissions. Some recommended measures are given in section 4.6.2, chapter- 4.	140
1.28	Site specific Impact assessment with its mitigation measures, Risk Assessment and Disaster Preparedness and Management Plan should be provided.	Impact assessment with its mitigation measures, Risk Assessment and Disaster Preparedness and Management Plan given chapter- 7.	163
1.29	Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.	Mining method, technology details given in section 2.10 to 2.13 of chapter- 2.	75 - 86
1.30	Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.	Details of mineral transport route from the quarry site is given in section 2.10.5, chapter-2. Impact on traffic due to transportation of minerals are shown in section 7.3.3, chapter- 7.	77, 170

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1.31	Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.	Details are given in section 4.11, chapter- 4	155
1.32	The number and efficiency of mobile/static water jet, Fog cannon sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.	Regular water sprinkling on haulage road through fixed water sprinkler are proposed and PP has earmarked a capital cost of INR 8.0 lakhs and recurring cost of INR 0.5 lakhs under EMP for water sprinkling arrangements.	-
1.33	Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.	Conceptual Final Mine Closure Plan and post mining land use details given in section 2.10, chapter- 2 and section 7.7, chapter- 7. Refer section 4.6.3, Chapter- 4 for Green belt development plan.	75, 172, 140
1.34	Adequate greenbelt nearby areas, mineral stock yard and transportation area of mineral shall be provided with details of species selected and survival rate Greenbelt development should be undertaken particularly around the transport route.	Agreed.	-
1.35	Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.	Compiled. EMP cost details given in section 10.6, chapter 10.	181
1.36	Details of R&R. Detailed project specific R&R Plan with data on the existing socio- economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate	Not applicable.	-

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	livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.		
1.37	CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.	Proposed Corporate Environmental Responsibility details are given chapter- 8.	173
1.38	Corporate Environment Responsibility:		
1.39	a) The Company must have a well laid down Environment Policy approved by the Board of Directors.	Environment policy details are given in section 10.4, chapter- 10.	179
1.40	b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.		
1.41	c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.	The proposed quarry is small scale magnitude operation and controlled by lessee individually by engaging optimum statutory personals. Based on magnitude of the operation the PP has framed Environmental Policy and the same is incorporated in Chapter- 10.	175
1.42	d) To have proper checks and balances, the company should have a well laid down 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.		
1.43	e) Environment Managment Cell and its responsibilities to be clearly spell out in EIA/ EMP report		
1.44	f) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.	Agreed	-

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1.45	Status of any litigations/ court cases filed/pending on the project should be provided	Nil	
1.46	PP shall submit clarification from DFO that mine does not fall under corridors of any National Park and Wildlife Sanctuary with certified map showing distance of nearest sanctuary.	Noted	-
1.47	Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.	Noted	-
1.48	Details on the Forest Clearance should be given as per the format given: Total ML Total Project Area Forest (ha) land (ha) Date of FC Extent of Forest Land Balance area for which FC is yet to be obtained Status of appl for diversion of forest land If more than one provides details of each FC	Noted	-
1.49	In case of expansion of the proposal, the status of the work done as per mining plan and approved mine closure plan shall be detailed in EIA/ EMP report	Noted	-
1.50	Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the time bound action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.	Noted	-
1.51	PP shall carry out survey through drone highlighting the ground reality for atleast 10 minutes	Noted	-

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1.52	Detailed Chronology of the project starting from the first lease deed allotted/Block allotment/ Land acquired to its No. of renewals, CTO /CTE with details of no. renewals, previous EC(s) granted details and its compliance details, NOC details from various Govt bodies like Forest NOC(s), CGWA permissions, Power permissions, etc as per the requisites respectively to be furnished in tabular form	Noted	-
1.53	The first page of the EIA/ EMP report must mention the peak capacity production, area, detail of PP, Consultant (NABET accreditation) and Laboratory (NABL / MoEF & CC certification)	Noted	-
1.54	The compliances of ToR must be properly cited with respective chapter section and page no in tabular form and also mention sequence of the respective ToR complied within the EIA-EMP report in all the chapters section	Noted	-

CHAPTER 1

INTRODUCTION

1.1 PURPOSE OF THE REPORT

Environmental Impact Assessment (EIA) as a tool used to identify the environmental, social and economic impacts of a project prior to decision-making. It aims to predict environmental impacts at an early stage in project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision-makers.

Thiru.T. Ponnusamy, has obtained Precise Area communication letter from the Assistant Director, Department of Geology and Mining, Karur. Total production is 8,21,260 m³ of Rough Stone & 1,69,200 m³ of Gravel, in which 5,65,550 m³ of rough stone & 1,69,200 m³ of Gravel will be mined out in first five years and remaining 2,55,710 m³ rough stone will be mined out in second 5 year over an extent of 4.23.80 Ha., located at the Survey No. 679/A, 679/B(P), 680/A(P) and 680/B(P) of Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State.

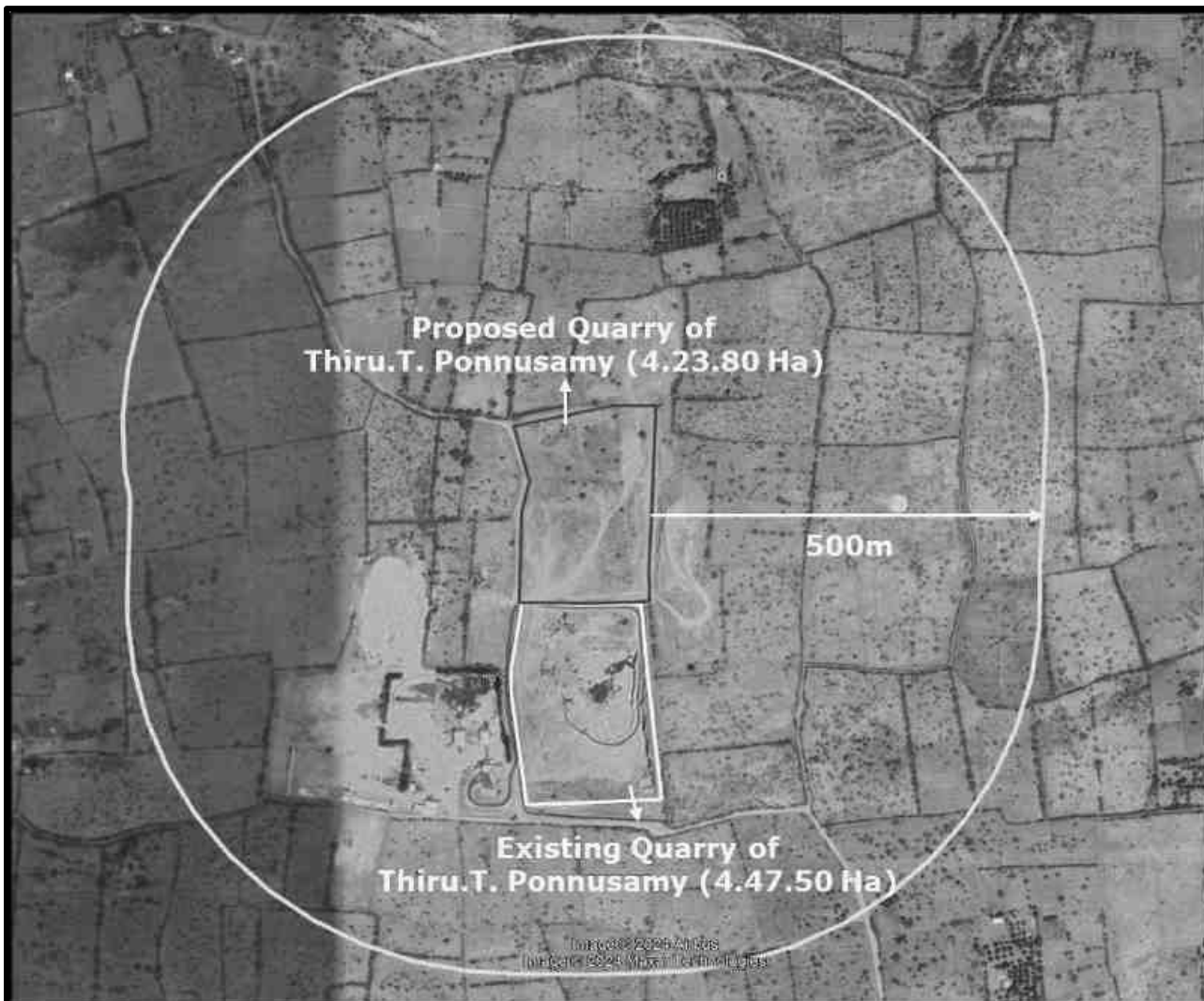
As per EIA notification, 2006 and its subsequent amendments the proposed Rough Stone & Gravel Quarry of Thiru.T.Ponnusamy, is falls under Schedule 1(a) Mining of Minerals. It is further classified under Category B1 due to the overall extent of cluster area is 8.71.30 Ha which is >5 Ha. This cluster includes the one existing Quarry and this proposed Quarry. The existing and proposed quarries located within 500m radius are detailed in Table 1.1. Satellite image of Quarries in Cluster is shown in Figure 1.1.

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Table 1.1 - Cluster Mines Details

S.No.	Name and address	Village & Taluk	S.F.No.	Extent (in Ha)	Remarks
Abandoned Quarry					
Nil					
Existing Quarry					
1.	Thiru.T. Ponnusamy S/o. Thangavel Door No. 4, Pavithram, Pugalur Taluk, Karur – 639 002	Thennilai West Village, Pugalur Taluk	1067/1(P), 1067/2(P) & 678(P)	4.47.50	30.09.2023 to 29.09.2028 EC Identification No. EC23B001TN110708 dated 25/09/2023
Proposed Quarry					
1.	Thiru.T. Ponnusamy S/o. Thangavel, Door no.4, Pavithram, Pugalur Taluk, Karur District. Pin Code– 639 002	Thennilai West Village, Pugalur Taluk	679/A, 679/B(P), 680/A(P) and 680/B(P)	4.23.80	Proposed Area (Lease for a period of 10 Years)
Total Extent: 8.71.30 Ha					

FIGURE 1.1 - SATELLITE IMAGE SHOWING CLUSTER QUARRIES



The ToR for preparation of EIA/EMP was approved vide TOR Identification No. TO24B0108TN5533139N, dated 09.10.2024. This report has been prepared in line with the approved TOR for total production of 8,21,260 m³ of Rough Stone & 1,69,200 m³ of Gravel, in which 5,65,550 m³ of Rough stone & 1,69,200 m³ of Gravel will be mined out in first five years and remaining 2,55,710 m³ rough stone will be mined out in second five year.

1.2 IDENTIFICATION OF PROJECT AND PROJECT PROPONENT

The proposed project is for mining of Rough Stone & Gravel (under cluster) from the S.F.Nos. 679/A, 679/B(P), 680/A(P) and 680/B(P) over an extent of 4.23.80 Ha., in Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State. As per EIA notification, 2006 and its subsequent amendments the project comes under Schedule 1(a) under Category B1 (Lease area >5 to 250 Ha). The proposed project details are given below.

1.2.1 PROPOSED PROJECT DETAILS

Sl. No.	Description	Status/Remarks
1.	Sector	Non-coal mining
2.	Category of the project	B1 (Cluster)
3.	Proposed mineral	Rough Stone & Gravel quarry
4.	Type of Lease	Proposed quarry
5.	Extent of the lease	4.23.80 Ha
6.	Proposed depth of Mining (For First 5 Years)	30m BGL
	Ultimate depth of Mining (For 10 Years)	60m BGL
7.	Method of mining	Opencast mechanized
8.	Proposed lease period	10 Years
9.	Proposed Environmental Clearance	10 Years
10.	Proposed production quantity for ten years	<u>Rough Stone:</u> 5,65,550 m ³ (First Five year) 2,55,710 m ³ (Remaining Year) <u>Gravel:</u> 1,69,200 m ³

1.2.2 PROFILE OF THE PROJECT PROPONENT

The lessee, Thiru.T.Ponnusamy (Proprietor) is an individual with sound experience in the identification of quarry, operation and marketing in the field of Rough Stone & Gravel. The proposed land is a patta land in the name of applicant vide patta nos. 3948 and 3905 (Refer Annexure - 6).

1.2.3 PROJECT PROPONENT DETAILS

Name of the proponent : Thiru.T.Ponnusamy
 Status of the Proponent : Proprietor
 Address : Thiru.T.Ponnusamy
 S/o. Thangavel
 Door No.4, Pavithiram,
 Pugalur Taluk, Karur District
 Pin Code- 639 002.

1.3 BRIEF DESCRIPTION OF NATURE OF THE PROJECT

The proposed quarrying operation Opencast Mechanized method with 5m bench height, 5m bench width and overall bench slope is less than 45°. The quarry operation involves shallow jackhammer drilling, slurry blasting, excavation, loading and transportation.

1.4 SIZE AND LOCATION OF THE PROJECT

1.4.1 SIZE OF THE PROJECT

Table 1.2 - Proposed project details		
Sl. No.	Feature	Description
1	Type of land	Owned Patta land
2	Extent of lease area	4.23.80 Ha
3	Type of lease	Proposed quarry
4	Geological Resource	Rough Stone – 23,28,150 m ³ Gravel – 2,11,650 m ³
5	Mineable Resource	Rough Stone – 8,21,260 m ³ Gravel – 1,69,200 m ³
6	Proposed production quantity for ten years	<u>Rough Stone:</u> 5,65,550 m ³ (First Five year) 2,55,710 m ³ (Remaining Year) <u>Gravel:</u> 1,69,200 m ³
6	Proposed depth of mining	For First 5 Years - 30m (BGL) For 10 Years – 60m (BGL)

1.4.2 LOCATION OF THE PROJECT

The proposed project site is located in Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State and its Latitude: 10°58'41.31"N to 10°58'49.98"N and Longitude: 77°48'48.50"E to 77°48'54.49"E with Survey of India Topo Sheet No. 58-F/13.

1.5 IMPORTANCE OF THE PROJECT TO THE COUNTRY AND REGION

There is an increasing demand for rough stone in India and other countries. Since the construction industry is rapidly growing now, there is an increasing demand for rough stone. Thus, this project will contribute not only to the demand of Rough Stone, but also provide employment opportunities to the nearby villages.

1.6 SCOPE OF THE STUDY WITH DETAILS OF REGULATORY SCOPING

Any mining project may cause environmental impacts near the project site during its operation. The type and intensity of impacts on various components of the environment may vary depending on the nature of the project, as well as its geographical location. The net impacts of the project can be quantified through Environment Impact Assessment (EIA) studies on Physical, Biological and Socio-economic environment. The EIA studies give a basis for preparing an Environmental Management Plan (EMP) to conserve the environment of the area.

For the purpose of preparing EIA/EMP the SEIAA, Tamilnadu has issued a Terms of Reference vide TOR Identification No. TO24B0108TN5533139N, dated 09.10.2024 in accordance with the provisions of EIA Notification 2006 and its subsequent amendments. This EIA study includes both Core and Buffer zone i.e., the lease area and 10km radius of the project area respectively. This EIA report prepared based on the data generated from the Post Monsoon season 2024 (October to December 2024) and all individual components of environment are described in detail. An in-depth analysis of available information has been made for working out an effective Environmental Management Plan.

1.7 PRESENT STUDY

The Project Proponent has assigned M/s. Global Mining Solutions, Salem for conducting Environment Impact Assessment / Environmental Management Plan (EIA/EMP) for this project. The Environmental Impact Assessment and Environmental Management Plan of this cluster quarry addressing all the environmental related impacts and mitigation measures. The EMP report is based on the data generated from October to December 2024 by M/s. Shrient Analytical & Research Labs Private Limited, Chennai and the data generated by the FAE of the M/s. Global Mining Solutions, Salem. The study evaluates the prevailing baseline environmental conditions. The objectives of the present study are given below.

- ✦ To prepare the present baseline scenario through primary field monitoring and secondary data for different environmental descriptors such as air, water, noise, traffic, biodiversity, socio-economic etc.
- ✦ To identify the activities of mining that have bearing on the environment
- ✦ To Assess the impact of proposed project activity
- ✦ To suggest preventive mitigation measures
- ✦ To prepare an Environmental Management Plan (EMP) including environmental monitoring.
- ✦ To Prepare Disaster Management Plan.

1.8 STATUS OF LITIGATIONS

This is a fresh Rough Stone & Gravel Quarry project. There is no litigation/court case pending against this project.

1.8.1 PRECISE AREA COMMUNICATION:

The Project Proponent has obtained Precise area communication letter received from the Assistant Director, Department of Geology and Mining, Karur vide **Rc.No. 51/Kanimam/2024 dated 20.06.2024. The letter copy enclosed as Annexure – 2.**

1.8.2 MINING PLAN APPROVAL LETTER:

The project proponent has prepared mining plan under rule 19(1), 41 & 42 of Tamil Nadu Minor Mineral Concession Rules, 1959 and the same has been approved by the Assistant Director, Dept. of Geology & Mining, Karur vide **Rc.No. 51/Mines/2024**

dated 05.07.2024. The approval letter along with approved plan is enclosed as Annexure – 3.

1.8.3 500M RADIUS QUARRY FEATURES:

The project proponent has obtained an official letter from Assistant Director, Department of Geology and Mining, Karur vide **Rc.No. 51/Mines/2024 dated 15.07.2024. The letter copy enclosed as Annexure – 4.**

1.8.4 VAO CERTIFICATION REGARDING 300 METER FEATURES:

There are no historical places, schools, cemeteries, HT and LT lines, temples, bird sanctuaries, and wildlife sanctuaries within 300 metres of the proposed project area. In this regard, the project proponent has received an official letter from the Village Administrative Officer, Thennilai Melpagam village. **The letter copy enclosed as Annexure – 5.**

1.8.5 LAND DOCUMENT OF THE PROPOSED LEASE AREA:

It is a Patta land in the name of Applicant (Thiru.T. Ponnusamy) vide Patta Nos. 3948 and 3905, **The copy of the Patta, Adangal, and A-Register Documents are enclosed as Annexure - 6.**

CHAPTER 2

PROJECT DESCRIPTION

2.1 TYPE OF PROJECT

The type of the project is opencast mechanized mining method to excavate Rough Stone within the proposed Mine Lease area with drilling, blasting, loading and transportation. This project is located at S.F. Nos. 679/A, 679/B(P), 680/A(P) and 680/B(P) over an extent of 4.23.80 Ha., in Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State.

As per EIA notification, 2006 and its subsequent amendments the project comes under Schedule 1 (a) under Category B1 (Lease area >5 to 250 Ha), considering cluster situation and the total cluster area is 8.71.30 Ha. The details of mines located in the cluster area is certified by Assistant Director, Department of Geology and Mining, Karur, through 500m radius letter vide Rc.No. 51/Mines/2024 dated 15.07.2024. Cluster Mines details are as follows:

Table 2.1 – Quarry details within 500 radius					
S.No.	Name and address	Village & Taluk	S.F.No.	Extent (in Ha)	Remarks
Abandoned Quarry					
Nil					
Existing Quarry					
1.	Thiru.T. Ponnusamy S/o. Thangavel Door No. 4, Pavithram, Pugalur Taluk, Karur – 639 002	Thennilai West Village, Pugalur Taluk	1067/1(P), 1067/2(P) & 678(P)	4.47.50	30.09.2023 to 29.09.2028 EC Identification No. EC23B001TN110708 dated 25/09/2023
Proposed Quarry					
1.	Thiru.T. Ponnusamy S/o. Thangavel, Door no.4, Pavithiram, Pugalur Taluk, Karur District. Pin Code– 639 002	Thennilai West Village, Pugalur Taluk	679/A, 679/B(P), 680/A(P) and 680/B(P)	4.23.80	Proposed Area (Lease for a period of 10 Years)
Total Extent: 8.71.30 Ha					

2.2 SALIENT FEATURES OF THE PROJECT

The salient features of the proposed Rough Stone & Gravel quarry of Thiru.T.Ponnusamy Mines are as follows:

Table 2.2 - Salient features of the project		
S.No.	Type of Detail	Description
1	Sector	1(a) Non coal mining
2	Fresh/Existing project	New Project
3	Category	B1 (Cluster)
4	Nature of mineral	Minor mineral
5	Life of the mine	10 years
6	Production Quantity for ten years	<u>Rough Stone:</u> 5,65,550 m ³ (First Five year) 2,55,710 m ³ (Remaining Year) <u>Gravel:</u> 1,69,200 m ³
7	Waste generation and management	Nil
8	Bench height and width	Proposed bench height & width is 5.0 m respectively and number of proposed benches is 12 (1+11) nos
9	Ultimate pit depth	60m (BGL)
10	End use	The excavated Rough Stone and Gravel is used for construction industries for Government & Public sector projects besides catering domestic housing and infrastructure projects in and around the district.

2.3 LOCATION

This project site is located in Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State. The project is approachable from Kullampalayam – Kunampatti village road on the western side of the lease area. Nearest Railway line is Karur to Erode line which is about 13.5 Km on the Northeastern side of the area. The Nearest National Highway (NH-81) Karur – Coimbatore which is about 3.2 km on the Southern side of the area. The State Highway (SH-189) Kangayam - Kodumudi is about 9.1 km on Northwestern side of the area. The general location is given in Figure 2.1. The specific location is given in Figure 2.2.

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

FIGURE 2.1 - LOCATION MAP

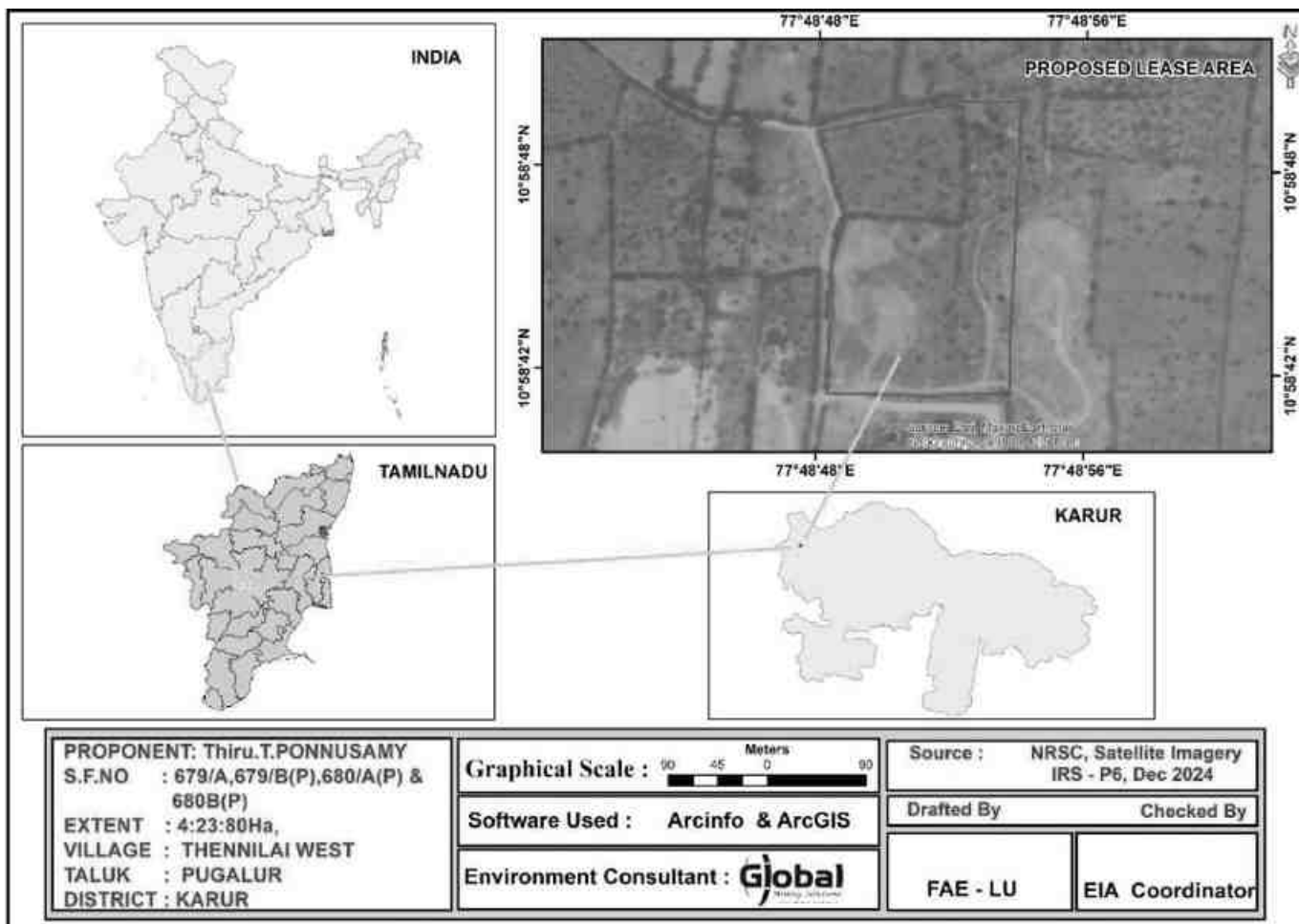
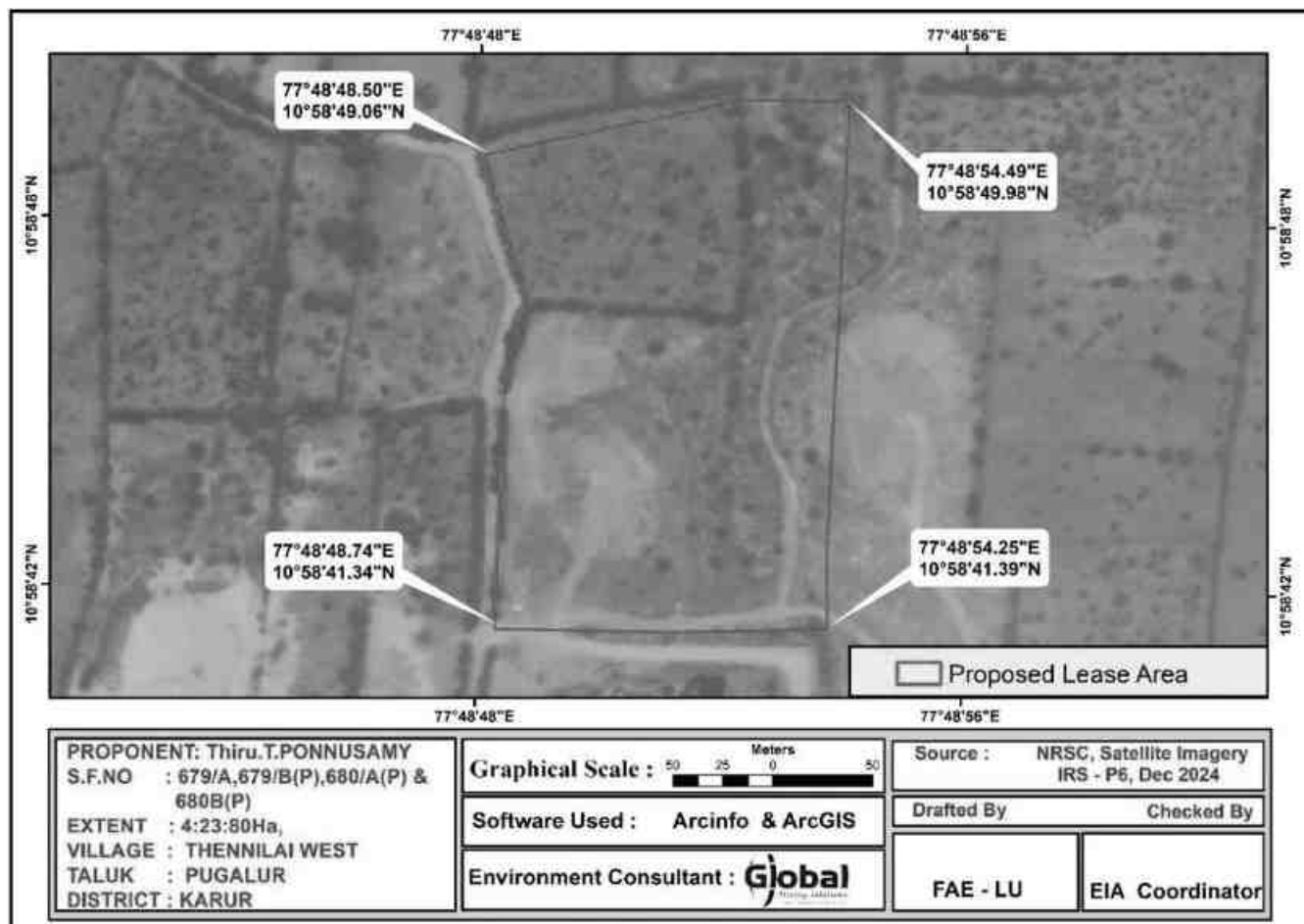


FIGURE 2.2 - GOOGLE IMAGE SHOWING PROJECT SITE



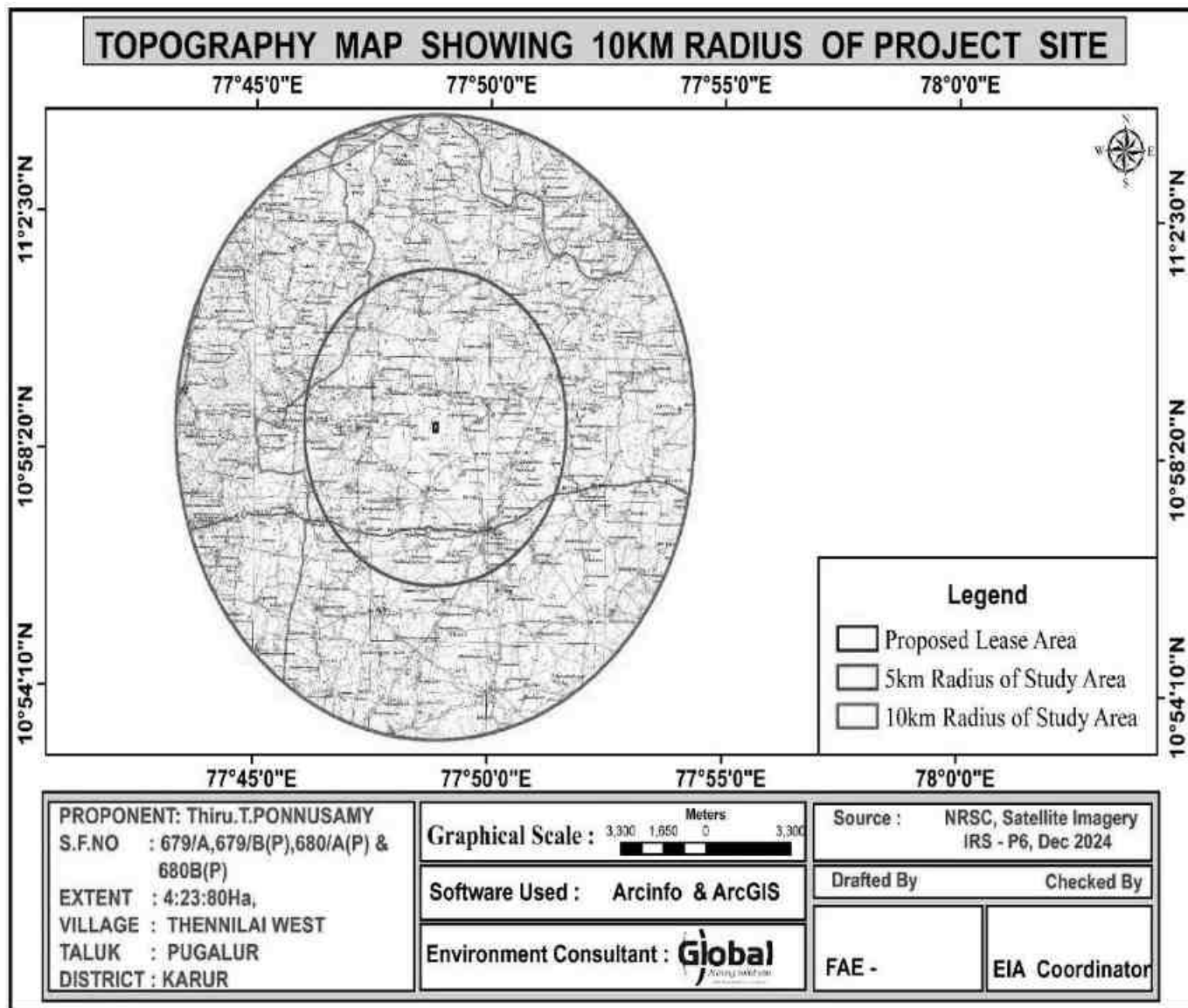
2.4 PROJECT BOUNDARY AND PROJECT SITE LAYOUT:

The lease area has 9 corners and the latitude and longitude values are given below.

Table 2.3 - Co-Ordinates of the Project Site			
Corners	Co-Ordinates		Distance between the corners
	Latitude	Longitude	
1	10° 58' 41.34"N	77° 48' 48.74"E	1-2 = 123.2m
2	10° 58' 45.34"N	77° 48' 48.85"E	2-3 = 41.0m
3	10° 58' 46.64"N	77° 48' 49.17"E	3-4 = 87.2m
4	10° 58' 49.06"N	77° 48' 48.50"E	4-5 = 129.8m
5	10° 58' 49.98"N	77° 48' 52.68"E	5-6 = 55.0m
6	10° 58' 49.98"N	77° 48' 54.49"E	6-7 = 217.6m
7	10° 58' 42.91"N	77° 48' 54.20"E	7-8 = 46.8m
8	10° 58' 41.39"N	77° 48' 54.25"E	8-9 = 77.4m
9	10° 58' 41.31"N	77° 48' 51.67"E	9-1 = 89.0m

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

FIGURE 2.3 - TOPO MAP SHOWING EXISTING SITE FEATURES



DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

FIGURE 2.4 - SURFACE PLAN OF THE PROJECT AREA

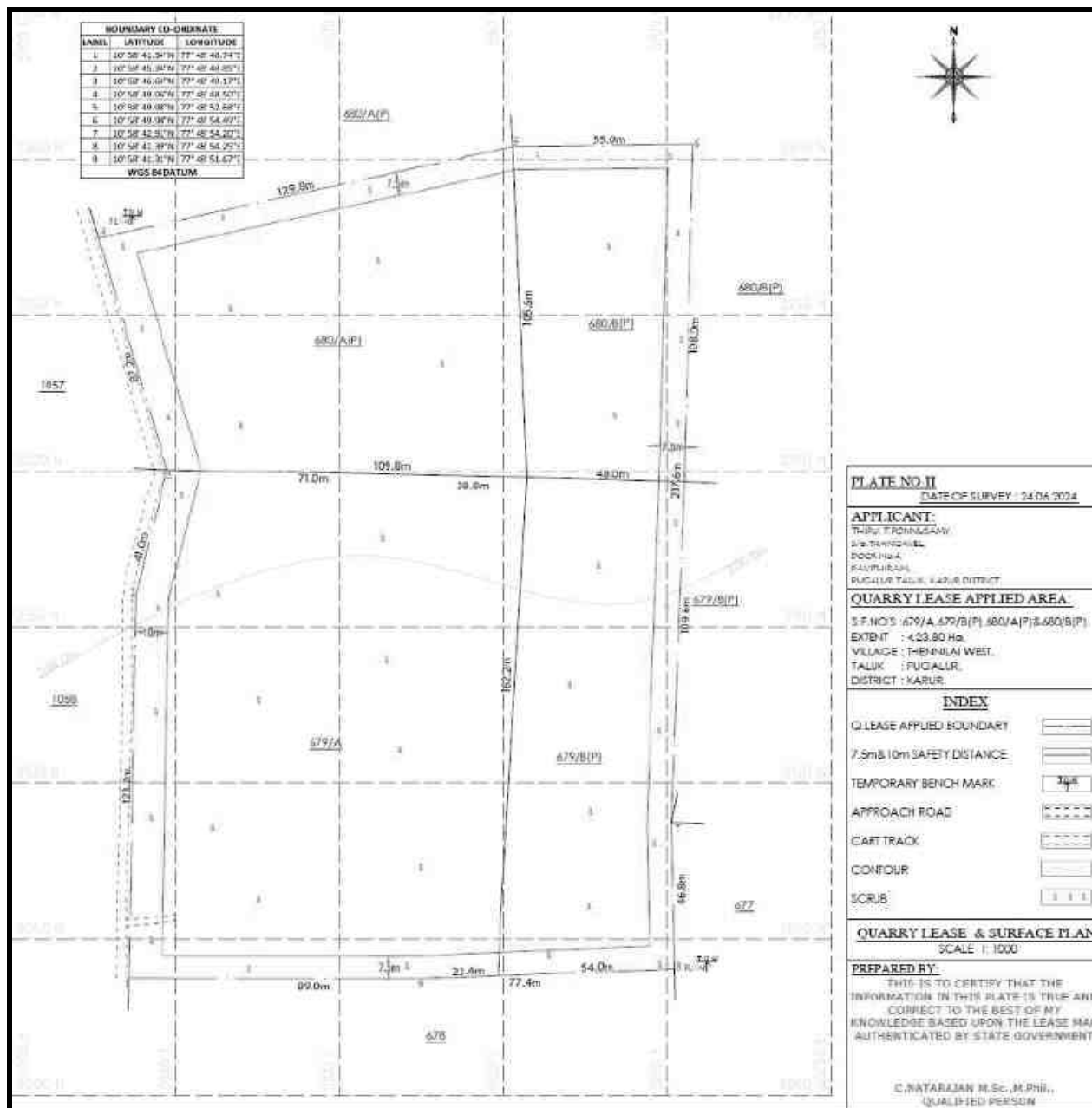


FIGURE 2.5 - SITE PHOTOS



Project site connectivity details are as follows:

Site Connectivity		
Sr.No	Salient Features	Description
1	Nearest Roadway	- There is an existing road from the area leads towards Kullampalayam – Kunampatti village road on the western side of the lease area. - The Nearest Railway line is Karur to Erode line which is about 13.5 km on northeastern side of the area. - The National Highway (NH-81) Karur – Coimbatore is about 3.2 km on the Southern side of the area. - The State Highway (SH-189) Kangayam - Kodumudi is about 9.1 km on Northwestern side of the area.
2	Nearest Village	Thennilai West – 1.0 km (NE) Kullampalayam - 1.2km (NW) Thennilai - 2.0km (SE) Vairamadaai - 1.2km (SE)
3	Nearest Railway	Kodumudi – 13.2 km on the northeastern side of the area
4	Nearest Airport	Coimbatore Airport - 85 km (W)

2.5 GEOLOGY AND TOPOGRAPHY

2.5.1 TOPOGRAPHY

The mine lease area of 4.23.80 Ha is covered in the Survey of India Toposheet 58-F/13 and is bounded by Latitude: 10°58'41.31"N to 10°58'49.98"N and Longitude: 77°48'48.50"E to 77°48'54.49"E. No major river is found nearby the lease applied area. Water table is found at a depth of 69m BGL. 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.

The topo map showing the lease area of the proposed quarry is given in Figure 2.3 and Satellite map showing proposed lease area is given in Figure 2.2.

The elevation of the proposed quarry is 206m (maximum) from MSL. There is no forest land in the mine lease area. The project site is dry land which is not fit for any cropping.

2.5.2 REGIONAL GEOLOGY

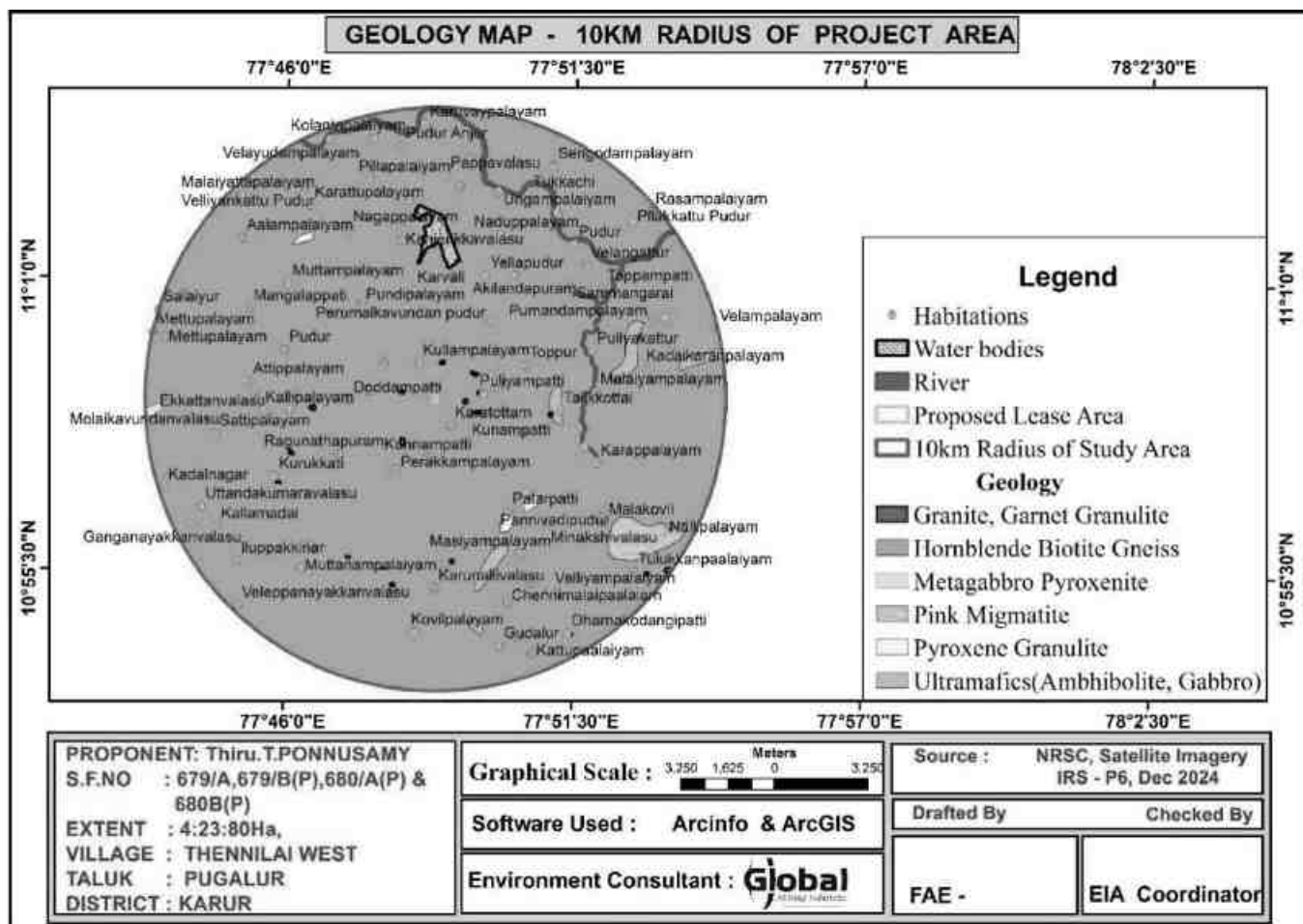
The Karur District forms part of the Archean complex of peninsular gneiss. The general rock types of this area are Charnockite, Biotite gneiss, Migmatites and Anorthosites. Karur District is blessed with good reserves of Crystalline Limestone known as "Palayam belt" in Varavanai, Thennilai, Gudalur etc., villages in Kulithalai Taluk and the occurrences of good quality of pegmatite veins constituting with glassy Quartz and potash Feldspar in lensoid patches in Nagampalli and Pungambadi areas in Aravakurichi Taluk. The major mineral such as Limestone, Quartz and Feldspar and Magnesite and Dunite are exploited in Karur District and utilized in the mineral based industries. The Charnockite and Granite Gneiss rocks are found to occur in K.Paramathi, Athur, Thennilai, Punnam, Kuppam, Munnur, Karudayampalayam, Anjur villages in Karur and Aravakurichi Taluk are exploited to produce building materials and road metal (Jelly) and over burden soil appear as gray to reddish in colour called as gravel.

Geologically, the entire district can be classified into hard rock and sedimentary formations. Hard rock Formation: - More than 90 percent of the district is underlain by hard rock of Archaean age. The gneissic type of Formation is the major formation among the various types of hard rocks. Charnockite occurs in this district as pockets in Karur and Aravakurichi taluks. Quartzites which are resistant to weathering are also seen as patches in Charnockite and gneissic varieties. Sedimentary Formation: - Recent alluvial deposits such as sand, silt, clay, gravel etc. which are transported sediments by river are found on the other side of Cauvery river in Karur, Krishnarayapuram and Kulithalai blocks. These formations are overlying the hard rock (*Source – District Survey Report, Karur*).

Regional Geology map for the 10 Km radius from the proposed project site is given as Figure 2.6.

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

FIGURE 2.6 - REGIONAL GEOLOGY MAP OF THE 10 Km RADIUS FROM PROJECT AREA



2.5.3 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 N80°W –S80°E with dipping towards NE80°.

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

Age	Rock Type
Recent	- Gravelly soil
Unconformity	
Archaean	- Dolerite dyke, Charnockite Peninsular Gneissic complex and Calc Gneiss

2.5.3.1 Geological Resources

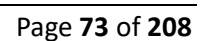
The geological cross sections are prepared across the strike of the ore body. The area of individual litho units in each cross section is calculated separately. Section wise sectional area is measured and multiplied by the influence to obtain the volume in m³. The quarrying is restricted up to a depth of 60m (below ground level) only, availability of resources is given below.

Table 2.4 - Geological resources in the lease area

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m ³	Gravel formation in m ³	Geological Resources of Rough stone in m ³
XY-AB	I	255	166	5	211650	211650	
	II	255	166	5	211650		211650
	III	255	166	5	211650		211650
	IV	255	166	5	211650		211650
	V	255	166	5	211650		211650
	VI	255	166	5	211650		211650
	VII	255	166	5	211650		211650
	VIII	255	166	5	211650		211650
	IX	255	166	5	211650		211650
	X	255	166	5	211650		211650
	XI	255	166	5	211650		211650
	XII	255	166	5	211650		211650
	Total					211650	2328150

Available Geological Resources observed to be 23,28,150 m³ of Rough stone and 2,11,650 m³ of Gravel formation.

FIGURE 2.7 – GEOLOGICAL PLAN AND CROSS SECTION OF PROJECT AREA



2.5.3.2 Available Mineable Reserves

Mineable reserve is getting restricted due to the formation of benches, leaving the statutory safety distance in the inner boundary, mineral lock up in the benches itself, ultimate depth of mining, bench slope adopted etc. So, the mineable reserve is estimated after reducing the rough stone blocked in the safety distance and benches. The mineable reserves calculated are given below.

Table 2.5 - Mineable Resources in the Lease Area							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m ³	Gravel in m ³	Mineable Reserves of Rough stone in m ³
XY-AB	I	235	144	5	169200	169200	
	II	222	131	5	145410		145410
	III	212	121	5	128260		128260
	IV	202	111	5	112110		112110
	V	192	101	5	96960		96960
	VI	182	91	5	82810		82810
	VII	172	81	5	69660		69660
	VIII	162	71	5	57510		57510
	IX	152	61	5	46360		46360
	X	142	51	5	36210		36210
	XI	132	41	5	27060		27060
	XII	122	31	5	18910		18910
Total						169200	821260

2.6 NEED FOR THE PROJECT

The construction industry is growing at a very faster rate so there is an increasing demand for Rough Stone. Also, in the international market there is a good demand for Indian cut and raw stones. Thus, this project will contribute to the demand of rough stone and provide employment opportunities to the nearby villages.

2.7 SIZE OR MAGNITUDE OF OPERATION

The proposed total production is 8,21,260 m³ of Rough Stone & 1,69,200 m³ of Gravel, in which 5,65,550 m³ of Rough stone & 1,69,200 m³ of Gravel will be mined out in first five years and remaining 2,55,710 m³ Rough stone will be mined out in second five year by Opencast Mechanized mining method.

2.8 LAND USE OF THE PROJECT AREA

The proposed Mine Lease area is owned patta land and the Land use pattern of the project site is given in below table.

Table 2.6 - Current Land Use Pattern			
S. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1	Quarrying Pit	Nil	3.38.40
2	Infrastructure	Nil	0.01.00
3	Roads	Nil	0.02.00
4	Green Belt	Nil	0.82.40
5	Unutilized	4.23.80	Nil
Total		4.23.80	4.23.80

2.9 LAND USE AT MINE CLOSURE STAGE

Table 2.7 - Land Use at Mine Closure Stage		
S. No.	Land Use	Area in use during the quarrying period (Hect)
1	Area left for water body	3.38.40
2	Green Belt	0.82.40
3	Remaining area	0.03.00
Total		4.23.80

2.10 METHOD OF MINING

Opencast mechanized mining with 5.0m height and 5.0m width with overall 45° slope of the bench. It is proposed to excavate total production of 8,21,260 m³ of Rough Stone & 1,69,200 m³ of Gravel, in which 5,65,550 m³ of Rough stone & 1,69,200 m³ of Gravel will be mined out in first five years and remaining 2,55,710 m³ Rough stone

will be mined out in second five year. No wastage is envisaged as the entire material available is Rough Stone and Gravel only.

2.10.1 TIMING

Mining will be done on single shift basis. Timing will be 8 hours from 8 AM to 1 Noon and 2 PM to 5 PM. Lunch time will be provided between 1 Noon and 2 PM. Timing may be variable from season to season depending upon the sunrise and sunset. Weekly one day will be declared as holiday.

2.10.2 BENCH GEOMETRY

Height (max) and Width (max) of the benches will be maintained as 5m each and overall slope angle will be at around 45° with the horizontal.

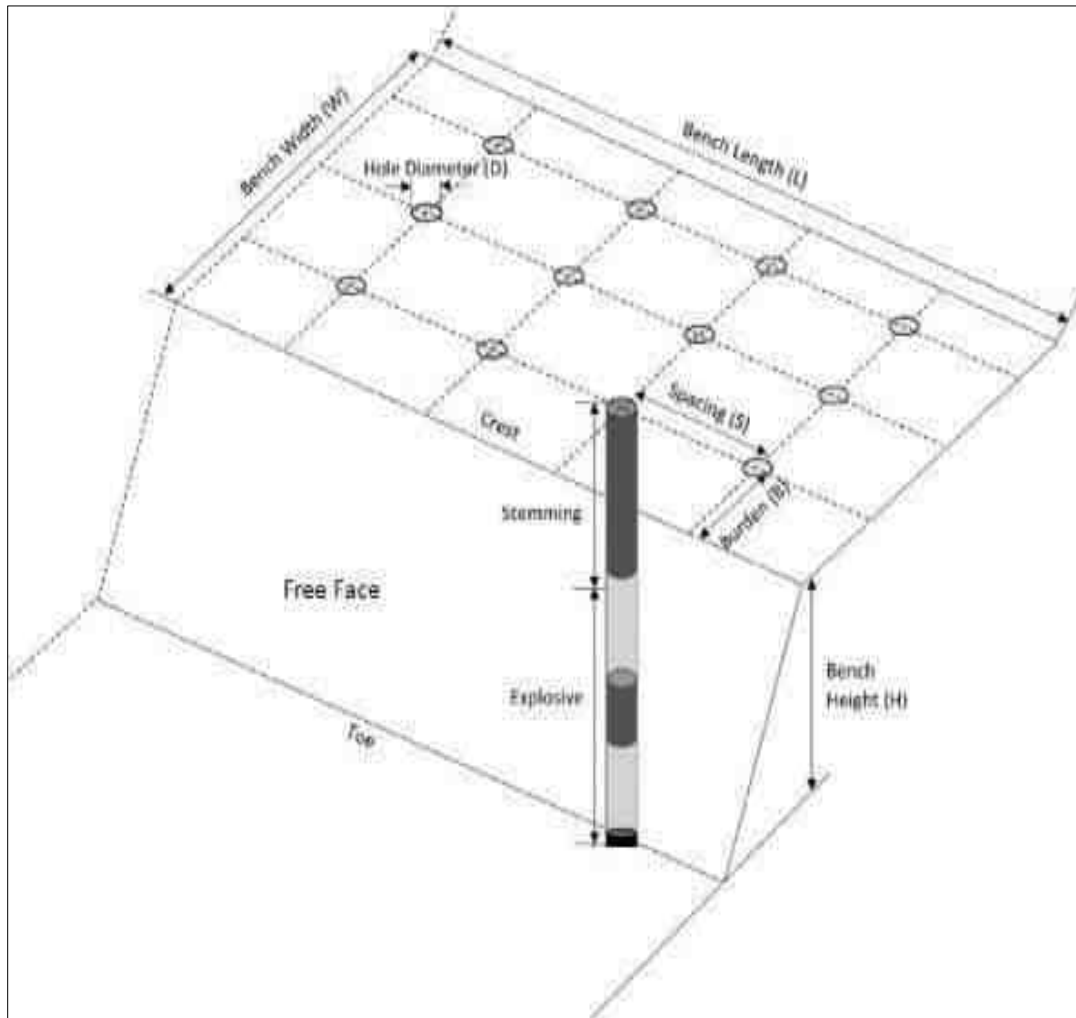
2.10.3 DEVELOPMENT OF MINING FACES

The proposed mining method is Opencast Mechanized mining. Site preparation as such bush cleaning, approach road, office and sanitary facilities will be done after obtaining all the statutory clearances as such Environmental Clearance, Consent to Operate, Lease Deed, etc., Once site is ready will start the quarrying operation and it is anticipated in the month of October 2025.

2.10.4 DRILLING & BLASTING

Drilling will be done upto maximum depth of 60m (BGL) and drilling diameter will be 32-36 mm. Jackhammer will be used for drilling with water spray. Powder factor of explosives for breaking such hard rock shall be in the order of 6 to 7 Tonnes per Kg of explosives. Small dia 25mm slurry explosive are proposed to be used for shattering and heaving effect for removal of Rough Stone. The proposed blasting pattern is given as Figure 2.8.

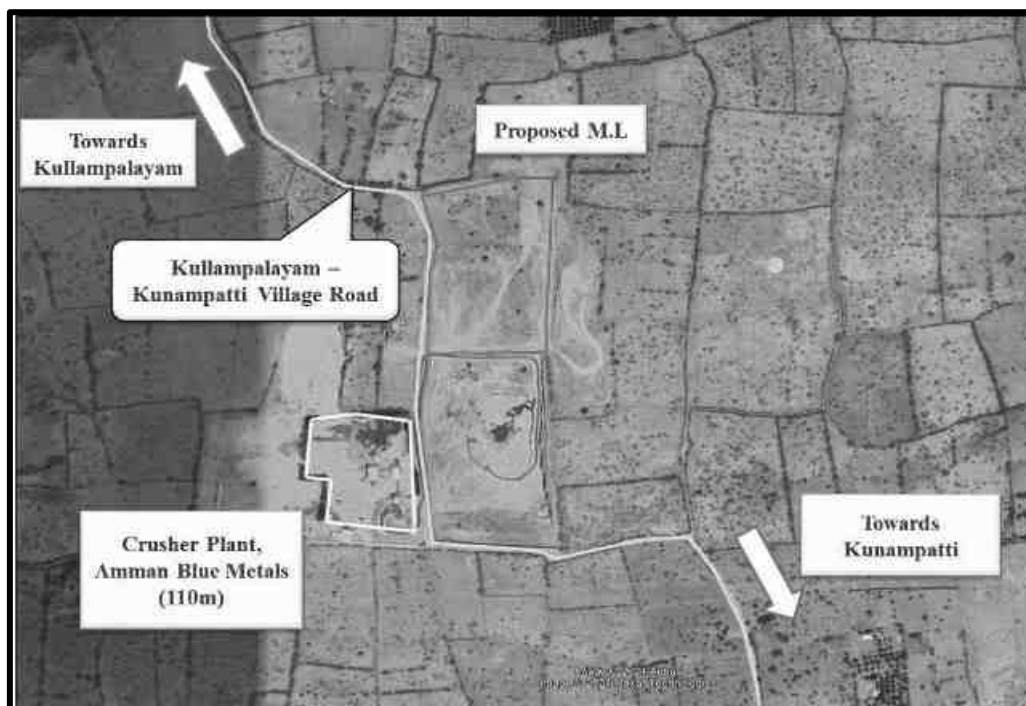
FIGURE 2.8 - BLASTING PATTERN



2.10.5 LOADING & TRANSPORTATION OF ROUGH STONE

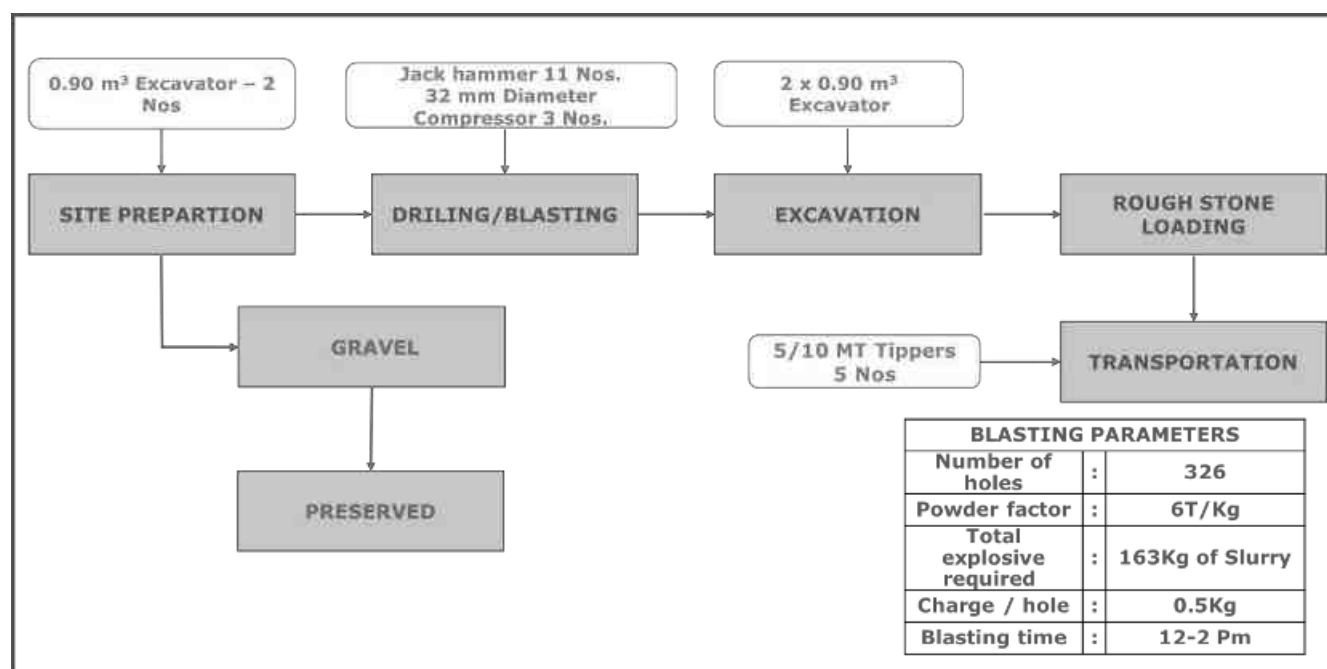
Hydraulic excavator will be used for lifting and loading of the Rough stone. This excavator in combination with Tippers (5/10Ts) capacity of 5 nos will be used. Details of mineral transport route from the quarry site is given below.

FIGURE 2.9 - TRANSPORT ROUTE FROM THE QUARRY SITE



2.10.6 PROCESS FLOW CHART FOR MINING OF DECORATIVE STONE

FIGURE 2.10 - FLOW CHART OF THE QUARRY OPERATION



2.10.7 LAYOUT

Layout of the proposed quarry working has been shown in development Plan/Sections (Figure 2.11a & b) Coloring has been done distinctly for easy identification of yearwise excavation programme.

2.10.8 MACHINERY DETAILS

Table 2.8 - Machineries involved in the project				
S.No.	Particulars	Size capacity	Motive Power	Nos
1.	Jack hammer	32mm dia hole	Compressed air	11
2.	Compressor	-	Diesel drive	3
3.	Excavator with Bucket and Rock Breaker	0.90 m ³	Diesel drive	2
4.	Tippers	5/10 Ts	Diesel drive	5

FIGURE 2.11a FIRST FIVE YEAR DEVELOPMENT PLAN

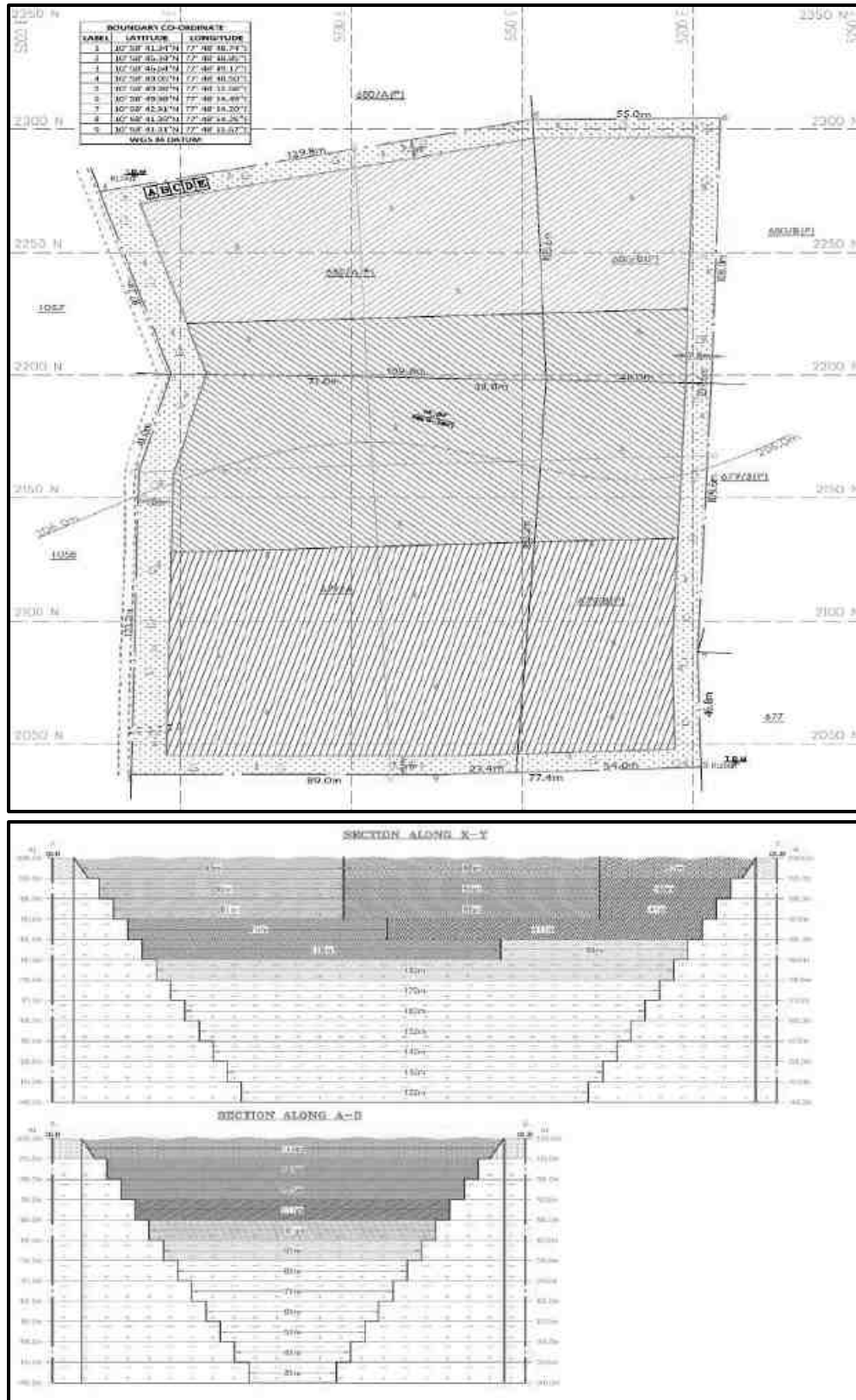
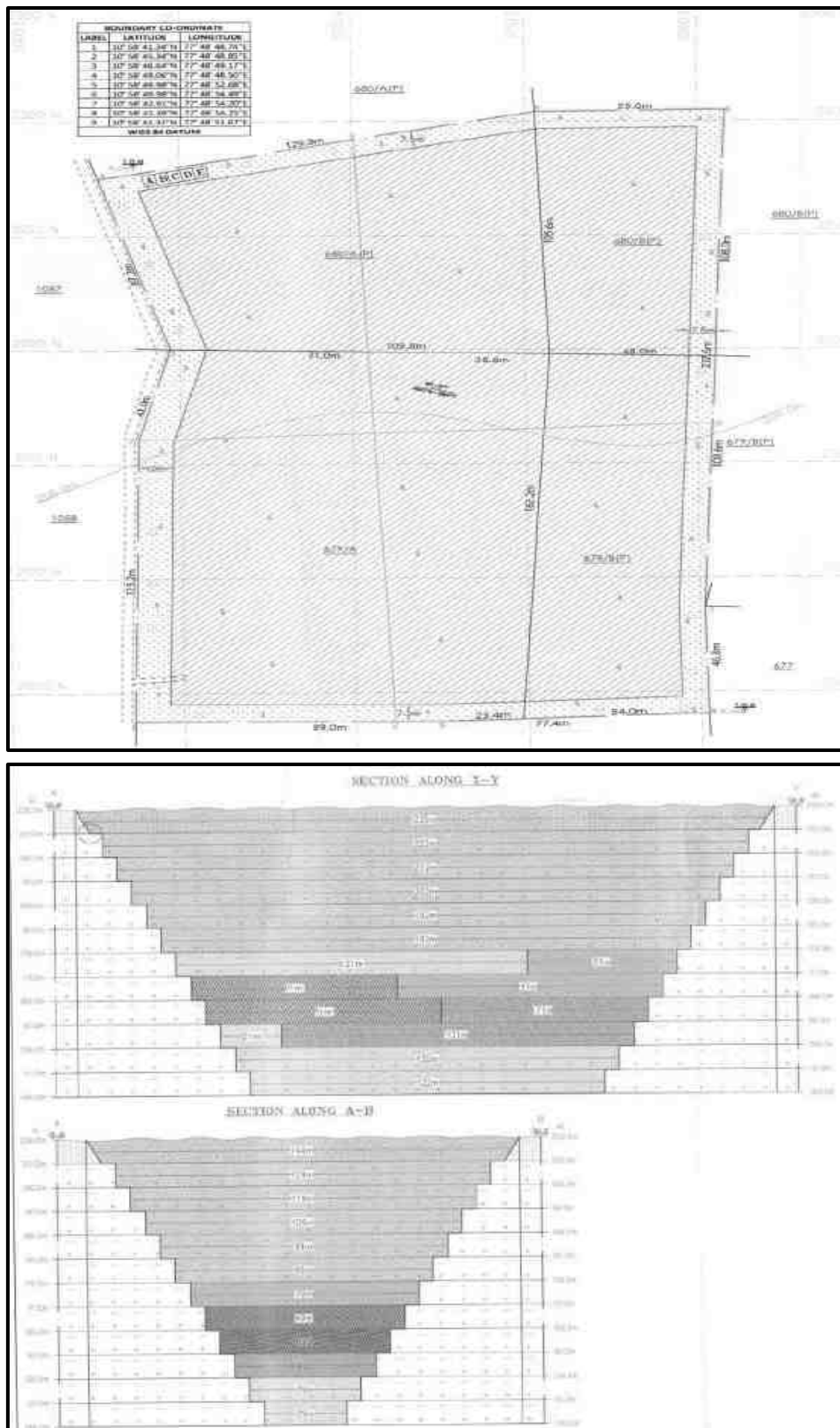


FIGURE 2.11b – SECOND FIVE YEAR DEVELOPMENT PLAN



2.11 PROPOSED SCHEDULE FOR IMPLEMENTATION

Year wise Production of Rough stone from the area will be upto maximum capacity. The recovery factor is up to 100% hence no waste expected to be generated. All excavated quantity is saleable. The summary of proposed development and production during the mine plan period is given in Table 2.9.

Table 2.9a - Summary of production For 5 Years								
Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m³	Gravel in m³	Mineable reserve of Rough stone in m³
I	XY-AB	I	93	144	5	66960	66960	
		II	86	131	5	56330		56330
		III	81	121	5	49005		49005
Total							66960	105335
II	XY-AB	I	90	144	5	64800	64800	
		II	90	131	5	58950		58950
		III	90	121	5	54450		54450
Total							64800	113400
III	XY-AB	I	52	144	5	37440	37440	
		II	46	131	5	30130		30130
		III	41	121	5	24805		24805
		IV	111	111	5	61605		61605
Total							37440	116540
IV	XY-AB	IV	91	111	5	50505		50505
		V	126	101	5	63630		63630
Total								114135
V	XY-AB	V	66	101	5	33330		33330
		VI	182	91	5	82810		82810
Total								116140
Grand Total							169200	565550

Table 2.9b - Summary of production For 6-10 Years

Table 2.9b - Summary of production For 6-10 Years							
Year	section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m³	Mineable Reserves of Rough stone in m³
VI	XY-AB	VII	121	81	5	49005	49005
Total							49005
VII	XY-AB	VII	51	81	5	20655	20655
		VIII	91	71	5	32305	32305
Total							52960
VIII	XY-AB	VIII	71	71	5	25205	25205
		IX	81	61	5	24705	24705
Total							49910
IX	XY-AB	IX	71	61	5	21655	21655
		X	121	51	5	30855	30855
Total							52510
X	XY-AB	X	21	51	5	5355	5355
		XI	132	41	5	27060	27060
		XII	122	31	5	18910	18910
Total							51325
Grand Total							255710

2.12 CONCEPTUAL PERIOD

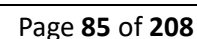
During conceptual stage the mined-out area will be converted into water reservoir and safety zone as well as upper benches will be used for plantation at the conceptual period. It will also serve the purpose as socio economic and corporate social responsibility of the lessee by way of supplying water for irrigation purpose or at will of the local people. This will help in ground water recharging as well. The conceptual plan and section of mine lease area is given in Figure 2.12. Ultimate extent and size of the quarry at the conceptual stage is given below as Table 2.10 and Land Use pattern is given as Table 2.11.

Table 2.10 - Ultimate Pit Dimension (M)			
End of Mining plan Period (5 Years)			
Pit No.	Length (max) (m)	Width (Avg) (m)	Depth (max) (m)
I	235	144	30 (BGL) (Proposed Depth)
End of the lease period (10 Years)			
I	235	144	60 (BGL) (Proposed Depth)

Table 2.11 - Land Use at Mine Closure Stage		
S. No.	Land Use	Area in use during the quarrying period (Ha)
1	Area left for water body	3.38.40
2	Green Belt	0.82.40
3	Remaining area	0.03.00
Total		4.23.80

At the mine closure stage, 3.38.40 Ha of lease area will be left as rain water harvesting pond and 0.82.40 Ha will be developed with green belt with local Species of 1000 Nos. of saplings (Refer section 4.6.3, Chapter- 4 for Green belt development plan).

FIGURE 2.12 - CONCEPTUAL PLAN AND CROSS SECTION



2.13 TECHNOLOGY AND PROCESS DESCRIPTION

- It is proposed to quarry out rough stone with 5m bench height, 5m width with 80° slope using conventional opencast Mechanized method.
- The quarry operation involves splitting of rock mass of considerable volume from the parent rock by jackhammer drilling and blasting, hydraulic excavators are used for loading the Rough Stone from pithead to the needy customers.
- Occasionally hydraulic excavator is attached with rock breakers for fragmentation to avoid secondary blasting.

2.14 PROJECT REQUIREMENTS

Table 2.12 - Project Requirements		
S.No.	Nature of requirement	Description
1	Water requirement	Total water requirement of 6.5 KLD which will be procured from the outside agencies. Out of 6.5 KLD, drinking water requirement is 2.5 KLD, Green belt development is 2.0 KLD and for dust suppression is 2.0 KLD.
2	Power requirement	No electricity is needed for the proposed mining operation. 685.208 KL of HSD will be utilized for the entire project life.
3	Manpower requirement	Total Manpower 37 Nos. Permanent employee – 20, Temporary employee – 17
4	Financial requirement	The total Project Cost is Rs. 688.27 lakhs.
5	Funds for Socio economic development	As per MOEF & CC Notification CER cost is arrived for an amount of 10.0 Lakhs for 10 Years.

2.15 PROJECT COST

The budget of the project is given below.

Table 2.13 Budget of the Project	
A. FIXED ASSET COST	
Particulars	Amount
Land cost	25.42 Lakhs
First aid room and accessories	1.00 Lakhs
Labour Shed	1.00 Lakhs
Sanitary Facility	1.00 Lakhs
Total	28.42 Lakhs
B. OPERATIONAL COST	
Machineries	80.00 Lakhs
Fencing cost	2.50 Lakhs
Total	82.50 Lakhs
C. EMP COST (FOR 10 YEARS) (Refer section 10.6, Chapter 10)	
Capital cost	82.55 Lakhs
Recurring Cost	383.77 Lakhs
Total	466.32 Lakhs
D. District Green Fund	83.39 Lakhs
E. Final Mine Closure Activities	17.64 Lakhs
F. CER COST	10.00 Lakhs
Grand Total (A+B+C+D+E+F)	688.27 Lakhs

CHAPTER 3

DESCRIPTION OF THE ENVIRONMENT

3.1 DESCRIPTION OF THE STUDY AREA

The project area is located in Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State over an extent of 4.23.80 Ha. The project area is considered as Core zone and the area in the surrounding of 10km radius is considered as Buffer Zone. The baseline environmental monitoring was conducted by Shrient Analytical & Research Labs Private Limited, Chennai it is an NABL and MOEF recognized laboratory for various components of environment, viz. Air, Noise, Water, Land was carried out during October to December 2024 in the study area covering 10 km radial distance from the Rough stone and Gravel quarry. Other environmental data on flora and fauna, land-use pattern, forest etc., were also generated through field surveys and secondary information collected from different State Govt. departments. Sampling methods and analysis. Socio-economic survey was conducted, through interaction with the people, sarpanch and medical officers by floating questionnaires and collection of information are supported by census data for demographic structures, amenities, and infrastructure availability within the study area. Baseline values for various environmental components are discussed in this Chapter.

The components included are:

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

3.2 DESCRIPTION OF ENVIRONMENT IN THE STUDY AREA

Table 3.1 - Description of the lease area

Table 3.1 - Description of the lease area				
S.No.	Areas	Distance from project site		
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Nil within 15km radius		
2	Areas which are important or sensitive for ecological reasons			
A	Wetlands, water courses or other water bodies,	Water bodies	Distance	Direction
		Odai	520m	NE
		Aathupalayam Dam	5.25km	N
		Noyyal River	7.0km	NE
		Kaveri River	13.5km	NE
		Amaravathi River	10.4km	SW
B	Coastal zone, biospheres,	Nil within 10km radius		
C	Mountains, forests	- Nil within 15km radius - Nearest Sanctuary - Vellode Bird Sanctuary – 34.30km (NW)		
3	Environmental sensitive areas, Protected areas as per Wildlife Protection Act, 1972	Nil within 15km radius		
4	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, overwintering, migration	Nil within 15km radius		
5	Inland, coastal, marine or underground waters	Nil within 15km radius		
6	State, National boundaries	Nil within 15km radius		
7	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Nil within 15km radius		
8	Defense installations	Nil within 15km radius		
9	Densely populated or built-up area	Thennilai West – 1.0 km (NE)		
10	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Thennilai West – 1.0 km (NE)		

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

11	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	Nil
12	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	Nil
13	Areas susceptible to natural hazard which could cause the project to present environmental problems (earth quakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions) similar effects	No. The area is not prone to earthquakes, floods, etc.

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

FIGURE 3.1 -TOPOGRAPHY MAP SHOWING 10KM RADIUS OF PROJECT SITE

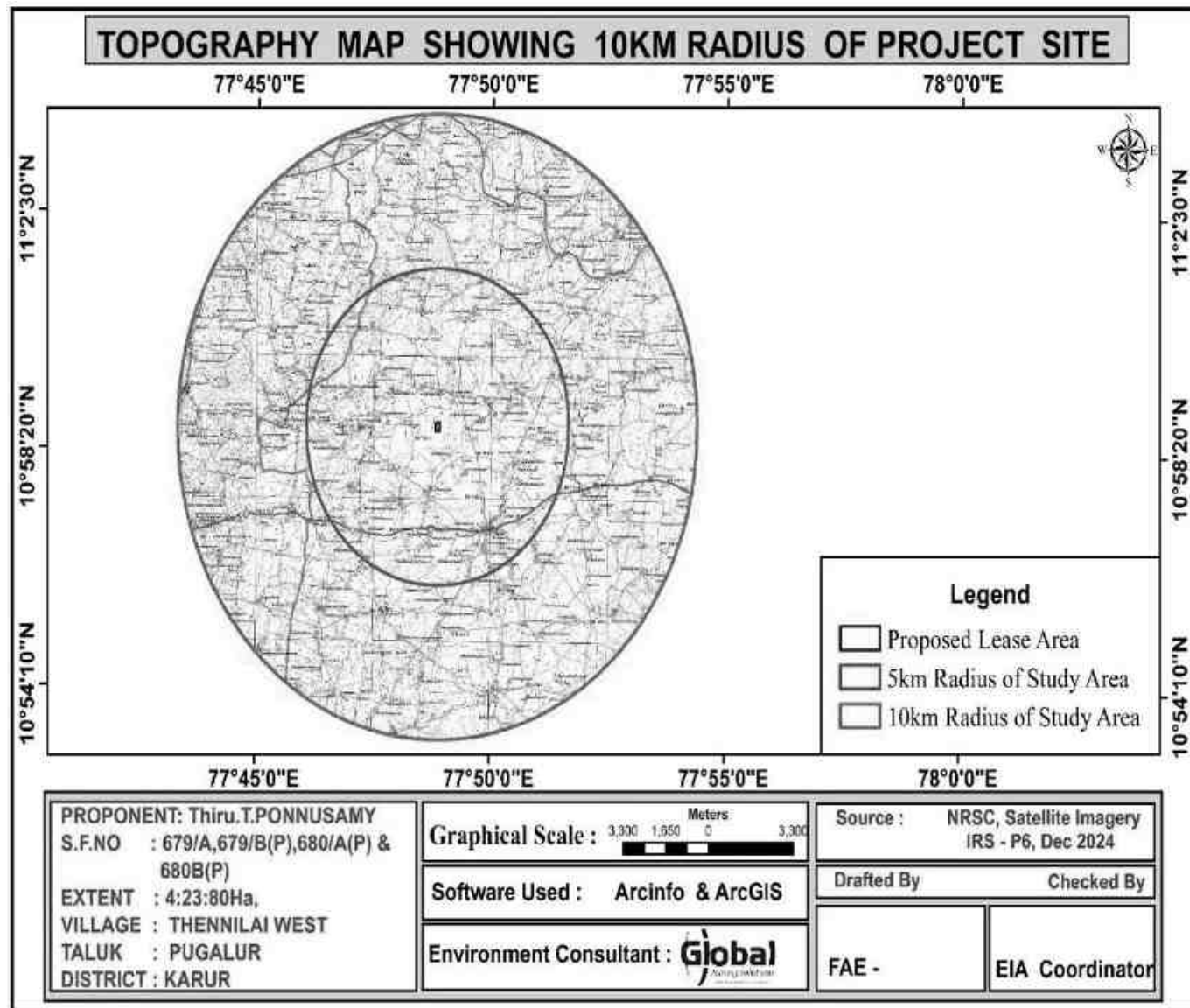
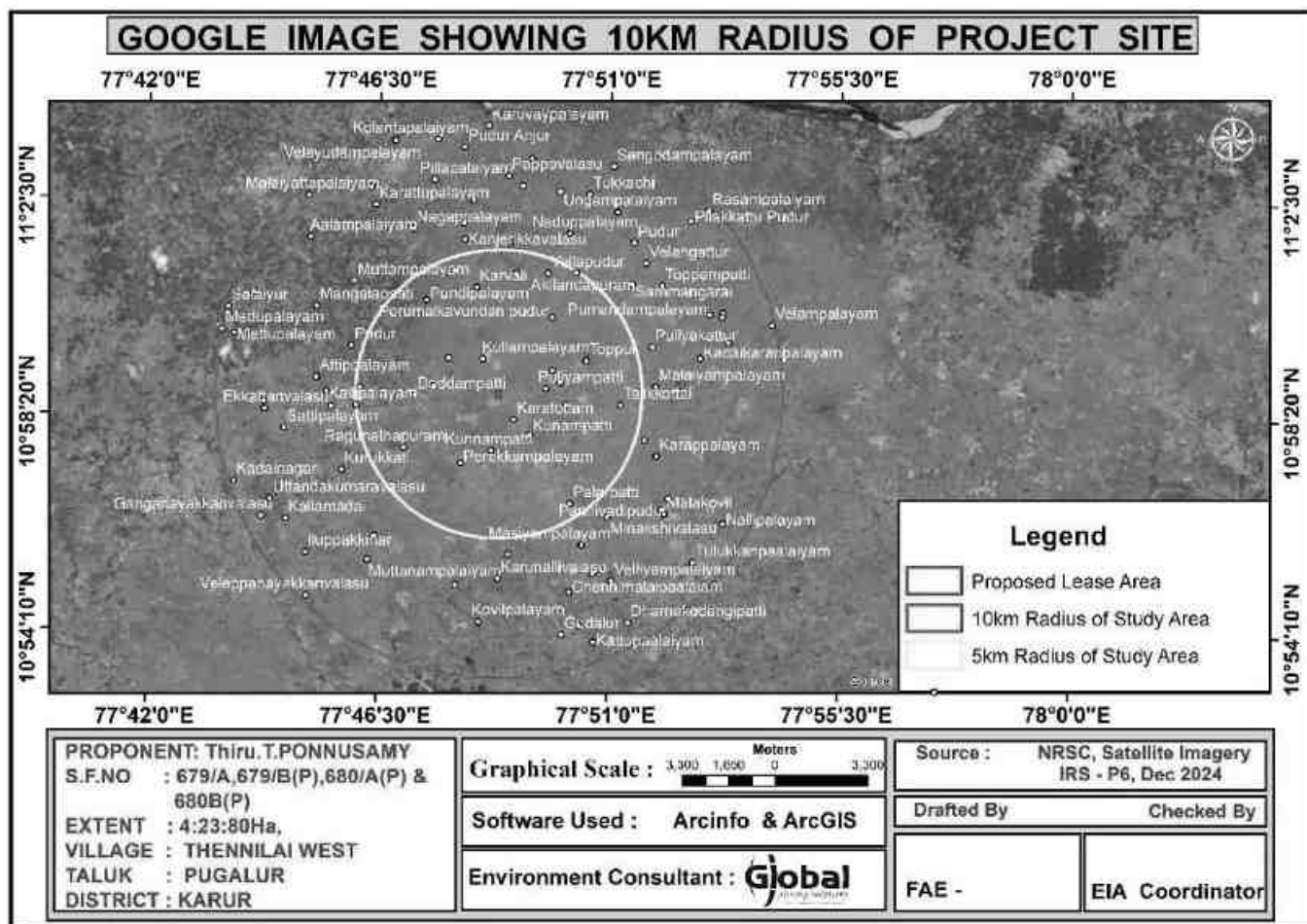


FIGURE 3.2 – GOOGLE IMAGE OF THE PROJECT AREA (10 KM RADIUS)



3.3 EXISTING ENVIRONMENTAL SCENARIO

3.3.1 METEOROLOGICAL ENVIRONMENT

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.

3.3.1.1 Climate

The climatic conditions of Karur are tropical in nature. In winter, there is much less rainfall than in summer. According to Köppen and Geiger, this climate is classified as Aw. The average temperature in Karur is 28.2°C | 82.7 °F. Approximately 724 mm |

28.5 inch of rainfall occurs on a yearly basis. Karur experiences a moderate climate, and the summers are not easy to define.

3.3.1.2 Rainfall

The Average Annual Rainfall data received from 2019 to 2024 are given below.

Table 3.2 - Rainfall data						
Annual Rainfall in mm						Normal rainfall in mm
2019	2020	2021	2022	2023	2024(As on 30.09.2024)	
524.5	1258.4	919.8	722.7	558.5	359.1	655.0

Source: Tamilnadu Water Supply and Drainage Board, Karur District

3.3.1.3 Relative Humidity

High relative humidity between 46.02% and 73.37% prevail throughout the year. Relative humidity is maximum in the morning and minimum in the evening.

3.3.1.4 Seismic information

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

3.3.1.5 Meteorological Data of the Project Area

The meteorological data collected in the study area from October 2024 to December 2024 which includes Temperature, Wind speed, Wind direction and Relative humidity. Details are given in below table and Figure 3.4.

Table 3.3 - Meteorological Data Recorded at Site			
S.NO	Parameters		Values
1.	Temperature (°C)	Min	18
		Max.	35
		Avg	26.05
2.	Relative Humidity (%)	Min	27.34
		Max	100
		Avg	74.03
3.	Wind Speed (km/h)	Min	0
		Max	24.20
		Avg	5.7
4.	Wind Direction	Predominant wind blowing from W to E	

FIGURE 3.3 - SEISMIC MAP OF INDIA

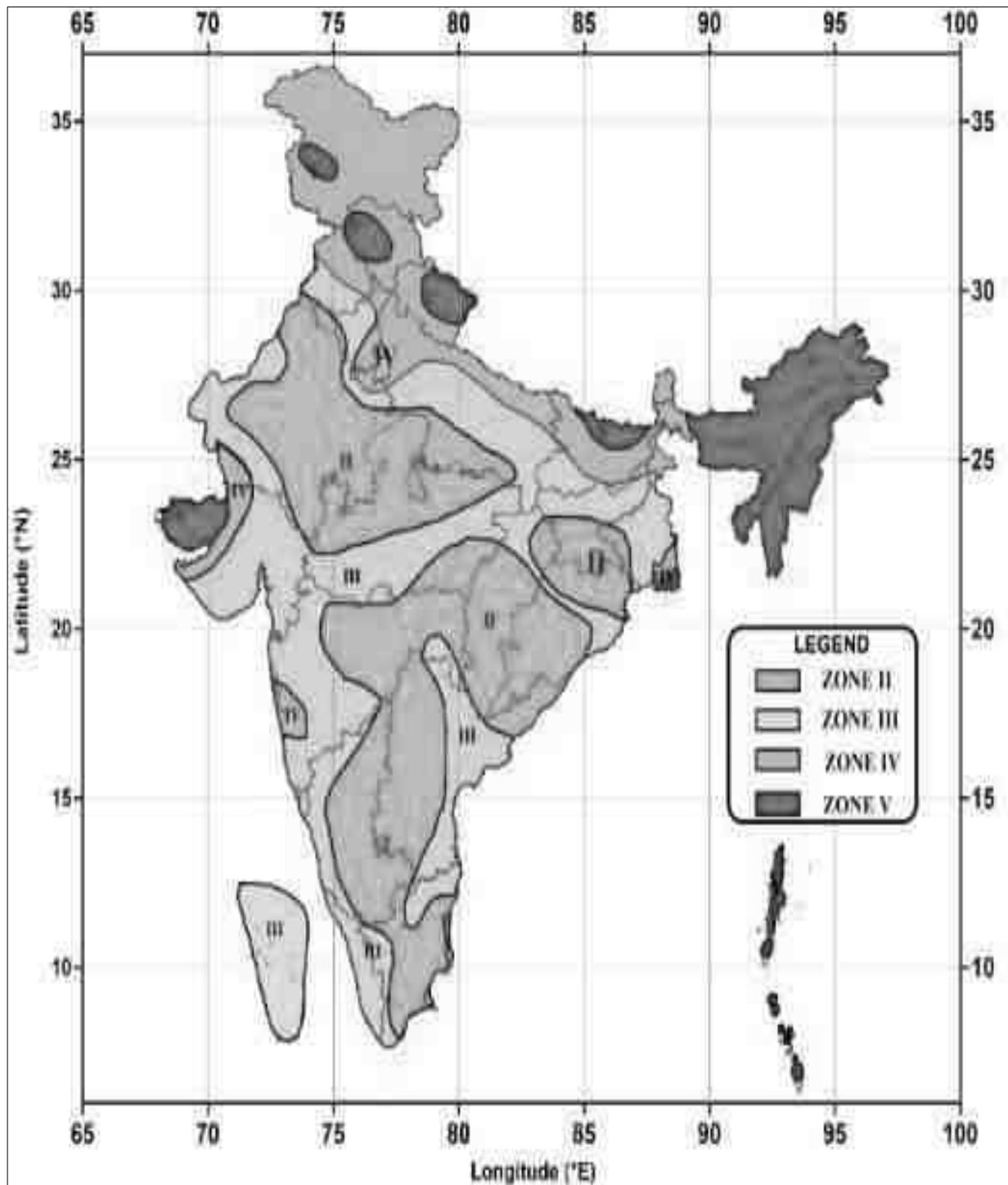
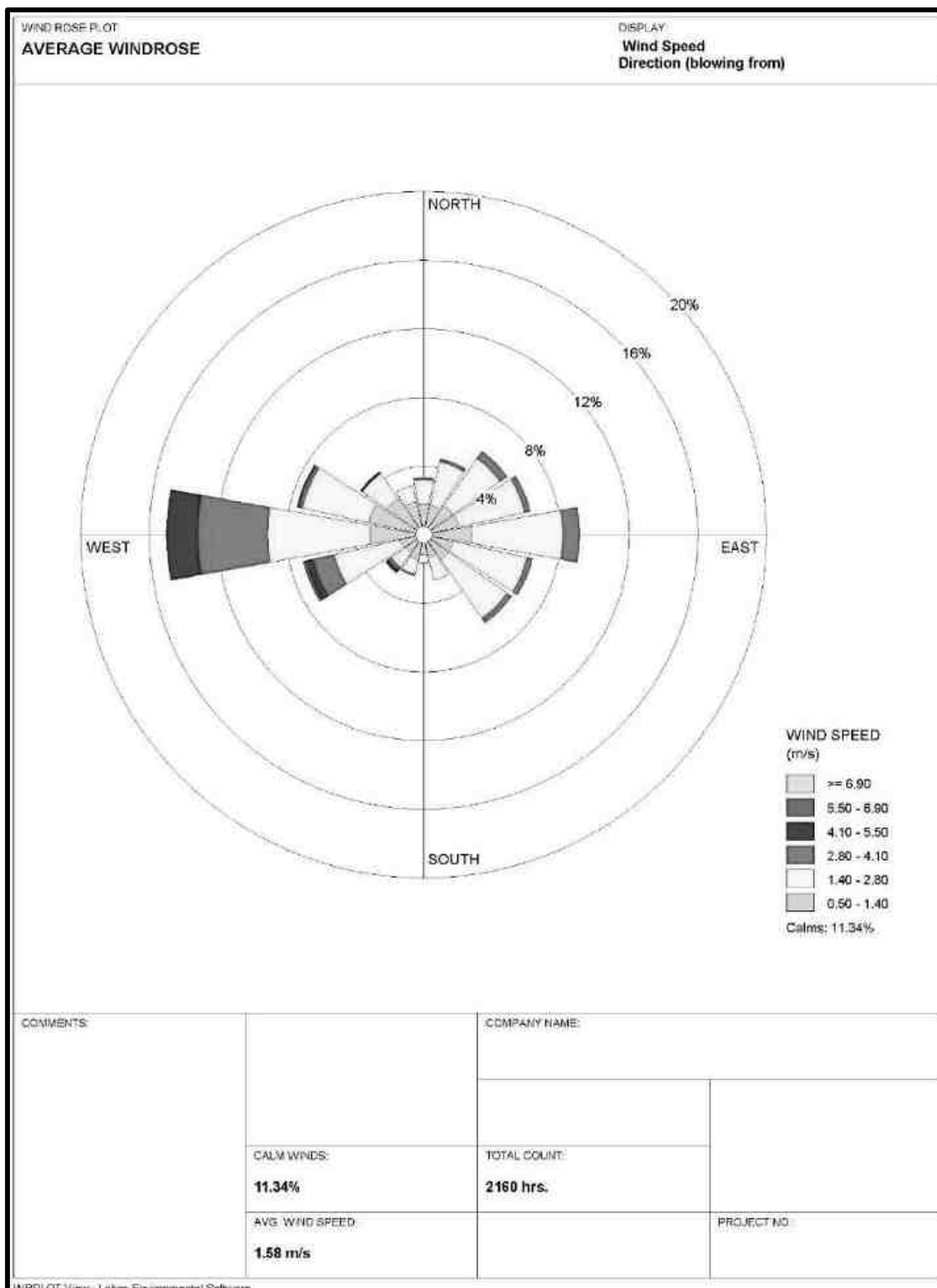


FIGURE 3.4 - WIND ROSE PLOT DURING OCTOBER TO DECEMBER 2024

- Predominant Wind Blowing From West to East



3.3.2 AMBIENT AIR MONITORING DATA

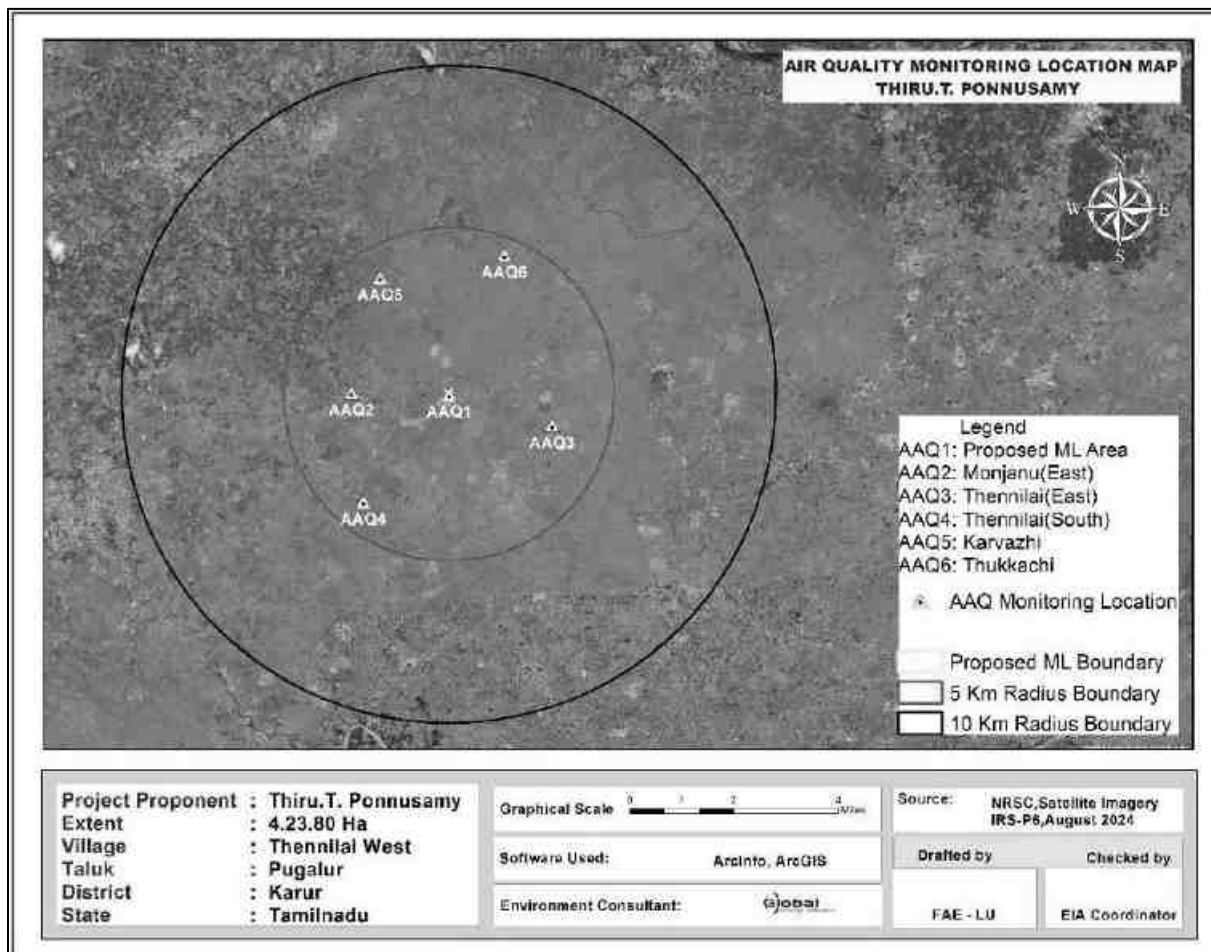
Ambient air quality monitoring has been carried out in 6 locations. One in the core zone and remaining five locations are in the buffer zone areas. Monitoring locations have been chosen such that the measurement represents the overall air condition prevailing in the area. The study area represents mostly rural environment with stone mining quarries & crushers.

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

The levels of Respirable Particulate Matter (PM₁₀), Fine Particulates (PM_{2.5}), Sulphur Dioxide (SO₂) and Oxides of Nitrogen (NO_x) were monitored for establishing the baseline status. PM₁₀ were sampled with the help of Respirable Dust Samplers on filter papers and SO₂ & NO_x were absorbed in the respective absorption media in the impingers attached to RD samplers and analyzed Spectro-photometrically. PM_{2.5} was monitored with the help of Fine Particulate Samplers. The monitoring locations for ambient air study are given in Table 3.4 and Figure 3.5 below.

Table 3.4 - Details of Ambient Air Quality Monitoring Locations				
S. No.	Station Code	Locations	Distance & Direction	Coordinates
1	AAQ1	Proposed ML Area	Core Zone	10°58'49.06"N 77°48'48.50"E
2	AAQ2	Monjanu (East)	3.9 Km, NW	10°58'29.36"N 77°46'38.88"E
3	AAQ3	Thennilai (East)	3.5 Km, SE	10°58'7.91"N 77°50'46.42"E
4	AAQ4	Thennilai (South)	4.5 Km, SE	10°56'27.14"N 77°47'43.99"E
5	AAQ5	Karvazhi	3.8 Km, N	11°0'50.04"N 77°48'24.07"E
6	AAQ6	Thukkachi	4.7 Km, NE	11°1'4.74"N 77°50'6.04"E

FIGURE 3.5 - AMBIENT AIR MONITORING LOCATIONS



3.3.2.1 Results and Discussion

The concentrations of various air pollutants at the 6 locations are given below. For all the components in the table, the unit are in $\mu\text{g}/\text{m}^3$

Table 3.5 - Results of Air sampling Analysis in 6 locations

Station ID	Min	Max	Avg.
Particulate matter PM_{2.5} (µg/m³)			
AAQ-1	26.9	35.1	31.2
AAQ-2	23.2	30.3	26.5
AAQ-3	22.6	29.6	25.8
AAQ-4	21.2	25.4	23.3
AAQ-5	21.0	25.3	23.0
AAQ-6	22.5	26.8	24.5
CPCB NAAQS 2009 for PM_{2.5} - 60 µg/m³			
Particulate matter PM₁₀ (µg/m³)			
AAQ-1	58.1	75.9	67.3
AAQ-2	49.0	64.1	56.0
AAQ-3	47.8	65.6	54.5
AAQ-4	44.5	53.7	49.1
AAQ-5	44.2	53.4	48.5
AAQ-6	49.2	58.4	53.5
CPCB NAAQS 2009 for PM₁₀ - 100 µg/m³			
Sulphur Di-oxide as SO₂ (µg/m³)			
AAQ-1	6.7	8.5	7.7
AAQ-2	4.5	5.7	5.1
AAQ-3	4.0	5.5	4.6
AAQ-4	3.6	5.9	4.7
AAQ-5	3.6	5.1	4.3
AAQ-6	4.1	5.6	4.8
CPCB NAAQS 2009 for SO₂ - 80 µg/m³			
Oxide of Nitrogen as NO₂ (µg/m³)			
AAQ-1	11.9	17.2	14.7
AAQ-2	7.0	11.0	8.7
AAQ-3	7.2	12.2	9.6
AAQ-4	7.5	12.6	9.8
AAQ-5	7.7	11.5	9.6
AAQ-6	8.5	13.1	10.4
CPCB NAAQS 2009 for NO₂ - 80 µg/m³			

From the table it is seen that, in the ambient air, the PM₁₀ values were in the range of 44.2 – 75.9 µg/m³. PM_{2.5} values were in the range of 21.0 – 35.1 µg/m³. SO₂ levels were ranging from 3.6 – 8.5 µg/m³. NO₂ levels were ranging from 7.0 – 17.2 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). The results are summarized in graph and given as below Figure - 3.6 to 3.11.

FIGURE 3.6 - AMBIENT AIR QUALITY DATA A1 - MINE LEASE AREA

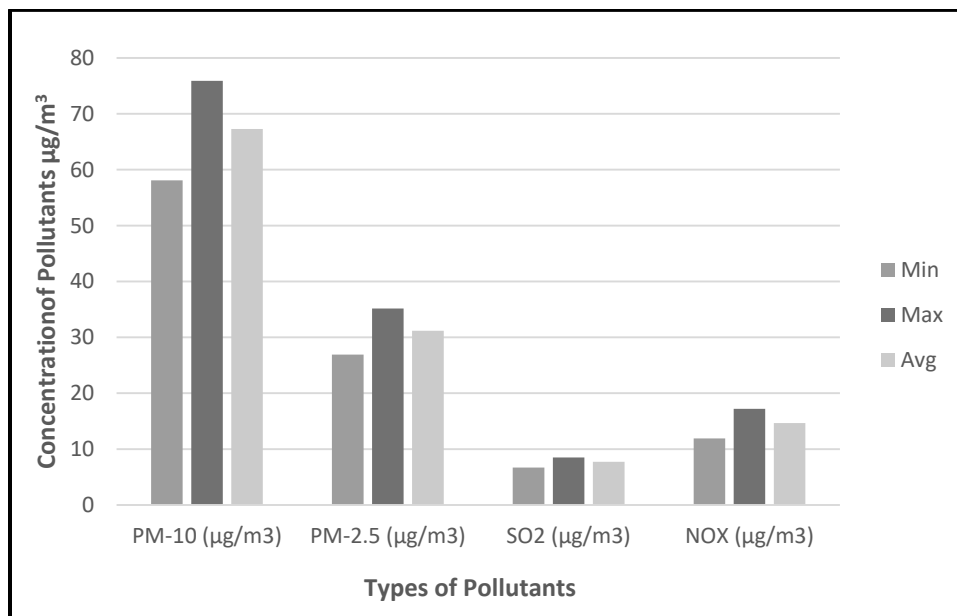


FIGURE 3.7 - AMBIENT AIR QUALITY DATA A2 - MONJANU (EAST) VILLAGE

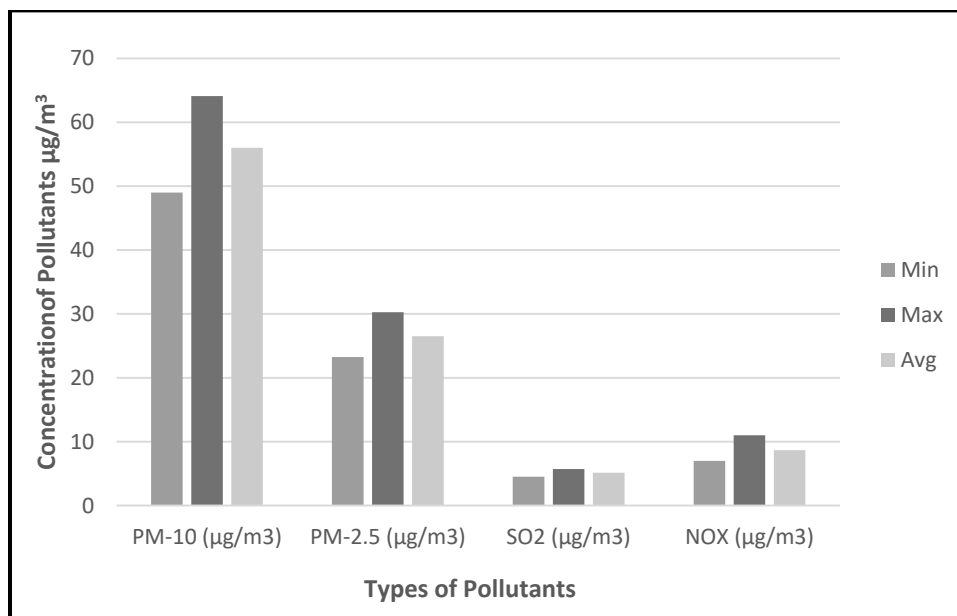


FIGURE 3.8 - AMBIENT AIR QUALITY DATA A3 - THENNILAI (EAST) VILLAGE

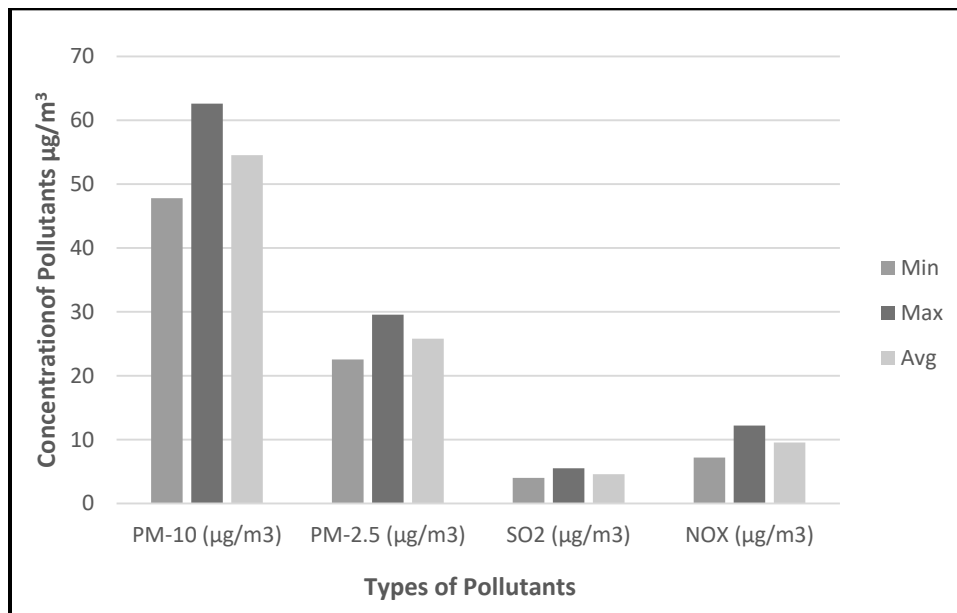


FIGURE 3.9 - AMBIENT AIR QUALITY DATA A4 - THENNILAI (SOUTH) VILLAGE

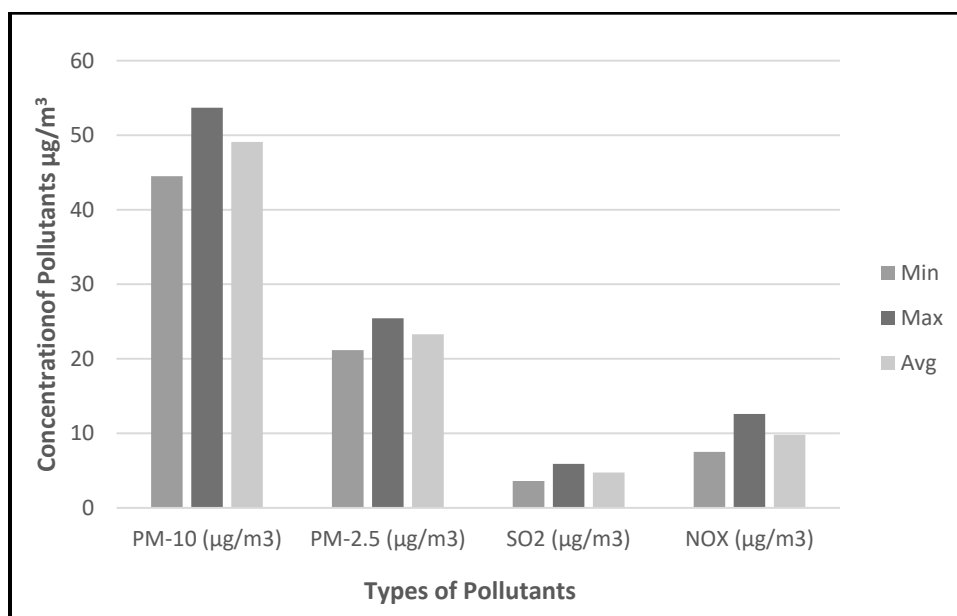


FIGURE 3.10 - AMBIENT AIR QUALITY DATA A5 - KARVAZHI VILLAGE

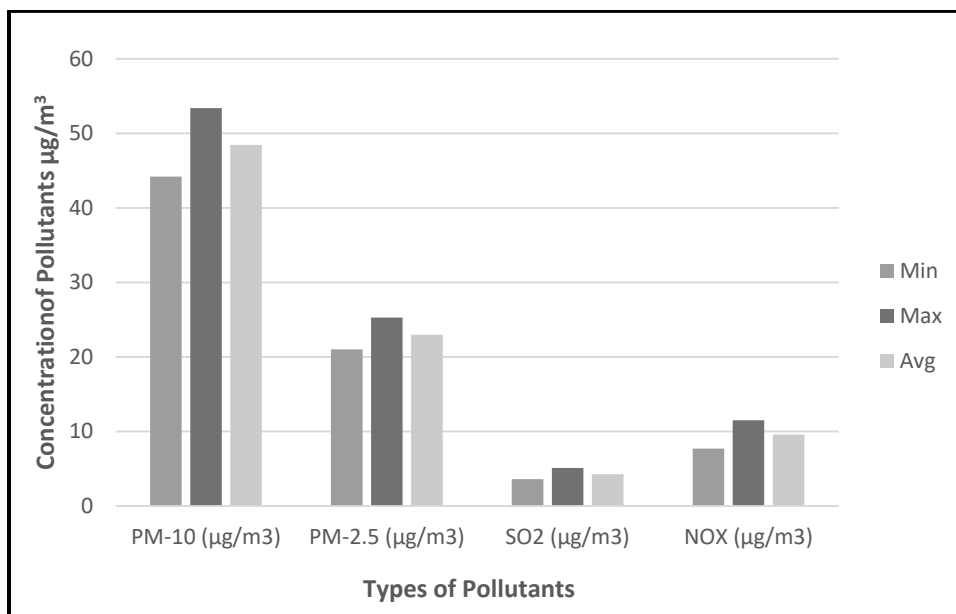
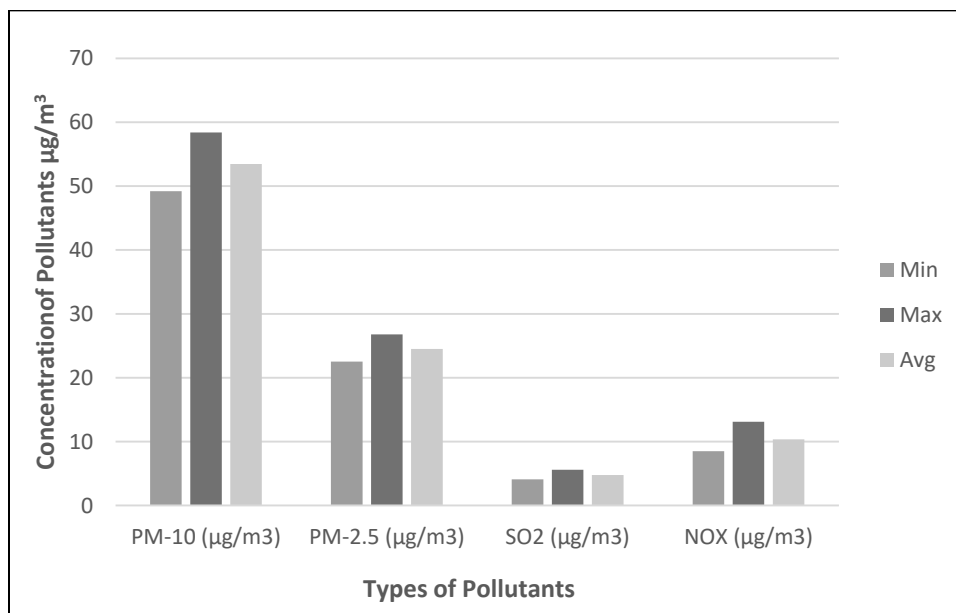


FIGURE 3.11 - AMBIENT AIR QUALITY DATA A6 - THUKKACHI VILLAGE



3.3.3 WATER ENVIRONMENT

Assessment of baseline data on water environment includes:

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

3.3.3.1 Surface Water

Surface water samples were taken from Noyyal River, which is located at a distance of 7.0 km in NE side. The rainfall over the area is moderate, the rainwater storage in open wells, trenches is in practice over the area and the stored water acts as source of freshwater. The prevailing status of surface water quality has been assessed during the study period. Surface water quality locations and results are provided in Table 3.6 and 3.7.

3.3.3.2 Ground Water

The rainfall is the main source for the availability of water both in surface and sub-surface. The quantum of rainfall varies every year depending upon the monsoon. However, the extraction of surface and sub-surface water is increasing year by year. It leads to environmental impact on the water sources like depletion of water level, deterioration of water quality. It makes the demand for the quantification of available water and also its quality for various purposes like agriculture, industries, drinking and domestic purposes. Total six (06) ground water monitoring locations were identified for assessment in different villages around the project site based on the usage of sub surface water by the settlements/ villages in the study area. The groundwater results are compared with the acceptable and permissible water quality standards as per IS: 10500 (2012) for drinking water. Groundwater quality monitoring locations and results are given in Table 3.6 and 3.8.

3.3.3.3 Sampling Locations

Two (2) 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 water bodies. The samples were analysed as per the procedures specified by CPCB, IS-10500:2012. The water sampling locations are given in Table 3.6 and shown as Figure 3.12a & 3.12b.

The monitoring locations were selected based on:

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

Table 3.6 - Water Sampling Locations			
S.NO	Location Code	Monitoring Locations	Latitude and longitude
Surface Water			
1	SW1	Noyyal River (Up- stream)	11°03'43.62"N 77°48'19.31"E
2	SW2	Noyyal River (Downstream)	11°01'27.29"N 77°52'56.16"E
Ground Water			
1	GW1	Proposed ML Area	10°58'49.06"N, 77°48'48.50"E
2	GW2	Monjanu (East)	10°58'29.36"N, 77°46'38.88"E
3	GW3	Thennilai (East)	10°58'7.91"N, 77°50'46.42"E
4	GW4	Thennilai (South)	10°56'27.14"N, 77°47'43.99"E
5	GW5	Karvazhi	11°0'50.04"N, 77°48'24.07"E
6	GW6	Thukkachi	11°1'4.74"N, 77°50'6.04"E

FIGURE 3.12a - BASE MAP OF SURFACE WATER SAMPLING LOCATIONS

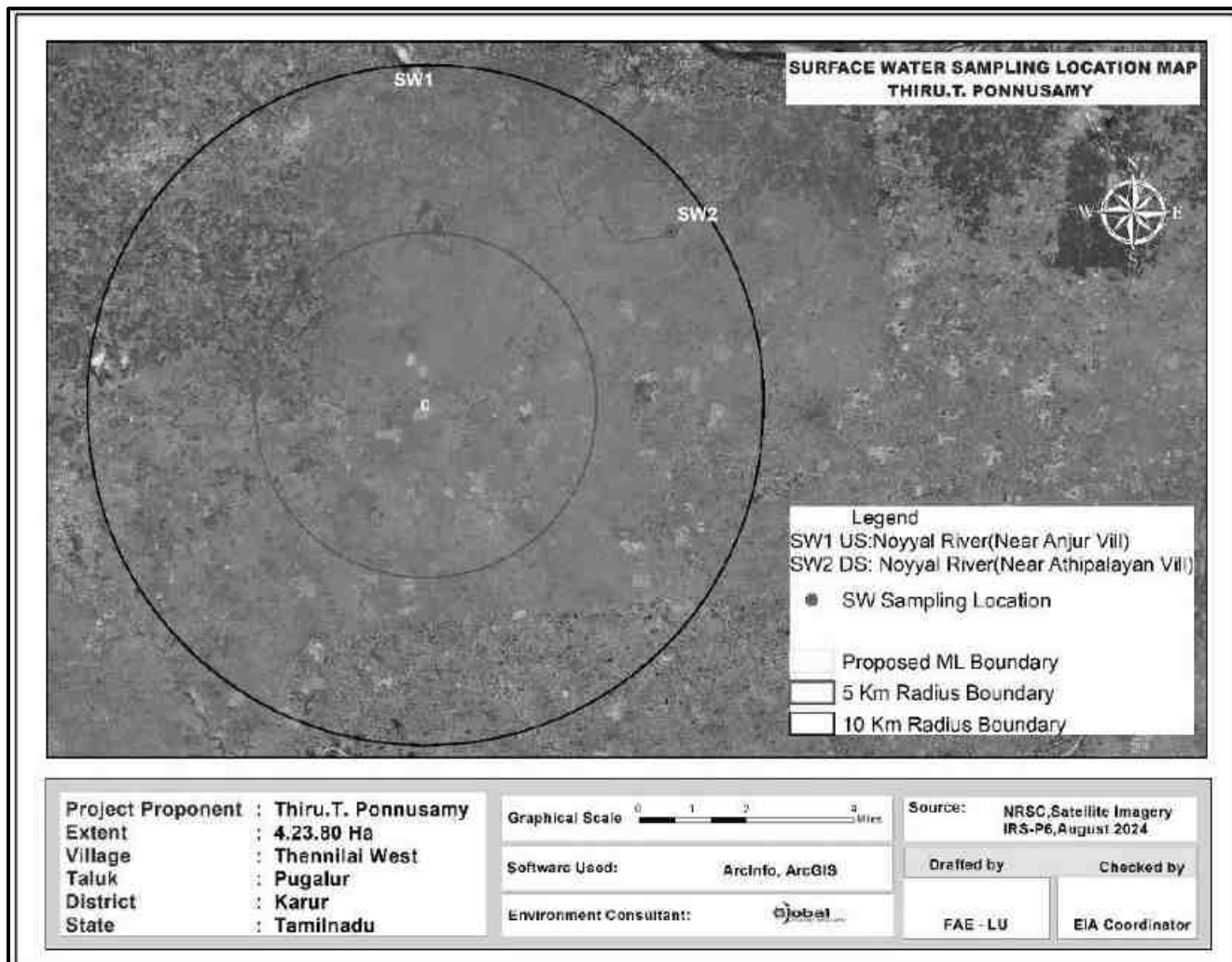
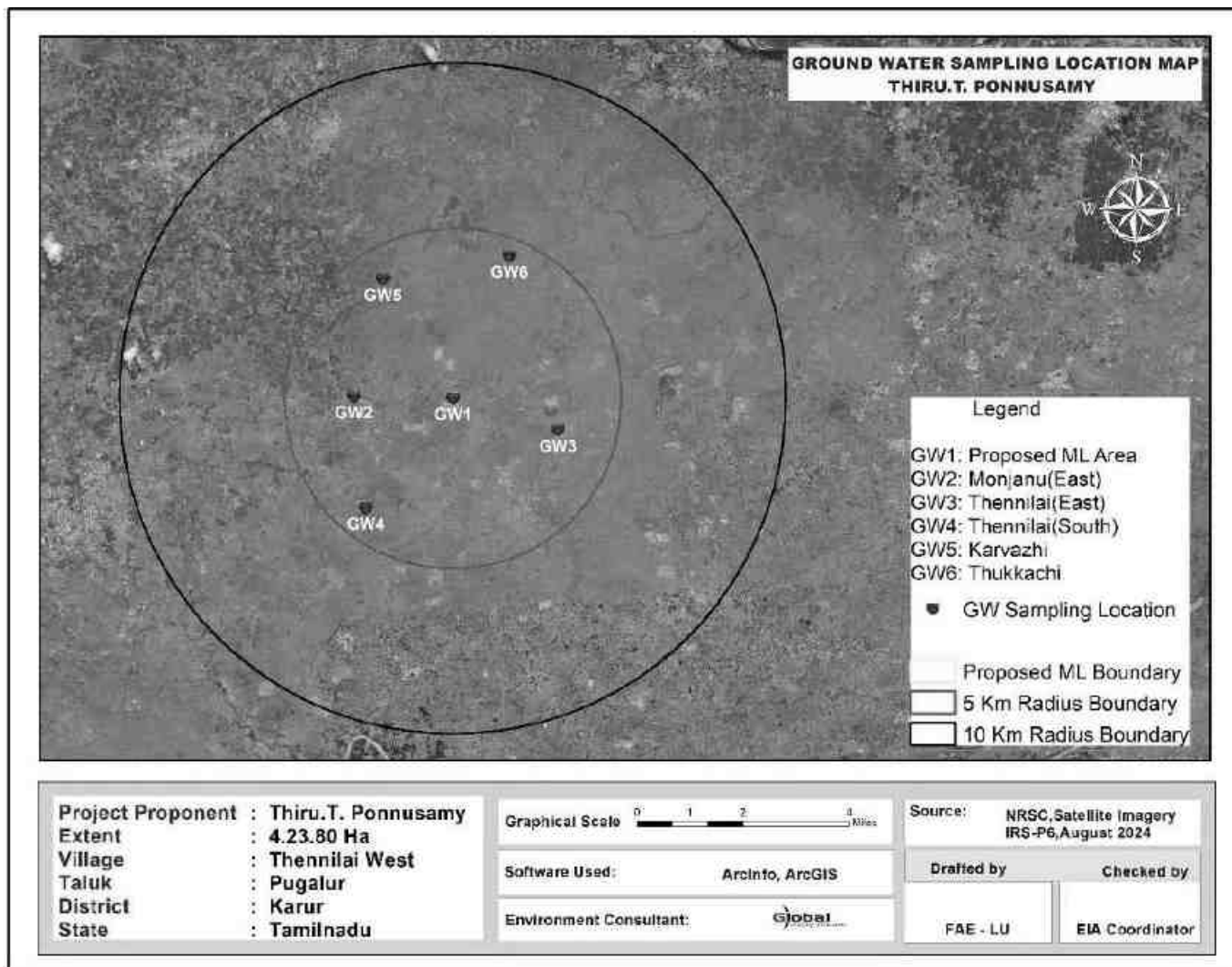


FIGURE 3.12b - BASE MAP OF GROUND WATER SAMPLING LOCATIONS



3.3.3.4 Results and discussion

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

(a) Surface Water Analysis Results

The pH varied from 7.26 to 7.68, while optimal pH range for sustainable aquatic life is 6.5 to 8.5 pH. Chloride varied between 136 mg/l and 152 mg/l. Nitrates varied from 2.65 to 5.47 mg/l, while Sulphates varied from 158 to 179 mg/l. Turbidity and Total Dissolved Solids varied from 12 to 16 mg/l and 520 to 552 mg/l. From the results, it is observed that Turbidity and TDS values are found to be higher, hence these water can be used for drinking purpose with conventional treatment followed by disinfection.

Table 3.7 - Surface Water Analysis Results

S. No	Parameter	Unit	SW1	SW2	Surface water standards (IS 2296 Class-A)
1	Odour	-	agreeable	Agreeable	-
2	Turbidity	NTU	12.0	16.0	1
3	pH at 25 °C	-	7.26	7.68	6.5-8.5
4	Electrical Conductivity	µS/cm	864.5	905.8	-
5	Total Dissolved Solids	mg/l	520	552	500
6	Total Suspended Solids	mg/l	22.0	34.0	-
7	Total hardness as CaCO ₃	mg/l	212	246	300
8	COD	mg/l	BDL(DL-4.0)	BDL(DL-4.0)	-
9	Calcium as Ca	mg/l	48.4	52.8	-
10	Magnesium as Mg	mg/l	21.8	27.4	-
11	BOD	mg/l	BDL(DL-2.0)	BDL(DL-2.0)	-
12	Total alkalinity as CaCO ₃	mg/l	205	234	-
13	Chloride as Cl ⁻	mg/l	136	152	250
14	Sulphates as SO ₄ ²⁻	mg/l	158	179	400
15	Iron as Fe	mg/l	BDL(DL-0.01)	BDL(DL-0.01)	1.0
16	Nitrate as NO ₃	mg/l	2.65	5.47	20
17	Fluoride as F	mg/l	BDL(DL-0.1)	BDL(DL-0.1)	1.5
18	Manganese as Mn	mg/l	BDL(DL-0.05)	BDL(DL-0.05)	0.5

(b) Ground Water Analysis Results

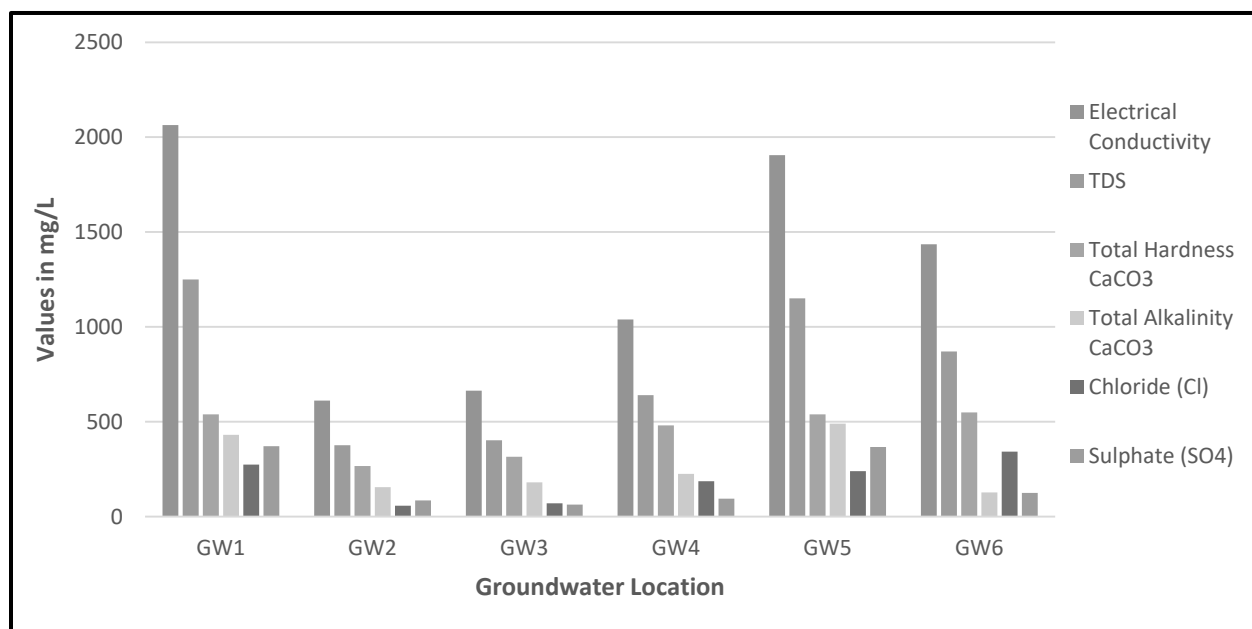
Table 3.8 - Results of Ground Water sampling Analysis

S. No.	Test Parameter	Unit	GW1	GW2	GW3	GW4	GW5	GW6	Specification/Limit (As per IS:10500: 2012)	
									Desirable	Permissible
1	Odour	...	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
2	Taste	...	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	pH	...	7.30	7.45	7.80	7.52	7.53	7.70	6.5 - 8.5	No Relaxation
4	Turbidity	NTU	<1	<1	<1	<1	<1	<1	1	5
5	TDS	mg/L	1250	376	402	640	1150	870	500	2000
6	Fluoride,(F)	mg/L	0.86	0.65	0.70	0.75	0.71	0.87	1	1.5
7	Total Alkalinity, (CaCO ₃)	mg/L	431	155	180	225	490	127	200	600
8	Total Hardness, (CaCO ₃)	mg/L	539	267	316	480	539	549	200	600
9	Calcium,(Ca)	mg/L	82.3	72.1	94.1	114	86.2	125	75	200
10	Calcium as CaCO ₃		206	180	235	284	216	314	-	-
11	Free Residual chlorine as Cl-		BDL(D.L- 0.2)	BDL(D.L- 0.2)	BDL (D.L - 0.2)	BDL(D.L- 0.2)	BDL(D.L- 0.2)	BDL(D.L- 0.2)	0.2	1.0
12	Chloride,(Cl)	mg/L	274	56.7	69.5	186	240	342	250	1000
13	Magnesium,(Mg)	mg/L	80.0	20.7	19.3	47.0	77.6	56.4	30	100
14	Nitrate, (NO ₃)	mg/L	5.57	BDL(DL- 1.0)	BDL(DL- 1.0)	2.03	BDL(DL- 1.0)	BDL(DL- 1.0)	45	No Relaxation
15	Sulphate, (SO ₄)	mg/L	371	85.1	63.4	94.5	367	125	200	400
16	Iron,(Fe)	mg/L	0.05	0.05	0.10	0.02	0.08	0.02	1	No Relaxation
17	Manganese, (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
18	Conductivity	µs/cm	2064	611	664	1039	1905	1435	Not Specified	Not Specified

As Per the data it has been observed that the pH value varies from 7.30 – 7.80, Chlorides ranges from 56.7 – 342 mg/l, Sulphates value found to be between 63.4 – 371 mg/l, Fluoride ranges from 0.65 – 0.87 mg/l, Hardness varies from 267 – 549 mg/l. The ground water has been analyzed as per IS 10500: 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. Total hardness of the samples ranges 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.

Some of the common parameters including EC, TDS, Total Hardness, Total Alkalinity, Chlorides and Sulphates in the 6 locations were plotted and the graph is provided below.

FIGURE 3.13 - VALUES OF FEW COMMON PARAMETERS IN GROUND WATER ANALYSIS

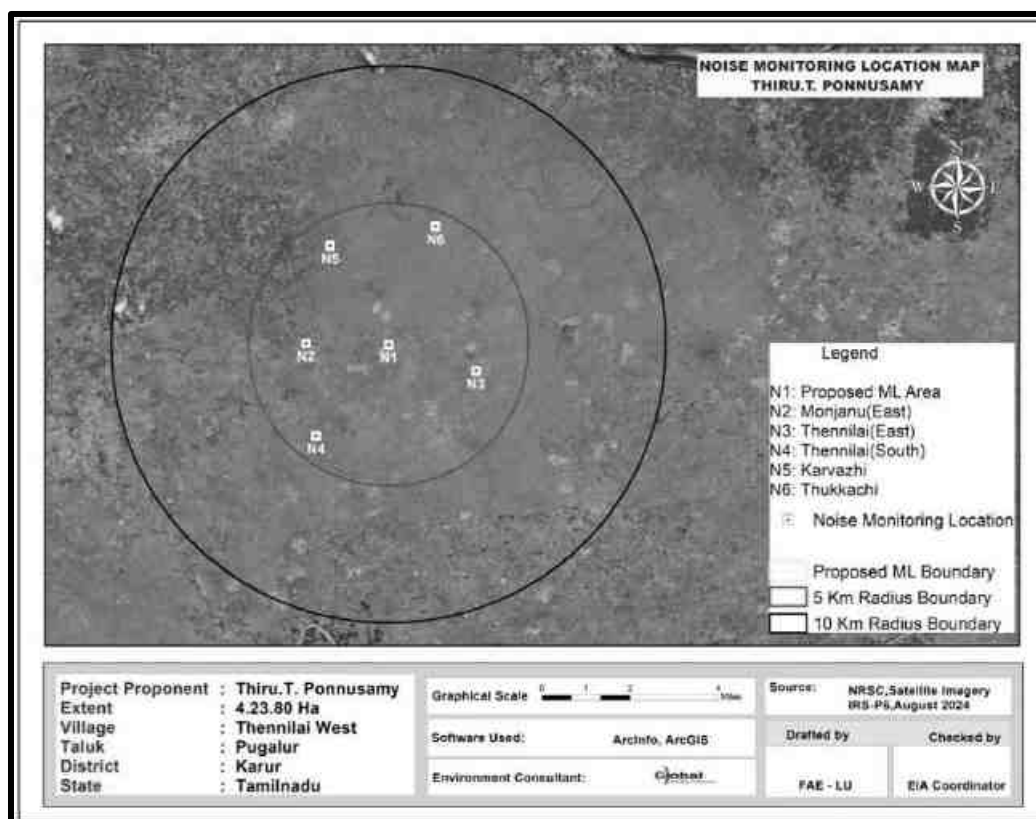


All the values were found to be within the permissible limits.

3.3.4 NOISE MONITORING

Noise level monitoring was calculated using a noise level meter by NABL Accredited lab and the results are summarized below. The noise monitoring locations are given in Figure 3.14.

FIGURE 3.14 - NOISE MONITORING LOCATIONS



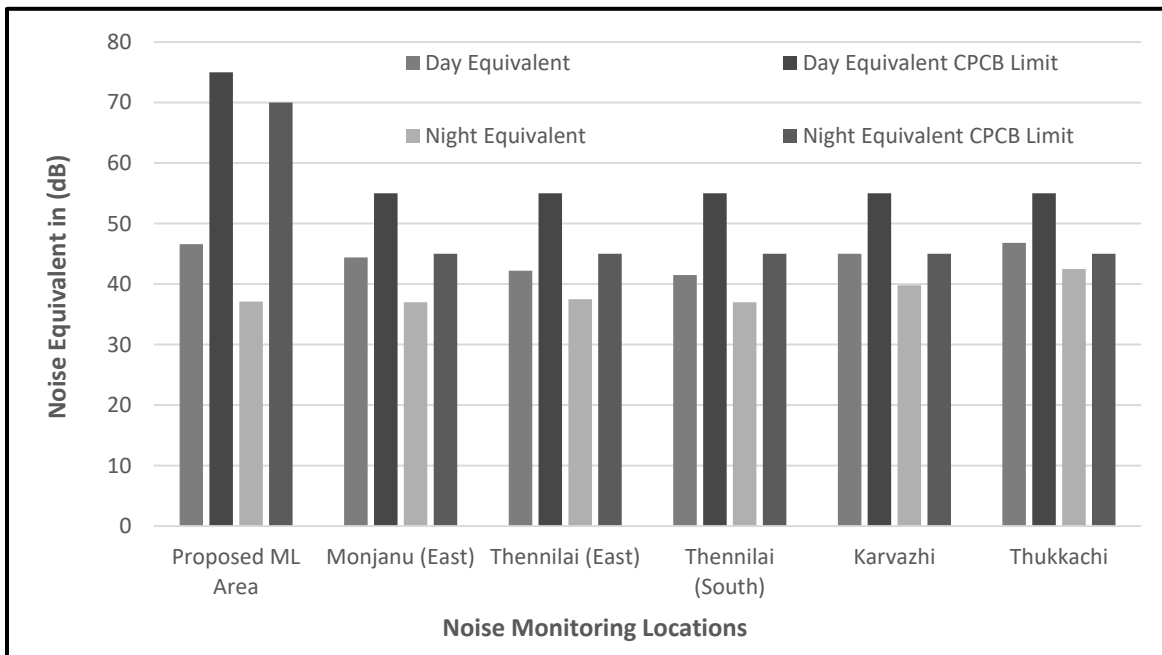
The results are given in Table below.

Table 3.9 - Noise monitoring Results

S. No	Location	Day equivalent (dB)	Night equivalent (dB)	Permissible noise level standards by CPCB		Zone
				Day time (dB)	Night time (dB)	
1	Proposed ML Area	46.6	37.1	75	70	Industrial Zone
2	Monjanu (East)	44.4	37.0	55	45	Residential Zone
3	Thennilai (East)	42.2	37.5			
4	Thennilai (South)	41.5	37.0			
5	Karvazhi	45.0	39.8			
6	Thukkachi	46.8	42.5			

The results are plotted as below.

FIGURE 3.15 - DAY AND NIGHT EQUIVALENT VALUES IN 6 LOCATIONS



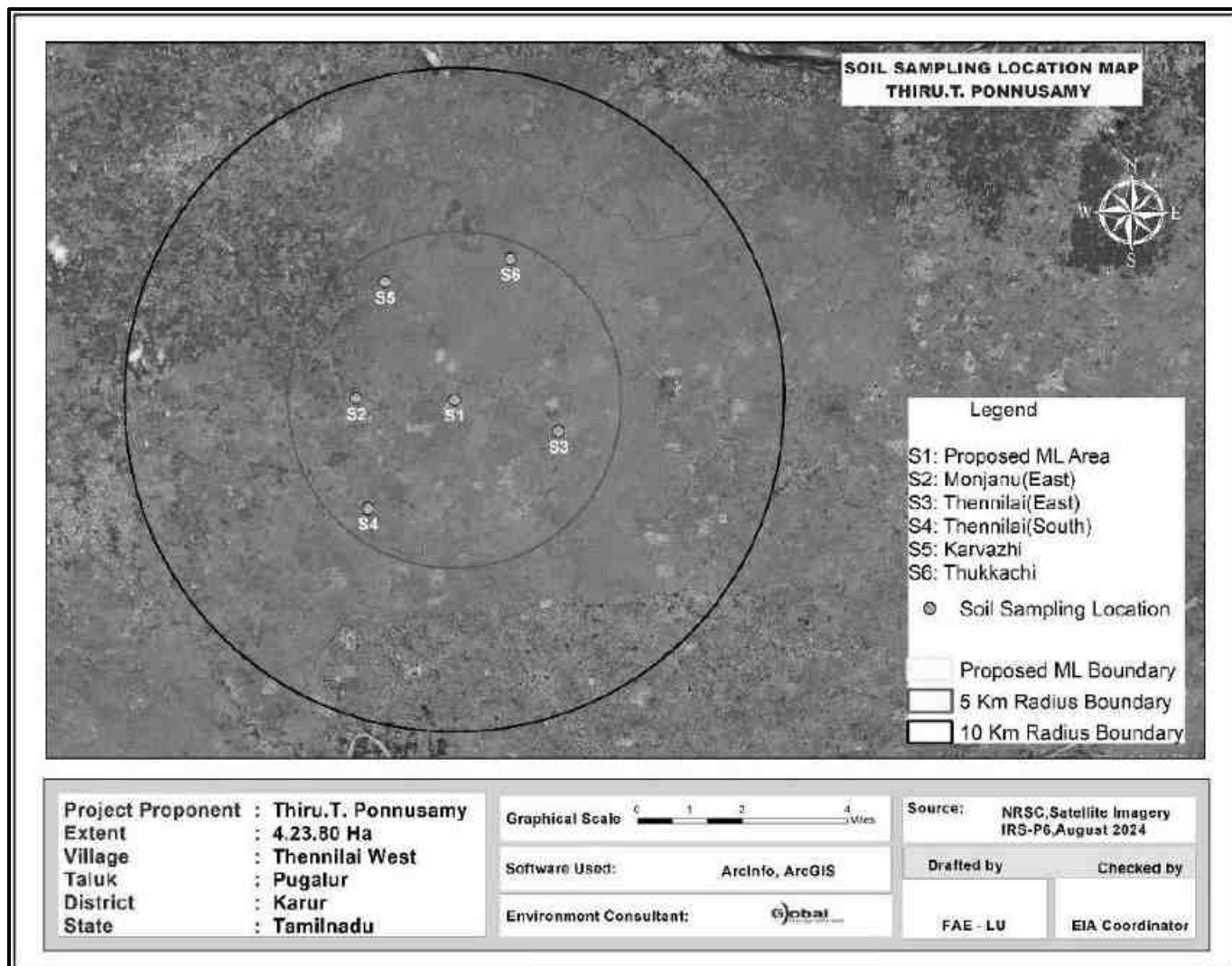
3.3.4.1 Results and Discussion

From the table, it is observed that, in the core zone, the Day Equivalent and Night Equivalent Noise levels observed to be 46.6 & 37.1 dB(A) which are well within the permissible noise level standards by CPCB in the Industrial zone. Whereas in the buffer zone the Day Equivalent Noise levels were ranging from 41.5 to 46.8 dB(A) and Night Equivalent Noise levels were ranging from 37.0 to 42.5 dB(A) which are within the CPCB norm of 55 dB(A) for day time and 45 dB(A) for night time in the Residential zone.

3.3.5 SOIL SAMPLING ANALYSIS

Soil samples have been collected from the mine lease area and 5 other locations from Monjanu (East) Village, Thennilai (East) Village, Thennilai (South) Village, Karvazhi Village and Thukkachi Village. The locations are shown in figure below.

FIGURE 3.16 - SOIL SAMPLING LOCATIONS



The results are summarized in the table below.

Table 3.10 - Results of Soil Sample Analysis

S. No.	Parameter	S1 Proposed ML Area	S2 Monjanu (East)	S3 Thennilai (East)	S4 Thennilai (South)	S5 Karvazhi	S6 Thukk achi
1	pH	7.62	6.12	7.54	7.28	7.11	7.36
2	Electrical Conductivity µs/cm	62.47	54.89	76.58	104.5	45.68	87.11
3	Dry Content	95.14	96.68	97.04	93.91	95.91	93.55
4	Water Content	4.86	3.32	2.96	6.09	4.09	6.45
5	Organic Matter	0.87	1.02	0.56	0.73	0.81	1.40
6	Phosphorus mg/kg	0.89	1.63	1.58	2.81	1.53	1.92
7	Texture	SILT LOAM	SILT LOAM	LOAM	LOAM	SILT LOAM	LOAM
8	Sand %	30.56	27.02	44.36	40.58	23.86	45.70
9	Clay %	18.28	11.49	10.22	12.18	18.32	10.48
10	Silt %	51.16	61.50	45.42	47.24	57.83	43.82
11	Total Nitrogen mg/kg	221	329	165	193	249	442
13	Sodium mg/kg	700	674	799	594	831	402
14	Potassium mg/kg	765	733	897	683	959	539
15	Water Holding Capacity %	4.2	3.9	4.5	4.3	3.8	4.1
16	Porosity %	22.5	23.6	20.5	21.9	21.5	25.6

3.3.6 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.

3.3.6.1 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.

(a) Floristic composition in Core Zone

The lease area is a non-forest, Patta land with majority of the area is observed with hard rock formation. Hence, there is no major clearance of plantations within the lease area. It is observed that there are no national parks / Sanctuaries / forests in the 10km buffer area. Details of Flora in the core zone are given below:

Table 3.11 - Flora in Core Zone			
S.No.	Scientific name	Vernacular/English name	Type of flora
1	<i>Borassus flabellifer</i>	Pana Nangu	Trees
2	<i>Lantana trifolia</i>	Unnichi	Shrubs
3	<i>Calotropis gigantea</i>	Erukku	
4	<i>Cassia auriculata</i>	Aavarai	
5	<i>Achyranthes aspera</i>	Nayuruvi	

(b) Floristic Scenario in Buffer zone

The present report gives the review of published secondary data and the results of field sampling conducted during October to December 2024 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 3.12 - Flora in Buffer zone

S.No.	Scientific name	Vernacular/English name	Type of flora
1	<i>Ficus Carica</i>	Athi Maram	Trees
2	<i>Acacia nilotica</i>	Karuvelai	
3	<i>Azadirachta indica</i>	Neem	
4	<i>Cassia auriculata</i>	Aavarai	
5	<i>Casuarina equisetifolia</i>	Savukku	
6	<i>Albizia amara</i>	Arappu	
7	<i>Cocos nucifera</i>	Thennai	
8	<i>Acacia nilotica</i>	Karu- velamaram	
9	<i>Tamarindus indica</i>	Puli	
10	<i>Delonix regia</i>	Cemmayir Konrai	
11	<i>Ficus benghalensis</i>	Aalamaram	
12	<i>Borassus flabelliformis</i>	Panna-maram	
13	<i>Ficus religiosa</i>	Arasamaram	
14	<i>Carica papaya</i>	Papaya	
15	<i>Tectona grandis</i>	Thekku	
16	<i>Ziziphus mauritiana</i>	Elandai	
17	<i>Thespesia populnea</i>	Poovarasam	
18	<i>Jatropha gossypifolia</i>	Kaatamanaku	Shrubs
19	<i>Hibiscus rosa sinensis</i>	Sembaruthi	
20	<i>Euphorbia geniculata</i>	Amman Pacharisi	
21	<i>Calotropis gigantea</i>	Yerukku	
22	<i>Ricinus communis</i>	Aamanakku	
23	<i>Tecoma stans</i>	Arali	
24	<i>Aloe vera</i>	Kathalai	
25	<i>Catharanthus roseus</i>	Nithyakalyani	Herbs
26	<i>Acalypha indica</i>	Kuppaimeni	
27	<i>Mimosa pudica</i>	Thottacherungi	
28	<i>Tephrosia purpurea</i>	Wild indigo	
29	<i>Coccinia grandis</i>	Kovai	Climbers
30	<i>Cissus quadrangularis</i>	Pirandai	
31	<i>Jasminum angustifolium</i>	malli	
32	<i>Ziziphus oenoplia</i>	Ilandai	
33	<i>Cymbopogon</i>	Kanam	Grasses
34	<i>Cyperus rotundus</i>	Kora grass	
35	<i>Cynodon dactylon</i>	Arugu	

3.3.6.2 Fauna in the Study Area

There is no specific Fauna found within ML area. The Fauna in the buffer zone is studied by direct observation method. People in the nearby locality were also consulted. The commonly found fauna in the area are given below.

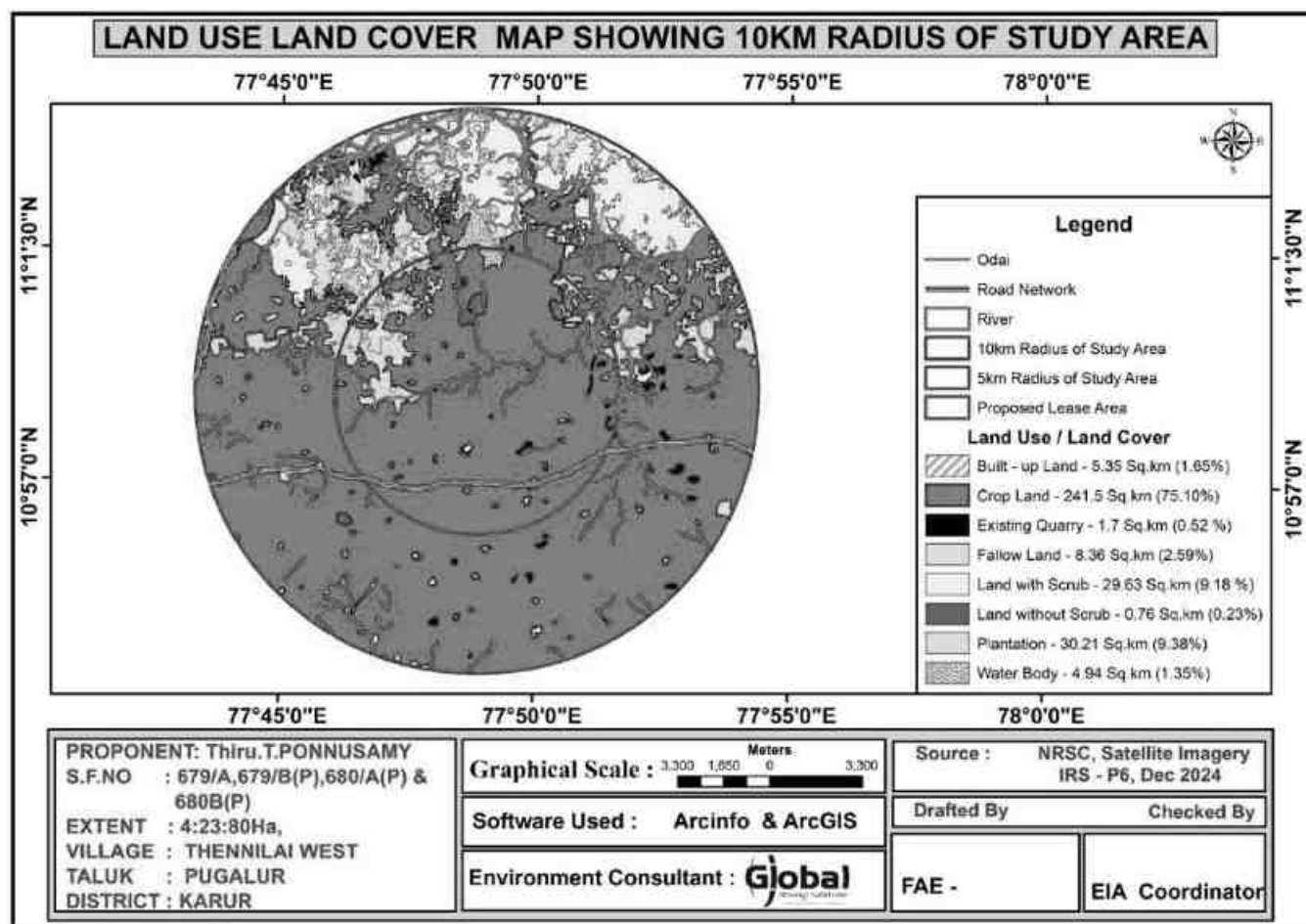
Table 3.13 - Fauna in buffer zone				
S.No.	Scientific name	Common name	Type of fauna	Schedule of wild life protection act
1	<i>Funambulus pennanti</i>	Palm Squirrel	Mammals	IV
2	<i>Funambus palmarum</i>	Three stripped palm squirrel		IV
3	<i>Mus rattus</i>	Indian rat		IV
4	<i>Felis catus</i>	Cat		-
5	<i>Canis lupus familiaris</i>	Indian dog		-
6	<i>Bos Indicus</i>	Indian Cow		-
7	<i>Sus scrofa domesticus</i>	Domestic pig		-
8	<i>Lepus nigricollis</i>	Indian Hare		IV
9	<i>Mus musculus</i>	Common Mouse		IV
10	<i>Bufo melanostictus</i>	Toad	Reptiles & Amphibians	IV
11	<i>Chameleon zeylanicum</i>	Chameleon		IV
12	<i>Bungarus caeruleus</i>	Common krait		IV
13	<i>Ptyas mucosa</i>	Rat snakes		IV
14	<i>Rana hexadactyla</i>	Frog		IV
15	<i>Calotes versicolor</i>	Lizard		IV
16	<i>Bubulcus ibis</i>	Cattle Egret	Birds	IV
17	<i>Coracias benghalensis</i>	Indian Roller		IV
18	<i>Corvus splendens</i>	Common Crow		V
19	<i>Passer domesticus</i>	House Sparrow		IV
20	<i>Acridotheres tristis</i>	Common Myna		IV
21	<i>Streptopelia chinensis</i>	Pigeon		V

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.

3.3.7 LAND USE PATTERN OF THE STUDY AREA

A supervised classification (Digital Interpretation) technique has been adopted for land use classification based on the NRSA Classification Level II for the preparation of land use mapping. The satellite images from NRSC satellite imagery IRS-P6 December 2024 as well as the projection UTM (Universal Traverse Mercator) and datum WGS1984 (World Geodetic System), Northern Hemisphere. The main objective of this section is to provide a baseline status of the study area covering 10 km radius around the mine site so that temporal changes due to the mining activities on the surroundings can be assessed in future. The land use map of the study area is given in Figure 3.17.

FIGURE 3.17 - LAND USE MAP OF THE STUDY AREA

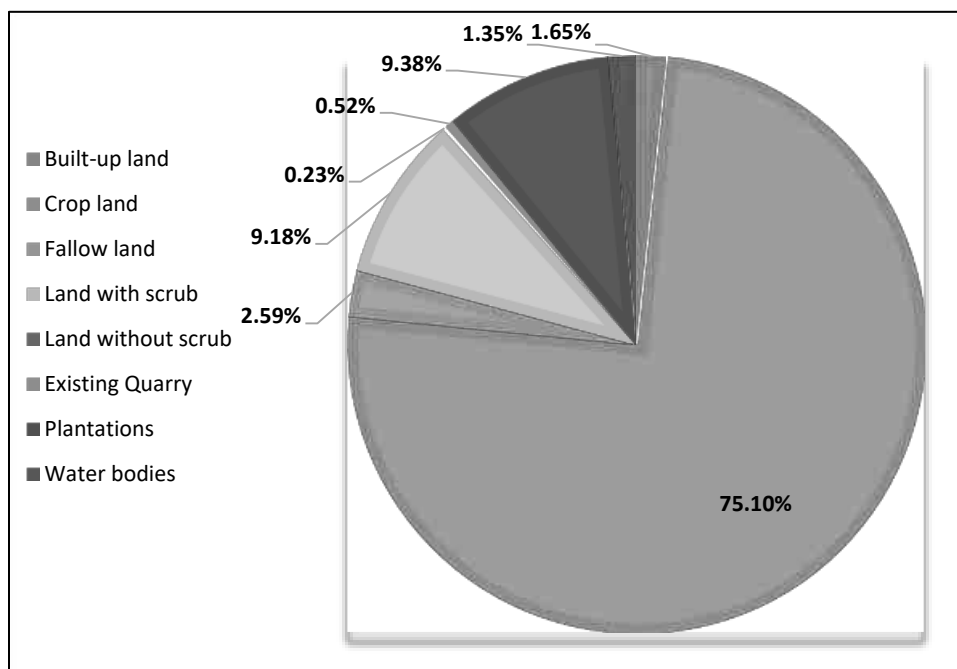


Among different uses of land- forests, pastures, human habitations, and various Economic activities, agriculture is the prime one and most important for the survival of mankind. Land use/land cover patterns give information on the type of surface material that regulates infiltration and surface runoff, as well as the human effect on groundwater (Barik et al. 2017; Roy et al. 2019). Figure 3.17 shows that Crop land is the main (75.10%) is distributed over the region except north, north-east and north western part of the study area. Built-up land covers 1.65% of the study area. The fallow land covers 2.59% and water body covers 1.35% of the study area. About 9.38% of the study area is occupied by plantation and land with scrub cover 9.18% of the area.

From the above Land Use Map, Pie Diagram and Land Use table are summarized and given below.

Table 3.14 Land use pattern of the Study area of 10 km radius			
Sl.No.	Land Use / Land Cover	Area in Sq.Km	Area in Percentage
1	Built-up land	5.35	1.65
2	Crop land	241.5	75.10
3	Fallow land	8.36	2.59
4	Land with scrub	29.63	9.18
5	Land without scrub	0.76	0.23
6	Existing Quarry	1.7	0.52
7	Plantations	30.21	9.38
10	Water bodies	4.94	1.35
	Total Area	322.45	100

FIGURE 3.18 – GRAPH SHOWING LAND USE PATTERN WITHIN 10KM RADIUS



It is inferred that the majority of the land in the study area is Agriculture land (includes crop land) 75.10% followed by Plantations. The total built up mining area within the study area is 1.65%. The cluster area of contributes about 0.52% of the total mining area within the study area. This small percentage of Mining Activities shall not have any significant impact on the environment.

3.3.8 SOCIOECONOMIC ENVIRONMENT

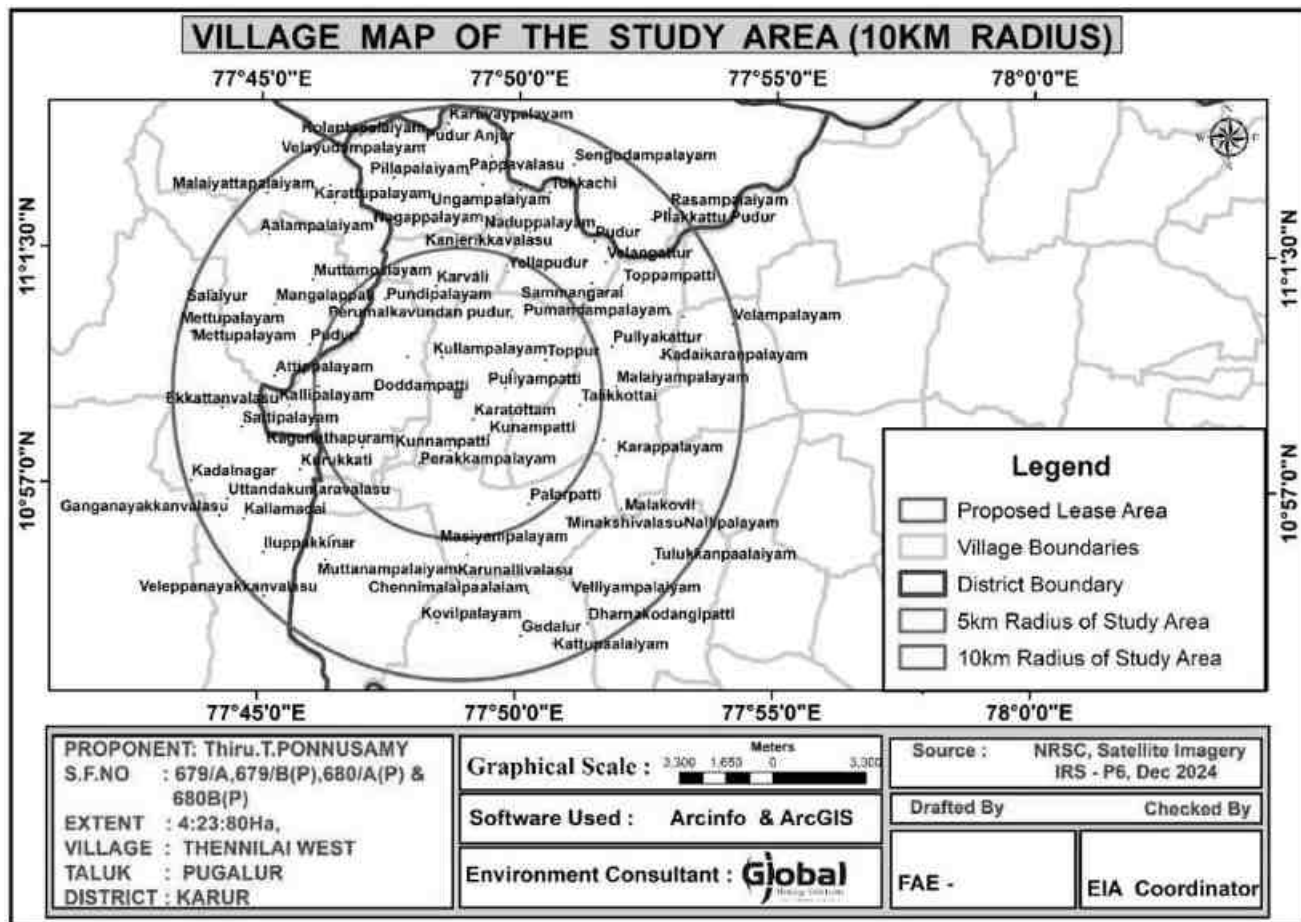
The socio economic environment of the study area is studied by conducting primary sites through site visits and conducting sample surveys. The secondary data obtained from Census 2011 is also used. The following data area collected from secondary data:

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

3.3.8.1 Details of Villages

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

FIGURE 3.19 - VILLAGE MAP OF THE STUDY AREA



The project is located in Thennilai West Village, Pugalur Taluk, Karur District. From the secondary data, there are 18 villages were observed in the study area of 10km radius. List of villages are given below.

Table 3.15 - Village details in study area				
S.No.	Village/Town Name	Radius	Taluk Name	District Name
1	Karvazhi	1-5km	Pugalur	Karur
2	Monjanur (East)			
3	Monjanur (West)			
4	Thennilai (East)			
5	Thennilai (West)			
6	Thennilai (South)			
7	Anjur	6-10km		
8	Athipalayam			
9	Elakkaturamachandrapuram			
10	Gudalur (West)			
11	Gudalur (East)			
12	K.Paramathi			
13	Kodanthur (North)			
14	Kodanthur (South)			
15	Munnur			
16	Nadanthai (North)			
17	Nadanthai (South)			
18	Thukkachi			

3.3.8.2 Population Profile of the Study Area

The total population is 36728 which comprise of 18167 males and 18561 females. The table below shows that the male and female population ratios are equal. Among the total population 1.6% belong to Scheduled Tribes, 20.35% are Scheduled Caste and the balance 78.05% people belong to other castes. Among the total population, 65.22% of the people are literate. Among the total population, 37.45% are literate males and 27.77% are literate females. Also the total population, 46.41% are total

workers and 53.59% are total non-workers. This results shows that the male literates are higher than the female literates.

Table 3.16 - Population profile of the study area		
Particulars	No of Population	Percentage (%)
A. Population break-up by Gender		
Male Population	18167	49.95
Female Population	18561	50.05
Total	36728	100
B. Population break-up by Caste		
Scheduled Caste	10191	20.35
Scheduled Tribes	11	1.6
Others	26526	78.05
Total	36728	100
C. Literacy Level		
Male Literate Population	13754	37.45
Female Literate Population	10201	27.77
Male Illiterate	4413	12.02
Female Illiterate	8360	22.76
Total	36728	100
D. Occupational structure		
Total Workers	23648	46.41
Total Non-workers	13080	53.59
Total	36728	100

The results are plotted in figures below.

FIGURE 3.20 - GENDER-WISE POPULATION DISTRIBUTION

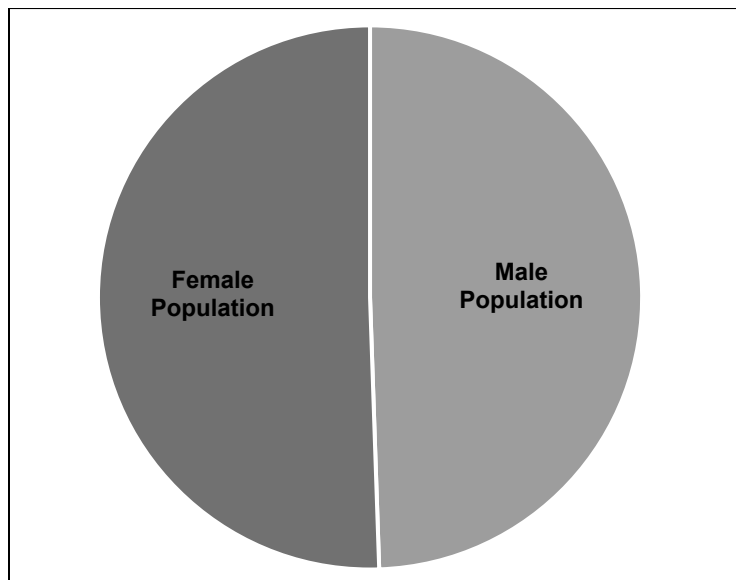


FIGURE 3.21 - GENDER WISE LITERACY DISTRIBUTION

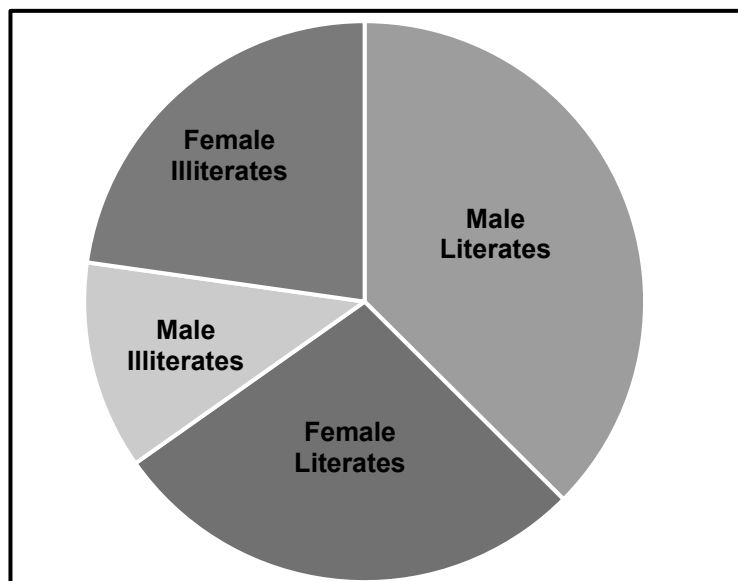
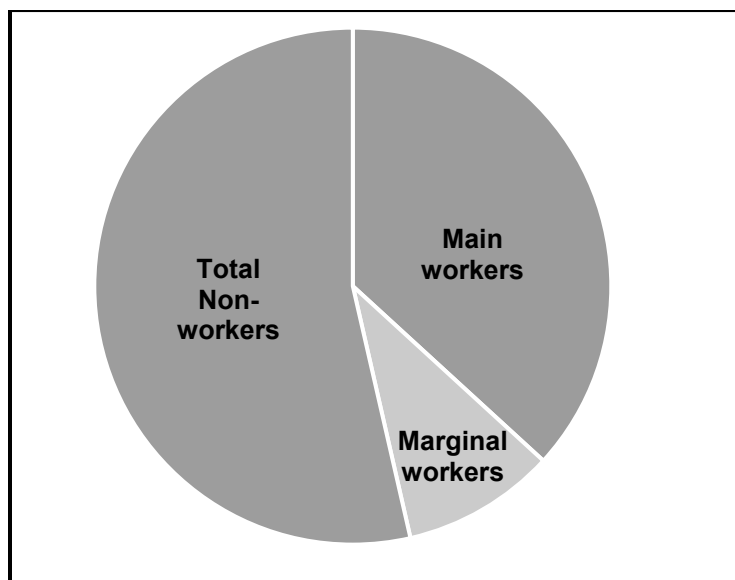


FIGURE 3.22 - OCCUPATIONAL STRUCTURE WITHIN BUFFER ZONE



3.3.8.3 Infrastructure Facilities in the Study Area

(a) Education

In the study area, there are totally 58 Primary Schools functioning in these 18 rural villages. Among them 6 villages have 2 primary schools, 3 villages have 3 primary schools, 8 villages have more than 3 primary school.

Table 3.17 - Educational infrastructure in the study area		
S. No.	Particulars	Available in village (Nos)
1	Govt. Primary School	17
2	Govt. Middle School	10
3	Govt. Secondary School	4
4	Govt. Senior Secondary School	2
5	Govt. Arts and Science Degree College	0
6	Govt. Engineering College	0
7	Govt. Medicine College	0
8	Govt. Management Institute	0
9	Govt. Polytechnic	0
10	Govt. Vocational Training School/ITI	0

(b) Healthcare

In the study area, the following facilities are available.

Table 3.18 - Medical Infrastructure in the study area		
S.No.	Particulars	Available in village (Nos)
1	Community Health Centre	0
2	Primary Health Centre	2
3	Primary Health Sub Centre	9
4	Maternity And Child Welfare Centre	2
5	TB Clinic	2
6	Hospital Allopathic	0
7	Veterinary Hospital	4

(c) Other Infrastructure

The other infrastructure facilities available are given below.

Table 3.19 - Other Infrastructure in the study area		
S.No.	Particulars	Available in village
1	Tap Water-Treated	18
2	Covered Well	14
3	Hand Pump	12
4	Tube Wells/Borehole	17
5	Post office	2
6	Public bus services	15
7	Commercial Bank	2
8	Cooperative bank	2

3.3.8.4 Sample Survey

The experts will be visiting villages in the study area within 5km radius. Discussions will be held with the people from nearby locality to study the social and economic conditions prevailing in the area. Their observations will be incorporated in Final EIA EMP report.

3.3.9 HYDROGEOLOGY OF THE STUDY AREA

The hydrological and hydrogeological pattern of the study area from the reputed institute is under process. It will be submitted in the Final EIA EMP report. Now the hydrogeology status was studied using satellite imagery. Details are as follows:

3.3.9.1 Physiography and Drainage Pattern

Proposed Mine lease area is dry Patta land with majority of the area is observed with hard rock formation. There is no any seasonal or perennial Odai within the M.L area. The drainage pattern of the region is plane to sub-dendritic.

In the study area, Noyyal River is located at a distance of 7.0 km in Northeast side and Aathupalayam Dam is located at a distance of 5.25 km on the Northern direction. The drainage map of the study area is given in Figure 3.23.

3.3.9.2 Geology

The regional geology of the study area is shown below Figure 3.24. The type of rock formation in the core and buffer zone is composed of Granite, Garnet Granulite, Hornblende Biotite Gneiss, Metagabbro Pyroxenite, Pink Migmatite, Pyroxene Granulite and Ultramafics. The geology of the study area is detailed below.

Sl.No.	Geological description	Area in sq.km	Area in percentage
1	Granite, Garnet Granulite	0.67	0.21
2	Hornblende Biotite Gneiss	315.35	97.77
3	Metagabbro Pyroxenite	0.16	0.05
4	Pink Migmatite	2.8	0.87
5	Pyroxene Granulite	0.64	0.20
6	Ultramafics	2.9	0.90
Total		322.52	100.00

3.3.9.3 Geomorphology

Predominantly the buffer zone is dominated by Pediplain Weathered buried as detailed below. The geomorphology of the study area is given in Figure 3.25.

Sl.No.	Geomorphological description	Area in Sq.Km	Area in Percentage
1	Pediment	1.96	0.60
2	Pediplain Weathered buried	320.26	99.30
3	Structural Hills	0.3	0.10

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

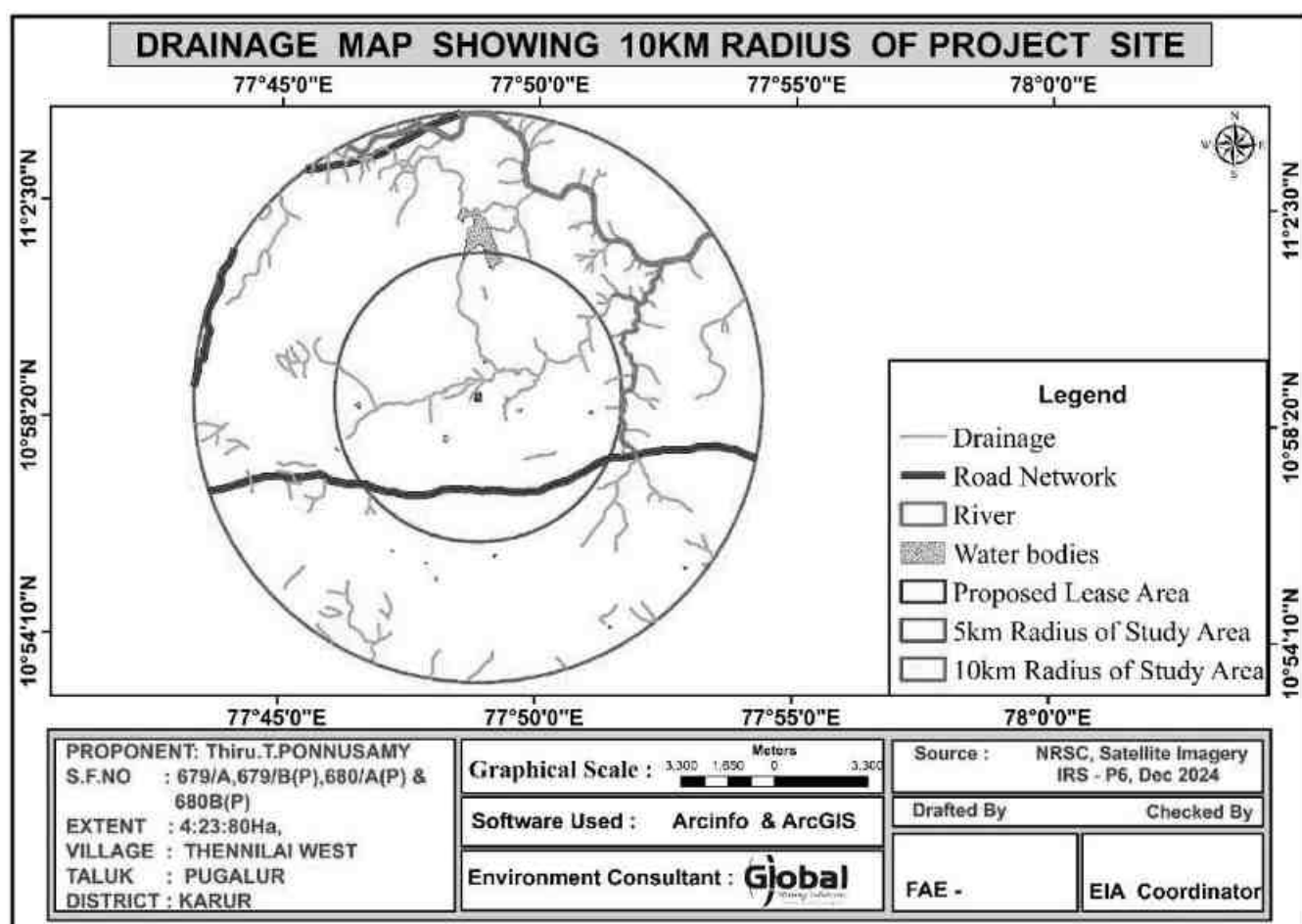
Total	322.52	100.00
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3.3.9.4 Soil

The study area is mainly dominated by well-drained soil category. Soil map of Core & Buffer Zone map is given in Figure 3.26. Soil map of the study area is detailed below.

Sl.No.	Soil drainage pattern	Area in Sq.km
1	Well-drained soil	295.41
2	Somewhat excessively drained soil	27.12

FIGURE 3.23 – DRAINAGE MAP SHOWING 10KM RADIUS OF PROJECT SITE



DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

FIGURE 3.24 – GEOLOGY MAP SHOWING 10KM RADIUS OF PROJECT SITE

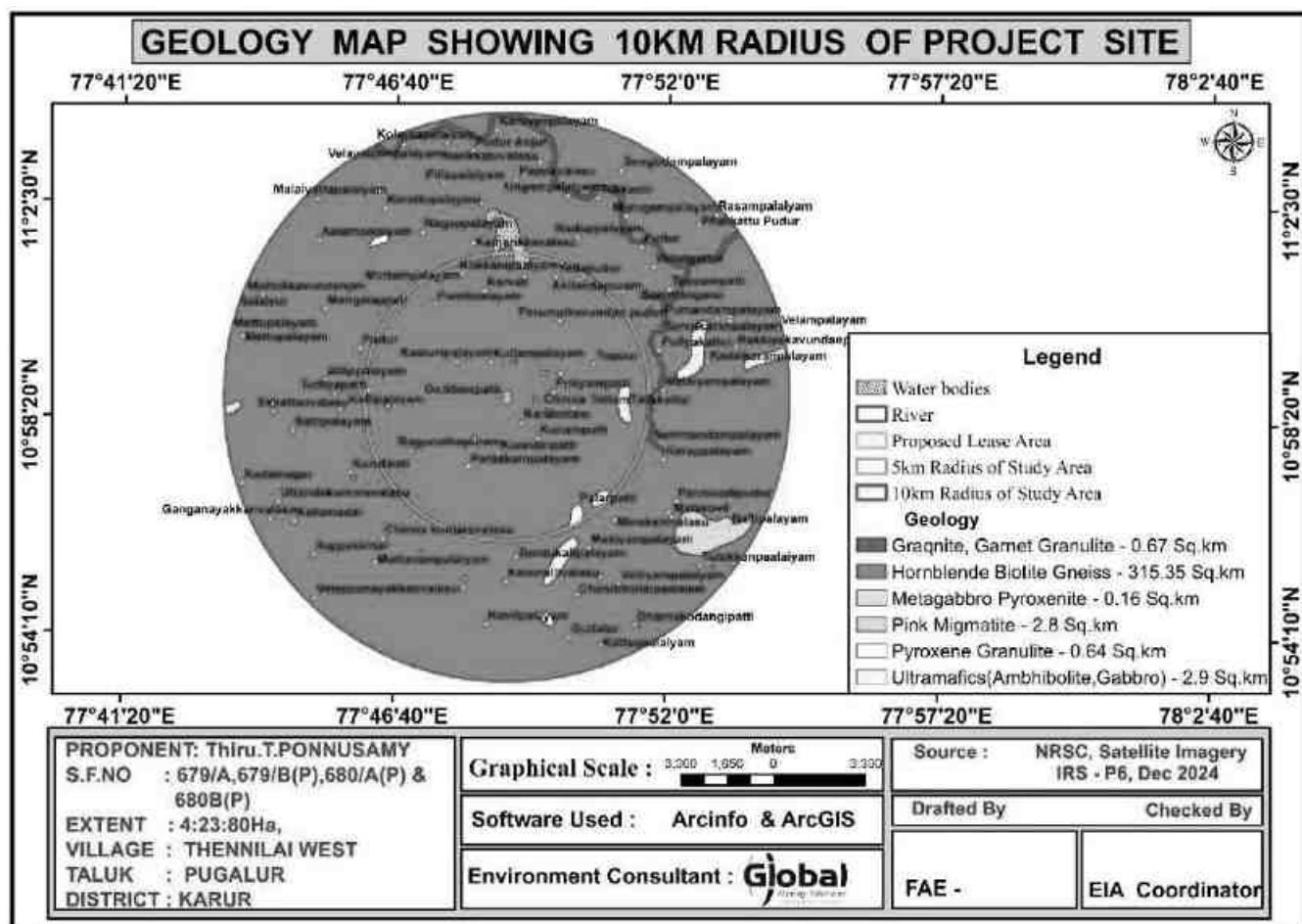


FIGURE 3.25 - GEOMORPHOLOGY MAP SHOWING 10KM RADIUS OF PROJECT SITE

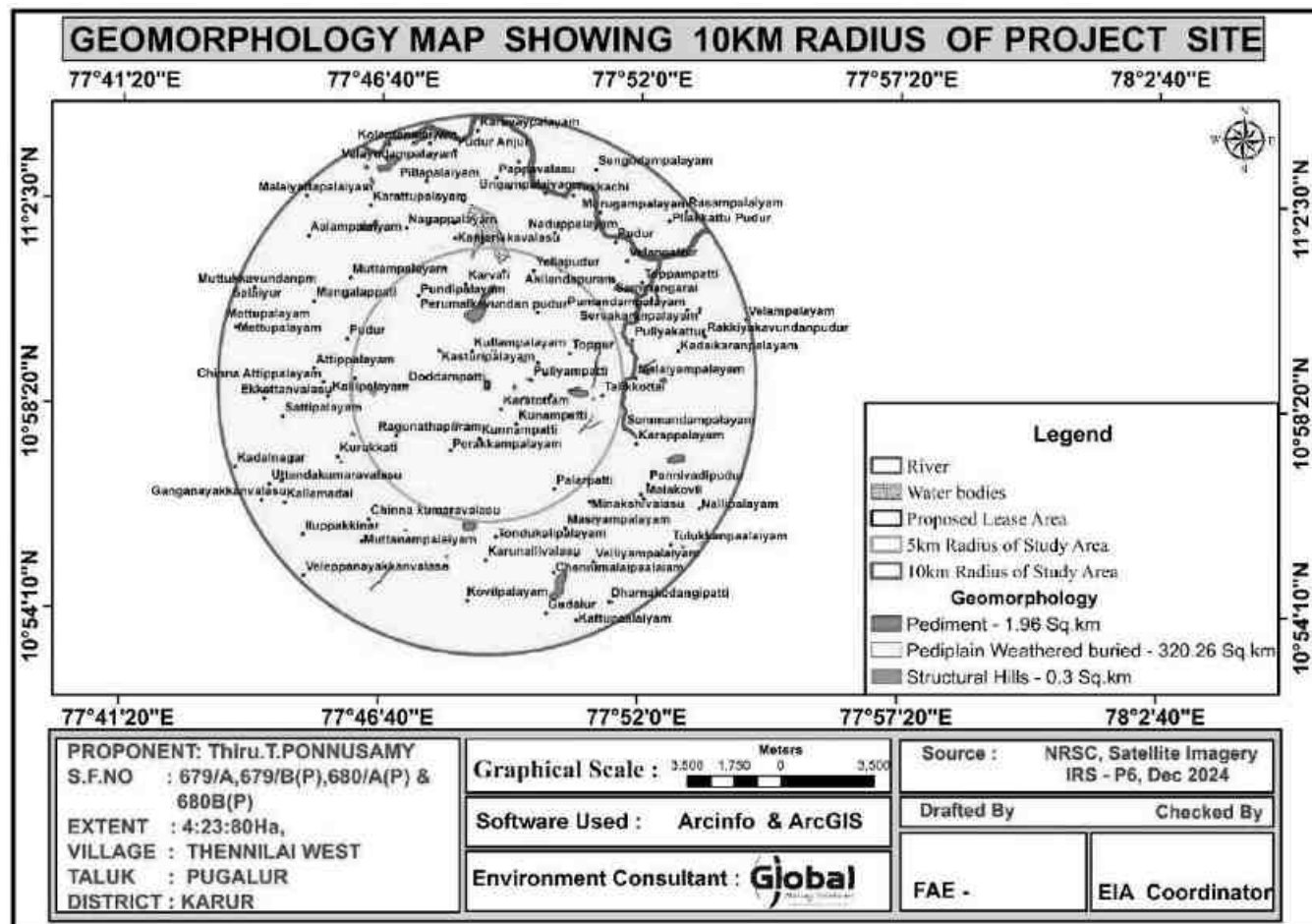
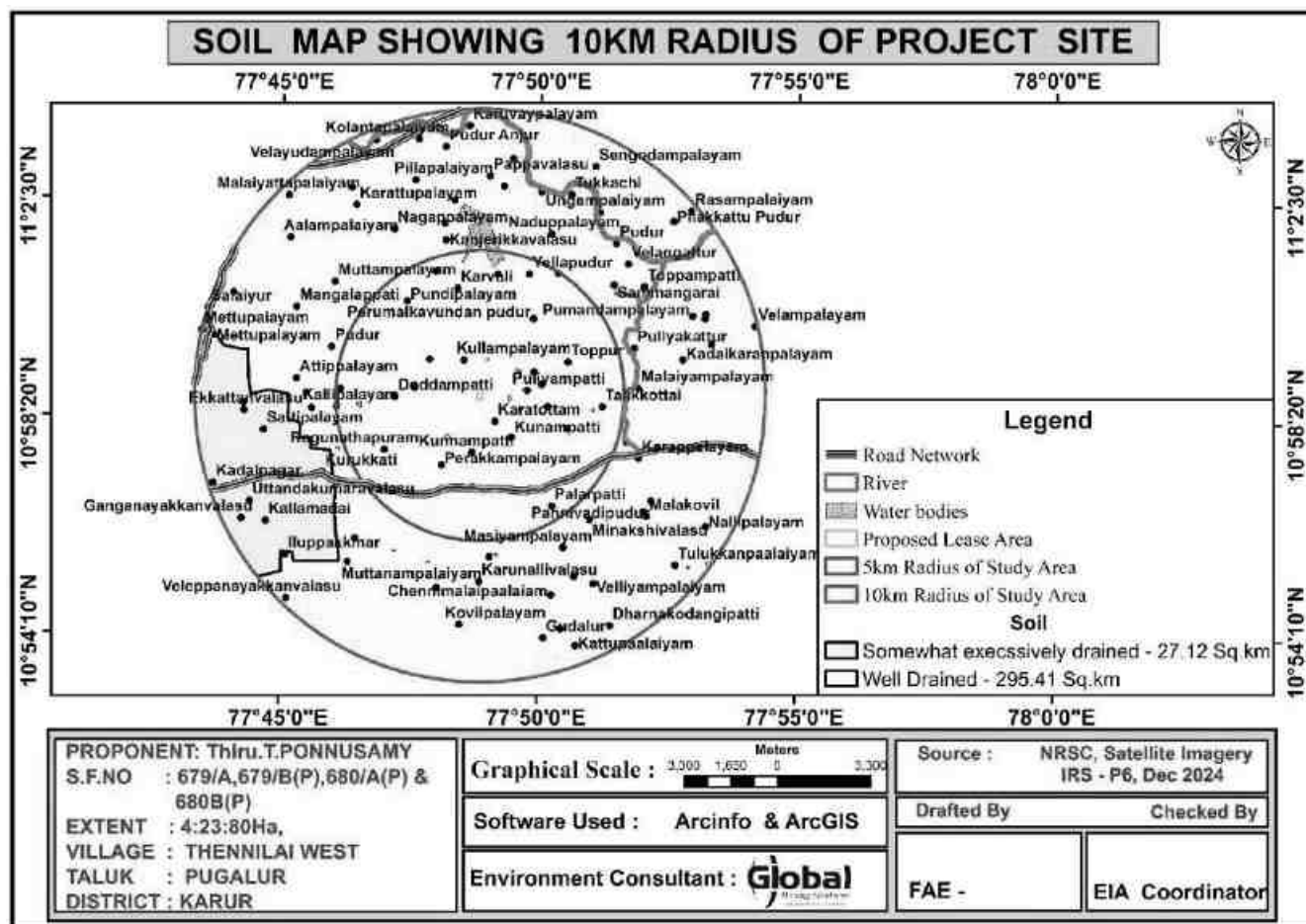


FIGURE 3.26 – SOIL MAP SHOWING 10KM RADIUS OF PROJECT SITE



CHAPTER 4

ANTICIPATED ENVIRONMENTAL IMPACTS AND **MITIGATION MEASURES**

4.1 INTRODUCTION

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

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

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

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

4.2 LAND ENVIRONMENT

This is a Proposed Rough Stone Quarry of Thiru.T.Ponnusamy at S.F.Nos. 679/A, 679/B(P), 680/A(P) and 680/B(P) over an extent of 4.23.80 Ha., in Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State. The method of mining is Opencast mechanized with a bench width and height of 5m. It is proposed to excavate to 8,21,260 m³ of Rough Stone & 1,69,200 m³ of Gravel, in which 5,65,550 m³ of Rough stone & 1,69,200 m³ of Gravel will be mined out in first five years and remaining 2,55,710 m³ Rough stone will be mined out in second five year. There is no stream/odai within the mine lease area.

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

The entire mine lease area is Patta land. The project area of 4.23.80 Ha is proposed to be altered by effective quarrying operation such as excavation (3.38.40 Ha), Infrastructure (0.01.0), Road (0.02.0 Ha) and green belt will be developed in the safety zone of 0.82.40 Ha. The ultimate depth of quarrying is proposed with maximum depth of 60m BGL and will not intersect the ground water table.

4.2.1 MEASURES FOR MINIMIZING AND/OR OFFSETTING ADVERSE IMPACTS IDENTIFIED

Aspect	Impact	Mitigation measures																															
Topography	The area applied for quarry lease is exhibits almost plain covered by Gravel formation. Quarrying activity will lead to change in geological setting of the area i.e., Due to the quarrying activity in the mine lease area will leads to affect the aesthetic view on the environment. Further, due to the movement of heavy vehicles in and around the mine lease area will leads to affect the surrounding agricultural lands, ecology and biodiversity, human habitations due to the emissions from vehicles like SO₂, NO_x, PM₁₀, PM_{2.5}, etc., The existing land use pattern is given as under. <table><tr><th>Land Use</th><th>Present Area (Hect)</th><th>Area in use during the quarrying period (Hect)</th></tr><tr><td>Quarrying Pit</td><td>Nil</td><td>3.38.40</td></tr><tr><td>Infrastructure</td><td>Nil</td><td>0.01.00</td></tr><tr><td>Roads</td><td>Nil</td><td>0.02.00</td></tr><tr><td>Green Belt</td><td>Nil</td><td>0.82.40</td></tr><tr><td>Unutilized</td><td>4.23.80</td><td>Nil</td></tr><tr><td>Total</td><td>4.23.80</td><td>4.23.80</td></tr></table> The ultimate pit dimension of the mine lease area is given below.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)	Quarrying Pit	Nil	3.38.40	Infrastructure	Nil	0.01.00	Roads	Nil	0.02.00	Green Belt	Nil	0.82.40	Unutilized	4.23.80	Nil	Total	4.23.80	4.23.80	The major impact due to this project on land environment is the change in land use. Mining activity will be carried out upto a depth of 60m below ground level. At the end of mining period, the quarried pit will act as a water reservoir to store the rain water. Land Use at the end of mine will be as follows. <table><tr><th>Land Use</th><th>Area in use during the quarrying period (Hect)</th></tr><tr><td>Area left for water body</td><td>3.38.40</td></tr><tr><td>Green Belt</td><td>0.82.40</td></tr><tr><td>Remaining area</td><td>0.03.0</td></tr><tr><td>Total</td><td>4.23.80</td></tr></table> At the mine closure stage, 3.38.40 Ha of lease area will be left as rain water harvesting pond. 0.82.40 Ha will be developed with green belt. Greenbelt shall be developed in and around the mine lease area and the details are given below. Totally PP have to plant 2100 saplings. The safety zone area of 0.82.40 Ha will be planted with local Species of 1000 Nos. of saplings as follows.	Land Use	Area in use during the quarrying period (Hect)	Area left for water body	3.38.40	Green Belt	0.82.40	Remaining area	0.03.0	Total	4.23.80
	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)																														
	Quarrying Pit	Nil	3.38.40																														
	Infrastructure	Nil	0.01.00																														
	Roads	Nil	0.02.00																														
	Green Belt	Nil	0.82.40																														
	Unutilized	4.23.80	Nil																														
	Total	4.23.80	4.23.80																														
	Land Use	Area in use during the quarrying period (Hect)																															
	Area left for water body	3.38.40																															
Green Belt	0.82.40																																
Remaining area	0.03.0																																
Total	4.23.80																																

Ultimate Pit dimension at the end of Mining plan Period			
Pit No.	Length (max) (m)	Width (Avg) (m)	Depth (max) (m)
I	235	144	60 BGL

If mining is not done systematically it will leads to the dumping failure in the mining area.

S. No.	Year	Species	No. of trees	Spacing	Survival
1	I	<i>Azadirachta indica</i> , <i>Ficus benghalensis</i> , <i>F. religiosa</i> , <i>Holoptetea integrifolia</i> , <i>Pongamia pinnata</i> and <i>Tamarindus indica</i>	1000	3m x 3m	80%
2	II		0		
3	III		0		
4	IV		0		
5	V		0		
Total			1000		

- Remaining 1100 saplings will be planted outside the lease area such as at project surrounding schools, temples, road sides, etc.,
- Due to the thick vegetation in and around the mine lease area and sprinkling of water around the haul roads the dust emissions arises from the vehicles will be controlled.

At the end of mining period, fencing will be provided around the mine lease area to arrest the entry of public/cattle to the mining area.

The rough stone is proposed to quarry 5m bench height and 5m width with 80° slope using conventional opencast Mechanized method. As per the approved mining plan a safety distance of 7.5m shall be provided. There is no overburden anticipated during the entire Rough Stone quarrying

		operation. The excavated rough stone will be directly loaded into tipper to the needy crusher/other buyers.
Drainage	Mines drainage indicates surface or groundwater that drains from an active or abandoned mine. One of the adverse impact of mine drainage is that, they will contaminate the ground water.	As per the approved mining plan the ultimate pit dimension is 235m (L) x 144m (W) x 60m (D) BGL. The ground water table is reported as 66m in rainy seasons. In the proposed mining plan only 60m below ground level has been envisaged as workable depth for safe & economic quarrying for the entire lease period. Hence the quarrying operation may not affect the ground water.
Soil Quality and Agriculture	In monsoon seasons due to the excavation of minerals, soil erosion and sediment deposition will occur in the nearby water bodies.	It is proposed to quarry upto a depth of 60 m below ground level and the nearby water table is 66m in rainy seasons. So, the mining activity will not affect the ground water. To prevent the soil erosion during monsoon season, garland drain will be constructed with silt traps.
Visual impact on surrounding environment	Quarrying activities and rock extraction generally cause several environmental effects on the surrounding areas. The alteration of landscape due to activities like excavation, drilling or blasting, in particular, often generates a visual impact on the receptors set in the surroundings. Among these effects, the shape, extent, or chromatic contrast of the mining surface with the original land form may represent a huge loss of appeal for the growth of new urban settlements.	The reclamation of the post mined quarry surface is aimed at restoring the ecological balance taking into account geological parameters but also local flora and climate. Further the ultimate depth of mining is 60m BGL. In the post mining stage the quarried out pit will be used for rainwater harvesting.

4.3 SOIL ENVIRONMENT

4.3.1 ANTICIPATED IMPACT ON SOIL ENVIRONMENT

Mining activities often disrupt the existing environment as they involve disturbing the untouched earth materials. There is no overburden / waste generation from this project as entire mined out mineral will be directly dispatched to the needy customer. Erosion of top layer (Gravel), 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.

4.3.2 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 minimize air born dust at source level, which may cause soil pollution due to sedimentation.
- Garland drains will be constructed around the project area with silt traps to control the soil erosion during rainy seasons.
- Greenbelt development (0.82.40 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.

4.4 SOLID WASTE GENERATION AND MANAGEMENT

The plastic waste generation is very negligible and it will be collected from the source level in specific dustbin and disposed through the municipal bins. Some of the key factors involved in waste management are as follows:

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

4.5 WATER ENVIRONMENT

4.5.1 IMPACT ON SURFACE WATER RESOURCES AND MITIGATION MEASURES

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

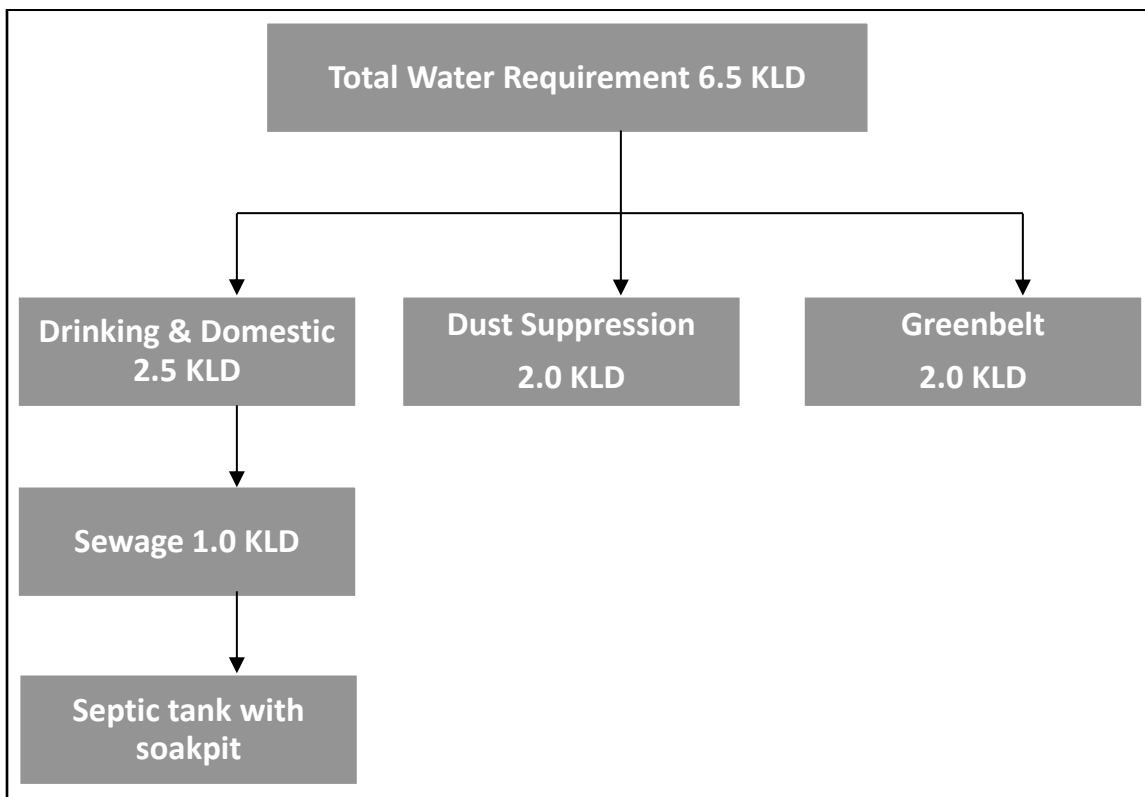
In the study area, Noyyal River is located at a distance of 7.0 km in Northeast side and Aathupalayam Dam is located at a distance of 5.25 km on the Northern direction of the proposed ML area. There is no discharge of effluent or any untreated water from the mines will be made into these water bodies, there is no major impact. The project proponent will restrict the mining operation only within the lease and no other work will be carried out outside the mining lease.

4.5.2 IMPACT DUE TO WATER USE IN MINES

In this proposed mines, water will be mainly used for domestic purpose, dust suppression & plantation. Total water requirement for the project is 6.5 KLD which

will be sourced from outside agencies. Negligible sewage of 1.0 KLD will be generated, for which a septic tank with soak pit will be set up. The water balance diagram is given below.

FIGURE 4.1 - WATER BALANCE DIAGRAM



4.5.3 IMPACT ON GROUND WATER

The mining activity is not likely to intersect ground water as the ground water table occurs at a depth of 66m in rainy seasons. The mining will go up to the maximum depth of 60m BGL. So, there will be no chance of intersecting the ground water table by the mining activity. So, the impact of mining on the ground water is not envisaged.

Mitigation Measures

- Entire lease area will be provided with proper garland drains.
- Check wears will be provided to prevent solids from wash off.

- Construction of garland drains around freshly excavated so that flow of water with loose material is prevented.
- The mine water will be passed through the natural slopes and valleys and gets accumulated in the settling tank (Bottom pit)

4.5.4 GROUND WATER ENVIRONMENT IN BUFFER ZONE

The scenario of Ground Water Availability is given below.

Table 4.1 - Stage of Groundwater Development

S. No.	Assessment Unit (Firka)	Net Annual Ground water availability	Existing gross ground water Draft for irrigation	Existing gross ground water Draft for domestic and industrial water supply	Existing gross ground water Draft for all uses	Stage of ground water development	Category of Firka
1	PUGALUR	1,329.84	1,209.06	14.08	1,223.15	92	CRITICAL

Source:nwm.gov.in

Proper alternative recharge structures must be established for the drastic depletion in groundwater resources. Rainfall is the main source for the availability of water both in surface and sub-surface. Hence, it has to be planned to carryout appropriate rainwater harvesting schemes and artificial recharge schemes in the area.

4.5.5 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 all around the quarry, connected to settling tank.
- Cleaning of drain periodically to prevent siltation
- Utilizing the rainwater harvested in the mine pit to meet the water requirement of the project.

The average annual rainfall of the area is 724mm. 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 (mm)	Volume of harvestable quantity (Cum) of rain water per annum
1	Quarry Area	33840	0.724	8,575
2	Unutilized Area	Nil	-	-
Total Harvested Rainfall				8,575

Total surface water runoff is 8,575 cum per Annum. 10% of this amount will be evaporated and rest 7,717 m³ will be recharged in the rain water harvesting pit.

The dimension of the rain water harvesting pond will be 18m x 18m x 3m with capacity of 972 Cu.m x 2 Nos. will be provided to harvest the rain water. The rain water stored in the pond will be utilized for plantation, dust suppression activities. The capacity of Rain water harvesting pond will be sufficient to arrest the surface runoff from the lease area considering the highest amount of rain fall.

4.6 BIOLOGICAL ENVIRONMENT

4.6.1 VEGETATION IN THE CORE ZONE

The mine lease area is devoid of major plantation. Shrubs and bushes are majorly found within the lease area. The proponent has planned to develop green belt in safety zone area of 0.82.40 Ha. Trees like *Azadirachta indica*, *Ficus benghalensis*, *F. religiosa*, *Holoptelea integrifolia*, *Pongamia pinnata* and *Tamarindus indica* will be planted around the mine lease area. A total of 1000 trees are planned to be planted for a period of 10 Years. Spacing will be 3m x 3m.

4.6.2 CARBON EMISSION:

CO₂ released from machineries and tippers during quarrying activities would be 612.11 kg per day, 1,83,633 kg per year and 18,36,357 kg over ten years, as provided in below table.

Table 4.3 – CO₂ emission Calculation			
Description	Per Day	Per year	For Ten Years
Total fuel consumption in liters	228.4	68,520	6,85,208
CO ₂ emission in kg	612.11	1,83,633	18,36,357

4.6.2.1 Carbon Sequestration

To mitigate CO₂ emission due to mining activities, the following measures are recommended:

- ✚ It is recommend to plant trees all around the mine area to offset the carbon emission. A tree absorbs about 25 kg of CO₂ annually. Therefore, PP have planned to plant 1000 saplings inside the lease area and 1100 plus saplings outside the lease area as such a project surrounding schools, temples, road sides, etc. Hence percentage of Carbon Sequestration after plantation will be achieved to be about 29% for ten years.
- ✚ Battery-driven or LNG/CNG based mining equipment is often powerful enough to replace diesel-driven options that can significantly reduce the amount of CO₂ produced by mining operations.

4.6.3 GREENBELT DEVELOPMENT PLAN

The main objective of the green belt is to provide a barrier between the source of pollution and the surrounding areas. 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.

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.

PP have planned Green belt development as follows:

- As per SEAC norms, PP have to plant 2100 saplings ($500 \times 4.2380 = 2100$ around). The safety zone area of 0.82.40 Ha will be maintained as a green belt area. This area will be planted with local Species of 1000 Nos. of saplings as follows.

Table 4.4 - Greenbelt Development Plan (inside mine lease area)					
S.No.	Year	Species	No. of trees	Spacing	Survival
1	I	<i>Azadirachta indica, Ficus benghalensis, F. religiosa, Holoptetea integrifolia, Pongamia pinnata and Tamarindus indica</i>	1000	3m x 3m	80%
2	II		0		
3	III		0		
4	IV		0		
5	V		0		
Total			1000		

- Remaining 1100 saplings will be planted outside the lease area such as at project surrounding schools, temples, road sides, etc.,
- Capital cost of INR 5.30 Lakhs and Recurring cost of INR 0.63 Lakhs per year has been included in EMP cost for greenbelt development.

Following points have been considered while recommending the species for plantation:

- ✚ Natural growth of existing species and survival rate of various species.
- ✚ Suitability of a particular plant species for a particular type of area.

- ✚ Creating of biodiversity.
- ✚ Fast growing, thick canopy copy, perennial and evergreen large leaf area.
- ✚ Efficient in absorbing pollutants without major effects of natural growth.

4.6.4 IMPACTS AND MITIGATION MEASURES FOR FAUNA

There are no sanctuaries/national parks in the buffer zone of 10km study area. The commonly found fauna in the buffer zone are given in section 3.3.7.2, Chapter 3. During mining activity the impacts and mitigation measures for Fauna are given in below table.

Table 4.5 - Impacts and mitigation measures for Fauna		
S.No.	Impact	Mitigation measure
1	Fauna is affected due to noise and vibration.	Sirens will be blown before blasting in the mines. To reduce noise levels, plantation will be done. Blasting will be carried out only in the allotted time.
2	Dust generation due to mining activities	To reduce dust generation, mist sprayers will be used. During transportation, the material will be covered with tarpaulin. Water sprinkling will be done to reduce generation of pollutants.
3	Change in land use of the lease area	After the mine closure stage, the mine pit will be left as rain water collecting tank, which can attract bird population in the nearby areas.
4	Accidental falling of animals	To prevent entry of animals, the mine lease surrounding area will be properly fenced with barbed wire.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF ENVIRONMENTAL COMPONENTS

4.7 AIR ENVIRONMENT

4.7.1 IMPACT DUE TO MINING OPERATION

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

4.7.2 IMPACT ON AIR ENVIRONMENT

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

4.7.3 AIR EMISSIONS

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

4.7.4 QUANTITATIVE ESTIMATION OF IMPACTS ON AIR ENVIRONMENT

An attempt has been made to predict the incremental rise of various ground level concentrations above the baseline status in respect of air pollution due to proposed is 8,21,260 m³ of Rough Stone & 1,69,200 m³ of Gravel in which 5,65,550 m³ of Rough stone & 1,69,200 m³ of Gravel will be mined out in first five years and

remaining 2,55,710 m³ Rough stone will be mined out in second five year by the opencast mechanized mining method.

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

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

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

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

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

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

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

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

Salient features of the AERMOD model are given hereunder.

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

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

4.7.5 SOURCES OF DUST EMISSION

The proposed mining is carried out by mechanized opencast method. The air borne particulate matter generated by ore handling operations, transportation and screening of ore is the main air pollutant. The emissions of sulphur dioxide (SO₂), Oxides of Nitrogen (NO_x) contributed by diesel operated excavation/loading equipment and vehicles plying on haul roads are marginal. Prediction of impacts on air environment has been carried out taking into consideration proposed production and net increase in emissions. Based on the various operations involved in the production of minerals, the various emission sources has been identified as given below.

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

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

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

4.7.6 EMISSION DETAILS

All the emissions discussed above are quantified for proposed production of 8,21,260 m³ of Rough Stone & 1,69,200 m³ of Gravel in which 5,65,550 m³ of Rough stone & 1,69,200 m³ of Gravel will be mined out in first five years and remaining 2,55,710 m³ Rough stone will be mined out in second five year by the opencast mechanized mining method. The existing air quality levels are covered in the baseline scenario. Excavation, loading and transportation through tippers are the major sources, which are of significance. Therefore, the emissions considered for modeling are from drilling blasting, excavation & transportation rough stone.

The emissions are computed based on AP-42 emission factors. Operational hours, activity rate, wind speed and moisture content have been considered for estimation of emissions from point and area sources. For line source, apart from operational hours, activity rate, moisture, silt content and vehicle weight have been considered. Predictions are carried out for the worst-case scenario of simultaneous operation of excavators (area sources) and tippers for transportation from mine pit to loading pit (line sources) over a distance of 500 m.

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

4.7.7 METEOROLOGICAL DATA

The meteorological data recorded continuously during the month of October 2024 – December 2024 on hourly basis on wind speed, wind direction and temperature has been processed to extract the 24- hourly mean meteorological data as per the guidelines of IMD and MoEF&CC for application of AERMOD model. Stability classes computed for the mean hours is based on guidelines issued by CPCB on modeling. Mixing heights representative of the region have been taken from the available published literature.

4.7.8 SUMMARY OF PREDICTED GROUND LEVEL CONCENTRATIONS

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

The predicted maximum Ground Level Concentration within the mine lease area is estimated to be about $1.05 \mu\text{g}/\text{m}^3$ of $\text{PM}_{2.5}$ & $3.73 \mu\text{g}/\text{m}^3$ of PM_{10} , where mining operations are being carried out. The impact of mining operations would be negligible beyond 0.5km.

Figure - 4.2 & 4.3 represents the spatial distribution of the ground level concentrations of $\text{PM}_{2.5}$ and PM_{10} .

FIGURE 4.2 - ISOPLETH OF GLC PREDICTION FOR PM_{2.5}

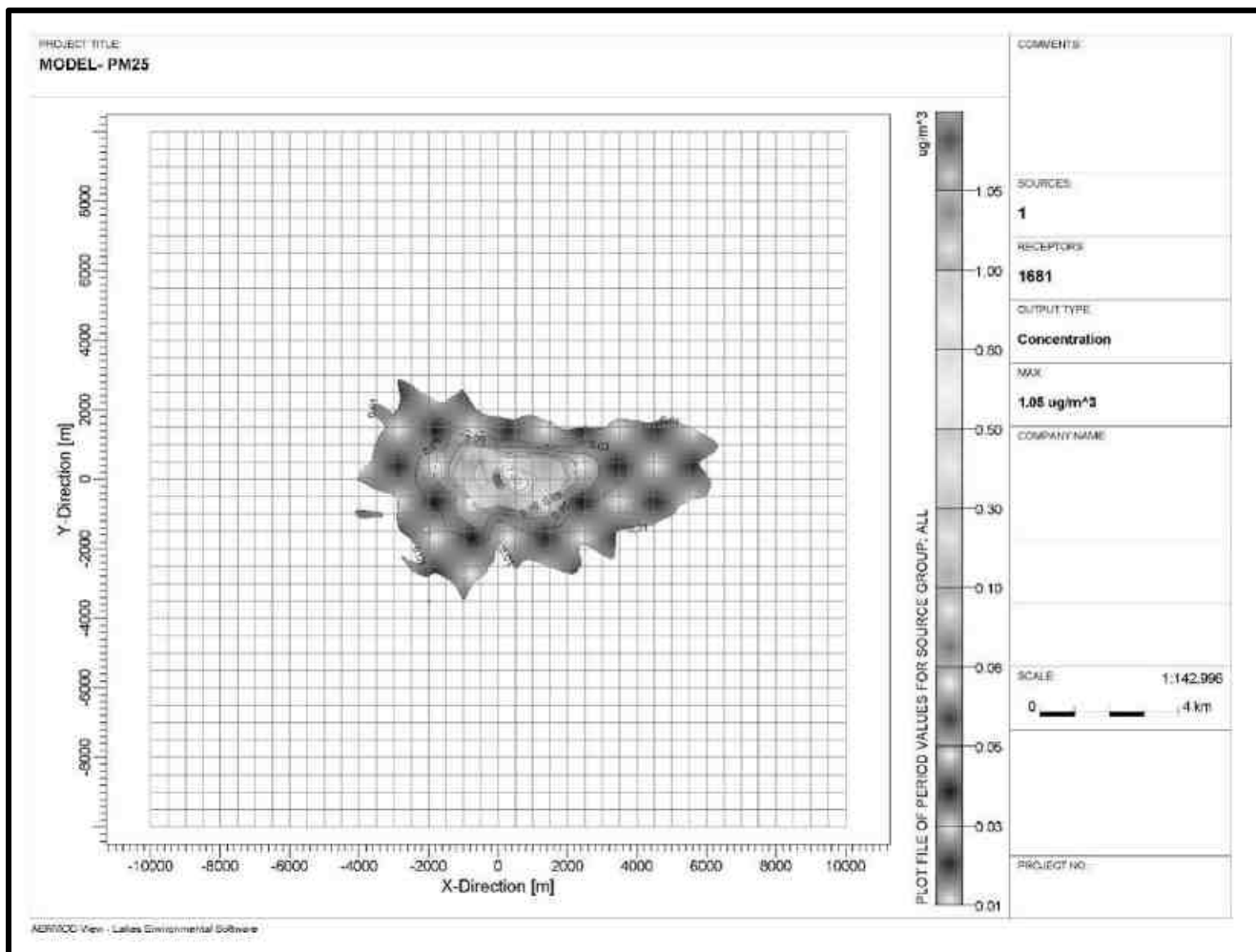
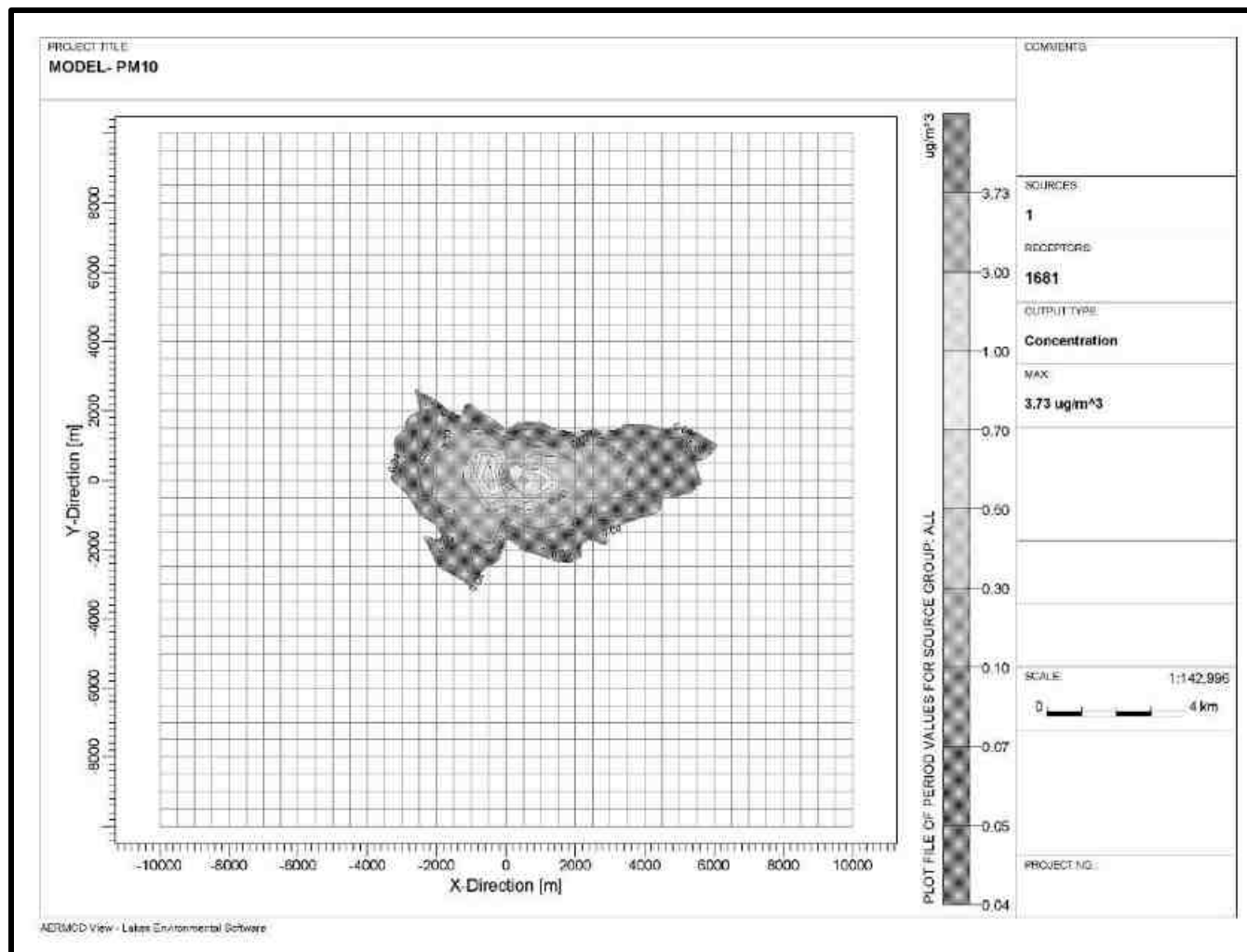


FIGURE 4.3 - ISOPLETH OF GLC PREDICTION FOR PM₁₀



4.7.9 PREDICTED AMBIENT AIR QUALITY:

The post project Concentrations of PM₁₀, PM_{2.5}, (GLC) (base line + incremental) after proper mitigative measures is given in Table – 4.6 & 4.7.

Table 4.6 - 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	Proposed ML Area	35.1	1.05	36.15	60
2	Monjanu (East)	30.3	<1.00	31.30	
3	Thennilai (East)	29.6	<1.00	30.60	
4	Thennilai (South)	25.4	<1.00	26.40	
5	Karvazhi	25.3	<1.00	26.30	
6	Thukkachi	26.8	<1.00	27.80	

Table 4.7 - Concentrations of PM₁₀ after Project Implementation					
SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Proposed ML Area	75.9	3.73	79.63	100
2	Monjanu (East)	64.1	<1.00	65.10	
3	Thennilai (East)	65.6	<1.00	66.60	
4	Thennilai (South)	53.7	<1.00	54.70	
5	Karvazhi	53.4	<1.00	54.40	
6	Thukkachi	58.4	<1.00	59.40	

The above report seems that, even in the worst-case scenario, the resultant added concentrations with baseline figures show that the values of ambient air quality for PM₁₀ are in the range of 54.40 µg/m³ to 79.63 µg/m³ and for PM_{2.5} are in the range of 26.30 µg/m³ to 36.15 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.

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

4.8 NOISE ENVIRONMENT

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

4.8.1 LIKELY NOISE LEVELS IN LEASE AREA DUE TO MINING ACTIVITY

S.No.	Source Name	Noise Level in dB (A)
1	Diesel generator	105
2	Excavator Operation	90
3	Trucks movement	90
4	Drilling	102
5	Blasting	126

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

Noise levels were measured in the lease area and in the nearby villages Monjanu (East) Village, Thennilai (East) Village, Thennilai (South) Village, Karvazhi Village and Thukkachi Village. The values are given below.

Table 4.8 - Noise Levels in Monitoring Locations

S. No.	Location	Distance and direction from Mine lease area	Day Equivalent (in dBA)	Night Equivalent (dBA)
1	Proposed ML Area	Core Zone	46.6	37.1
2	Monjanu (East)	3.9 Km, NW	44.4	37.0
3	Thennilai (East)	3.5 Km, SE	42.2	37.5
4	Thennilai (South)	4.5 Km, SE	41.5	37.0
5	Karvazhi	3.8 Km, N	45.0	39.8
6	Thukkachi	4.7 Km, NE	46.8	42.5

The above noise levels during the day time are within the CPCB limits of 75 dB(A) in the working area (core zone) and 55 dB(A) in the buffer areas. Here, five buffer areas are considered as 'Residential area', whereas during mining operation mine lease area will be considered as 'Industrial area' for which DGMS norms of 85 dB(A) or CPCB guidelines of 75 dB(A) are followed.

4.8.2 IMPACT OF NOISE DUE TO MINING

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

4.8.3 MITIGATION MEASURES FOR NOISE LEVEL CONTROL

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

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

4.9 IMPACTS DUE TO VIBRATION

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

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

Impacts

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

Mitigation measures

- ✚ The DG set will be kept within the acoustic enclosure made by the stone blocks.
- ✚ Drills will be equipped with sharp bits and wet drilling will be adopted.
- ✚ A well planned green belt is proposed for the mining to reduce noise level.

- ✚ Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.
- ✚ Regular maintenance of the machineries and vehicles to reduce the noise level.
- ✚ Use of ear muffs by the workers with occupational exposure to noise.
- ✚ Carrying out blasting on limited scale, only from 12:00 PM to 2:00 PM
- ✚ Control of fly rock and vibration by maintaining peak particle velocity within the standard as prescribed by the DGMS and MOEF & CC.
- ✚ Shallow depth jackhammer drilling and blasting is proposed to be carried out with minimum use of explosive.
- ✚ Supervising blasting by competent and statutory Foreman/ Mines Manager.

4.10 SOCIO ECONOMIC IMPACT

From the primary Socio-economic survey & through secondary data available from established literature and census data 2011, it is found that there would be positive impact on Socio-economic condition of the nearby area. There is no habitation within 300 m of the proposed mining lease area. Therefore, no major impact is anticipated on the nearby habitation during the entire life of the mine. The entire lease area is in the proponent's possession. Hence, there are no habitations or hutments in the core zone area and no rehabilitation or resettlement problems will arise here.

The mining operations in the proposed mine will employ about 20 persons directly and 17 people on indirect basis through allied opportunities in logistics, trading, repairing works etc. good employment potential will arise, which will provide raising income levels and standards of living in the area through various service related activities connected with the project operations as shown under.

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

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

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

From above details, it is clear that the project operations will have highly beneficial positive impact in the area. However, towards the socio economic development of the surrounding area, the proponent has earmarked an amount of INR 10.0 Lakhs under Corporate Environmental Responsibility (For details Refer Chapter 8). Apart from this, the proponent has earmarked an amount of INR 83.39 Lakhs under Contribution towards Green Funds @ 10% of Seigniorage fee.

4.11 OCCUPATIONAL HEALTH AND SAFETY

4.11.1 IMPACTS ON HUMANS DUE TO VARIOUS MINING ACTIVITIES

The occupational risk due to proposed mining may be due to drilling, blasting, excavation and transportation. A total of 37 workers will be engaged in the mining activity. Mining activity may cause various health problems to the mines workers as follows:

Table 4.9 - Impacts on humans due to various mining activities		
S.No.	Type of activity	Impact
1	Dust generation due to excavation, drilling, blasting and Transportation	Continuous exposure to dust causes Pneumonia, Tuberculosis, Rhematic arthritis and Segmental Vibration and other respiratory lungs disorders
2	Noise generation due to mining activity	Short term impact will be lack of sleep, high blood pressure and heart ailments. Long term exposure may lead to partial or permanent deafness / Noise Induced Hearing Loss (NIHL)
3	Unexpected accidents	Risks include fly rocks, cracks or fissures due to improper mining methods
4	Heavy weight lifting by the workers	May cause injuries to arms, legs and back.

4.11.2 MITIGATION MEASURES

- The mines worker will be provided with dust mask to minimize the inhalation of the dust.
- Water sprinkling twice in a day is in practice on the haul roads, near excavation and roads to reduce the fugitive dust emission.
- Wet drilling and drilling with dust extractor will be practiced.
- Ear muffs will be supplied to the workers working in the noise prone area
- The mining site will be supplied with first aid facilities and the entire mines worker will have access to that.
- The mines workers will be well trained about the safety practices in the mining activities.
- As per Mines Rules, 1955, medical examination of employees at the initial stage and periodically, shall be done by a team of qualified medical officers provided by the project proponent.
- Regular medical checkup camps shall also be arranged for detection of occupational diseases and minor disease in the nearby rural population.
- Free checkup and medicine for treatment for their acute and chronic illness shall be provided by the lessee. Conducting periodical Medical Examination as per DGMS.
- Making all first aid kits available in mines office
- Keeping fire extinguisher in place
- Educating the employees about how to handle unexpected happenings
- Posting information containing emergency contact numbers in mines office
- By adopting all these measures, the safety of the employees working in the quarry will be ensured.

4.12 WASTE MANAGEMENT

4.12.1 SOLID WASTE

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

4.12.2 LIQUID WASTE

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

4.12.3 HAZARDOUS WASTE MANAGEMENT

In this project the following management practices will be followed:

In the quarrying operation, the source of hazardous waste is from machinery maintenance activities that are waste oil/ Waste lubricants / Used filters / Used Hydraulic hoses. The said hazardous waste 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.

4.12.4 PLASTIC WASTE

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

CHAPTER 5

ANALYSIS OF ALTERNATIVES

5.1 ALTERNATE TECHNOLOGY

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

5.2 ALTERNATE SITE

The proposed 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.

CHAPTER 6

ENVIRONMENTAL MONITORING PROGRAMME

6.1 ENVIRONMENTAL MONITORING

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

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

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

6.2 OBJECTIVES OF ENVIRONMENTAL MONITORING

The objectives of Environmental Monitoring are as follows.

- ✚ Monitoring and analysis of air and water samples
- ✚ Implementing the control and protective measures.
- ✚ Coordinating the environment related activities within the project as well as with outside agencies. Collecting statistics of health of workers and population of the surrounding villages. Green belt development etc.
- ✚ Monitoring the progress of implementation of Environmental Management Programme.
- ✚ Monitoring the noise generation in and around the project areas.
- ✚ Monitoring of wastewater treatment and disposal of solid waste.

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

6.3 ENVIRONMENTAL MONITORING SCHEDULE

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

Table 6.1 - Environmental Monitoring Schedule			
Sl.No.	Description of Parameters	Parameters	Frequency
1	Air	Air Quality for SPM, PM ₁₀ , PM _{2.5} , SO ₂ and NO _x	24 hour average samples once in a 3 month
2	Water	General, Physical, and chemical parameters	Once in a season
3	Noise	Leq, Lmax, Lmin, Leq Day & Leq Night dB(A)	8 hour average samples Once in a 3 month
4	Soil	Physical and Chemical characteristics	Once in a season

6.4 ENVIRONMENT MONITORING LOCATION

Monitoring of the above mentioned environmental parameters would be done at appropriate and sensitive areas. The exact location of monitoring is given as Figure – 3.5, 3.12a, 3.12b, 3.14 & 3.16.

6.5 MEASUREMENT METHODOLOGY

6.5.1 AMBIENT AIR QUALITY

Ambient air quality will be monitored for SO₂, NO_x, PM₁₀ and PM_{2.5}. The instruments like high volume air samplers and Respirable dust samplers would be used for this purpose. These parameters will be monitored as mentioned in the monitoring schedule previously.

6.5.2 WATER QUALITY

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

6.5.3 NOISE MONITORING

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

6.5.4 GREEN BELT AND AFFORESTED AREAS

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

6.5.5 SOCIO-ECONOMICS

Present Socio-Economics status of the core and buffer zone details are elaborated in **Chapter-3**. Socio-economic study are conducted to know the status of the villages, nearby towns & other change in amenities/services etc.

6.6 TECHNICAL ASPECTS OF MONITORING THE EFFECTIVENESS OF MITIGATION MEASURES

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

6.7 EMERGENCY PROCEDURES

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

6.8 REPORTS TO BE GENERATED

The Project Proponent will maintain records of each test and its interpretation so as

to formulate an adequate Environmental Management Plan. The set of records planned to be maintained by Project Proponent are given in below table 6.2.

Table 6.2 - Important Records to be maintained by PP	
S.No.	Particulars
1	Monitoring results for Air, Water & Soil.
2	Records of slope failure, land erosion & drainage.
3	Plantation Records
4	Environmental and related standards/ norms
5	Records pertaining to statutory consents, approvals.
6	Periodic Medical examination (PME) records.
7	Complain register (Environmental pollution)
8	Records on water and electricity consumption
9	Periodic progress records.
10	Environmental Expenses Records

6.9 DETAILED BUDGET AND PROCUREMENT SCHEDULES

The summary of budget planned for environmental monitoring is given in below tables. Refer Chapter 10 for detailed EMP budget.

Table 6.3 - Environmental Management Plan Budget (in Lakhs)		
Mitigation Measures	Capital cost	Recurring Cost /Annum
Air Environment	11.92	2.62
Noise Environment	0.50	14.59
Waste Management	0.30	0.22
Mine Closure	14.20	0.78
Implementation of EC, Mining Plan & DGMS Condition	6.10	12.30
Total	33.02	30.51
The total EMP Cost is 466.32 Lakhs (For 10 Years)		
i.e., Rs. 82.55 Lakhs of Capital Cost (Rs. 33.02 Lakhs for 1 st first Five years and Rs. 49.53 Lakhs for 2 nd five years*) + Rs. 383.77 Lakhs of Recurring cost (@ 5% Escalation) for 10 Years		
<i>*Life of Capital - 5 years, augmented by 50% in 6th year</i>		

CHAPTER 7

ADDITIONAL STUDIES

The additional studies covered for this EIA / EMP report are,

1. Public consultation
2. Risk Assessment
3. Cumulative Environmental Impact Assessment Study
4. Social Impact Assessment, R&R Action Plans
5. Slope Stability Action Plan
6. Disaster Management Plan
7. Mine Closure Plan

7.1 PUBLIC CONSULTATION

After the preparation of the draft EIA/EMP report, it must be submitted to the State Pollution Control Board. A public consultation will be conducted on behalf of the Pollution Control Board through the District Collector and the officials from the PCB. A prior notice must be issued about the event, along with the time and date, in two leading newspapers. The opinions, suggestions, demands, and objections of people, NGO environmentalists, etc. are sought, and the proceedings are recorded. The replies of the proponent and corresponding officials will be recorded in the final EIA/EMP report.

7.2 RISK ASSESSMENT & MANAGEMENT

(a) Objectives

Risk assessment is a method in which possible threats/hazards which may arise during mining operations are identified so that adequate machinery/equipment are made available in precaution. The objectives of environmental risk assessment are governed by the following, which excludes natural calamities:

- ✚ To identify the potential hazardous areas so that necessary design safety measures can be adopted to minimize the probability of accidental events.

- ✚ To identify the potential areas of environmental disaster which can be prevented by proper design of the installations and its controlled operation.
- ✚ To manage the emergency situation or a disastrous event, if any, from the mining operation.

(b) The major hazards related to the mining activities are as follows

- ✚ Open cast bench slope failure
- ✚ Accident due to fall of quarry sides
- ✚ Accident due to machineries
- ✚ Accident due to explosives
- ✚ Accident due to large block cutting, separation and loading

Some of the common hazards are identified and the corresponding precautionary measures are drafted.

Table 7.1 - Hazards and Precautionary measures

S.No.	Hazard	Precautionary measures
1	Fire	Fire suppressants will be made available at mines office and explosive storage room.
2	Explosion	Controlled blasting will be done. DGMS norms will be strictly followed during blasting. Blasting will be done only by trained professionals.
3	Combustion of chemicals or hazardous substances	Combustible Substances are stored with all precautionary measures. Fire suppressant is made available at storage site
4	Landslide	Width, height and slope will be maintained as suggested by DGMS
5	Accidents during handlings	All vehicles will be properly maintained. Overloading will not be done. Only trained/certified people will be employed.
6	Accidental fall of people or animals	The lease area will be fenced properly. Only people working in the mines will be permitted to enter.

7.3 CUMULATIVE ENVIRONMENTAL IMPACT ASSESSMENT STUDY

As per the Letter received from Dept. of Geology and Mining, Karur stating the quarry details within 500m radius (**Refer Annexure – 4**). There is one existing and the present proposed quarry are located. The details are given below.

Table 7.2 - Details of quarries within 500m radius (as per 500m certificate)

S.No.	Name and address	Village & Taluk	S.F.No.	Extent (in Ha)	Remarks
Abandoned Quarry					
Nil					
Existing Quarry					
1.	Thiru.T. Ponnusamy S/o. Thangavel Door No. 4, Pavithram, Pugalur Taluk, Karur – 639 002	Thennilai West Village, Pugalur Taluk	1067/1(P), 1067/2(P) & 678(P)	4.47.50	30.09.2023 to 29.09.2028 EC Identification No. EC23B001TN110708 dated 25/09/2023
Proposed Quarry					
1.	Thiru.T. Ponnusamy S/o. Thangavel, Door no.4, Pavithiram, Pugalur Taluk, Karur District. Pin Code– 639 002	Thennilai West Village, Pugalur Taluk	679/A, 679/B(P), 680/A(P) and 680/B(P)	4.23.80	Proposed Area (Lease for a period of 10 Years)
Total Extent: 8.71.30 Ha					

A map showing the existing and proposed quarry located within 500m radius is given in Figure 1.1, Chapter 1. The cumulative impact study of these two quarries are detailed below.

7.3.1 AIR QUALITY IMPACT PREDICTION FOR THE CLUSTER

The AERMOD atmospheric dispersion modeling (AERMOD Cloud remote version) is used for assessment of incremental Ground level concentration (GLC) for the cluster area. Area source model taken into consideration of wet drilling and loading of the cluster mines. Further line source model was taken into consideration for transportation through haul road. Baseline meteorological studies were conducted for the period of October to November 2024. Salient features and production load of existing and proposed quarry within cluster is shown in below table.

Table 7.3 - Salient Features of Existing & Proposed Quarry

Description		P1-Present Proposed Quarry	P2-Existing Quarry
Name of the Quarry		Thiru. T. Ponnusamy	Thiru. T. Ponnusamy
Geological Resources in m ³	Rough stone	23,28,150	18,48,943
	Gravel	2,11,650	1,232
Mineable Reserves in m ³	Rough stone	8,21,260	5,83,201
	Gravel	1,69,200	28
Five years plan period as in the approved mining plan	Rough stone	5,65,550	5,83,201
	Gravel	1,69,200	28
Production per day in m ³	Peak Production	611.66	450.26
Lorry Loads per day in Nos	-	61	45
Employment in Nos	-	37	22
Proposed Depth in meters	-	30 m	50 m
Status of the quarry	-	Fresh	Existing

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

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

The cumulative maximum Ground Level Concentration (GLC) are estimated to be about 4.65 µg/m³ of PM_{2.5} & 5.99 µg/m³ of PM₁₀. The impact of mining operations would be negligible beyond 0.5km.

Figure – 7.1 & 7.2 represents the cumulative spatial distribution of the ground level concentrations of PM_{2.5} and PM₁₀.

FIGURE 7.1 – CUMULATIVE ISOPLETH OF GLC PREDICTION FOR PM_{2.5}

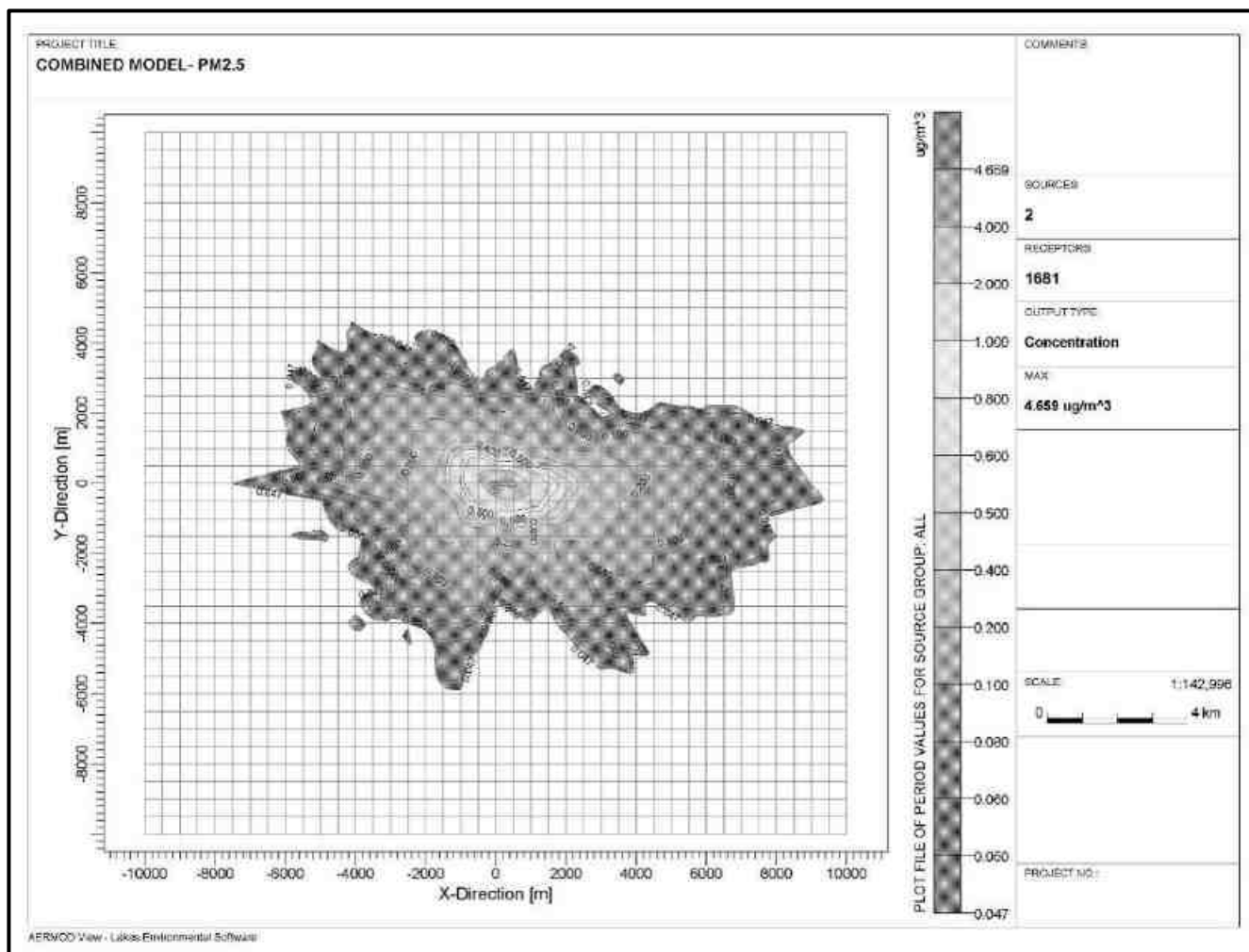
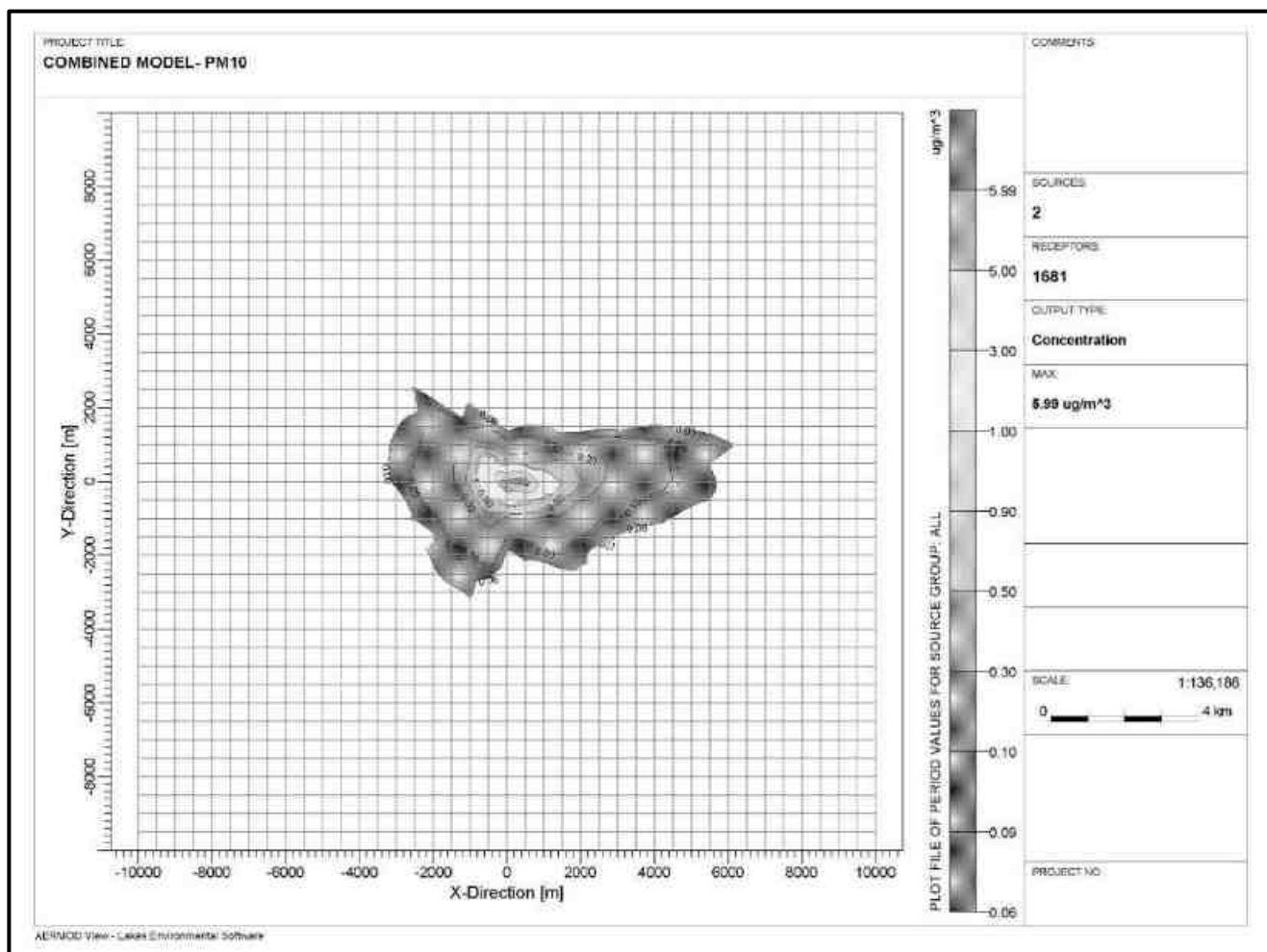


FIGURE 7.2 – CUMULATIVE ISOPLETH OF GLC PREDICTION FOR PM₁₀



7.3.2.1 Predicted Ambient Air Quality:

The cumulative post project Concentrations of PM₁₀, PM_{2.5}, (GLC) (base line + incremental) after proper mitigative measures is given in Table – 7.4 & 7.5.

Table 7.4 – Cumulative 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	Proposed ML Area	35.1	4.65	39.75	60
2	Monjanu (East)	30.3	<1.00	31.30	
3	Thennilai (East)	29.6	<1.00	30.60	
4	Thennilai (South)	25.4	<1.00	26.40	
5	Karvazhi	25.3	<1.00	26.30	
6	Thukkachi	26.8	<1.00	27.80	

Table 7.5 – Cumulative Concentrations of PM₁₀ after Project Implementation					
SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Proposed ML Area	75.9	5.99	81.89	100
2	Monjanu (East)	64.1	<1.00	65.10	
3	Thennilai (East)	65.6	<1.00	66.60	
4	Thennilai (South)	53.7	<1.00	54.70	
5	Karvazhi	53.4	<1.00	54.40	
6	Thukkachi	58.4	<1.00	59.40	

The above report seems that, combined impact of both the projects even in the worst-case scenario, the resultant added concentrations with baseline figures show that the values of ambient air quality for PM₁₀ are in the range of 54.40 µg/m³ to 81.89 µg/m³ and for PM_{2.5} are in the range of 26.30 µg/m³ to 39.75 µg/m³ which are within the statutory limits in each case.

7.3.3 CUMULATIVE IMPACT ON TRAFFIC

The mined-out minerals will be transported by means of trucks to the consumers like crusher units for producing stone aggregates of different sizes or construction of roads, bridges, buildings and other buyers etc. The cumulative impact on traffic due to transportation of minerals from these three leases are provided below:

Description	Rough Stone and Gravel Production Per day in tons	No of Trips per hour
P1-Present Proposed Quarry	1417	18
P2-Existing Quarry	1056	13
	Total	31

The cumulative trips from these projects will bring 31 trips per hour. The existing road can absorb this additional traffic due to these projects. 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.

7.3.4 CUMULATIVE IMPACT ON WATER ENVIRONMENT

The total water requirement for both the projects 11.5 KLD, comprising 6.5 KLD for present proposed Thiru.T.Ponnusamy quarry and 5.0 KLD for existing Thiru.T.Ponnusamy quarry. Initially these water are and will be sourced from outside agencies and subsequently the rainwater collected in the mine sump will be used (Green belt, Dust suppression) for this purpose.

There is no discharge of effluent or any untreated water from these mines will be made into any nearby water bodies, hence there is no major impact. Also Proper alternative recharge structures will be established.

7.3.5 CUMULATIVE IMPACT ON SOCIO-ECONOMIC ENVIRONMENT

The mining operations in the 2 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. Socio Economic benefits from these two quarry are as follows:

Description	Employment	Project Cost	CER Cost
P1-Present Proposed Quarry	37	Rs.6,88,27,000	Rs.10,00,000/-
P2-Existing Quarry	22	Rs.1,05,77,900	Rs.7,60,000/-
Total	59	Rs. 7,94,04,900/-	Rs.17,60,000/-

7.4 REHABILITATION AND RESETTLEMENT (R & R) PLAN

No land is acquired from people dwelling in the area. The lease area is an uninhabited land. No R & R plan is proposed.

7.5 SLOPE STABILITY ACTION PLAN

The proposed quarry is a small quarry and the production is also less. Opencast mechanized mining with a bench height of 5m and bench width of 5m with 80° Slope is proposed. The depth of mining is proposed as 60m (BGL), which is the ultimate pit limit. Also, there is no overburden since the entire mined out material will be utilized. As far as technical factors are concerned, the following precautionary measures will be adopted:

- Strict adherence to DGMS norms
- Frequent inspection by Mines-in-charge/Mines Manager
- Bench height, width, slope will be as per DGMS norms

Project proponent allocated INR 2.0 Lakhs as a Capital cost in the EMP budget for slope stability analysis and implementation of slope stabilization techniques.

7.6 DISASTER MANAGEMENT PLAN

Proper preventive mechanism exists already in the mines.

- Precautionary measures are well explained to all staff by the mines in-charge.
- PPE necessary for all staff are available in the quarry. No person is allowed to enter inside without PPE. Avoiding quarrying during unfavorable environmental conditions.
- Carrying out safe blasting by following DGMS norms

- Safety equipment like fire extinguisher, first aid kit, etc are present in the mine.
- Proper maintenance of machinery used for mining
- In case of any emergency, the contact numbers of mines in-charge, mines manager, Management contact are available in the mines office.

7.7 MINE CLOSURE PLAN

The quarrying operation is proposed up to a depth of 60m (BGL) only, which will be achieved in 10 years. The ultimate pit dimension will be 235m x 144m x (60m BGL). After quarry reaches pit limit of 60m BGL depth (for this lease period), fencing will be constructed around the quarried pit to prevent inherent entry of the public and cattle. This pit will work as rainwater harvesting pit. Below are the action plan for mine closure:

- ✚ Office, workshop & internal roads will be planted with local species and maintained for a period of 1 year.
- ✚ Filling of Gravel benches with soil and carrying out plantations.
- ✚ Fencing the mined out void area with the barbed wire and leaving the void as the water storage area by installing water meter to measure the water level.
- ✚ Monitoring the accumulated water in the mined out voids for the period of 3 years of mine closure.
- ✚ Proposed EMP budget of 14.20 Lakh (Capital) & 0.78 Lakh (recurring) has been allocated for the mine closure plan.

CHAPTER 8

PROJECT BENEFITS

The project area is a fresh patta 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 & Gravel Quarry of Thiru.T.Ponnusamy will create employment opportunity for 37 local people. As per MOEF & CC Notification the project proponent has proposed CER cost of INR 10.00 Lakhs @ 2% of the project cost for project surrounding schools development. Details of Corporate Environmental Responsibility are given in below table:

Table 8.1 – Proposed Corporate Environmental Responsibility	
Proposed CER Activities	Cost in Lakhs
1. Providing books and racks for the library 2. Plantations inside school premises 3. Renovating the smart class room by installing the air conditioning and glass doors. Providing computers, UPS, printer, window screen, computer covers, green mat, fans and lights. 4. Maintenance of school toilets for the entire life of the mine	10.00
Total CER Cost	10.00
The above proposed CER cost will be spent for Government High School, Pavithiram Village. Letter in this regard obtained enclosed as Annexure - 12.	

CHAPTER 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.

CHAPTER 10

ENVIRONMENTAL MANAGEMENT PLAN

10.1 OBJECTIVES

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

10.2 BASIC OF EMP

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

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

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

Table 10.1 - Environmental Management Plan

Environmental Parameter	Mitigation Measures
Air	Wet drilling to suppress the dust emission from drill machine
	Regular water sprinkling on haulage road through fixed water sprinkler.
	2.0 KLD of water will be used for dust suppression.
	Avoiding blasting during high wind period, night times and temperature inversion periods.
	Regular grading of haul road to clear accumulation of loose material.
	It will be ensured that vehicles are properly maintained to comply with exhaust emission requirements
	Maintenance as per operator manual of the equipment and machinery in the mines to minimizing air pollution
	Ambient Air Quality Monitoring carried out in the project area and in surrounding villages to access the impact due to the mining activities and the efficacy of the adopted air pollution control measures.
	Afforestation for control of dust.
Surface water	In the study area, Noyyal River is located at a distance of 7.0 km in Northeast side and Aathupalayam Dam is located at a distance of 5.25 km on the Northern direction of the proposed ML area. There is no discharge of effluent or any untreated water from the mines will be made into these water bodies, there is no major impact. The project proponent will restrict the mining operation only within the lease and no other work will be carried out outside the mining lease.
	Surface runoff management structures like garland drain of required length which is connected to a settling pond will be constructed around the quarry to collect the rain water. Monthly or after rainfall, inspection will done to ensure performance of water management structures and systems. There is no discharge of any effluent into nearby water bodies.
Ground Water	The quarrying operation is proposed upto a depth of 60m below ground level, Water table is found at a depth of 66m in rainy seasons, hence the project will not intersect the Ground water table during entire quarry period.

Water Consumption and Wastewater generation	Water required for this project will be sourced from vendors.
	Domestic wastewater generation of 1.0 KLD will be treated in septic tank with soak pit.
	Conduct ground water and surface water monitoring for parameters specified by CPCB
Noise	The workers employed are provided with protection equipment, earmuffs and ear-plugs for the protection from high noise level generated at the mine site wherever required.
	Noise levels are controlled by using optimum explosive charge, proper delay detonators and proper stemming to prevent blow out of holes.
	Development of thick greenbelt all along the safety Zone (7.5 m and 10m) of the project area to attenuate the noise and the same will be maintained.
	Preventive maintenance of mining machinery and replacement of worn-out accessories to control noise generation.
	Annual ambient noise level monitoring are carried out in the project area and in surrounding villages to assess the impact due to the mining activities and the efficacy of the adopted noise control measures. Additional noise control measures will be adopted if required as per the observations during monitoring.
Ground Vibration and Fly Rock Control	Controlled blasting using delay detonators will be carried out to maintain the PPV value well within the prescribed standards of DGMS.
	Drilling and blasting will be carried under the supervision of qualified persons.
	Will be Ensured that blast holes are adequately stemmed for the depth of the hole and stemmed with suitable angular material.
	To be Undertake noise or vibration monitoring.
Land Environment	At conceptual stage, the mining pits will be converted into Rain Water Harvesting pit. Remaining area will be converted into greenbelt area.
	No external dumping i.e., outside the project area. The entire material will be sold.
	Garland drains with catch pits / settlement traps to be provided all around the project area to prevent run off affecting the surrounding lands.

	The periphery of Project area will be planted with thick plantation to arrest the fugitive dust, which will also act as acoustic barrier.
	Frequent Soil and ground water testing as per Environmental Monitoring Plan.
Top Soil / Overburden	There is no overburden anticipated during the quarrying operation.
Biological Environment	During mining, thick plantation will be carried out on the mentioned safety zone areas.
	The main attributes that retard the survival of sapling is fugitive dust, this fugitive dust can be controlled by water sprinkling on the haul roads and installing a sprinkler unit near the newly planted area.
	Regular review on Green belt development programme.
	Year wise greenbelt development plan mentioned in Chapter 4 will be monitored.

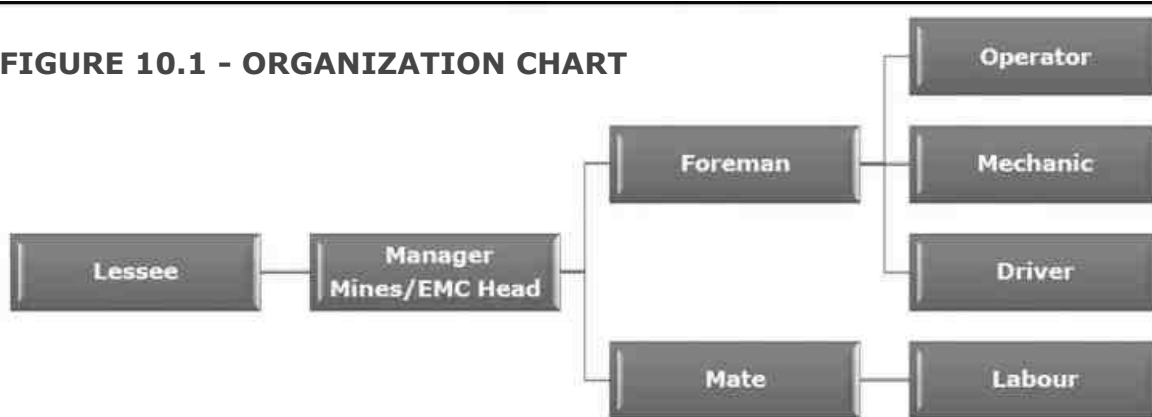
10.3 ADMINISTRATION AND TECHNICAL SETUP

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

- ✚ Monitoring of the water/ waste water quality, air quality and solid waste generated.
- ✚ Analysis of the water and air samples collected through external laboratory.
- ✚ Implementation and monitoring of the pollution control and protective measures/ devices which shall include financial estimation, ordering, installation of air pollution control equipment, waste water treatment plant, etc.
- ✚ Co-ordination of the environment related activities within the project as well as with outside agencies.

- ✚ Collection of health statistics of the workers and population of the surrounding villages.
- ✚ Green belt development.
- ✚ Monitoring the progress of implementation of the environmental monitoring programme.
- ✚ Compliance to statutory provisions, norms of State Pollution Control Board, Ministry of Environment and Forests and the conditions of the environmental clearance as well as the consents to establish and consents to operate.

FIGURE 10.1 - ORGANIZATION CHART



SI. No	Skill Description	Designation	Nos
1.	Skilled	Mines Manager	1 No.
		Foreman / Mate	2 No.
		Operator	13 No.
		Mechanic	1 No.
2.	Semi-skilled	Driver	5 No.
3.	Unskilled	Labours	15Nos
Total =			37Nos

10.4 ENVIRONMENTAL POLICY

- The Project Proponent has stipulated a well-defined Environmental policy by which the lessee is committed to conducting business with a strong environmental conscience towards the community, customers, and employees. The Environment policy is given as below.

- The Environment policy of "Rough Stone & Gravel Quarry of Thiru.T.Ponnusamy" is that the rules and commitment are driven towards conservation of the environment.
- The lessee is committed to efficient use of natural resources based on reduce, recycle and reuse method.
- The project is committed to the identification of possible impacts and will take the necessary management steps to mitigate the impacts.
- Environment performance will be regularly monitored and reported for continual improvement of our environment and health performance.

10.5 OCCUPATIONAL SAFETY & HEALTH MANAGEMENT

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

Proponent has allocated a Budget of 1.58 Lakh (Capital) & 0.83 Lakh (recurring) for Environmental display board, PPE, IME & PME and First aid facility provision.

10.6 COST OF ENVIRONMENTAL CONTROL MEASURES

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

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	0.42	0.42
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	8.00	0.50
	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	2.75	0.28
	No overloading of trucks/tippers/tractors	0.00	0.14
	Stone carrying trucks will be covered by tarpaulin	0.00	0.10
	Enforcing speed limits of 20 km/hr within ML area	0.25	0.03
	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	0.85
	Installing wheel wash system near gate of quarry	0.50	0.20
Sub-Total (A)		11.92	2.62
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	14.57
Sub-Total (B)		0.50	14.59
Waste Management	Provision for domestic waste collection and disposal through authorized agency	0.25	0.20

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	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	0.42	0.05
	Per Hectare fencing Cost @ Rs. 2,00,000/- with Maintenance of Rs 10,000/- per annum	8.48	0.10
	Plantation inside ML area (1000 Nos.)	2.00	0.30
	Plantation outside ML area (1100 Nos.)	3.30	0.33
Sub-Total (D)		14.20	0.78
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
	Workers will be provided with Personal Protective Equipment's	1.48	0.37
	Health checkup for workers will be provisioned	0.00	0.37
	First Aid facility Provision	0.00	0.08
	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	2.12	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 Stablitiy Action Plan	2.00	0.00
Sub-Total (E)		6.10	12.30
Grant Total		33.02	30.51

Table 10.3 - Environmental Management Plan Budget for 10 years			
Sl. No	Year	Capital cost* (Lakhs)	Recurring Cost @ 5% Escalation (Lakhs)
1	1 st	33.02	30.51
2	2 nd	0.0	32.04
3	3 rd	0.0	33.64
4	4 th	0.0	35.32
5	5 th	0.0	37.09
6	6 th	49.53	38.94
7	7 th	0.0	40.89
8	8 th	0.0	42.93
9	9 th	0.0	45.08
10	10 th	0.0	47.33
Total		82.55	383.77
Grand Total (Lakhs)		466.32	
The total EMP Cost is 466.32 Lakhs (For 10 Years) i.e., Rs. 82.55 Lakhs of Capital Cost (Rs. 33.02 Lakhs for 1 st first Five years and Rs. 49.53 Lakhs for 2 nd five years) + Rs. 383.77 Lakhs of Recurring cost (For 10 Years)			
*Life of Capital - 5 years, augmented by 50% in 6 th year			

10.7 CONCLUSION

Various aspects of mining activities were considered, and related impacts were evaluated. Considering all the possible ways to mitigate the Environmental concerns, an Environmental Management Plan was prepared, and INR 466.32 Lakhs has been allocated for the same. The EMP is dynamic, flexible, and subjected to periodic review. For projects where major environmental impacts are associated, EMP will be under regular review. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will have a positive impact on the study area.

CHAPTER 11

SUMMARY & CONCLUSION

11.1 OVER ALL JUSTIFICATION FOR IMPLEMENTATION OF THE PROJECT

11.1.1 INTRODUCTION

Thiru.T. Ponnusamy, has obtained Precise Area communication letter from the Assistant Director, Department of Geology and Mining, Karur over an extent of 4.23.80 Ha., located at the Survey No. 679/A, 679/B(P), 680/A(P) and 680/B(P) of Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State.

As per EIA notification, 2006 and its subsequent amendments the proposed Rough Stone & Gravel Quarry of Thiru.T.Ponnusamy, is falls under Schedule 1(a) Mining of Minerals. It is further classified under Category B1 due to the overall extent of cluster area is 8.71.30 Ha which is >5 Ha. This cluster includes the one existing Quarry and this proposed Quarry. The ToR for preparation of EIA/EMP was approved vide TOR Identification No. TO24B0108TN5533139N, dated 09.10.2024. This report has been prepared in line with the approved TOR for total production of 8,21,260 m³ of Rough Stone & 1,69,200 m³ of Gravel, in which 5,65,550 m³ of Rough stone & 1,69,200 m³ of Gravel will be mined out in first five years and remaining 2,55,710 m³ rough stone will be mined out in second five year.

Sl. No.	Description	Status/Remarks
1.	Sector	Non-coal mining
2.	Category of the project	B1 (Cluster)
3.	Proposed mineral	Rough Stone & Gravel quarry
4.	Type of Lease	Proposed quarry
5.	Extent of the lease	4.23.80 Ha
6.	Proposed depth of Mining (For First 5 Years)	30m BGL
	Ultimate depth of Mining (For 10 Years)	60m BGL
7.	Method of mining	Opencast mechanized

8.	Proposed lease period	10 Years
9.	Proposed Environmental Clearance	10 Years
10.	Proposed production quantity for ten years	<u>Rough Stone:</u> 5,65,550 m ³ (First Five year) 2,55,710 m ³ (Remaining Year) <u>Gravel:</u> 1,69,200 m ³

The lessee, Thiru.T.Ponnusamy (Proprietor) is an individual with sound experience in the identification of quarry, operation and marketing in the field of Rough Stone & Gravel. The proposed land is a patta land in the name of applicant vide Patta Nos. 3948 and 3905 (Refer Annexure - 6).

11.1.2 LOCATION

This proposed project site is located in Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State and its Latitude: 10°58'41.31"N to 10°58'49.98"N and Longitude: 77°48'48.50"E to 77°48'54.49"E with Survey of India Topo Sheet No. 58-F/13. To conduct the study, the proposed mine lease area (core zone) and an impact zone of 10 km radius (called buffer zone) around the proposed mine site were considered. The EIA report is based on three months baseline data (i.e. October 2024 to December 2024)

11.1.3 GEOLOGY

The area is underlain by the wide range of metamorphic rocks of peninsular gneissic complex. The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The strike of the Charnockite formation is N80°W –S80°E with dipping towards NE80°.

11.1.4 PROJECT DESCRIPTION

This is a proposed Rough Stone & Gravel quarry by opencast mechanized mining method with drilling and blasting. The quarrying is restricted up to a depth of 60m below ground level. The geological reserves is estimated to be 23,28,150 m³ of Rough stone and 2,11,650 m³ of Gravel formation. The mineable reserve calculated by

deducting safety distance and bench loss. The mineable reserves estimated to be 8,21,260 m³ of Rough Stone & 1,69,200 m³ of Gravel, in which 5,65,550 m³ of Rough stone & 1,69,200 m³ of Gravel will be mined out in first five years and remaining 2,55,710 m³ Rough stone will be mined out in second five year.

It is proposed to quarry out rough stone with 5m bench height, 5m width with 80° slope using conventional Opencast Mechanized method. The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, Loading and transportation of Rough Stone. There is no overburden anticipated during entire rough stone quarrying operation. The Salient features of the project are given in below table

S.No.	Type of Detail	Description
1	Sector	1(a) Non coal mining
2	Fresh/Existing project	New Project
3	Category	B1 (Cluster)
4	Nature of mineral	Minor mineral
5	Life of the mine	10 years
6	Production Quantity for ten years	<u>Rough Stone:</u> 5,65,550 m ³ (First Five year) 2,55,710 m ³ (Remaining Year) <u>Gravel:</u> 1,69,200 m ³
7	Waste generation and management	Nil
8	Bench height and width	Proposed bench height & width is 5.0 m respectively and number of proposed benches is 12 (1+11) nos
9	Ultimate pit depth	60m (BGL)
10	End use	The excavated Rough Stone and Gravel is used for construction industries for Government & Public sector projects besides catering domestic housing and infrastructure projects in and around the district.

11.1.5 PROJECT REQUIREMENTS

The requirements of the project is given below.

S.No.	Nature of requirement	Description
1	Water requirement	Total water requirement of 6.5 KLD which will be procured from the outside agencies. Out of 6.5 KLD, drinking water requirement is 2.5 KLD, Green belt development is 2.0 KLD and for dust suppression is 2.0 KLD.
2	Power requirement	No electricity is needed for the proposed mining operation. 685.208 KL of HSD will be utilized for the entire project life.
3	Manpower requirement	Total Manpower 37 Nos. Permanent employee – 20, Temporary employee – 17
4	Financial requirement	The total Project Cost is Rs. 688.27 lakhs.
5	Funds for Socio economic development	As per MOEF & CC Notification CER cost is arrived for an amount of 10.0 Lakhs for 10 Years.

11.2 DESCRIPTION OF ENVIRONMENT IN THE STUDY AREA

The baseline data collection for meteorology, air, water, noise and soil environments have been carried out during October 2024 to December 2024. Air, water, noise and soil samples are collected and analyzed through NABL accredited lab. The features in the study area are given below.

S.No.	Areas	Distance from project site		
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Nil within 15km radius		
2	Areas which are important or sensitive for ecological reasons			
A	Wetlands, water courses or other water bodies,	Water bodies	Distance	Direction
		Odai	520m	NE
		Aathupalayam Dam	5.25km	N

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		Noyyal River	7.0km	NE
		Kaveri River	13.5km	NE
		Amaravathi River	10.4km	SW
B	Coastal zone, biospheres,	Nil within 10km radius		
C	Mountains, forests	• Nil within 15km radius • Nearest Sanctuary - Vellode Bird Sanctuary – 34.30km (NW)		
3	Environmental sensitive areas, Protected areas as per Wildlife Protection Act, 1972	Nil within 15km radius		
4	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, overwintering, migration	Nil within 15km radius		
5	Inland, coastal, marine or underground waters	Nil within 15km radius		
6	State, National boundaries	Nil within 15km radius		
7	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Nil within 15km radius		
8	Defense installations	Nil within 15km radius		
9	Densely populated or built-up area	Thennilai West – 1.0 km (NE)		
10	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Thennilai West – 1.0 km (NE)		
11	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	Nil		
12	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	Nil		
13	Areas susceptible to natural hazard which could cause the project to present environmental problems (earth quakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions) similar effects	No. The area is not prone to earthquakes, floods, etc.		

11.3 EXISTING ENVIRONMENTAL SCENARIO

11.3.1 METEOROLOGICAL DATA

Meteorological Data Recorded at Site is given below (Refer Figure 3.4, Chapter 3):

S.NO	Parameters	Values
1.	Temperature (°C)	Min 18
		Max. 35
		Avg 26.05
2.	Relative Humidity (%)	Min 27.34
		Max 100
		Avg 74.03
3.	Wind Speed (km/h)	Min 0
		Max 24.20
		Avg 5.7
4.	Wind Direction	Predominant wind blowing from W to E

11.3.2 AIR ENVIRONMENT

The air monitoring have been carried out in 6 locations and details of monitoring locations are given below:

S. No.	Station Code	Locations	Distance & Direction	Coordinates
1	AAQ1	Proposed ML Area	Core Zone	10°58'49.06"N 77°48'48.50"E
2	AAQ2	Monjanu (East)	3.9 Km, NW	10°58'29.36"N 77°46'38.88"E
3	AAQ3	Thennilai (East)	3.5 Km, SE	10°58'7.91"N 77°50'46.42"E
4	AAQ4	Thennilai (South)	4.5 Km, SE	10°56'27.14"N 77°47'43.99"E
5	AAQ5	Karvazhi	3.8 Km, N	11°0'50.04"N 77°48'24.07"E
6	AAQ6	Thukkachi	4.7 Km, NE	11°1'4.74"N 77°50'6.04"E

The concentrations of various air pollutants at the 6 locations are given below. For all the components in the table, the unit are in µg/m³.

Results of Air sampling Analysis in 6 locations			
Station ID	Min	Max	Avg.
Particulate matter PM_{2.5} (µg/m³)			
AAQ-1	26.9	35.1	31.2
AAQ-2	23.2	30.3	26.5
AAQ-3	22.6	29.6	25.8
AAQ-4	21.2	25.4	23.3
AAQ-5	21.0	25.3	23.0
AAQ-6	22.5	26.8	24.5
CPCB NAAQS 2009 for PM_{2.5} - 60 µg/m³			
Particulate matter PM₁₀ (µg/m³)			
AAQ-1	58.1	75.9	67.3
AAQ-2	49.0	64.1	56.0
AAQ-3	47.8	65.6	54.5
AAQ-4	44.5	53.7	49.1
AAQ-5	44.2	53.4	48.5
AAQ-6	49.2	58.4	53.5
CPCB NAAQS 2009 for PM₁₀ - 100 µg/m³			
Sulphur Di-oxide as SO₂ (µg/m³)			
AAQ-1	6.7	8.5	7.7
AAQ-2	4.5	5.7	5.1
AAQ-3	4.0	5.5	4.6
AAQ-4	3.6	5.9	4.7
AAQ-5	3.6	5.1	4.3
AAQ-6	4.1	5.6	4.8
CPCB NAAQS 2009 for SO₂ - 80 µg/m³			
Oxide of Nitrogen as NO₂ (µg/m³)			
AAQ-1	11.9	17.2	14.7
AAQ-2	7.0	11.0	8.7
AAQ-3	7.2	12.2	9.6
AAQ-4	7.5	12.6	9.8
AAQ-5	7.7	11.5	9.6
AAQ-6	8.5	13.1	10.4
CPCB NAAQS 2009 for NO₂ - 80 µg/m³			

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

11.3.3 WATER ENVIRONMENT

Two surface water samples and six ground water samples were collected from the study area were analyzed and given in below table.

Surface Water Analysis Results					
S. No	Parameter	Unit	SW1	SW2	Surface water standards (IS 2296 Class-A)
1	Odour	-	agreeable	Agreeable	-
2	Turbidity	NTU	12.0	16.0	1
3	pH at 25 °C	-	7.26	7.68	6.5-8.5
4	Electrical Conductivity	µS/cm	864.5	905.8	-
5	Total Dissolved Solids	mg/l	520	552	500
6	Total Suspended Solids	mg/l	22.0	34.0	-
7	Total hardness as CaCO ₃	mg/l	212	246	300
8	COD	mg/l	BDL(DL-4.0)	BDL(DL-4.0)	-
9	Calcium as Ca	mg/l	48.4	52.8	-
10	Magnesium as Mg	mg/l	21.8	27.4	-
11	BOD	mg/l	BDL(DL-2.0)	BDL(DL-2.0)	-
12	Total alkalinity as CaCO ₃	mg/l	205	234	-
13	Chloride as Cl ⁻	mg/l	136	152	250
14	Sulphates as SO ₄ ²⁻	mg/l	158	179	400
15	Iron as Fe	mg/l	BDL(DL-0.01)	BDL(DL-0.01)	1.0
16	Nitrate as NO ₃	mg/l	2.65	5.47	20
17	Fluoride as F	mg/l	BDL(DL-0.1)	BDL(DL-0.1)	1.5
18	Manganese as Mn	mg/l	BDL(DL-0.05)	BDL(DL-0.05)	0.5

From the above results, it is observed that Turbidity and TDS values are found to be higher, hence these water can be used for drinking purpose with conventional treatment followed by disinfection.

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Results of Ground Water sampling Analysis										
S. No.	Test Parameter	Unit	GW1	GW2	GW3	GW4	GW5	GW6	Specification/Limit (As per IS:10500: 2012)	
									Desirable	Permissible
1	Odour	...	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
2	Taste	...	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	pH	...	7.30	7.45	7.80	7.52	7.53	7.70	6.5 - 8.5	No Relaxation
4	Turbidity	NTU	<1	<1	<1	<1	<1	<1	1	5
5	TDS	mg/L	1250	376	402	640	1150	870	500	2000
6	Fluoride,(F)	mg/L	0.86	0.65	0.70	0.75	0.71	0.87	1	1.5
7	Total Alkalinity, (CaCO ₃)	mg/L	431	155	180	225	490	127	200	600
8	Total Hardness, (CaCO ₃)	mg/L	539	267	316	480	539	549	200	600
9	Calcium,(Ca)	mg/L	82.3	72.1	94.1	114	86.2	125	75	200
10	Calcium as CaCO ₃		206	180	235	284	216	314	-	-
11	Free Residual chlorine as Cl ⁻		BDL(D .L-0.2)	BDL(D .L-0.2)	BDL (D.L - 0.2)	BDL(D .L-0.2)	BDL(D .L-0.2)	BDL(D .L-0.2)	0.2	1.0
12	Chloride,(Cl)	mg/L	274	56.7	69.5	186	240	342	250	1000
13	Magnesium,(Mg)	mg/L	80.0	20.7	19.3	47.0	77.6	56.4	30	100
14	Nitrate, (NO ₃)	mg/L	5.57	BDL(D L-1.0)	BDL(D L-1.0)	2.03	BDL(D L-1.0)	BDL(D L-1.0)	45	No Relaxation
15	Sulphate, (SO ₄)	mg/L	371	85.1	63.4	94.5	367	125	200	400
16	Iron,(Fe)	mg/L	0.05	0.05	0.10	0.02	0.08	0.02	1	No Relaxation
17	Manganese, (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
18	Conductivity	µs/cm	2064	611	664	1039	1905	1435	Not Specified	Not Specified

All the values were found to be within permissible limits

11.3.4 NOISE ENVIRONMENT

Noise levels were measured in 6 locations and the results are given below.

S. No	Location	Day equivalent (dB)	Night equivalent (dB)	Permissible noise level standards by CPCB		Zone
				Day time (dB)	Night time (dB)	
1	Proposed ML Area	46.6	37.1	75	70	Industrial Zone
2	Monjanu (East)	44.4	37.0	55	45	Residential Zone
3	Thennilai (East)	42.2	37.5			
4	Thennilai (South)	41.5	37.0			
5	Karvazhi	45.0	39.8			
6	Thukkachi	46.8	42.5			

All the values are found to be within CPCB norms.

11.3.5 SOIL ENVIRONMENT

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

S. No.	Parameter	S1 Proposed ML Area	S2 Monjanu (East)	S3 Thennilai (East)	S4 Thennilai (South)	S5 Karvazhi	S6 Thukkachi
1	pH	7.62	6.12	7.54	7.28	7.11	7.36
2	Electrical Conductivity	62.47	54.89	76.58	104.5	45.68	87.11
3	Dry Content	95.14	96.68	97.04	93.91	95.91	93.55
4	Water Content	4.86	3.32	2.96	6.09	4.09	6.45
5	Organic Mater	0.87	1.02	0.56	0.73	0.81	1.40
6	Phosphorus	0.89	1.63	1.58	2.81	1.53	1.92
7	Texture	SILT LOAM	SILT LOAM	LOAM	LOAM	SILT LOAM	LOAM
8	Sand	30.56	27.02	44.36	40.58	23.86	45.70
9	Clay	18.28	11.49	10.22	12.18	18.32	10.48
10	Silt	51.16	61.50	45.42	47.24	57.83	43.82
11	Total Nitrogen	221	329	165	193	249	442
13	Sodium	700	674	799	594	831	402
14	Potassium	765	733	897	683	959	539
15	Water Holding Capacity	4.2	3.9	4.5	4.3	3.8	4.1
16	Porosity	22.5	23.6	20.5	21.9	21.5	25.6

11.3.6 BIOLOGICAL ENVIRONMENT

11.3.6.1 Flora

For measuring the extent of flora present in the study area, the area is divided in to 4 quadrants. The flora population in each quadrant is summed up for the total population in the study area. Field survey is done. Shrubs like Erukku, Aavarai are found in lease area. In the buffer zone, common trees like Neem, papaya, Thennai, etc., and shrubs like Yerukku, Arali, etc., and climbers like Kovai, Pirandai etc., are found.

11.3.6.2 Fauna

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

11.3.7 LAND USE

For Land-use and land cover study, satellite images from NRSC satellite imagery IRS-P6 December 2024 has been used. The land use pattern in the study area is given below:

Sl.No.	Land Use / Land Cover	Area in Sq.Km	Area in Percentage
1	Built-up land	5.35	1.65
2	Crop land	241.5	75.10
3	Fallow land	8.36	2.59
4	Land with scrub	29.63	9.18
5	Land without scrub	0.76	0.23
6	Existing Quarry	1.7	0.52
7	Plantations	30.21	9.38
10	Water bodies	4.94	1.35
	Total Area	322.45	100

11.3.8 SOCIO ECONOMIC ENVIRONMENT

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

The following data area collected from secondary data.

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

Population profile of the study area is given below:

Particulars	No of Population	Percentage (%)
A. Population break-up by Gender		
Male Population	18167	49.95
Female Population	18561	50.05
Total	36728	100
B. Population break-up by Caste		
Scheduled Caste	10191	20.35
Scheduled Tribes	11	1.6
Others	26526	78.05
Total	36728	100
C. Literacy Level		
Male Literate Population	13754	37.45
Female Literate Population	10201	27.77
Male Illiterate	4413	12.02
Female Illiterate	8360	22.76
Total	36728	100
D. Occupational structure		
Total Workers	23648	46.41
Total Non-workers	13080	53.59
Total	36728	100

11.3.9 HYDROGEOLOGY OF THE LEASE AREA

The hydrological and hydrogeological pattern of the study area is studied in detail using satellite imagery. Proposed Mine lease area is dry Patta land with majority of the area is observed with hard rock formation. There is no any seasonal or perennial Odai within the M.L area. The drainage pattern of the region is plane to sub-dendritic.

In the study area, Noyyal River is located at a distance of 7.0 km in Northeast side and Aathupalayam Dam is located at a distance of 5.25 km on the Northern direction. Refer Figure 3.23 – 3.26 for Drainage, Geology, Geomorphology, Soil behavior of the study area.

11.4 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental impacts on the following environments are identified.

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

11.4.1 LAND ENVIRONMENT: IMPACT AND MITIGATION MEASURES

The major impact due to this project on land environment is the change in land use. Since this quarry is a small one and the production is less, mining activity will be carried out upto 60m BGL. Other than quarrying of minerals, no other change will be done since there is no dumping. To prevent soil erosion during monsoon season, garland drain will be constructed with silt traps.

At the mine closure stage, 3.38.40 Ha of lease area will be left as rain water harvesting pond, 0.82.40 Ha will be developed with green belt.

11.4.2 WATER ENVIRONMENT: IMPACT AND MITIGATION MEASURES

- There is no water body present inside the lease area. The entire water requirement for the project is 6.5 KLD which will be sourced from outside agencies. Negligible sewage will be generated, for which a septic tank with soak pit will be set up.
- During monsoon season, the excess rain water, if any, will be led through garland drain to the collection pond with silt traps.
- The mining activity is not likely to intersect ground water as the ground water table occurs at a depth of 66m in rainy seasons. The mining will go up to the maximum depth of 60m BGL. So, there will be no chance of intersecting the ground water table by the mining activity.
- The major water bodies found in the buffer zone are:
 - Noyyal River -7.0km, NE
 - Aathupalayam Dam -5.25km, N
- Since these water bodies are located outside the lease area and there is no discharge of effluent or any untreated water from the mines will be made into these water bodies, there is no major impact.
- It is planned to carryout appropriate rainwater harvesting schemes and artificial recharge schemes in the area (Refer section 4.5.5, chapter 4).

11.4.3 BIOLOGICAL ENVIRONMENT: IMPACT AND MITIGATION MEASURES

S.No.	Year	Species	No. of trees	Spacing	Survival
1	I	<i>Azadirachta indica</i> , <i>Ficus benghalensis</i> , F.	1000	3m x 3m	80%
2	II		0		

3	III	<i>religosa, Holoptea integrifolia, Pongamia pinnata and Tamarindus indica</i>	0		
4	IV		0		
5	V		0		
Total			1000		

- The mine lease area is devoid of major plantation. Shrubs and bushes are majorly found within the lease area. During mining operation, to mitigate CO₂ emission due to mining activities, it is recommend to plant trees all around the mine area to offset the carbon emission.
- PP have to plant 2100 saplings. Therefore, the safety zone area of 0.82.40 Ha will be maintained as a green belt area and will be planted with local Species of 1000 Nos. of saplings as follows.
- Remaining 1100 saplings will be planted outside the lease area such as at project surrounding schools, temples, road sides, etc.,
- Capital cost of INR 5.30 Lakhs and Recurring cost of INR 0.63 Lakhs per year has been included in EMP cost for greenbelt development.
- During mining activity major impacts like disturbance to animals, dust generation, change in land use & accidental fall of animals may occur. Below mitigation measures are followed to reduce the above impacts:
 - Sirens will be blown before blasting in the mines. To reduce noise levels, plantation will be done. Blasting will be carried out only in the allotted time.
 - To reduce dust generation, mist sprayers will be used. During transportation, the material will be covered with tarpaulin. Water sprinkling will be done to reduce generation of pollutants.
 - After the mine closure stage, the mine pit will be left as rain water collecting tank, which can attract bird population in the nearby areas.
 - Proper planning of Habitat improvement program
 - To prevent entry of animals, the mining area will be properly fenced.

11.4.4 AIR ENVIRONMENT: IMPACT AND MITIGATION MEASURES

- The major Air pollutants due to mining operations are fugitive emissions like PM₁₀, PM_{2.5}. Gaseous emissions like sulfur dioxide (SO₂) and oxides of nitrogen (NO_x) occurs due to excavation/loading equipment and due to vehicles plying on haul roads. Dust emission occurs due to drilling, blasting and transportation.
- The major mitigation measures include, Practicing Wet drilling during drilling operation, Water sprinkling in haul roads & loading area etc., providing dust masks for mines workers, Proper maintenance of vehicles used for transportation, conducting regular emission tests for vehicles used for transport, Development of greenbelt proposed in the safety zone of 7.5m barriers in the lease area.
- The predicted maximum Ground Level Concentration within the mine lease area is estimated to be about 1.05 µg/m₃ of PM_{2.5} & 3.73 µg/m₃ of PM₁₀.
- The post project Concentrations of PM₁₀, PM_{2.5} after adopting necessary control measures shows that even in the worst-case scenario, the resultant added concentrations with baseline figures (GLC - base line + incremental) indicate that the values of ambient air quality for PM₁₀ are in the range of 54.40 µg/m³ to 79.63 µg/m³ and for PM_{2.5} are in the range of 26.30 µg/m³ to 36.15 µg/m³ which are within the statutory limits in each case.

11.4.5 NOISE ENVIRONMENT: IMPACT AND MITIGATION MEASURES

Impacts

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

Mitigation measures

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

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

11.4.6 VIBRATION: IMPACT AND MITIGATION MEASURES

Impacts

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

Mitigation measures

- ✦ Carrying out blasting on limited scale, only from 12:00 PM to 2:00 PM
- ✦ Control of fly rock and vibration by maintaining peak particle velocity within the standard as prescribed by the DGMS and MOEF&CC.
- ✦ Drilling parameters like depth, diameter and spacing will be properly designed to give proper blast;
- ✦ Supervising blasting by competent and statutory Foreman/ Mines Manager.

11.4.7 SOCIO ECONOMIC ENVIRONMENT

The lease area is Patta land in the name of applicant vide Patta Nos. 3948 and 3905. No rehabilitation is needed. Hence, there is no negative impact. The proponent has

planned to spend INR 10,00,000/- Lakhs @ 2% of the project cost for CER activities.

11.4.8 OCCUPATIONAL HEALTH & SAFETY

Impacts

Mining activity may cause various health problems to the mines workers as follows:

- ✦ Dust generated during excavation, drilling, stone cutting, sizing and transportation may cause health problems like Silicosis, Asthma, Tuberculosis and other respiratory lungs disorders etc.
- ✦ Heavy weight lifting by the workers may cause injuries to arms, legs and back.
- ✦ Noise generated during the mining activity may cause Noise Induced Hearing Loss (NIHL).
- ✦ Risks include fly rocks, cracks or fissures due to improper mining methods leads to unexpected accidents.

Mitigation measures

- ✦ The mines worker will be provided with dust mask to minimize the inhalation of the dust.
- ✦ Water sprinkling twice in a day is in practice on the haul roads, near excavation and roads to reduce the fugitive dust emission.
- ✦ Ear muffs will be supplied to the workers working in the noise prone area
- ✦ The mining site will be supplied with first aid facilities and the entire mines worker will have access to that.
- ✦ Providing green belt for air pollutant and noise attenuation
- ✦ Ensuring slope stability
- ✦ Employing only trained professionals for blasting
- ✦ Conducting Pre-Medical Examination for employees before inducting
- ✦ Conducting periodical Medical Examination as per DGMS.
- ✦ Keeping fire extinguisher in place
- ✦ Educating the employees about how to handle unexpected happenings
- ✦ Posting information containing emergency contact numbers in mines office
- ✦ Proponent has allocated a Budget of 1.58 Lakh (Capital) & 0.83 Lakh (recurring) for Environmental display board, PPE, IME & PME and First aid facility provision.

By adopting all these measures, the safety of the employees working in the quarry will be ensured.

11.5 ENVIRONMENTAL MONITORING PROGRAMME

- Monitoring is done to measure the efficiency of control measures implemented. Regular monitoring of various environmental parameters like air, water, noise and soil environments is needed to assess the status of environment during the project operation.
- A schedule is framed with timeline to monitor various parameters during the operation of the project.
- To evaluate the effectiveness of environmental management programme, regular monitoring of the important environmental parameters will be taken up. Air monitoring will be carried out once in 3 months, water sample will be collected once in a season, noise will be monitored once in 3 months, soil samples will be analyzed once per season. Monitoring of the environmental parameters would be done at appropriate and sensitive areas.
- Once the data thus obtained will be incorporated in the EC Compliance report submitted to the Regional office, MoEF&CC. The measurement methodologies will be as per CPCB/BIS/MoEF&CC/DGMS norms.
- Finally, the total EMP Cost of 466.32 Lakhs for a period of Ten years have been proposed. i.e., Capital cost of Rs. 82.55 Lakhs + Recurring cost of Rs. 383.77 lakhs (For 10 Years @ 5% Escalation).

11.6 PROJECT BENEFITS

Financial benefits

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

Social benefits

- This project provides employment to 37 people directly & indirectly. Local people will be hired for unskilled labour.
- For CER, INR 10,00,000/- Lakhs will be allocated through which nearby schools, hospitals will be benefitted.

11.7 CONCLUSION

Various aspects of mining activities were considered, and related impacts were evaluated. Considering all the possible ways to mitigate the Environmental concerns, an Environmental Management Plan was prepared, and INR 466.32 Lakhs has been allocated for the same. The EMP is dynamic, flexible, and subjected to periodic review. For projects where major environmental impacts are associated, EMP will be under regular review. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will have a positive impact on the study area.

CHAPTER 12

DISCLOSURE OF CONSULTANTS

Declaration by Experts contributing to the *Proposed Rough Stone and Gravel Quarry of Thiru.T.Ponnusamy over a lease extent of 4.23.80 Ha., & Cluster extent of 8.71.30 Ha., located at Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State.*

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

EIA Coordinator Name: M. Manikandan



Signature & Date

Period of involvement: October to December 2024.

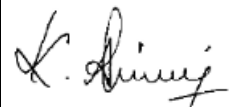
Contact information:

M/s Global Mining Solutions

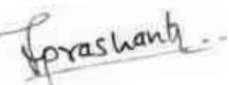
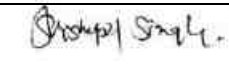
Plot No.6, SF No. 13/2, A2, VS City, RC Chettypatty,

Kottamettupatty, Omalur,

Salem, Tamil Nadu – 636 455

S. No.	Functional areas	Name of the expert/s	Involvement (period and task**)	Signature and Date
1	AP	Dhanalakshmi Ramanathan	Assessment of existing air quality, Impact of the project on ambient air and suggested mitigation measures for air pollution. <u>Period: Oct 2024 to Dec 2024.</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: Oct 2024 to Dec 2024.</u>	

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3	SHW	Ramadoss N	Assessment of waste generated from the project, suggested waste management practices. <u>Period: Oct 2024 to Dec 2024.</u>	
4	SE	Saraswathy K	Baseline SE studies. Data compilation and assessment. Impact of the project on SE status of the area. Formulation of CER plan. <u>Period: Oct 2024 to Dec 2024.</u>	
5	EB	Saravanan S	Baseline data collection of related to ecology of the area. <u>Period: Oct 2024 to Dec 2024.</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: Oct 2024 to Dec 2024.</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: Oct 2024 to Dec 2024.</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: Oct 2024 to Dec 2024.</u>	
9	LU	Srilatha Thiruveedhula	Preparation of land use map based on satellite imagery. Land use classification and analysis. Impact prediction of the project on the surrounding land environment. <u>Period: Oct 2024 to Dec 2024.</u>	
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: Oct 2024 to Dec 2024.</u>	
11	SC	Shisu Pal Singh	Soil monitoring, secondary data collection on soil type, soil	

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			management practices, utilization of topsoil.	
			<u>Period: Oct 2024 to Dec 2024.</u>	
12	GEO	Valliappan Meyyappan	Geological map, stability of quarry and dump, management plan for mine stability, after use of mining quarry and geological feature of the area.	
			<u>Period: Oct 2024 to Dec 2024.</u>	

TM-EC:

S.No	Name of TM (EC)	Sector(s) proposed	Name of EC with whom to be attached	Period of involvement	Type of work	Signature
1	R. Dhanalakshmi	1	Manikandan Manickam	<u>Period: Oct 2024 to Dec 2024.</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	M.Prabu	LU	Srilatha Thiruveedhula	<u>Oct 2024 to Dec 2024.</u>	Associated with FAE in preparing Land use map based on satellite imagery, Land use classification and analysis, Impact prediction on surrounding land environment	
		HG	Ashok Kumar Rajagopal		Associated with FAE in studying hydrogeological pattern of study area, Studying ground water and the impact of the project on ground water	
2	M. Manikandan	EB	Saravanan S	<u>Oct 2024 to Dec 2024.</u>	Associated with the expert in baseline data collection related to ecology of the study area	
		SC	Shishu Pal Singh		Associated with the expert in Soil monitoring, secondary data collection	

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

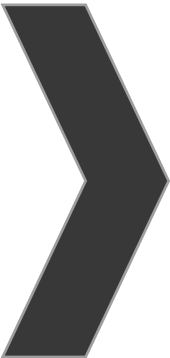
					on soil type, soil management practices, utilization of top soil	
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TM-FAA:

S. No	Name of TM (FAA)	Functional Area	Approved FAE (to work under)	Period of involvement	Type of work	Signature
1	S. Kamaraj	HG	Ashok Kumar Rajagopal	<u>Oct 2024 to Dec 2024.</u>	Associated with Experts in studying hydrogeological pattern of study area, Studying ground water and the impact of the project on ground water	S. Kamaraj
2	Asan Ali S	GEO	Valliappan Meyyappan	<u>Oct 2024 to Dec 2024.</u>	Associated with the expert in preparing Geological map, assessing stability of quarry slope faces and dump, management plan for mine stability, after use of mining quarry and geological features of the area	S. Asan ali
		NV	Srilatha Thiruveedhula		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.	
3	Mownica. B	AP	Dhanalakshmi Ramanathan	<u>Oct 2024 to Dec 2024</u>	Associated with expert team in assessing existing air quality, impact of the project on ambient air and suggesting mitigation measures for air pollution	Mownica
		NV	Dhanalakshmi Ramanathan		Associated with the expert team in suggesting control measures for noise and Ground Vibration.	

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU.T.PONNUSAMY, OVER AN EXTENT OF 4.23.80 HA LOCATED AT S.F.NOS. 679/A, 679/B(P), 680/A(P) AND 680/B(P) THENNILAI WEST VILLAGE, PUGALUR TALUK, KARUR DISTRICT, TAMIL NADU STATE.

4	G.Balasubramani	GEO	Valliappan Meyyappan	<u>Oct 2024</u> <u>to Dec</u> <u>2024</u>	with the expert in preparing Geological map, assessing stability of quarry slope faces and dump, management plan for mine stability, after use of mining quarry and geological features of the area	
		NV	Srilatha Thiruveedhula		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.	



ANNEXURE-1



File No: 11201
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment
Authority(SEIAA), TAMIL NADU)



Dated **09/10/2024**



To,

Thiru THANGAVEL PONNUSAMY

T. Ponnusamy, S/o. Thangavel, Door.No.4, Pavithram, Pavithram-Post, Pugalur Taluk, Karur District-639002., Karur , KARUR, TAMIL NADU, Karur , 639002
ponnusamyvel102@gmail.com

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

Sir/Madam,

SEIAA, Tamil Nadu – Terms of Reference with Public Hearing (ToR) for the Proposed Rough Stone and Gravel quarry over an extent of 4.23.80 Ha at S.F. Nos. 679/A, 679/B(P), 680/A(P) and 680/B(P) of Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu by Thiru. T. Ponnusamy – under project category - “B1” and Schedule S.No.1(a) – ToR issued along with Public Hearing – preparation of EIA report – Regarding.

Ref:

1. Online proposal No. SIA/TN/MIN/491444/2024, Dated: 13.08.2024
2. Your application submitted for Terms of Reference dated: 28.08.2024.
3. Minutes of the 497th meeting of SEAC held on 13.09.2024
4. Minutes of the 760th SEIAA meeting held on 01.10.2024

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO24B0108TN5533139N
(ii) File No.	11201
(iii) Clearance Type	TOR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vii) Name of Project	Rough Stone and Gravel Quarry of Thiru.T. Ponnusamy
(viii) Name of Company/Organization	THANGAVEL PONNUSAMY
(ix) Location of Project (District, State)	KARUR, TAMIL NADU
(x) Issuing Authority	SEIAA
(xii) Applicability of General Conditions	no

1. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1 (Part A and B) were submitted to the SEIAA for an appraisal by the SEAC under the provision of EIA notification 2006 and its subsequent amendments.
2. The above-mentioned proposal has been considered by (SEIAA) Appraisal Committee of SEIAA in the meeting held on 01/10/2024. The minutes of the meeting and all the Application and documents submitted [(viz. Form-1 Part A, Part B,)] are available on PARIVESH portal which can be accessed by scanning the QR Code above.
3. The State Expert Appraisal Committee (SEAC), based on the information & clarifications provided by the project proponent and after detailed deliberations on all technical aspects recommended the proposal for grant of Terms of Reference under the provision of EIA Notification, 2006 and as amended thereof subject to the stipulation of specific and general conditions as detailed in Annexure (2).
4. The SEIAA has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the SEAC hereby decided to issue the following Terms of Reference for instant proposal of Thiru.THANGAVEL PONNUSAMY under the provisions of EIA Notification, 2006 and as amended thereof.
5. The Ministry/SEIAA-TN reserves the right to stipulate additional conditions, if found necessary.
6. The Terms of Reference to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.
7. This issues with the approval of the Competent Authority.
8. The TORs with public hearing prescribed shall be **valid for a period of three years** from the date of issue, for submission of the EIA/EMP report as per OM No.J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.

Copy To

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. The 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, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
6. The Chair Person, TNPC Board, 76, Mount Salai, Guindy, Chennai-32
7. The District Collector, Karur District
8. The Commissioner of Geology and Mines, Guindy, Chennai-32
9. Assistant Director, Department of Geology & Mining, Karur District
10. EI 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	After detailed discussions, the Authority accepts the recommendation of SEAC and decided to grant Terms of Reference with Public Hearing for the production quantity of 7,75,290m ³ of Rough Stone & 1,69,200m ³ of Gravel and the annual peak production of 1,16,540m ³ of Rough

S. No	Terms of Reference
	Stone & 66,960m³ of Gravel with the restricted depth of mining upto 50m subject to the following TORs, specific conditions as recommended by SEAC in addition to the standard terms of reference for EIA study and details issued by the MOEF & CC in addition to the conditions in Annexure “B” of this minutes to be included in EIA/EMP Report: 1. The PP shall furnish the revised Mining plan for the restricted depth upto 50m. 2. The detailed studies on the Loss of Vegetation, Loss of Biodiversity shall be carried out and the action plan to prevent the same shall be included in the EIA report. 3. The detailed studies on the Impact on water bodies and human health shall be carried out and the action plan to prevent the same shall be included in the EIA report. 4. The detailed studies on the Impact on Reserved Forests and Agriculture shall be carried out and the action plan to prevent the same shall be included in the EIA report. 5. The detailed studies on the Impact on Free ranging Wildlife & grazing domestic animals, cattle breeds and animal husbandry shall be carried out and the action plan to prevent the same shall be included in the EIA report. 6. The detailed studies on the Livelihood shall be carried out and the action plan to prevent the same shall be included in the EIA report. 7. The PP shall carry out the scientific studies to assess the hydrogeological condition of the quarry by involving any one of the reputed Research and Academic Institution. A copy of such scientific study report shall be included in the EIA report. 8. The PP shall carry out the scientific studies with prior permission from the DMS/Chennai Region, to design the controlled blast parameters for reducing the blast-induced ground/air-vibrations and eliminating the fly rock from the blasting operations carried out in the quarry, by involving anyone of these reputed Research and Academic Institution. A copy of such scientific study report shall be included in the EIA report. 9. The PP shall furnish the details of EMP addressing the revegetation and restoration activities proposed for the project activity.

2. Seac Conditions - Site Specific

S. No	Terms of Reference
2.1	1. The PP shall submit the Development & Production Plan for the life / lease period of 10 years along with the prescribed EMP measures. 2. The PP shall provide the controlled blasting methodology design keeping the cluster of operating mines in mind which includes the procurement, transportation and storage of explosives and safe blasting procedures. 3. The project proponent shall furnish the videos and photographs of the previous mine. 4. The project proponent shall furnish the status of previous EC obtained vide Lr.No.SEIAA-TN/F.No.9908/1(a)/EC.No:5493/2023, dated:22.08.2023.

3. Seac Standard Conditions

S. No	Terms of Reference
3.1	1. In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following: (i) Original pit dimension (ii) Quantity achieved Vs EC Approved Quantity (iii) Balance Quantity as per Mineable Reserve calculated.

S. No	Terms of Reference
	(iv) Mined out Depth as on date Vs EC Permitted depth (v) Details of illegal/illicit mining (vi) Violation in the quarry during the past working. (vii) Quantity of material mined out outside the mine lease area (viii) Condition of Safety zone/benches (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m. 2. Details of habitations around the proposed mining area and latest VAO certificate regarding the location of habitations within 300m radius from the periphery of the site. 3. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc. 4. The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within 1 km of the proposed quarry. 5. The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report. 6. The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site. 7. In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC. 8. However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level. 9. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent. 10. The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site. 11. The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences. 12. If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines, 13. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines? 14. Quantity of minerals mined out. · Highest production achieved in any one year · Detail of approved depth of mining. · Actual depth of the mining achieved earlier. · Name of the person already mined in that leases area. · If EC and CTO already obtained, the copy of the same shall be submitted.

S. No	Terms of Reference
	· Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches. 15. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone). 16. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc., 17. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan. 18. The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same. 19. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act 1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment. 20. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. 21. The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study. 22. The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind. 23. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted. 24. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given. 25. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided. 26. Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered. 27. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided. 28. Impact on local transport infrastructure due to the Project should be indicated. 29. A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both

S. No	Terms of Reference
	within the mining lease applied area & 300m buffer zone and its management during mining activity. 30. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific. 31. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible. 32. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix-I in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner. 33. Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner 34. A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period. 35. A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period. 36. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed. 37. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations. 38. The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation. 39. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given. 40. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc. 41. If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB. 42. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine. 43. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.

4. Seiaa Standard Conditions:

S. No	Terms of Reference
4.1	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. 2. The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc., 3. The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines. 4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network. 5. The committee shall deliberate on risk & emergency management plan, fire safety & evacuation plan and sustainable development goals pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan. 6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail in the EIA Report. 7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner. 8. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public in the vicinity. Agriculture & Agro-Biodiversity 9. Impact on surrounding agricultural fields around the proposed mining Area. 10. Impact on soil flora & vegetation around the project site. 11. Details of type of vegetation including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetation all along the boundary of the proposed mining area shall committed mentioned in EMP. 12. The Environmental Impact Assessment should study the agro-biodiversity, agro-forestry, horti-cultural plantations, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem. 13. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services. 14. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock. Forests 15. The project proponent shall detailed study on impact of mining on Reserve forests and free ranging wildlife. 16. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna. 17. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection. 18. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site. Water Environment 19. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period. 20. Erosion Control measures.

S. No	Terms of Reference
	21. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas. 22. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir. 23. The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities. 24. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts. 25. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components. 26. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites. 27. The EIA shall include the impact of mining activity on the following: - Hydrothermal/Geothermal effect due to destruction in the Environment. - Bio-geochemical processes and its foot prints including environmental stress. - Sediment geochemistry in the surface streams. Energy 28. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished. Climate Change 29. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities. 30. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and physical, chemical & biological soil features. 31. Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood. Mine Closure Plan 32. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued. EMP 33. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued and the scope for achieving SDGs. 34. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan. Risk Assessment 35. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining. Disaster Management Plan 36. To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued. Others 37. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc. 38. As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and

S. No	Terms of Reference
	all the activities proposed shall be part of the Environment Management Plan. 39. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

Standard Terms of Reference for (Mining of minerals)

1.

S. No	Terms of Reference
1.1	An EIA-EMP Report shall be prepared for peak capacity (.....MTPA)operation in an ML/project area of.....ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
1.2	An EIA-EMP Report would be prepared for peak capacity operation to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for..... MTPA of mineral production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.
1.3	Propoer KML file with pin drop and coordinate of mine at 500-1000 m interval be provided
1.4	A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries, mines and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given. The above details to be furnished in tabular form also
1.5	Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.
1.6	A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
1.7	Catchment area with its drainage map of 25 km area within and outside the mine shall be provided with names, details of rivers/ riverlet system and its respective order. The map should clearly indicate drainage pattern of the catchment area with basin of major rivers. Diversion of drains/ river need eloboration in form of lengthe, quantity and quality of water to be diverted
1.8	(Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production

S. No	Terms of Reference																																																
	from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.																																																
1.9	Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.																																																
1.10	Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing though the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.																																																
1.11	A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.																																																
1.12	Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified. Area under Surface Rights <table><thead><tr><th>S.N</th><th>ML/Project Land use</th><th>Area under Surface Rights(ha)</th><th>Area Under Mining Rights(ha)</th><th>Area under Both (ha)</th></tr></thead><tbody><tr><td>1</td><td>Agricultural land</td><td></td><td></td><td></td></tr><tr><td>2</td><td>Forest Land</td><td></td><td></td><td></td></tr><tr><td>3</td><td>Grazing Land</td><td></td><td></td><td></td></tr><tr><td>4</td><td>Settlements</td><td></td><td></td><td></td></tr><tr><td>5</td><td>Others (specify)</td><td></td><td></td><td></td></tr></tbody></table> <table><thead><tr><th>S.N.</th><th>Details</th><th>Area (ha)</th></tr></thead><tbody><tr><td>1</td><td>Buildings</td><td></td></tr><tr><td>2</td><td>Infrastructure</td><td></td></tr><tr><td>3</td><td>Roads</td><td></td></tr><tr><td>4</td><td>Others (specify)</td><td></td></tr><tr><td></td><td>Total</td><td></td></tr></tbody></table>	S.N	ML/Project Land use	Area under Surface Rights(ha)	Area Under Mining Rights(ha)	Area under Both (ha)	1	Agricultural land				2	Forest Land				3	Grazing Land				4	Settlements				5	Others (specify)				S.N.	Details	Area (ha)	1	Buildings		2	Infrastructure		3	Roads		4	Others (specify)			Total	
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1.13	Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a																																																

S. No	Terms of Reference
	Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
1.14	One-season (other than monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SOx, NOx and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided. The detail of NABL/ MoEF&CC certification of the respective laboratory and NABET accreditation of the consultant to be provided.
1.15	Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
1.16	For proper baseline air quality assessment, Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ shall be planned by the collection of air quality data by adequate monitoring stations in the downwind areas. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area. In case of expansion, the displayed data of CAAQMS and its comparison with the monitoring data to be provided
1.17	A detailed traffic study along with presence of habitation in 100 mts distance from both side of road, the impact on the air quality with its proper measures and plan of action with timeline for widening of road. The project will increase the no. of vehicle along the road which will indirectly contribute to carbon emission so what will be the compensatory action plan should be clearly spell out in EIA/ EMP report.
1.18	The socio-economic study to conducted with actual survey report and a comparative assessment to be provided from the census data should be provided in EIA/ EMP report also occupational status & economic status of the study area and what economically project will contribute should be clearly mention. The study should also include the status of infrastructural facilities and amenities present in the study area and a comparative assessment with census data to be provided and to link it with the initialization and quantification of need based survey for CSR activities to be followed.
1.19	The Ecology and biodiversity study should also indicate the likely impact of change in forest area for surface infrastructural development or mining activity in relation to the climate change of that area and what will be the compensatory measure to be adopted by PP to minimize the impact of forest diversion.
1.20	Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.
1.21	Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted

S. No	Terms of Reference
1.22	Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
1.23	Study on land subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
1.24	Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
1.25	PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs
1.26	PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of mineral. The measures adopted to conserve energy or use of renewable sources shall be explored
1.27	PP to evaluate the green house emission gases from the mine operation and corresponding carbon absorption plan.
1.28	Site specific Impact assessment with its mitigation measures, Risk Assessment and Disaster Preparedness and Management Plan should be provided.
1.29	Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
1.30	Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
1.31	Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
1.32	The number and efficiency of mobile/static water jet, Fog cannon sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.
1.33	Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine

S. No	Terms of Reference
	closure and reclamation should be furnished.
1.34	Adequate greenbelt nearby areas, mineral stock yard and transportation area of mineral shall be provided with details of species selected and survival rate Greenbelt development should be undertaken particularly around the transport route.
1.35	Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
1.36	Details of R&R. Detailed project specific R&R Plan with data on the existing socio- economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
1.37	CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
1.38	Corporate Environment Responsibility:
1.39	a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
1.40	b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
1.41	c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
1.42	d) To have proper checks and balances, the company should have a well laid down 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.
1.43	e) Environment Management Cell and its responsibilities to be clearly spelled out in EIA/ EMP report
1.44	f) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
1.45	Status of any litigations/ court cases filed/pending on the project should be provided.
1.46	PP shall submit clarification from DFO that mine does not falls under corridors of any National Park and Wildlife Sanctuary with certified map showing distance of nearest sanctuary.
1.47	Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.
1.48	Details on the Forest Clearance should be given as per the format given:

S. No	Terms of Reference
	Total ML Total Date Extent of Balance area for which Status of appl For Project Area Forest of FC Forest Land FC is yet to be diversion of forest (ha) land (ha) obtained land If more than one provide details of each FC
1.49	In case of expansion of the proposal, the status of the work done as per mining plan and approved mine closure plan shall be detailed in EIA/ EMP report
1.50	Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the time bound action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
1.51	PP shall carry out survey through drone highlighting the ground reality for atleast 10 minutes
1.52	Detailed Chronology of the project starting from the first lease deed allotted/Block allotment/ Land acquired to its No. of renewals, CTO /CTE with details of no. renewals, previous EC(s) granted details and its compliance details, NOC details from various Govt bodies like Forest NOC(s), CGWA permissions, Power permissions, etc as per the requisites respectively to be furnished in tabular form.
1.53	The first page of the EIA/ EMP report must mention the peak capacity production, area, detail of PP, Consultant (NABET accreditation) and Laboratory (NABL / MoEF & CC certification)
1.54	The compliances of ToR must be properly cited with respective chapter section and page no in tabular form and also mention sequence of the respective ToR complied within the EIA-EMP report in all the chapter,s section.

A. STANDARD TERMS OF REFERENCE

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

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

- due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
- 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
 - 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
 - 20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
 - 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
 - 22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented

date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM₁₀, particularly for free silica, should be given.

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

both in AMSL and bgl. A schematic diagram may also be provided for the same.

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

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

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

content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

- i) As per the circular no. J-11011/618/2010-IA.II (I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
- j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

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

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

1. Project name and location (Village, District, State, Industrial Estate (if applicable)).
2. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes.
3. Measures for mitigating the impact on the environment and mode of discharge or disposal.
4. Capital cost of the project, estimated time of completion.
5. The proponent shall furnish the contour map of the water table detailing the number of wells located around the site and impacts on the wells due to mining activity.
6. A detailed study of the lithology of the mining lease area shall be furnished.
7. Details of village map, "A" register and FMB sketch shall be furnished.
8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be submitted along with EIA report.
9. Obtain a letter /certificate from the Assistant Director of Geology and Mining standing that there is no other Minerals/resources like sand in the quarrying area within the approved depth of mining and below depth of mining and the same shall be furnished in the EIA report.
10. EIA report should strictly follow the Environmental Impact Assessment Guidance Manual for Mining of Minerals published February 2010.
11. Detail plan on rehabilitation and reclamation carried out for the stabilization and

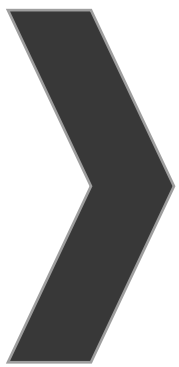
restoration of the mined areas.

12. The EIA study report shall include the surrounding mining activity, if any.
13. Modeling study for Air, Water and noise shall be carried out in this field and incremental increase in the above study shall be substantiated with mitigation measures.
14. A study on the geological resources available shall be carried out and reported.
15. A specific study on agriculture & livelihood shall be carried out and reported.
16. Impact of soil erosion, soil physical chemical and biological property changes may be assumed.
17. Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./ private land, status of its acquisition, nearby (in 2-3 km.) water body, population, within 10km other industries, forest, eco-sensitive zones, accessibility, (note - in case of industrial estate this information may not be necessary)
18. Baseline environmental data - air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
19. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
20. Likely impact of the project on air, water, land, flora-fauna and nearby population
21. Emergency preparedness plan in case of natural or in plant emergencies
22. Issues raised during public hearing (if applicable) and response given
23. CER plan with proposed expenditure.
24. Occupational Health Measures
25. Post project monitoring plan
26. The project proponent shall carry out detailed hydro geological study through intuitions/NABET Accredited agencies.
27. A detailed report on the green belt development already undertaken is to be furnished and also submit the proposal for green belt activities.
28. The proponent shall propose the suitable control measure to control the fugitive emissions during the operations of the mines.
29. A specific study should include impact on flora & fauna, disturbance to migratory pattern of animals.
30. Reserve funds should be earmarked for proper closure plan.
31. A detailed plan on plastic waste management shall be furnished. Further, the proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throw

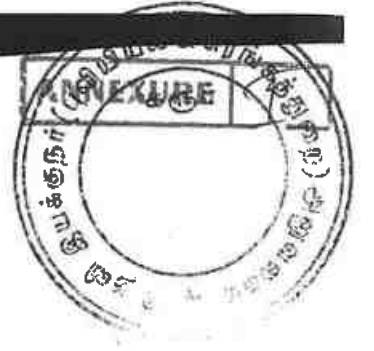
away plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986. In this connection, the project proponent has to furnish the action plan.

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

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



ANNEXURE-2



ந.க.எண். 51/கனிமம்/2024

மாவட்ட ஆட்சியர் அலுவலகம்,
புவியியல் மற்றும் சுரங்கத்துறை,
கரூர்
நாள்: 20.06.2024.

குறிப்பாணை

பொருள்: கனிமங்களும் குவாரிகளும் - கரூர் மாவட்டம் - புகளூர் வட்டம் - தென்னிலை மேற்கு கிராமம் - பட்டா புல எண்கள்.679/A(1.82.0 ஹெக்டேர்), 679/B(பகுதி) 0.78.80 ஹெக்டேர், 680/A(பகுதி) 1.08.00 ஹெக்டேர் மற்றும் 680/B(பகுதி) 0.55.00 ஹெக்டேர் ஆகியவற்றின் மொத்த பரப்பு 4.23.80 ஹெக்டேர் பரப்பில் - சாதாரணகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் வேண்டி திரு.த.பொன்னுசாமி என்பவர் விண்ணப்பம் செய்தது - உரிமம் வழங்க பரிந்துரை செய்யப்பட்டது - தகுதியான நிலப்பரப்பாக கருதி ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணைய இசைவினை பெற்று சமர்ப்பிக்கக் கோருதல் - தொடர்பாக.

- பார்வை:**
1. திரு.த.பொன்னுசாமி, த/பெ.தங்கவேல், கதவு எண்.4,பவித்திரம், புகளூர் வட்டம், கரூர் மாவட்டம் என்பவர் குவாரி குத்தகை உரிமம் வழங்கக் கோரும் விண்ணப்பம் நாள்: 24.01.2024
 2. வருவாய் கோட்டாட்சியர், கரூர் அவர்களின் கடிதம் ந.க.எண். அ1/982/2024, நாள்:17.05.2024
 3. உதவி புவியியலாளர், புவியியல் மற்றும் சுரங்கத்துறை கரூர் என்பவரது புலத்தணிக்கை அறிக்கை நாள்:18.06.2024.
 4. அரசாணை (பல்வகை) எண். 169, தொழில் (எம்.எம்.சி-1) துறை நாள்: 04.08.2020 இணைத்து வரப்பெற்றுள்ளது. (தமிழ்நாடு அரசிதழ் சிறப்பு வெளியீடு எண். 315 நாள்: 04.08.2020).

கரூர் மாவட்டம், புகளூர் வட்டம், தென்னிலை மேற்கு கிராமம், பட்டா புல எண்கள்.679/A(1.82.0 ஹெக்டேர்), 679/B(பகுதி) 0.78.80 ஹெக்டேர், 680/A(பகுதி) 1.08.00 ஹெக்டேர் மற்றும் 680/B(பகுதி) 0.55.00 ஹெக்டேர் ஆகியவற்றின் மொத்த பரப்பு 4.23.80 ஹெக்டேர் பரப்பு நிலத்திலிருந்து பத்து ஆண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க கதவு எண்.4,பவித்திரம், புகளூர் வட்டம், கரூர் மாவட்டம் என்ற



முகவரியில் வசித்துவரும் திரு.த.பொன்னுசாமி, த/பெ.தங்கவேல் என்பவர் பார்வை 1-இல் கண்டுள்ளவாறு விண்ணப்பம் செய்துள்ளார்.

மேற்படி விண்ணப்பம் தொடர்பாக, வருவாய் கோட்டாட்சியர், கரூர் மற்றும் உதவிப் புவியியலாளர், புவியியல் மற்றும் சுரங்கத்துறை, கரூர் ஆகியோர் புலத்தணிக்கை மேற்கொண்டு கரூர் மாவட்டம், புகளூர் வட்டம், தென்னிலை மேற்கு கிராமம், பட்டா புல எண்கள்.679/A(1.82.0 ஹெக்டேர்), 679/B(பகுதி) 0.78.80 ஹெக்டேர், 680/A(பகுதி) 1.08.00 ஹெக்டேர் மற்றும் 680/B(பகுதி) 0.55.00 ஹெக்டேர் ஆகியவற்றின் மொத்த பரப்பு 4.23.80 ஹெக்டேர் பரப்பில் மட்டும் தமிழ்நாடு சிறு கனிமச்சலுகை விதிகளில் விதி எண்கள்.19-(1), 20 மற்றும் 22-இன் கீழ் திரு.த.பொன்னுசாமி என்பவர் சாதாரண கற்கள் மற்றும் கிராவல் குவாரி உரிமம் வழங்க கீழ்க்கண்ட நிபந்தனைகளுக்குட்பட்டு அனுமதி வழங்கலாம் என பரிந்துரை செய்துள்ளனர்.

1. விண்ணப்ப புலத்திற்கு மேற்கில் தென்வடலாக செல்லும் வண்டிப்பாதைக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு யாதொரு சேதமுமின்றி முறையாக குவாரிப்பணி செய்ய வேண்டும்.
2. விண்ணப்ப புலத்திற்கு அருகில் உள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் மற்றும் புறம்போக்கு நிலத்திற்கு 10 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு யாதொரு சேதமுமின்றி முறையாக குவாரிப்பணி செய்ய வேண்டும்.
3. குத்தகைக்காலத்தில் கைத்துளைப்பான் கருவி கொண்டு பாறைகளை துளையிட்டும், மிதமான வெடிபொருள் பயன்படுத்தியும், பொதுமக்களுக்கோ, பொது சொத்துக்களுக்கோ மற்றும் கொச்சின் to கரூர் (ஆத்தூர்) வழியாக செல்லும் பெட்ரோலியம் பைப் லைனுக்கு எவ்வித பாதிப்பும் இல்லாமல், யாதொரு சேதமுமின்றி விதிமுறைகளின்படி குவாரிப்பணி செய்ய வேண்டும்.
4. குவாரித் தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்ய Mettalliferous Mines, விதிகளின்படி அகலமானதும், பாதுகாப்பானதுமான Benches அமைத்து பாதுகாப்பான முறையில் குவாரிக்குள் வாகனங்கள் சென்றுவரவும் மற்றும் குவாரி தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்தும் குவாரிப்பணி செய்ய வேண்டும்.
5. குவாரி குத்தகை வழங்க ஏதுவாக துணை இயக்குநர் (சுரங்கம்) அவர்களால் ஏற்பளிக்கப்பட்ட சுரங்கத்திட்டத்தினையும், மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (SEIAA) அனுமதி பெற்று மாவட்ட நிர்வாகத்திற்கு விண்ணப்பதாரரால் சமர்ப்பிக்கப்பட வேண்டும்.

எனவே, வருவாய் கோட்டாட்சியர், கரூர் மற்றும் உதவிப் புவியியலாளர், புவியியல் மற்றும் சுரங்கத்துறை, கரூர் ஆகியோரின் பரிந்துரைகள் மற்றும் நிபந்தனைகளின் அடிப்படையில் கரூர் மாவட்டம், புகளூர் வட்டம், தென்னிலை மேற்கு கிராமம், பட்டா புல எண்கள்.679/A(1.82.0 ஹெக்டேர்), 679/B(பகுதி) 0.78.80 ஹெக்டேர், 680/A(பகுதி) 1.08.00 ஹெக்டேர் மற்றும் 680/B(பகுதி) 0.55.00 ஹெக்டேர் ஆகியவற்றின் மொத்த



பரப்பு 4.23.80 ஹெக்டேர் பரப்பில் 1959-ம் வருட தமிழ்நாடு சிறுகனிம விதிகள், விதி எண். 19(1), 20 மற்றும் 22-இன்படியும் மேலும் மேற்கண்ட நிபந்தனைகளுக்கு உட்பட்டு 10 (பத்து) வருட காலத்திற்கு திரு.த.பொன்னுசாமி என்பவர் சாதாரண கற்கள் மற்றும் கிராவல் குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதப்படுகிறது.

அதற்கிணங்க, தமிழ்நாடு சிறு கனிம சலுகை விதிகள்-1959 விதி எண்.41-இன்படி குவாரிப்பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்க திட்டத்தினை 90 தினங்களுக்குள் சமர்ப்பிக்குமாறு திரு.த.பொன்னுசாமி என்பவர் கேட்டுக்கொள்ளப்படுகிறார். மேலும் ஏற்பளிக்கப்பட்ட சுரங்கத்திட்டத்தின் தொடர்ச்சியாக 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், விதி எண். 42-இன்படி சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்கும் பட்சத்தில் மட்டுமே குவாரி உரிமம் வழங்கப்படும் என இதன் மூலம் தெரிவிக்கப்படுகிறது.


உறுதி இயக்குநர், 20/6/24
புலியியல் மற்றும் சுரங்கத்துறை,
கருர்.

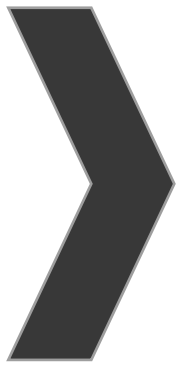
பெறுநர்

திரு.த.பொன்னுசாமி,
த/பெ.தங்கவேல்,
கதவு எண்.4,
பவித்திரம்,
புகளூர் வட்டம்,
கருர் மாவட்டம்.


20/6/24

நகல்:-

1. மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையம், சென்னை.
2. ஆணையர், புலியியல் மற்றும் சுரங்கத்துறை, கிண்டி, சென்னை.



ANNEXURE-3

From
Thiru.S.Poornavel, M.Sc.,
Assistant Director,
Geology and Mining,
Karur.

To
Thiru.T.Ponnusamy,
S/o.Thangavel,
Door No.4, Pavithiram,
Pugalur Taluk,
Karur District.

Rc.No.51/Mines/2024, Dated:05.07.2024

Sir,

Sub: Mines and Minerals – Minor Mineral – Karur District – Pugalur Taluk - Thennilai West Village - Patta lands in S.F.Nos.679/A(1.82.0 hectares), 679/B(Part) (0.78.80 hectares), 680/A(Part) (1.08.00 hectares) and 680/B(Part) (0.55.00 hectares) Over an extant of 4.23.80 hectares - Quarry lease application for Rough Stone and Gravel – Preferred by Thiru.T.Ponnusamy - Precise area communicated - mining plan submitted for approval – Mining Plan Approved – Regarding.

- Ref:
1. Quarry lease application for Rough stone and Gravel preferred by Thiru.T.Ponnusamy, S/o.Thangavel, Door No.4, Pavithiram, Pugalur Taluk, Karur District, dated: 24.01.2024.
 2. Order of the Hon'ble Supreme Court of India in I.A.Nos.12-13/2011 in SLP (C) No.19628-19629/2009, dt: 27.02.2012.
 3. Government of India, Ministry of Environment and Forest Office Memorandum, Dated:18.05.2012.
 4. The Chairman, State Level Environment Impact Assessment Authority, Tamil Nadu D.O.Lr.No.SEIAA-TN/Minor Minerals/2012, Dated: 17.09.2012.
 5. The Commissioner of Geology and Mining, Chennai letter Rc.No.3868/LC/2012, dt: 19.11.2012.
 6. Assistant Director, Geology and Mining, Karur Notice Rc.No.51/Mines/2024, Dated: 20.06.2024.
 7. Mining Plan submitted by Thiru.T.Ponnusamy letter Dated: 25.06.2024

In the reference 1st cited, Thiru.T.Ponnusamy, S/o.Thangavel, Door No.4, Pavithiram, Pugalur Taluk, Karur District has applied for

the grant of ten years lease to quarry Rough Stone and Gravel over an extent of 4.23.80 hectares of patta lands in S.F.Nos. S.F.Nos.679/A(1.82.0 hectares), 679/B(Part) (0.78.80 hectares), 680/A(Part) (1.08.00 hectares) and 680/B(Part) (0.55.00 hectares) of Thennilai West Village, Pugalur Taluk, Karur District under Rule 19(1) of Tamil Nadu Minor Mineral Concession Rule 1959.

The Precise area has been communicated to the applicant for the first based on the recommendation of the Revenue Divisional Officer, Karur and Assistant Geologist, Geology and Mining, Karur in the reference 6th cited, as per rule 41 and also submit the Environmental Clearance as per Rule 42 of Tamil Nadu Minor Mineral Concession Rules. In perusal to that the draft mining plan submitted by the applicant in the reference 7th cited.

The above submitted mining plan for the grant of Rough stone and Gravel quarry lease patta lands in S.F.Nos.679/A(1.82.0 hectares), 679/B(Part) (0.78.80 hectares), 680/A(Part) (1.08.00 hectares) and 680/B(Part) (0.55.00 hectares) Over an extent of 4.23.80 hectares of patta lands in Thennilai West Village, Pugalur Taluk, Karur District has been examined in detail.

Scrutiny remarks on the draft Mining Plan are furnished below.

- a. The Rough Stone & Gravel quarry has been planned to be operated for a period of first five years.
- b. The Geological reserve in the subject area is assessed as 2328150 cubic meter of Rough Stone and 211650 cubic meter of Gravel upto a depth of 60m below ground level only.
- c. The Mineable reserve is estimated as 821260 cubic meter of Rough Stone and 169200 cubic meter of Gravel for ten years upto a depth of 60m below ground level only.

- d. It has been proposed to quarry 565550 cubic meter of Rough Stone for first five years and 169200 cubic meter of Gravel for first 3 years upto a depth of 30m below ground level.
- e. Machineries like tractor mounted compressor attached with jack hammers, excavators with rock breaker attachment are proposed for quarrying operation.
- f. Water table level in the area applied is in between 90 m to 85 m during a year.
- g. As per the Rule 111 of Metalliferous Mining Regulations 1961, the boundary barrier zone of 7.5 meters is ear-marked as neutral zone.
- h. The draft Mining plan is submitted within the prescribed time limit of 90 days from the date of receipt of the precise area communication and stipulations made in the rule 36 of the TNMMCR, 1959 are adhered.
- i. The plates including Toposketch of quarry lease applied area for 10Km Radius (1:1,00,000), Quarry lease & Surface plan (1:1,000), Conceptual plan and sections (1:1,000), Topography, Geological & Year wise development & Production plan & Sections (1: 1,000) and Environmental plan (1:10,000) were verified with reference to the field evidences.

As per the guidelines/ instructions issued by the Commissioner of Geology and Mining, Chennai vide letter Rc.No.3868/LC/2012, date: 19.11.2012., the mining plan submitted by the applicant is hereby approved, subject to the following conditions:

- (i) 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.

- (II) This approval of the mining plan does not in any way imply the approval of the Government in terms or 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, Explosives Act, 1884 (Central Act IV of 1884) Minor Mineral Concession and Development Rules, 2010 and the Rules made there under and the Tamil Nadu Minor Mineral Concession Rules, 1959.
- (III) The mining plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.
- (IV) The approval is valid up to five years from the date of execution of lease deed and the applicant should submit scheme of mining at least 180 days before the expiry of the mining plan period.
- (V) As per the Assistant Director, Geology and Mining, Karur notice in Rc.No.51/Mines/2024, Dated.20.06.2024 the following conditions are incorporated in the Mining Plan plates.
1. விண்ணப்ப புலத்திற்கு மேற்கில் தென்வடலாக செல்லும் வண்டிப்பாதைக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு யாதொரு சேதமுமின்றி முறையாக குவாரிப்பணி செய்ய வேண்டும்.
 2. விண்ணப்ப புலத்திற்கு அருகில் உள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் மற்றும் புறம்போக்கு நிலத்திற்கு 10 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு யாதொரு சேதமுமின்றி முறையாக குவாரிப்பணி செய்ய வேண்டும்.
 3. குத்தகைக்காலத்தில் கைத்துளைப்பான் கருவி கொண்டு பாறைகளை துளையிடும், மிதமான வெடிபொருள் பயன்படுத்தியும், பொதுமக்களுக்கோ, பொது சொத்துக்களுக்கோ மற்றும் கொச்சின் to கருர் (ஆத்தூர்) வழியாக செல்லும் பெட்ரோலியம் பைப் லைனுக்கு எவ்வித பாதிப்பும் இல்லாமல், யாதொரு சேதமுமின்றி விதிமுறைகளின்படி குவாரிப்பணி செய்ய வேண்டும்.

4. குவாரித் தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்ய Mettalliferous Mines, விதிகளின்படி அகலமானதும், பாதுகாப்பானதுமான Benches அமைத்து பாதுகாப்பான முறையில் குவாரிக்குள் வாகனங்கள் சென்றுவரவும் மற்றும் குவாரி தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்தும் குவாரிப்பணி செய்ய வேண்டும்.

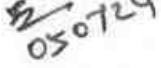
5. குவாரி குத்தகை வழங்க ஏதுவாக துணை இயக்குநர் (சுரங்கம்) அவர்களால் ஏற்பளிக்கப்பட்ட சுரங்கத்திட்டத்தினையும், மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (SEIAA) அனுமதி பெற்று மாவட்ட நிர்வாகத்திற்கு விண்ணப்பதாரரால் சமர்ப்பிக்கப்பட வேண்டும்.

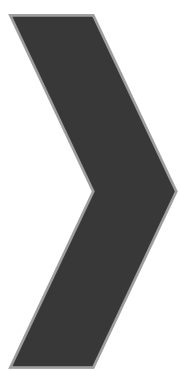
(VI) Quarrying shall be done as per the approved Mining Plan and that the mining plan is approved without prejudice to any other law applicable to the quarry lease from time to time whether such laws are made by the Central Government, State Government or any other authority.

(VII) If anything is found to be concealed as required by the Mines Act in the contents of the Mining Plan and the proposal for rectification has not been made, the approval shall be deemed to have been withdrawn with immediate effect.

Encl: Two copies of Approved Mining Plan.


Assistant Director,
Geology and Mining,
Karur.


050724



APPROVAL MINING PLAN



MINING PLAN FOR THENNILAI WEST 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 : KARUR
TALUK : PUGALUR
VILLAGE : THENNILAI WEST
S.F.NOS : 679/A, 679/B(P), 680/A(P)
AND 680/B(P)
EXTENT : 4.23.80Ha

FOR APPLICANT

Thiru. T.Ponnusamy,
S/o.Thangavel,
Door no.4, Pavithiram,

Pugalur Taluk, this Mining Plan is approved subject
Karur District. to the conditions/stipulations
indicated in the Mining Plan approved

PREPARED BY Letter No: 51/mine/2024
Dated: 05-07-2024
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.

ECO-FRIENDLY



SUSTAINABILITY



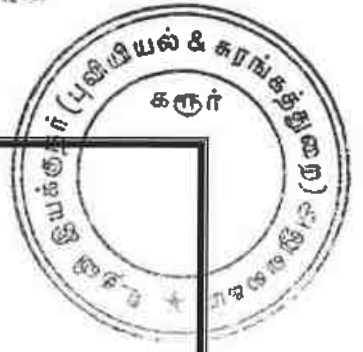
SAFETY



(PPE)

T. Ponnusamy

T.Ponnusamy,
S/o.Thangavel,
Door no.4, Pavithiram,
Pugalur Taluk, Karur District.



CONSENT LETTER FROM THE APPLICANT

The Mining Plan in respect of **Rough Stone and Gravel** quarry over an extent of 4.23.80hectares of Patta lands in S.F.Nos. 679/A, 679/B(P), 680/A(P) and 680/B(P) of Thennilai West Village, Pugalur Taluk, Karur 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, Karur District to make further correspondence regarding modifications of the Mining Plan with the said Qualified Person on this following address.

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

Qualified Person

No.93/36E2, Subramaniyar Kovil Street,

Omalur Taluk, Salem District,

Tamil Nadu, Pin code-636 455.

Mobile:97502 23535 & 94446 54520.

I hereby undertake that all modifications so made in the Mining Plan by the Qualified Person may be deemed to have been made with my knowledge and consent and shall be acceptable to me and building on me in all respects.

Signature of the Applicant

T.Ponnusamy,

Place: Karur

Date: 24.06.2024



T.Ponnusamy,
S/o.Thangavel,
Door no.4, Pavithiram,
Pugalur Taluk, Karur District.

DECLARATION

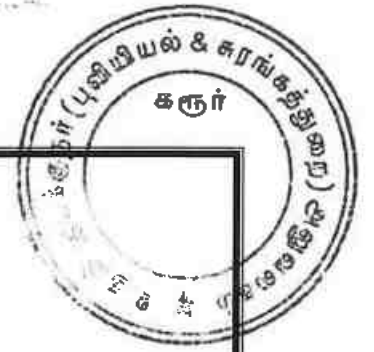
The Mining Plan in respect of **Rough Stone and Gravel** quarry over an extent of 4.23.80hectares of Patta lands in S.F.Nos. 679/A, 679/B(P), 680/A(P) and 680/B(P) of Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State has been prepared with my consultation and I have understood the contents and agree to implement the same in accordance with the Mining Laws.

Signature of the Applicant

T.Ponnusamy,

Place: Karur

Date: 24.06.2024



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 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 4.23.80hectares of Patta lands in S.F.Nos. 679/A, 679/B(P), 680/A(P) and 680/B(P) of Thennilai West Village, Pugalur Taluk, Karur District, of Thennilai Keelpakam Village, Pugalur Taluk, Karur District, Tamil Nadu State applied by Thiru.T.Ponnusamy, 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: 25.06.2024



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 4.23.80hectares of Patta lands in S.F.Nos. 679/A, 679/B(P), 680/A(P) and 680/B(P) of Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu State for Thiru.T.Ponnusamy, 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 : 25.06.2024

T. Ponnusamy

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 4.23.80hectares of Patta land in S.F.Nos. 679/A, 679/B(P), 680/A(P) and 680/B(P) of Thennilai West Village, Pugalur Taluk, Karur District, by Thiru.T.Ponnusamy, for a period of Ten Years. Since the Mining Plan is prepared as per the provisions contained in Rule 15(1) (a) and (b) of Minerals (Other than Atomic, Hydro Carbons Energy Minerals) concession Rules 2016, the same may be approved by the Competent Authority.


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

Qualified Person

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

Qualified Person

Place : Salem

Date : 25.06.2024

This Mining Plan is approved subject
to the conditions / stipulations
indicated in the Mining Plan approval
letter no: 51/mine/2024
Dated: 05.07.2024.



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T. Prasad



Annexure

S. No.	Description	Annexure No.
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LIST OF PLATES

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3.0	Satellite imagery map	I-B
4.0	Topo sketch of Quarry lease applied area for 10Km Radius	I-C
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T. Prasad

MINING PLAN FOR MINOR MINERALS

ROUGH STONE AND GRAVEL

Over an extent of 4.23.80 hectares of Patta land in S.F.Nos.679/A, 679/B(P), 680/A(P) and 680/B(P) of Thennilai West Village, Pugalur Taluk, Karur 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.T.Ponnusamy, S/o. Thangavel, residing at Door no.4, Pavithiram, Pugalur Taluk, Karur District.
2. The application was processed by the Assistant Director, Department of Geology and Mining, Karur, and passed an order vide Rc.No.51/Kanimam/2024 dated 20.06.2024 directing the applicant to produce approved Mining Plan under Rule 41(5) of the Tamil Nadu Minor Mineral Concession Rules, 1959 and Environmental Clearance Certificate under Rule 42 from the State Level Environmental Impact Assessment Authority (SEIAA) for the grant of quarry lease to quarry Rough Stone and Gravel over an extent of 4.23.80 hectares of Patta lands in S.F.Nos. 679/A, 679/B(P), 680/A(P) and 680/B(P) of Thennilai West Village, Pugalur Taluk and Karuru District of Tamil Nadu State for a period of ten years.
3. Accordingly, Mining Plan is prepared under the provisions of rule 19(1), 41 and 42 as per the amendments under Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating following the conditions imposed in the precise area communication letter.
 - a) 10 meters of safety distance should be provided to the cart track passing in a north-south direction, situated on the west side of the lease applied area.
 - b) A safety distance of 7.5m should be maintained to the adjacent patta lands and 10 meters of safety distance should be provided to government poramboke land while quarrying operation.

T. Ponnusamy



- c) The applicant should use jackhammers and mild explosives during blasting in the quarry, and the applicant should not cause any hindrance or damage to the public, public property, and the petroleum pipe line passing between Koonin to Karur (Via Attur) during the quarry operations.
- d) The applicant ensures labours safety and vehicles safely passing within the quarry as per the Metalliferous Mines Rule, should keep widening and safety benches.
- e) The quarry lease will grant after the applicant getting approval for draft mining plan from Assistant Director (Mines) and Environmental clearance from the State Level Environmental Impact Assessment Authority (SEIAA).
4. Geological Resources is estimated at 23,28,150m³ of Rough stone and 2,11,650m³ of gravel formation and Mineable Reserves is estimated at 8,21,260m³ of Rough Stone and 1,69,200m³ of gravel formation and after leaving necessary safety distance from the lease boundary as indicated in the precise area letter and relevant mining laws in force.
5. The production schedule is proposed production of 5,65,550m³ of Rough Stone, 1,69,200m³ of gravel formation for the period of first five years upto a depth of 30m below ground level and remaining quantity of 2,55,710m³ of Rough Stone will be proposed for the period of second five years upto a depth of 60m (below ground level).
6. The applicant ensured that, child labours under 18 years of age will not be engaged for quarrying operation.
7. The applicant ensure that will appoint should have valid certified persons (Mines Manager, Foreman, Mate) during quarrying operation.

T. Rajan



8. Environmental parameters,

- i) The area does not attract the Forest Conservation Act, 1980 as there is no forest around 10km 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.

T. Prasad



EXECUTIVE SUMMARY:

a.	Name of the Village Panchayat	:	Thennilai West
b.	Name of the Panchayat Union	:	K.Paramathi
c.	The proposed total Movable Reserves	:	8,21,260m ³ of Rough Stone 1,69,200m ³ of gravel formation
d.	The proposed quantity of reserves (level of production) for Five years to be mined is(Recoverable reserves)	:	5,65,550m ³ of Rough Stone, 1,69,200m ³ of gravel formation
e.	Total extent of the area	:	4.23.80Ha
f.	Proposed Period of mining	:	Five Years
g.	Existing depth	:	It is fresh quarry lease applied area
h.	Proposed Depth of mining	:	30m (below ground level) for the proposed mining plan.
i.	Method of mining/level of mechanization	:	Opencast, Semi-mechanized Mining with a bench height of 5m and bench width of 5m is proposed.
j.	Types of Machineries used in the quarry	:	Machineries like Tractor mounted compressor attached with Jack hammers, Excavators are proposed to deploy for quarrying operation.
k.	Cost of the Project A. Fixed Assets Cost B. Operational Cost C. EMP Cost		Rs. 28,42,800/- Rs. 82,50,000/- Rs. 6,70,000/- Total Project cost(A+B+C)= Rs.1,17,62,800/-
l.	The area applied for lease is bounded by nine corners and the coordinates are clearly marked in plate no II.		
	Corners	Co-ordinates	Distance between the corners
		Latitude	Longitude
	1	10° 58' 41.34"N	77° 48' 48.74"E
	2	10° 58' 45.34"N	77° 48' 48.85"E
	3	10° 58' 46.64"N	77° 48' 49.17"E
	4	10° 58' 49.06"N	77° 48' 48.50"E
	5	10° 58' 49.98"N	77° 48' 52.68"E
	6	10° 58' 49.98"N	77° 48' 54.49"E
	7	10° 58' 42.91"N	77° 48' 54.20"E
	8	10° 58' 41.39"N	77° 48' 54.25"E
	9	10° 58' 41.31"N	77° 48' 51.67"E
			1-2 = 123.2m 2-3 = 41.0m 3-4 = 87.2m 4-5 = 129.8m 5-6 = 55.0m 6-7 = 217.6m 7-8 = 46.8m 8-9 = 77.4m 9-1 = 89.0m

T. Prasad



2.0 General Information:

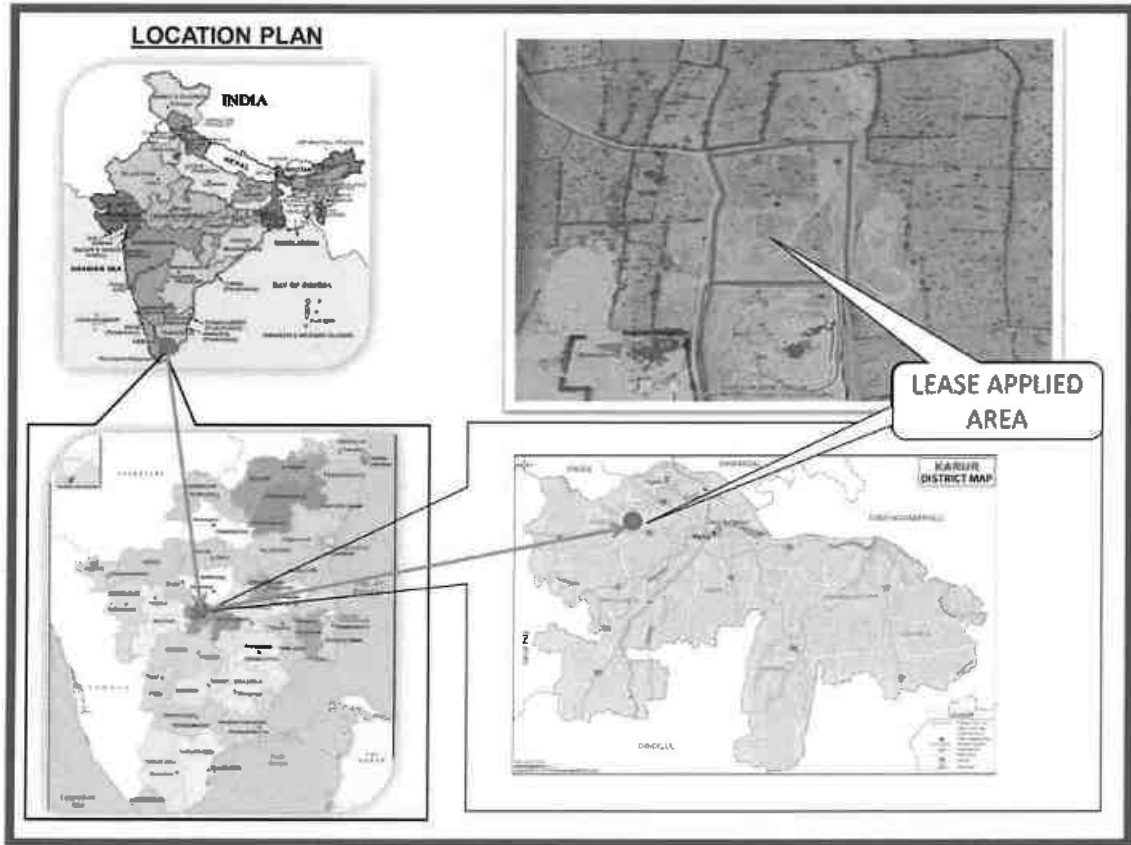
2.1	a.	Name of the Applicant	:	Thiru.T.Ponnusamy
	b.	Address of the Applicant with phone No and e-mail id if any	:	S/o. Thangavel, Door no.4, Pavithiram, Pugalur Taluk, Karur District. Pin Code- 639002 Cell No.:9944941575
	c.	Status of the Applicant	:	Individual
2.2	a.	Mineral Which the applicant intends 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, Karur, vide Rc.No.51/ Kanimam/ 2024 dated 20.06.2024.
	c.	Period of permission / lease granted	:	The Assistant Director, Department of Geology and Mining, Karur, has grant of lease period for ten years .
	d.	Name and Address of the QP preparing Mining Plan	:	C.Natarajan, M.Sc.,M.Phil., Qualified Person No.93/36E2, Subramanியar Kovil Street, Omalur Taluk, Salem District, Tamil Nadu, Pin-636 455. Mobile: 97502 23535 & 94446 54520.

T. Ponnusamy

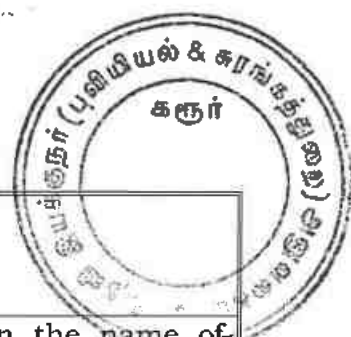


3.0 Location:

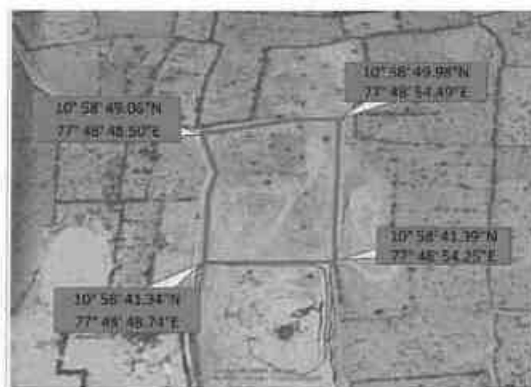
S.No	Details of the Area:	
1	Corner Coordinates	Latitude :10°58'41.31"N to 10°58'49.98"N Longitude :77°48'48.50"E to 77°48'54.49"E
2	Toposheet Number	58- F/13
3	The altitude of the area	206m (MSL)
4	Extent	4.23.80Ha
5	Survey Nos	679/A, 679/B(P), 680/A(P) and 680/B(P)
6	Village	Thennilai West
7	Taluk	Pugalur
8	District	Karur
9	State	Tamil Nadu



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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 applicant, vide patta nos. 3948 and 3905, Please refer Annexure No: IV.
c.	Toposheet No. with Latitude and Longitude	:	Topo Sheet No: 58-F/ 13 Latitude: 10°58'41.31"N to 10°58'49.98"N Longitude: 77°48'48.50"E to 77°48'54.49"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 Kullampayam – Kunampatti village road on west side of the area. The Nearest Railway line is Karur to Erode line which is about 13.5Km on northeast side of the area.



SATELLITE IMAGERY OF THE LEASE APPLIED AREA



TOPOGRAPHICAL VIEW OF THE LEASE APPLIED AREA

Fig. Location of the lease applied area

T. Prasad



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 5m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 206m (maximum) from MSL. ➤ No major river is found nearby the lease applied area. ➤ Water table is found at a depth of 69m in summer and 66m 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 N80°W -S80°E with dipping towards NE80°. 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								

T. Prasad



4.2		Details of Exploration already carried out if any	:	No exploration was carried out, as the Rough stone formations are clearly visible from the adjacent existing quarry pit.
4.3	a.	Estimation of Reserves	:	The Geological and Recoverable reserves are estimated by cross sectional method. Totally two sections have been drawn, one section drawn length wise as (X-Y), and another one section drawn width wise as (A-B), to cover maximum area considered for lease. The Plans and Sections have been drawn with a scale of 1:1000 and 1:500 respectively. Please refer plate No.III.

a. Geological Resources

The quarrying is restricted up to a depth of 60m (below ground level) only, availability of resources is given below.

Table No-1

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m ³	Gravel formation in m ³	Geological Resources of Rough stone in m ³
XY-AB	I	255	166	5	211650	211650	
	II	255	166	5	211650		211650
	III	255	166	5	211650		211650
	IV	255	166	5	211650		211650
	V	255	166	5	211650		211650
	VI	255	166	5	211650		211650
	VII	255	166	5	211650		211650
	VIII	255	166	5	211650		211650
	IX	255	166	5	211650		211650
	X	255	166	5	211650		211650
	XI	255	166	5	211650		211650
	XII	255	166	5	211650		211650
Total						211650	2328150

Gravel Formation : 2,11,650m³

The Geological Resources of Rough stone : 23,28,150m³

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b. Mineable Reserve

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

Table No-2

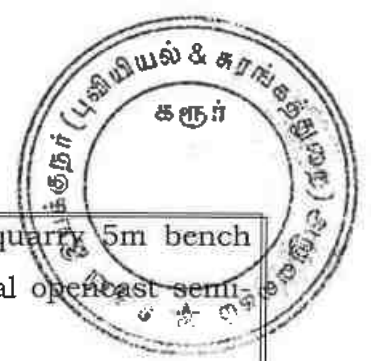
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m ³	Gravel in m ³	Mineable Reserves of Rough stone in m ³
XY-AB	I	235	144	5	169200	169200	
	II	222	131	5	145410		145410
	III	212	121	5	128260		128260
	IV	202	111	5	112110		112110
	V	192	101	5	96960		96960
	VI	182	91	5	82810		82810
	VII	172	81	5	69660		69660
	VIII	162	71	5	57510		57510
	IX	152	61	5	46360		46360
	X	142	51	5	36210		36210
	XI	132	41	5	27060		27060
	XII	122	31	5	18910		18910
Total						169200	821260

The mineable reserve is computed as 8,21,260m³ of Rough stone and 1,69,200m³ of Gravel formation upto a depth 60m (below ground level) only.

5.0 Mining:

5.1	Method of Mining	:	1. Opencast method of semi mechanized mining with 5.0m height 5m width of the bench. 2. However, as far as the quarrying of Rough stone is concerned, observance of the provisions of Regulation 106(2) (b) as above is seldom[possible due to various inherent petrogenetic factors coupled with mining difficulties. Hence it is proposed to obtain relaxation to the provisions of the above regulation from the Director of mines safety for which necessary provision is available with the regulation 106 (2) (b) of MMR-1961, under Mine Act-1952.
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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.

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The Yearwise Production and Development Table

Table No -3

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m³	Gravel in m³	Mineable reserve of Rough stone in m³
I	XY-AB	I	93	144	5	66960	66960	
		II	86	131	5	56330		56330
		III	81	121	5	49005		49005
Total							66960	105335
II	XY-AB	I	90	144	5	64800	64800	
		II	90	131	5	58950		58950
		III	90	121	5	54450		54450
Total							64800	113400
III	XY-AB	I	52	144	5	37440	37440	
		II	46	131	5	30130		30130
		III	41	121	5	24805		24805
		IV	111	111	5	61605		61605
Total							37440	116540
IV	XY-AB	IV	91	111	5	50505		50505
		V	126	101	5	63630		63630
Total								114135
V	XY-AB	V	66	101	5	33330		33330
		VI	182	91	5	82810		82810
Total								116140
Grand Total							169200	565550

The applicant has proposed to carry out 5,65,550m³ of Rough stone and 1,69,200m³ of Gravel formation upto a depth of 30m (below ground level) for the period of first five years and remaining quantity of 2,55,710m³ of Rough Stone will be proposed for the period of second five years upto a depth of 60m (below ground level).

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

Table No-4

Year	section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in m³	Mineable Reserves of Rough stone in m³
VI	XY-AB	VII	121	81	5	49005	49005
Total							49005
VII	XY-AB	VII	51	81	5	20655	20655
		VIII	91	71	5	32305	32305
Total							52960
VIII	XY-AB	VIII	71	71	5	25205	25205
		IX	81	61	5	24705	24705
Total							49910
IX	XY-AB	IX	71	61	5	21655	21655
		X	121	51	5	30855	30855
Total							52510
X	XY-AB	X	21	51	5	5355	5355
		XI	132	41	5	27060	27060
		XII	122	31	5	18910	18910
Total							51325
Grand Total							255710

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	11	32	Atlas Copco	Compressed air
		2	Compressor	3	-	Atlas Copco	Diesel Drive
	b.	Loading		:	Excavator of 0.90m ³ bucket capacity (with Rock breaker attachment) (2No).		
	c.	Transportation		:	Tipper 5Nos (5/10Ts) capacity.		

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5.6	Disposal of Overburden	The overburden in the form of Gravel, after the excavation gravel will be directly loaded into tipper to the needy buyers for road project and construction works for filling and leveling of low lying areas.																								
5.7	Brief Note on Conceptual Mining Plan for the entire lease period	Conceptual Mining Plan is prepared with an object of ten years of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructures etc. Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc. Ultimate Pit dimension is given as under, <table><tr><th colspan="4">Ultimate Pit dimension (M) end of Mining plan Period</th></tr><tr><th>Pit No</th><th>Length (max) in (m)</th><th>Width (Avg) in (m)</th><th>Depth(max) in(m)</th></tr><tr><td>I</td><td>235</td><td>144</td><td>30</td></tr></table> <table><tr><th colspan="4">Ultimate pit dimension End of the lease period</th></tr><tr><th>Pit No</th><th>Length (max) in (m)</th><th>Width (Avg) in (m)</th><th>Depth(max) in(m)</th></tr><tr><td>I</td><td>235</td><td>144</td><td>60</td></tr></table> Afforestation has been proposed on all along the boundary barrier by planting trees. All the haseline 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	235	144	30	Ultimate pit dimension End of the lease period				Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in(m)	I	235	144	60
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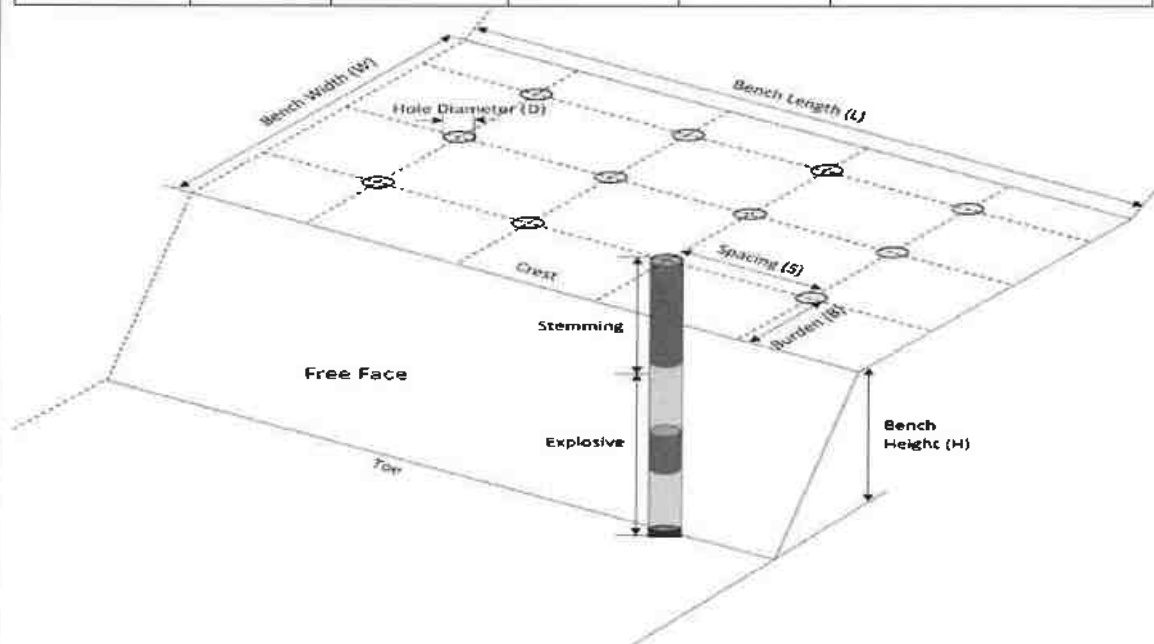
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6.0 Blasting:

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

Diameter of the hole	Spacing	Depth	Burden for hole	Pattern of hole	Inclination of hole
32-36mm	0.6m	1 to 1.5m	0.6m	Zig Zag	70° 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 border="1"> <tr> <td>Number of holes</td> <td>: 326</td> </tr> <tr> <td>Powder factor</td> <td>: 6Ts/Kg of explosives</td> </tr> <tr> <td>Total explosive required</td> <td>: 163Kg 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	: 326	Powder factor	: 6Ts/Kg of explosives	Total explosive required	: 163Kg slurry explosives	Charge / hole	: 0.5Kg	Blasting time	: 12-2 Pm
Number of holes	: 326											
Powder factor	: 6Ts/Kg of explosives											
Total explosive required	: 163Kg 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 69m below ground level. In the proposed mining plan only 30m (below ground level) and 60m (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										

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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 no Water bodies (River, Pond, Lake, Odai, Channel etc within a radius of 500m
8.4	Archeological / Historical Monuments	:	There are no Archaeological / Historical Monuments within a radius of 300m.
8.5	Road (NH, SH, Village Road etc)	:	The National Highway (NH-81) Karur - Coimbatore is about 3.2km on south side of the area. The State Highway (SH-189) Kangayam - Kodumudi is about 9.1Km on northwest side of the area.
8.6	Places of Worship	:	There are no Places of Worship within a radius of 50m.
8.7	Reserved Forest / Forest / Social Forest / Wild Life Sanctuary etc.,	:	There is no Reserved Forest, Wild Life Sanctuary within a radius of 1Km.
8.8	Any Interstate Border, Protected areas under the Wild Life (Protection) Act, 1972, Critically Polluted Areas as Identified by Central Pollution Control Board and Notified Eco sensitive areas	:	There are No inter State border within a radius of 10Kms.
8.9	Any Other Structures	:	Nil

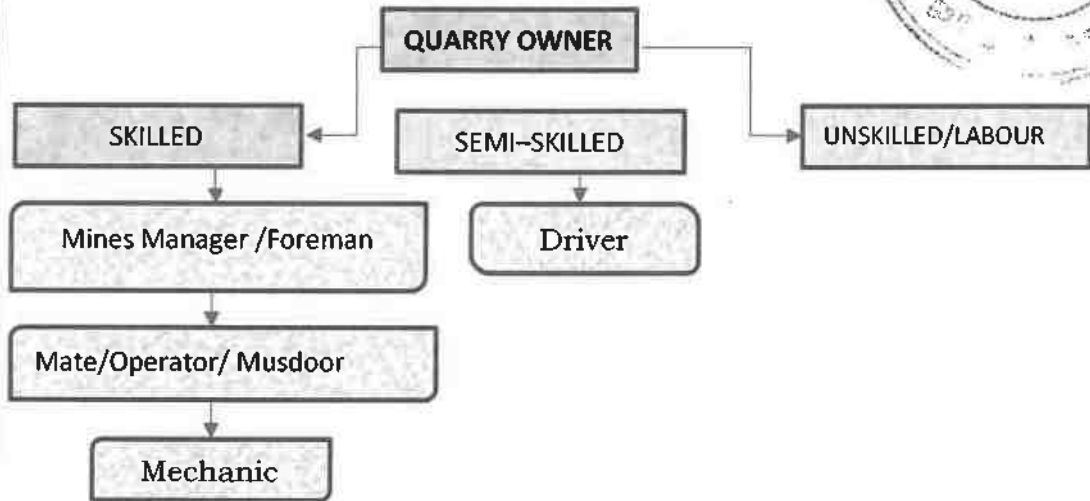
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9.0 Employment Potential & Welfare Measures:

9.1 Employment Potential (Management & Supervisory personnel)

The proposed organization chart



1.	Skilled	Mines Manager	1 No.
		Foreman / Mate	2 No.
		Operator	13 No.
		Mechanic	1 No.
2.	Semi-skilled	Driver	5 No.
3.	Unskilled	Labours	15Nos
Total =			37Nos

Allowing 10% absentee, the no. of men of roll will be around 33.

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 Thennilai village which is about 3.5Km on southeast side of the area.
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T. Prasad



b.	Sanitary facilities	:	Semi-permanent latrines & urinals shall be maintained at convenient places for use of labourers as per the provisions of Rule (33) of the Mines Rules, 1960 separately for males and females. Washing facilities shall also be arranged as per rule (36) of the Mines Rules, 1960.
c.	First Aid Facility	:	First aid kits are kept in Mines office room, in case of such eventualities the victim will be given first aid immediately at the site and injured person will be taken to the hospital. Hospital is available at distance of 10.5Km (SW) in Vellakovil 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.

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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 30m (below ground level) for the proposed mining plan period. 3. Fluctuation of Water table in this area is in between 69m and 66m during a year. 4. This region receives the average annual rainfall of 800mm to 900mm. The surrounding area is practiced by the seasonal cultivation. The existing land use pattern is given as under. Table No-5 <table><tr><th>Sl. No.</th><th>Land Use</th><th>Present Area (Ha)</th><th>Area in use during the quarrying period (Ha)</th></tr><tr><td>1.</td><td>Quarrying Pit</td><td>Nil</td><td>3.38.40</td></tr><tr><td>2.</td><td>Infrastructure</td><td>Nil</td><td>0.01.00</td></tr><tr><td>3.</td><td>Roads</td><td>Nil</td><td>0.02.00</td></tr><tr><td>4.</td><td>Green Belt</td><td>Nil</td><td>0.82.40</td></tr><tr><td>5.</td><td>Unutilized</td><td>4.23.80</td><td>Nil</td></tr><tr><td></td><td>Total =</td><td>4.23.80</td><td>4.23.80</td></tr></table>	Sl. No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)	1.	Quarrying Pit	Nil	3.38.40	2.	Infrastructure	Nil	0.01.00	3.	Roads	Nil	0.02.00	4.	Green Belt	Nil	0.82.40	5.	Unutilized	4.23.80	Nil		Total =	4.23.80	4.23.80
Sl. No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)																											
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2.	Infrastructure	Nil	0.01.00																											
3.	Roads	Nil	0.02.00																											
4.	Green Belt	Nil	0.82.40																											
5.	Unutilized	4.23.80	Nil																											
	Total =	4.23.80	4.23.80																											
10.2	Water Regime	: Water table in this area is noticed at a depth of 69m and presently, in the proposed mining plan only 30m (below ground level) and 60m (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.																												

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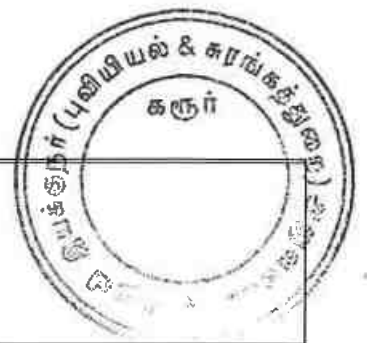
10.4	Climatic conditions	: Generally subtropical climatic condition prevails throughout the year and there is no sharp variation in climate. This District receives rain both in south west and north east monsoon. The average rainfall is about 800mm to 900mm and the temperature ranges from 18°C during 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><tr><th colspan="4">Table No-6</th></tr><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>Thennilai west</td><td>1.1Km - NE</td><td>400</td></tr><tr><td>2.</td><td>Kullampalayam</td><td>1.2km - NW</td><td>200</td></tr><tr><td>3.</td><td>Thennilai</td><td>2.0km - SE</td><td>600</td></tr><tr><td>4.</td><td>Vairamadai</td><td>1.2km - SE</td><td>300</td></tr></table>	Table No-6				S. No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population	1.	Thennilai west	1.1Km - NE	400	2.	Kullampalayam	1.2km - NW	200	3.	Thennilai	2.0km - SE	600	4.	Vairamadai	1.2km - SE	300
Table No-6																										
S. No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population																							
1.	Thennilai west	1.1Km - NE	400																							
2.	Kullampalayam	1.2km - NW	200																							
3.	Thennilai	2.0km - SE	600																							
4.	Vairamadai	1.2km - SE	300																							
10.6	Plan for Air, Dust Suppression	: Air or dust expected to be generated from drilling process, hauling roads, places of excavation etc., will be suppressed by periodical wetting of land by water spraying. Wet drilling and dust extractor arrangements will be provided to drilling units so as to control raise of dust from the site of drilling. Operators, those exposed directly to such conditions will be provide such protective equipment like mask, ear plug, helmet, gloze etc., as per the Mines Act.																								
10.7	Plan for Noise Control	: Quarrying of Rough Stone will be carried out by drilling and 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.																								

T. Rajan



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 30m (below ground level) and 60m (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 60m depth, fencing will be constructed around the quarried pits to prevent inherent entry of the public and cattle.
10.11	Program for Afforestation	:	The 7.5m and 10m safety distance along the lease boundary has been identified to be utilized for afforestation. Appropriate native species of Neem/Pungan trees will be planted in the first year. Nearly 8240Sqm area is proposed to use under afforestation by planting 989nos 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)= 2. First aid room and accessories 3. Labour Shed 4. Sanitary Facility Total=		Rs. 25,42,800 Rs.1,00,000 Rs.1,00,000 Rs.1,00,000 Rs. 28,42,800/-

T. Prasad



B. Operational Cost:		
1. Machineries	:	Rs.80,00,000/-
2. Fencing cost	:	Rs. 2,50,000
Total	:	Rs.82,50,000/-
C.EMP Cost:		Budget Provision for the entire quarrying period.
	:	Air Quality Sampling = Rs. 40,000/-
	:	Water Quality Sampling = Rs. 40,000/-
	:	Noise Monitoring = Rs. 20,000/-
	:	Ground vibration test = Rs. 20,000/-
Expenditure		
1. Drinking water facility		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. 1,50,000/-
Total=		Rs. 6,70,000/-
Total Project Cost (A+B+C)		Rs. 1,17,62,800/-
CSR Cost(2% of Total Project Cost)		Rs. 2,35,256/-

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.

T. Rajan



12.0 Any Other Details Intend to Furnish by the Applicant:

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

Prepared by

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

Qualified Person

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

Qualified Person

Place: Salem

Date: 25.06.2024

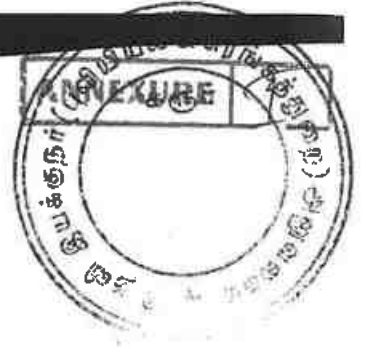
**This Mining Plan is approved based on
Incorporation of the particulars specified in
clause 7 (iv) of the Commissioner of Geology and
Mining Chennai Lr No 3868 / LC / 2012
dt 19-11-2012 and Draft Minor Mineral
Conservation & Development Rules 2010**

Assistant Director of Geology and Mining
Karur District.

This Mining Plan is approved subject
to the conditions/stipulations
indicated in the Mining Plan approval
Letter No: 51/mine/2024
Dated: 05.07.2024

05-7-24

T. P. Sanyal



ந.க.எண். 51/கனிமம்/2024

மாவட்ட ஆட்சியர் அலுவலகம்,
புவியியல் மற்றும் சுரங்கத்துறை,
கரூர்
நாள்: 20.06.2024.

குறிப்பாணை

பொருள்: கனிமங்களும் குவாரிகளும் - கரூர் மாவட்டம் - புகளூர் வட்டம் - தென்னிலை மேற்கு கிராமம் - பட்டா புல எண்கள்.679/A(1.82.0 ஹெக்டேர்), 679/B(பகுதி) 0.78.80 ஹெக்டேர், 680/A(பகுதி) 1.08.00 ஹெக்டேர் மற்றும் 680/B(பகுதி) 0.55.00 ஹெக்டேர் ஆகியவற்றின் மொத்த பரப்பு 4.23.80 ஹெக்டேர் பரப்பில் - சாதாரணகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் வேண்டி திரு.த.பொன்னுசாமி என்பவர் விண்ணப்பம் செய்தது - உரிமம் வழங்க பரிந்துரை செய்யப்பட்டது - தகுதியான நிலப்பரப்பாக கருதி ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணைய இசைவினை பெற்று சமர்ப்பிக்கக் கோருதல் - தொடர்பாக.

- பார்வை:**
1. திரு.த.பொன்னுசாமி, த/பெ.தங்கவேல், கதவு எண்.4,பவித்திரம், புகளூர் வட்டம், கரூர் மாவட்டம் என்பவர் குவாரி குத்தகை உரிமம் வழங்கக் கோரும் விண்ணப்பம் நாள்: 24.01.2024
 2. வருவாய் கோட்டாட்சியர், கரூர் அவர்களின் கடிதம் ந.க.எண். அ1/982/2024, நாள்:17.05.2024
 3. உதவி புவியியலாளர், புவியியல் மற்றும் சுரங்கத்துறை கரூர் என்பவரது புலத்தணிக்கை அறிக்கை நாள்:18.06.2024.
 4. அரசாணை (பல்வகை) எண். 169, தொழில் (எம்.எம்.சி-1) துறை நாள்: 04.08.2020 இணைத்து வரப்பெற்றுள்ளது. (தமிழ்நாடு அரசிதழ் சிறப்பு வெளியீடு எண். 315 நாள்: 04.08.2020).

கரூர் மாவட்டம், புகளூர் வட்டம், தென்னிலை மேற்கு கிராமம், பட்டா புல எண்கள்.679/A(1.82.0 ஹெக்டேர்), 679/B(பகுதி) 0.78.80 ஹெக்டேர், 680/A(பகுதி) 1.08.00 ஹெக்டேர் மற்றும் 680/B(பகுதி) 0.55.00 ஹெக்டேர் ஆகியவற்றின் மொத்த பரப்பு 4.23.80 ஹெக்டேர் பரப்பு நிலத்திலிருந்து பத்து ஆண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க கதவு எண்.4,பவித்திரம், புகளூர் வட்டம், கரூர் மாவட்டம் என்ற

T. Rajan



முகவரியில் வசித்துவரும் திரு.த.பொன்னுசாமி, த/பெ.தங்கவேல் என்பவர் பார்வை 1-இல் கண்டுள்ளவாறு விண்ணப்பம் செய்துள்ளார்.

மேற்படி விண்ணப்பம் தொடர்பாக, வருவாய் கோட்டாட்சியர், கரூர் மற்றும் உதவிப் புவியியலாளர், புவியியல் மற்றும் சுரங்கத்துறை, கரூர் ஆகியோர் புலத்தணிக்கை மேற்கொண்டு கரூர் மாவட்டம், புகளூர் வட்டம், தென்னிலை மேற்கு கிராமம், பட்டா புல எண்கள்.679/A(1.82.0 ஹெக்டேர்), 679/B(பகுதி) 0.78.80 ஹெக்டேர், 680/A(பகுதி) 1.08.00 ஹெக்டேர் மற்றும் 680/B(பகுதி) 0.55.00 ஹெக்டேர் ஆகியவற்றின் மொத்த பரப்பு 4.23.80 ஹெக்டேர் பரப்பில் மட்டும் தமிழ்நாடு சிறு கனிமச்சலுகை விதிகளில் விதி எண்கள்.19-(1), 20 மற்றும் 22-இன் கீழ் திரு.த.பொன்னுசாமி என்பவர் சாதாரண கற்கள் மற்றும் கிராவல் குவாரி உரிமம் வழங்க கீழ்க்கண்ட நிபந்தனைகளுக்குட்பட்டு அனுமதி வழங்கலாம் என பரிந்துரை செய்துள்ளனர்.

1. விண்ணப்ப புலத்திற்கு மேற்கில் தென்வடலாக செல்லும் வண்டிப்பாதைக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு யாதொரு சேதமுமின்றி முறையாக குவாரிப்பணி செய்ய வேண்டும்.
2. விண்ணப்ப புலத்திற்கு அருகில் உள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் மற்றும் புறம்போக்கு நிலத்திற்கு 10 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு யாதொரு சேதமுமின்றி முறையாக குவாரிப்பணி செய்ய வேண்டும்.
3. குத்தகைக்காலத்தில் கைத்துளைப்பான் கருவி கொண்டு பாறைகளை துளையிட்டும், மிதமான வெடிபொருள் பயன்படுத்தியும், பொதுமக்களுக்கோ, பொது சொத்துக்களுக்கோ மற்றும் கொச்சின் to கரூர் (ஆத்தூர்) வழியாக செல்லும் பெட்ரோலியம் பைப் லைனுக்கு எவ்வித பாதிப்பும் இல்லாமல், யாதொரு சேதமுமின்றி விதிமுறைகளின்படி குவாரிப்பணி செய்ய வேண்டும்.
4. குவாரித் தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்ய Mettalliferous Mines, விதிகளின்படி அகலமானதும், பாதுகாப்பானதுமான Benches அமைத்து பாதுகாப்பான முறையில் குவாரிக்குள் வாகனங்கள் சென்றுவரவும் மற்றும் குவாரி தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்தும் குவாரிப்பணி செய்ய வேண்டும்.
5. குவாரி குத்தகை வழங்க ஏதுவாக துணை இயக்குநர் (சுரங்கம்) அவர்களால் ஏற்பளிக்கப்பட்ட சுரங்கத்திட்டத்தினையும், மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (SEIAA) அனுமதி பெற்று மாவட்ட நிர்வாகத்திற்கு விண்ணப்பதாரரால் சமர்ப்பிக்கப்பட வேண்டும்.

எனவே, வருவாய் கோட்டாட்சியர், கரூர் மற்றும் உதவிப் புவியியலாளர், புவியியல் மற்றும் சுரங்கத்துறை, கரூர் ஆகியோரின் பரிந்துரைகள் மற்றும் நிபந்தனைகளின் அடிப்படையில் கரூர் மாவட்டம், புகளூர் வட்டம், தென்னிலை மேற்கு கிராமம், பட்டா புல எண்கள்.679/A(1.82.0 ஹெக்டேர்), 679/B(பகுதி) 0.78.80 ஹெக்டேர், 680/A(பகுதி) 1.08.00 ஹெக்டேர் மற்றும் 680/B(பகுதி) 0.55.00 ஹெக்டேர் ஆகியவற்றின் மொத்த

T. R. Sany



பரப்பு 4.23.80 ஹெக்டேர் பரப்பில் 1959-ம் வருட தமிழ்நாடு சிறுகனிம விதிகள், விதி எண். 19(1), 20 மற்றும் 22-இன்படியும் மேலும் மேற்கண்ட நிபந்தனைகளுக்கு உட்பட்டு 10 (பத்து) வருட காலத்திற்கு திரு.த.பொன்னுசாமி என்பவர் சாதாரண கற்கள் மற்றும் கிராவல் குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதப்படுகிறது.

அதற்கிணங்க, தமிழ்நாடு சிறு கனிம சலுகை விதிகள்-1959 விதி எண்.41-இன்படி குவாரிப்பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்க திட்டத்தினை 90 தினங்களுக்குள் சமர்ப்பிக்குமாறு திரு.த.பொன்னுசாமி என்பவர் கேட்டுக்கொள்ளப்படுகிறார். மேலும் ஏற்பளிக்கப்பட்ட சுரங்கத்திட்டத்தின் தொடர்ச்சியாக 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், விதி எண். 42-இன்படி சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்கும் பட்சத்தில் மட்டுமே குவாரி உரிமம் வழங்கப்படும் என இதன் மூலம் தெரிவிக்கப்படுகிறது.

[Handwritten signature]
உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
கருர்.

பெறுநர்

திரு.த.பொன்னுசாமி,
த/பெ.தங்கவேல்,
கதவு எண்.4,
பவித்திரம்,
புகளூர் வட்டம்,
கருர் மாவட்டம்.

நகல்:-

1. மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையம், சென்னை.
2. ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, கிண்டி, சென்னை.

[Handwritten signature]

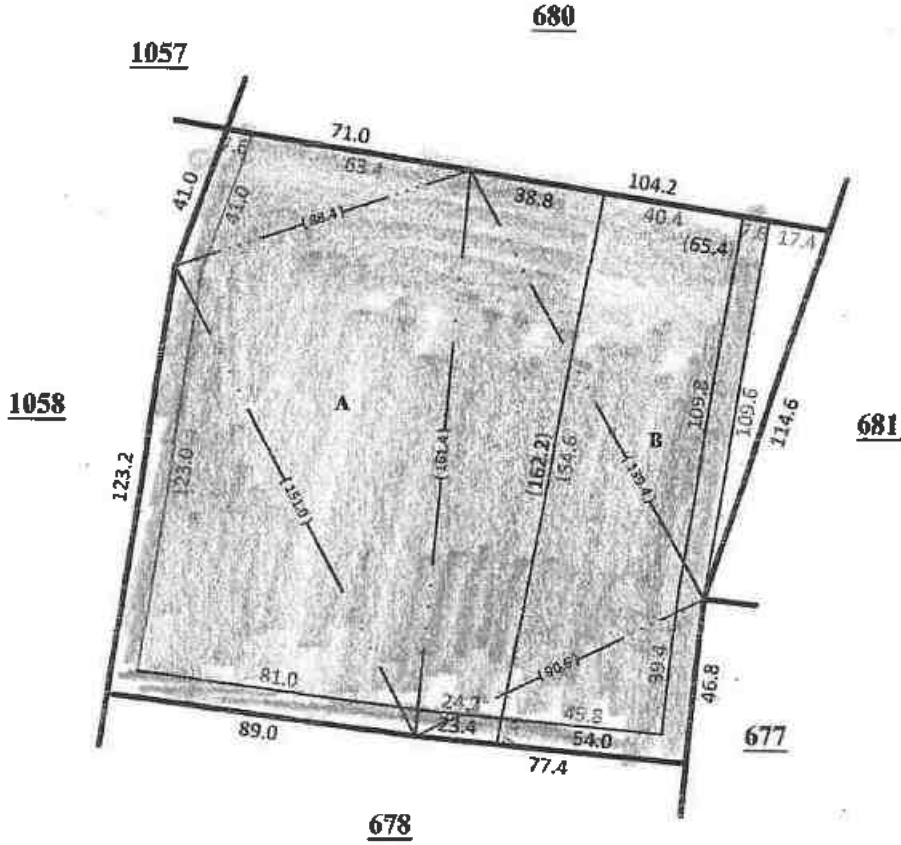
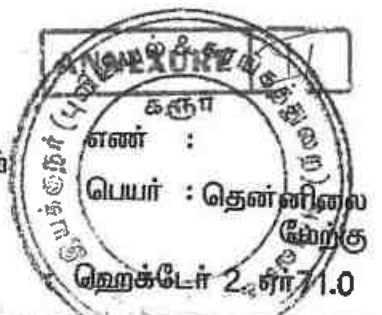
மாவட்டம் : கரூர்

வட்டம் : புகழூர்

புல எண் : 679

கிராமம்

பரப்பு



- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 679/A நெடுக்க 1.82.00 = ஏக்கர் 4.49½ சென்ட்
- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 679/B பகுதி நெடுக்க 0.78.80 = ஏக்கர் 1.94½ சென்ட்
- ☐ பாதுகாப்பு தூர இடைவெளி பகுதி

LEASE APPLIED AREA ☒

தமிழ்நாடு அரசு
தென்னிசை

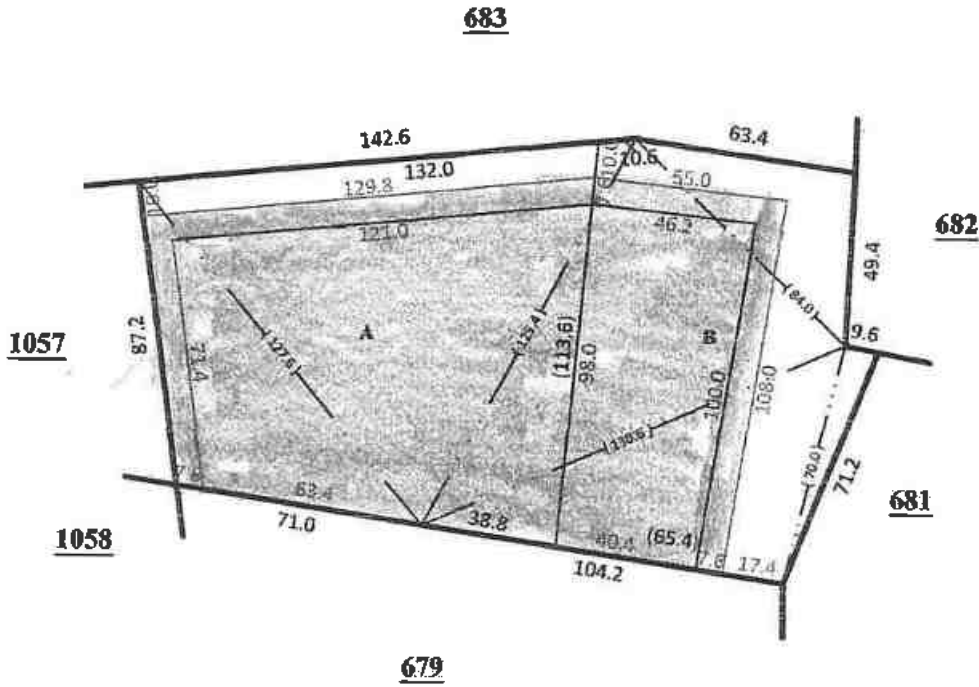
மாவட்டம் : கரூர்

வட்டம் : புகழூர்

புல எண் : 680

கிராமம்

பரப்பு : ஹெக்டேர் 2. ஏர் 02.5



- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 680/A பகுதி ஹெக்டர் 1.08.00 = ஏக்கர் 2.67 சென்ட்
- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 680/B பகுதி ஹெக்டர் 0.55.00 = ஏக்கர் 1.35 சென்ட்
- ☐ பாதுகாப்பு தூர இடைவெளி பகுதி



T. R. Sanyal
குறும்பு அளவா

மாவட்டம் : கரூர்

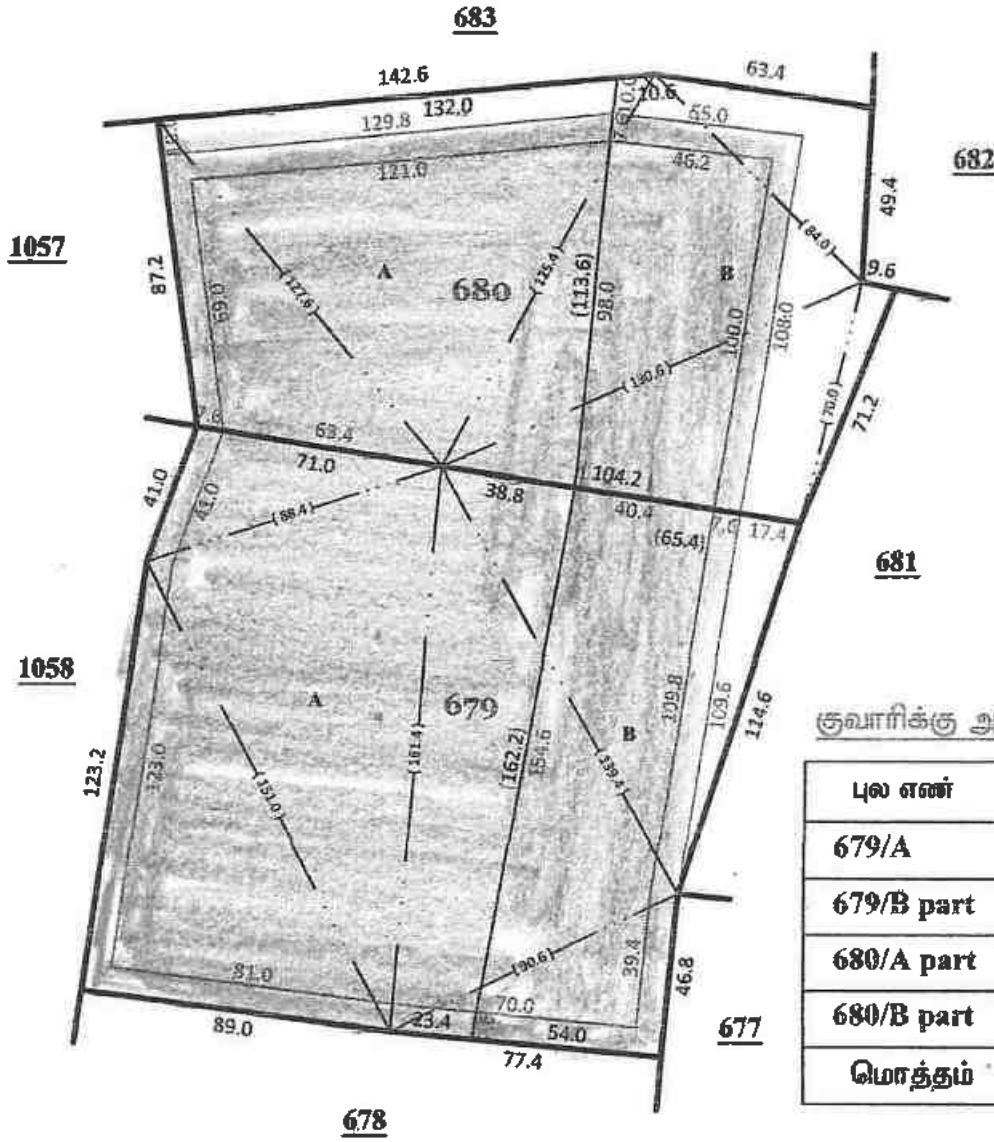
வட்டம் : புகழூர்

புல எண் : 679,680

கிராமம் :



எண் :
பெயர் : தென்னிலை
மேற்கு



குவாரிக்கு அனுமதி கோரும் பகுதி

புல எண்	ஹெக். ஏர்	ஏக்கர் சென்ட்
679/A	1.82.00	4.49½
679/B part	0.78.80	1.94½
680/A part	1.08.00	2.67
680/B part	0.55.00	1.36
மொத்தம்	4.23.80	10.47

- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 679/A ஹெக் 1.82.00 = ஏக் 4.49½ சென்ட்
- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 679/B பகுதி ஹெக் 0.78.80 = ஏக் 1.94½ சென்ட்
- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 680/A பகுதி ஹெக் 1.08.00 = ஏக் 2.67 சென்ட்
- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 680/B பகுதி ஹெக் 0.55.00 = ஏக் 1.36 சென்ட்
- ☐ பாதுகாப்பு தூர இடைவெளி பகுதி

LEASE APPLIED AREA

அளவு - 1: 2000

தென்னிலை



மாவட்டம் : திருச்சிராப்பள்ளி

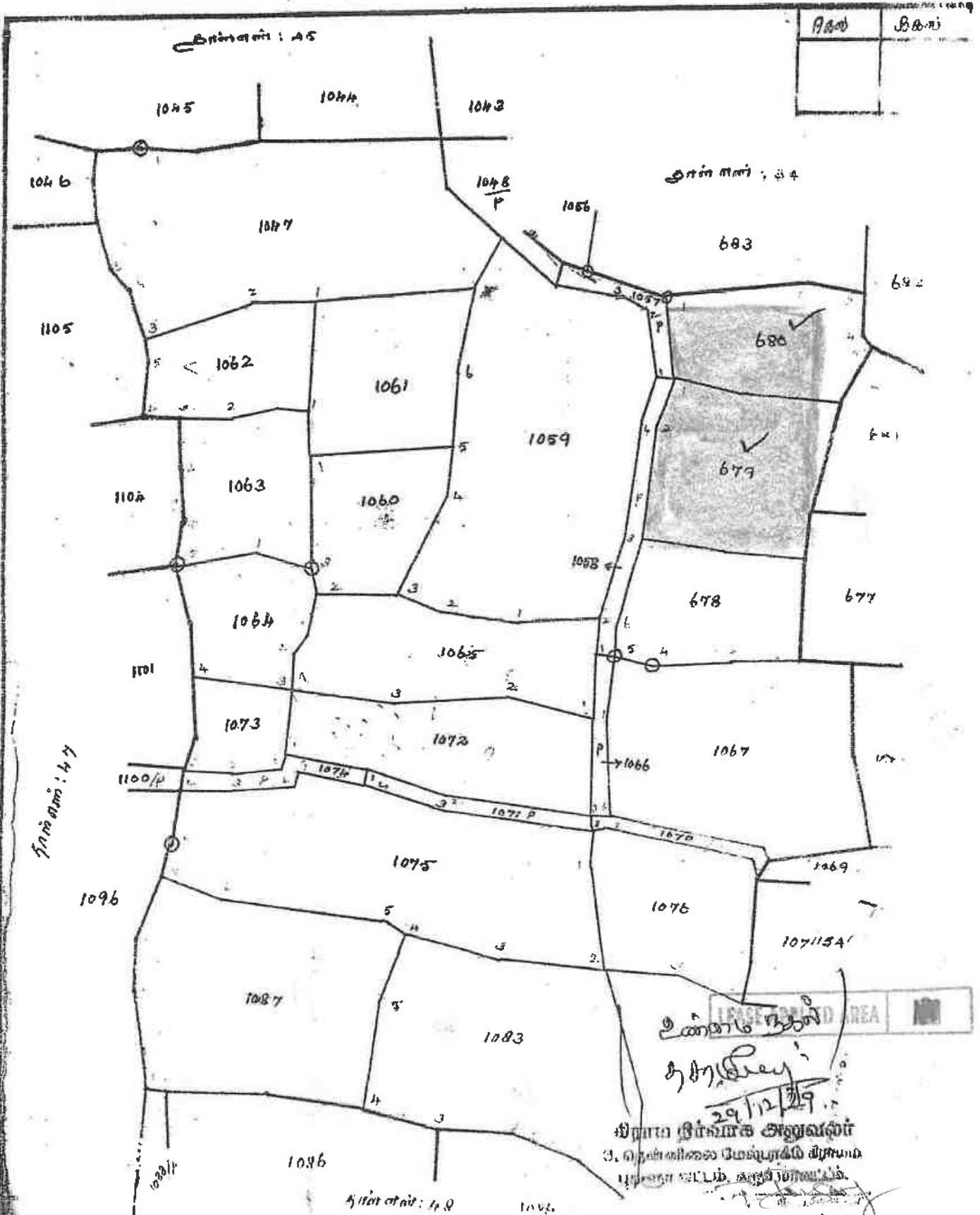
கிராமம்

தொகுதி : 86

பட்டம் : 689

தொகுதி : 46

மையர் : தஞ்சாவூர் மாவட்டம்





தமிழ்நாடு அரசு
வருவாய்த் துறை

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

மாவட்டம் : கரூர்

வட்டம் : புகழூர்

வருவாய் கிராமம் : தெண்ணிலை மே

பட்டா

எண் : 3948

உரிமையாளர்கள் பெயர்

1. தங்கவேல் மகன் பொன்னுசாமி

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்டர் - ஏர்	ரூ - பை	ஹெக்டர் - ஏர்	ரூ - பை	ஹெக்டர் - ஏர்	ரூ - பை	
679	A	1 - 82.00	3.64	—	—	—	—	2022/0103 /14/228056---- 13-09-2022
679	B	0 - 89.00	1.78	—	—	—	—	2022/0103 /14/228056---- 13-09-2022
680	B	0 - 87.00	1.74	—	—	—	—	2022/0103 /14/228056---- 13-09-2022
		3 - 58.00	7.16					

குறிப்பு2 :

barCode	1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் https://eservices.tn.gov.in என்ற இணைய தளத்தில் 14/07/003/03948/30354 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
	2. இத் தகவல்கள் 26-12-2023 அன்று 11:55:18 AM நேரத்தில் அச்சடிக்கப்பட்டது.
	3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

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T. R. Sany

2023-11-31 11:51



**தமிழ்நாடு அரசு
வருவாய்த் துறை**

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

மாவட்டம் : கரூர்

வட்டம் : புகழூர்

வருவாய் கிராமம் : தெண்ணிலை மே

பட்டா

எண் : 3905

உரிமையாளர்கள் பெயர்

1. தங்கவேல் மகன் பொன்னுசாமி

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
680	A	1 - 15.50	2.32	-	--	--	--	2022/0103 /14/208341--- -- 20-04-2022
		1 - 15.50	2.32					

குறிப்பு2 :

barCode	1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் https://eservices.tn.gov.in என்ற இணைய தளத்தில் 14/07/003/03905/30327 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
	2. இத் தகவல்கள் 26-12-2023 அன்று 12:12:04 PM நேரத்தில் அச்சடிக்கப்பட்டது.
	3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

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T. Rajan



1423 - ஆம் பக்கத்தில்

கீழ் மாவட்டம்

புதுச்சேரி

பிரதான அமைச்சர்

மேலும் கீழ்க்கண்ட விவரம்

நில வரித் திட்டத்தின்படி புலன்களின் விவரம்.					சார்புப் பானரின் பெயர்.	முதல் பாகம்.					
(1)	(2)	(3)	(4)	(5)		(7)	(8)	(9)	(10)	(11)	(12)
நில ஆளவை எண்.	உட்கிரிவு எண்.	பரப்பு	திட்டம்.	ஒரு பாகம் ஆகியது இரண்டு பாகங்கள்.	கைப்பற்று தாரகுடைய பெயரும் என்னும் அல்லது அதுபோக தாரகுடைய பெயர்.	நிலத்தின் எந்த பகுதி மாவது சார்புபாகங்கள் மலிந்திருக்கிறது.	எந்த மாதத்தில் பரம்ப செலவாகிறது எந்த மாதத்தில் ஆறுவடை செலவாகிறது.	பரமின் பெயர்.	பரமின் / ஆறுவடை மான பரப்பு.	உண்டாகிய பரமின் ஆறுவடை.	விவரங்கள் ஆறுவடை விவரங்கள்.
679	A	82°	3-64	29/12	த. சிவசுந்தரம்	சொகுதி					
679	B	89°	1-78	29/12	த. சிவசுந்தரம்	சொகுதி					
680	A	15°	2-22	29/12	த. சிவசுந்தரம்	சொகுதி					
680	R	81°	1-76	29/12	த. சிவசுந்தரம்	சொகுதி					
பிரதான அமைச்சர் புதுச்சேரி 29/12/21 சிராம நிர்வாக அலுவலர் 3. விதவையிலை மலப்பாக்கம் சிராமம் புதுச்சேரி வட்டம், கீழ்க்கண்ட விவரம்.											

T. Rajan

அ-பதிவேடு விவரங்கள் - ஊரகம்



மாவட்டம் : கரூர்

வட்டம் : புகழூர்

கிராமம் : தெண்ணிலை மே

1. புல எண்	679	9. மண் வயனமும் ரகமும்	8 - 3
2. உட்பிரிவு எண்	A	10. மண் தரம்	5
3. பழைய புல உட்பிரிவு எண்	679-A ,	11. தீர்வை (ரூ - ஹெ)	2.00
4. பகுதி	-	12. பரப்பு (ஹெக்டேர் - ஏர்)	1 - 82.00
5. அரசு / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ரூ - பை)	3.64
6. நிலத்தின் வகை	பஞ்சை	14. பட்டா எண்	3948
7. பாசன ஆதாரம்	-	15. குறிப்பு	-
8. இரு போகமா	-	16. பெயர்	1.பொன்னுசாமி

குறிப்பு:



மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து

1. பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய
தளத்தில் 14/07/003/679/A/60354 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி
செய்துகொள்ளவும்.

அ-பதிவேடு விவரங்கள் - ஊரகம்



மாவட்டம் : கரூர்

வட்டம் : புகழூர்

கிராமம் : தெண்ணிலை மே

1. புல எண்	679	9. மண் வயனமும் ரகமும்	8 - 3
2. உட்பிரிவு எண்	B	10. மண் தரம்	5
3. பழைய புல உட்பிரிவு எண்	679-B ,	11. தீர்வை (ரூ - ஹெ)	2.00
4. பகுதி	-	12. பரப்பு (ஹெக்டேர் - ஏர்)	0 - 89.00
5. அரசு / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ரூ - பை)	1.78
6. நிலத்தின் வகை	பஞ்சை	14. பட்டா எண்	3948
7. பாசன ஆதாரம்	-	15. குறிப்பு	-
8. இரு போகமா	-	16. பெயர்	1.பொன்னுசாமி

குறிப்பு:



மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து
1. பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய
தளத்தில் 14/07/003/679/B/60354 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி
செய்துகொள்ளவும்.

அ-பதிவேடு விவரங்கள் - ஊரகம்



மாவட்டம் : கரூர்

வட்டம் : புகழூர்

கிராமம் : தெண்ணிலை மே

1. புல எண்	680	9. மண் வயனமும் ரகமும்	8 - 3
2. உட்பிரிவு எண்	A	10. மண் தரம்	5
3. பழைய புல உட்பிரிவு எண்	680-A ,	11. தீர்வை (ரூ - ஹெ)	2.00
4. பகுதி	-	12. பரப்பு (ஹெக்டேர் - ஏர்)	1 - 15.50
5. அரசு / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ரூ - பை)	2.32
6. நிலத்தின் வகை	பஞ்சை	14. பட்டா எண்	3905
7. பாசன ஆதாரம்	-	15. குறிப்பு	-
8. இரு போகமா	-	16. பெயர்	1.பொன்னுசாமி

குறிப்பு:



மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து
1. பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய
தளத்தில் 14/07/003/680/A/60327 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி
செய்துகொள்ளவும்.

அ-பதிவேடு விவரங்கள் - ஊரகம்



மாவட்டம் : கரூர்

வட்டம் : புகழூர்

கிராமம் : தெண்ணிலை மே

1. புல எண்	680	9. மண் வயனமும் ரகமும்	8 - 3
2. உட்பிரிவு எண்	B	10. மண் தரம்	5
3. பழைய புல உட்பிரிவு எண்	680-B ,	11. தீர்வை (ரூ - ஹெ)	2.00
4. பகுதி	-	12. பரப்பு (ஹெக்டேர் - ஏர்)	0 - 87.00
5. அரசு / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ரூ - பை)	1.74
6. நிலத்தின் வகை	பஞ்சை	14. பட்டா எண்	3948
7. பாசன ஆதாரம்	-	15. குறிப்பு	-
8. இரு போகமா	-	16. பெயர்	1.பொன்னுசாமி

குறிப்பு:



மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து
1. பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய
தளத்தில் 14/07/003/680/B/60354 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி
செய்துகொள்ளவும்.





இந்திய அரசாங்கம்
Government of India

இந்திய தனிப்பட்ட அடையாள ஆணையர் அமைப்பு
Unique Identification Authority of India

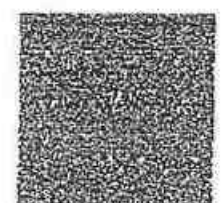
பதிவேட்டு எண்/ Enrolment No.: 2189/81881/08397

Download Date: 13/08/2017

To
பொன்னுசாமி த
Ponnusamy T
S/O Thangavel
NO 4
PAVUTHIRAM
PAVUTHIRAM POST
Pavithram
Karrur Tamil Nadu - 639002
9944941575

Issue Date: 04/07/2017

Signature valid



உங்கள் ஆதார் எண் / Your Aadhaar No. :
9852 2595 7233
VID : 9146 8684 9291 3028
எனது ஆதார், எனது அடையாளம்



Download Date: 13/08/2017



பொன்னுசாமி த
Ponnusamy T
பிறந்த நாள்/DOB: 30/04/1985
ஆண்/ MALE

Issue Date: 04/07/2017

9852 2595 7233
VID : 9146 8684 9291 3028
எனது ஆதார், எனது அடையாளம்



தகவல்

- ஆதார் அடையாளத்திற்கான சான்று. குடியுரிமைக்கு அல்ல.
- பாதுகாப்பான QR குறியீடு/ ஆபிஸ்லைன் XML / ஆன்லைன் அங்கீகரிக்கப்பட்ட பயன்படுத்தி அடையாளத்தை சரிபார்க்கவும்
- இது எலக்ட்ரானிக் செயல்முறை மூலம் தயாரிக்கப்பட்ட கடிதமாகும்.

INFORMATION

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

- ஆதார் தாடு முழுவதிலும் செல்லுபடியாகும்.
- பல்வேறு அரசு மற்றும் அரசு சார்பு சேவைகளை எளிதில் பெற ஆதார் உதவுகிறது.
- உங்கள் மொபைல் எண் மற்றும் மின்னஞ்சல் ஐடிவை ஆதாரில் புதுப்பிக்கவும்
- Aadhaar செயலிணைப்பு பயன்படுத்தி உங்கள் ஸ்மார்ட், பெனில் ஆதாரை எடுத்துச் செல்லுங்கள்

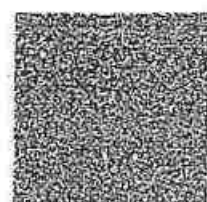
- Aadhaar is valid throughout the country.
- Aadhaar helps you avail various Government and non-Government services easily.
- Keep your mobile number & email ID updated in Aadhaar.
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Download Date: 13/08/2017

Issue Date: 04/07/2017

தகவல்:
S/O தங்கவேல், எண் 4, பவூதிரம், பவூதிரம்
பெரியூர், பவூதிரம், கரூர்,
தமிழ்நாடு - 639002

Address:
S/O Thangavel, NO 4, PAVUTHIRAM,
PAVUTHIRAM POST, Pavithram, Karur,
Tamil Nadu - 639002



9852 2595 7233
VID : 9146 8684 9291 3028

1047 | help@uidai.gov.in | www.uidai.gov.in

T. Prasad

CHETTINAD CEMENT CORPORATION

(Regd. Office: RANI SEETHAI HALL BUILDING IV & V FLOORS, 603, ANNA SALAI, MADRAS-600006.)
WORKS OFFICE: PULIYUR.

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



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

22nd September, 1987.

CERTIFICATE.

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

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

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

for CHETTINAD CEMENT CORPORATION LTD.,


(T.RAJU).
Mines Manager & Dy. General Manager.





Faculty of Science

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

Given under the seal of the University.

Annamalainagar.

8th December, 1976.

T. Prasad
S. Chandrasekh
298
Vice-Chancellor.



10°58'49.98"N



77°48'54.97"E

10°58'41.31"N

PLATE NO: I

DATE OF SURVEY : 24.06.2024

APPLICANT:

THIRU TIRUNELVAM,
S/O THANGAVEL,
DOOR No.4,
PAVITHRAM,
PUCALUR TALUK, KARUR DISTRICT

QUARRY LEASE APPLIED AREA:

S.F.NO'S: 679/A, 679/B (P), 680/A (P) & 680/B (P).

EXTENT : 4.23.80 Hg.

VILLAGE : THIENILAI WEST,

TALUK : PUGALUR,

DISTRICT : KARUR.

INDEX

Q. L. APPLIED AREA : ●

TOPO SHEET NO : 58 F / 13

LATITUDE: 10°58'41.31"N to 10°58'49.98"N

LONGITUDE: 77°48'48.50"E to 77°48'54.49"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

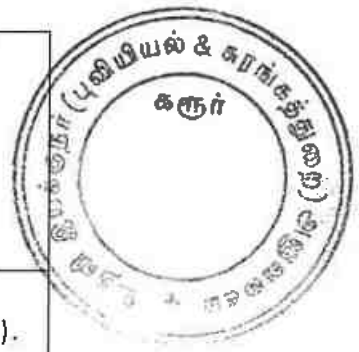
KNOWLEDGE BASED UPON THE LEASER'S

AUTHENTICATION BY STATE GOVERNMENT

C. NATARAJAN

QUALITY PERSON

PLATE NO: 1A
DATE OF SURVEY : 24.06.2024



APPLICANT:

THIRU. T.PONNUSAMY,
S/o.THANGAVEL,
DOOR No 4,
PAVITHIRAM,
PUGALUR TALUK, KARUR DISTRICT.

QUARRY LEASE APPLIED AREA:

S.F.NO'S :679/A,679/B(P),680/A(P)&680/B(P).
EXTENT : 4.23.80 Ha,
VILLAGE : THENNILAI WEST,
TALUK : PUGALUR,
DISTRICT : KARUR.

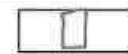
INDEX

TOPO SHEET NO : 58 F / 13

LATITUDE:10°58'41.31"Nto10°58'49.98"N

LONGITUDE:77°48'48.50"Eto77°48'54.49"E

Q.L.APPLIED AREA



300M RADIUS



500M RADIUS



1KM RADIUS



APPROACH ROAD



CART TRACK



PANCHAYAT ROAD



BARREN LAND



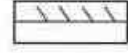
TREES



SEASONAL AGRICULTURAL LAND



QUARRY PIT



HABITATIONS



ODAI



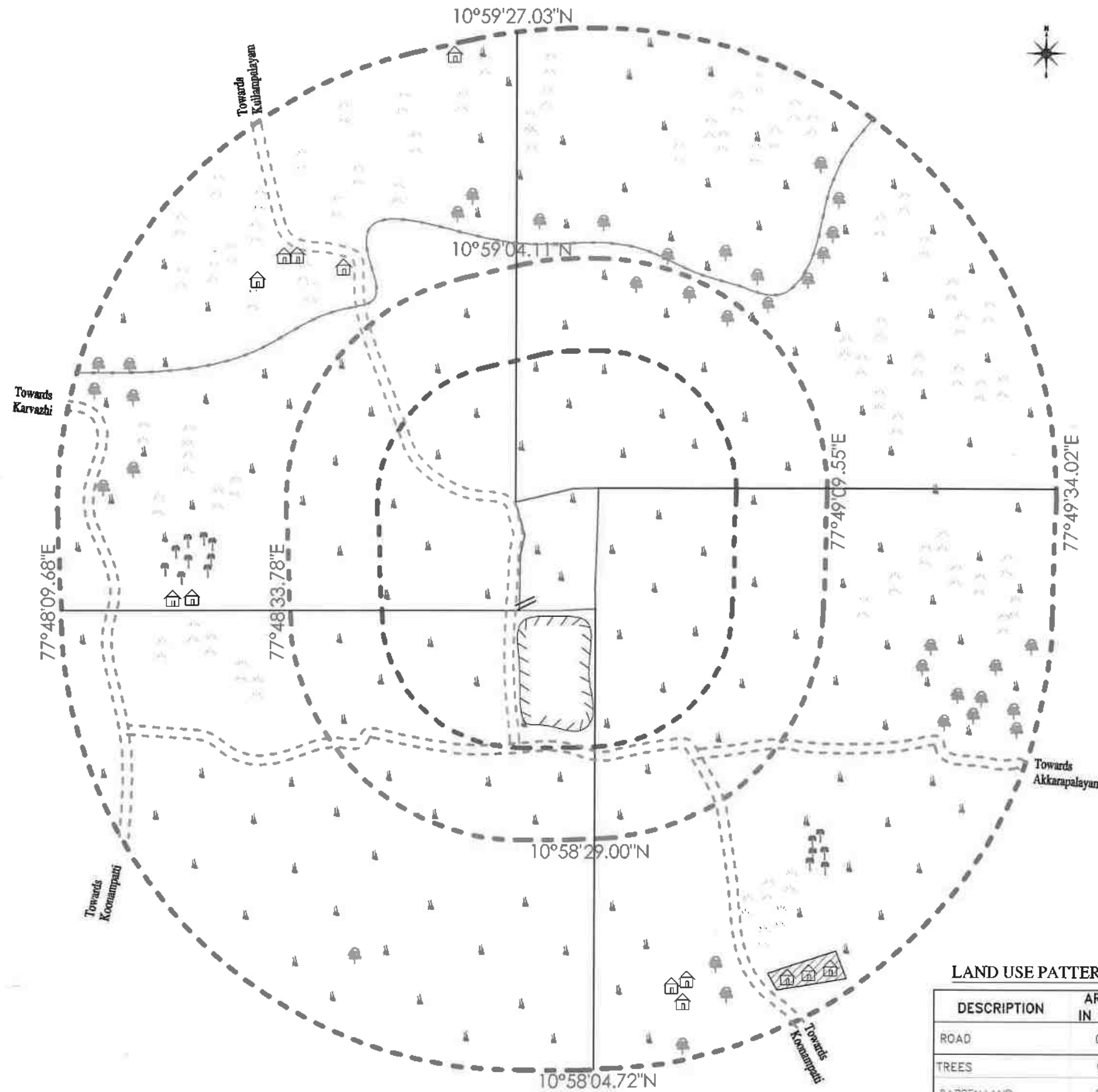
ENVIRONMENTAL PLAN

SCALE 1 : 10,000

PREPARED BY :

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

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



LAND USE PATTERN

DESCRIPTION	AREA IN (%)
ROAD	05
TREES	05
BARREN LAND	69
HABITATION	02
AGRICULTURAL LAND	15
WATER BODIES	04

T. Ponnusamy



T. Pongu

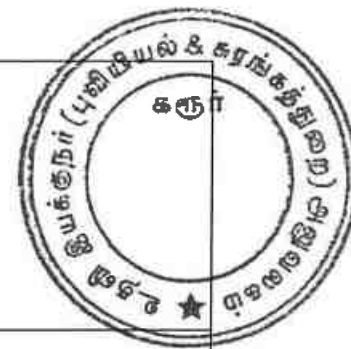
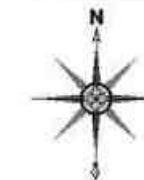
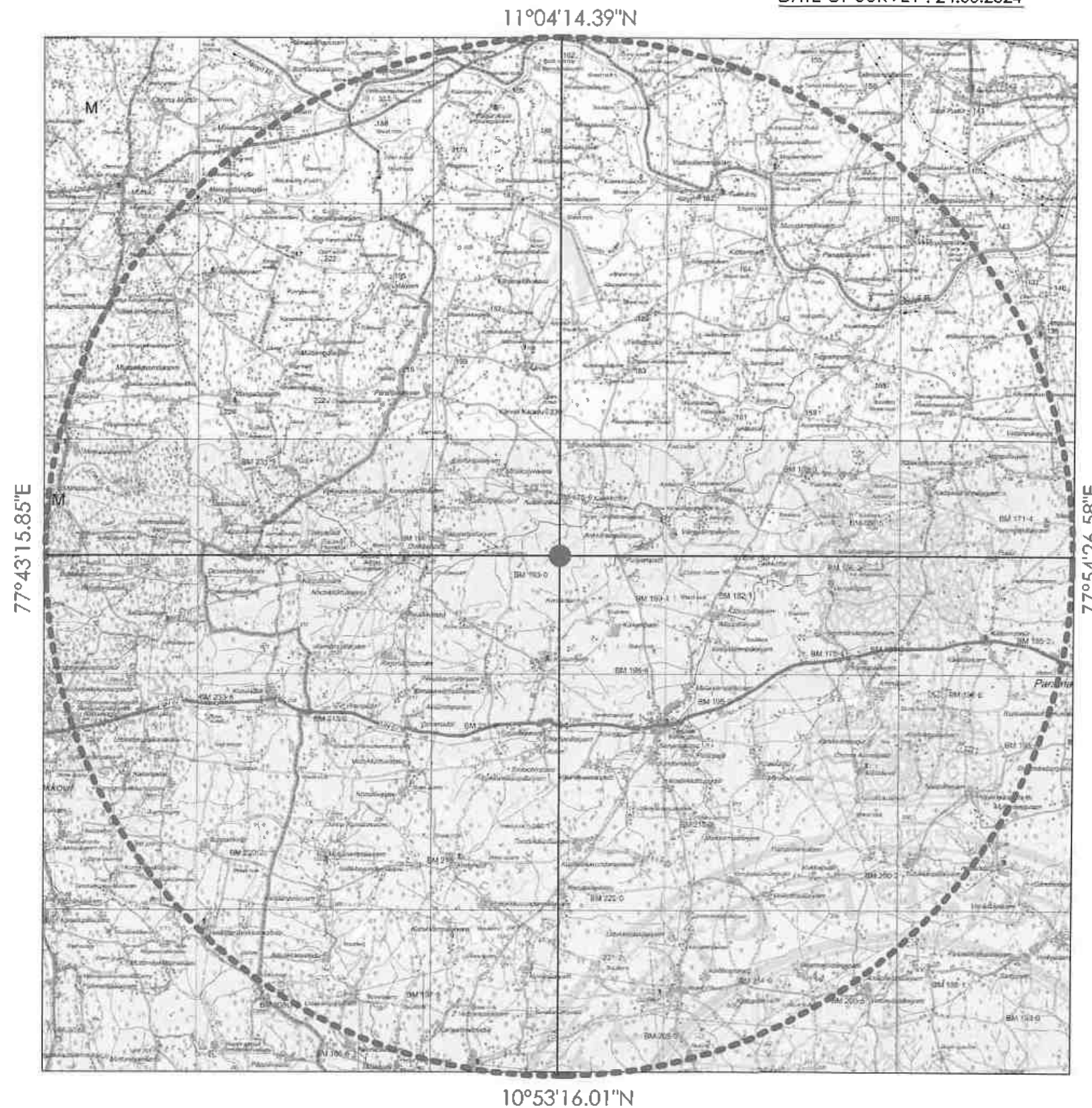


PLATE NO: 1B	
DATE OF SURVEY : 24.06.2024	
APPLICANT: THIRU. T.PONNUSAMY, S/o.THANGAVEL, DOOR No 4, PAVITHIRAM, PUGALUR TALUK, KARUR DISTRICT.	
QUARRY LEASE APPLIED AREA: S.F.NO'S :679/A,679/B(P),680/A(P)&680/B(P). EXTENT : 4.23.80 Ha, VILLAGE : THENNILAI WEST, TALUK : PUGALUR, DISTRICT : KARUR.	
INDEX	
TOPO SHEET NO : 58 F / 13	
LATITUDE:10°58'41.31"Nto10°58'49.98"N	
LONGITUDE:77°48'48.50"Eto77°48'54.49"E	
Q.L. APPLIED AREA	
300M RADIUS	
500M RADIUS	
1KM RADIUS	
APPROACH ROAD	
CARTTRACK	
PANCHAYAT ROAD	
SATELLITE IMAGERY	
SCALE 1 : 10,000	
PREPARED BY : THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE BASED UPON THE LEASE MAP AUTHENTICATED BY STATE GOVERNMENT	
 C.NATARAJAN M.Sc., M.Phil., QUALIFIED PERSON	



PLATE NO-I C
DATE OF SURVEY : 24.06.2024



T. Ponnusamy

APPLICANT:
THIRU. T.PONNUSAMY,
S/o THANGAVEL,
DOOR No 4,
PAVITHIRAM,
PUGALUR TALUK, KARUR DISTRICT.



QUARRY LEASE APPLIED AREA:
S.F.NO'S : 679/A, 679/B(P), 680/A(P) & 680/B(P).
EXTENT : 4.23.80 Ha.
VILLAGE : THENNILAI WEST,
TALUK : PUGALUR,
DISTRICT : KARUR.

INDEX

TOPO SHEET NO : 58 F / 13
LATITUDE: 10°58'41.31"N to 10°58'49.98"N
LONGITUDE: 77°48'48.50"E to 77°48'54.49"E

Q.L. APPLIED AREA



10KM RADIOUS



CONVENTIONAL SYMBOLS	
Express highway, showing with bridge with details below	
Roads, including unimproved roads	
Railways, showing with details below	
Canals, showing with details below	
Water, showing with details below	
Vegetation, showing with details below	
Buildings, showing with details below	
Temples, showing with details below	
Other buildings, showing with details below	
Other symbols, showing with details below	

TOPO SKETCH OF QUARRY LEASE

APPLIED AREA FOR

10Km RADIUS

SCALE- 1:100000

PREPARED BY :

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

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

KEY PLAN

PLATE NO:ID

DATE OF SURVEY : 24.06.2024

APPLICANT:

THIRU T PONNUSAMY,
S/o THANGAVEL,
DOOR No.4,
PAVITHIRAM,
PUGALUR TALUK, KARUR DISTRICT.

QUARRY LEASE APPLIED AREA:

S.F.NO'S : 679/A, 679/B(P), 680/A(P) & 680/B(P)
EXTENT : 4.23.80 Ha.
VILLAGE : THENNILAI WEST,
TALUK : PUGALUR,
DISTRICT : KARUR.

INDEX

Q.L. APPLIED AREA



NATIONAL HIGHWAY



PANCHAYAT ROAD



CARTTRACK



APPROACH ROAD



HABITATIONS



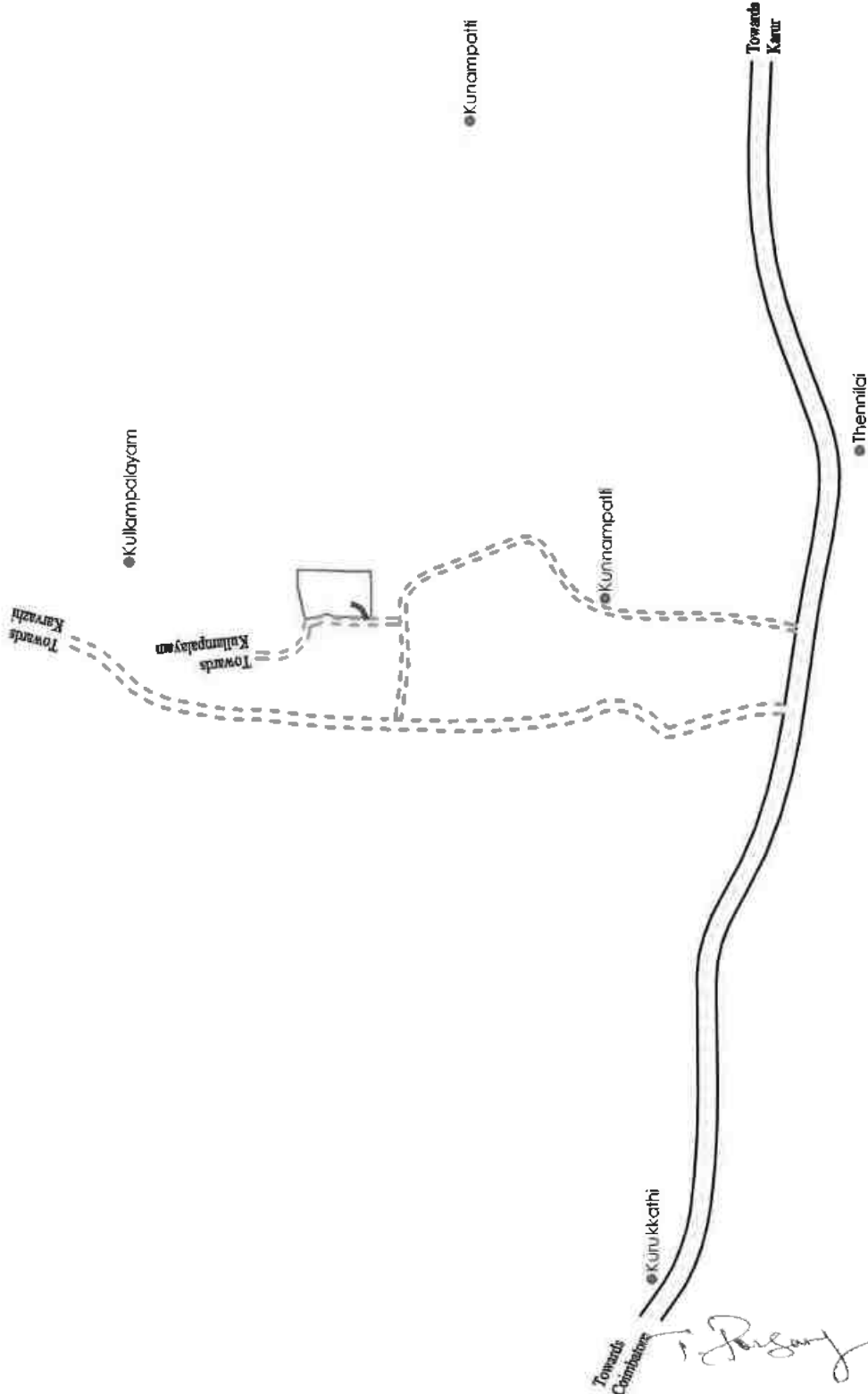
KEY PLAN

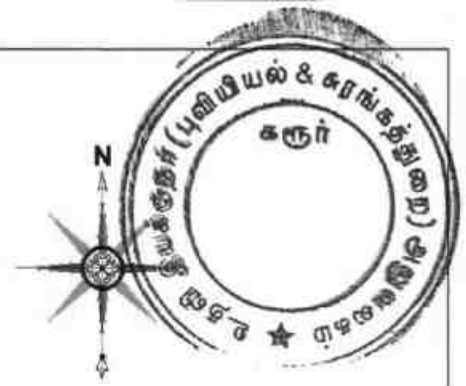
Not To Scale

PREPARED BY

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

ச.நாராயணசுப்ரமணியம்
C. NARAYAN SUBRAMANIAM
QUALIFIED PERSON





BOUNDARY CO-ORDINATE		
LABEL	LATITUDE	LONGITUDE
1	10° 58' 41.34"N	77° 48' 48.74"E
2	10° 58' 45.34"N	77° 48' 48.85"E
3	10° 58' 46.64"N	77° 48' 49.17"E
4	10° 58' 49.06"N	77° 48' 48.50"E
5	10° 58' 49.98"N	77° 48' 52.68"E
6	10° 58' 49.98"N	77° 48' 54.49"E
7	10° 58' 42.91"N	77° 48' 54.20"E
8	10° 58' 41.39"N	77° 48' 54.25"E
9	10° 58' 41.31"N	77° 48' 51.67"E
WGS 84 DATUM		

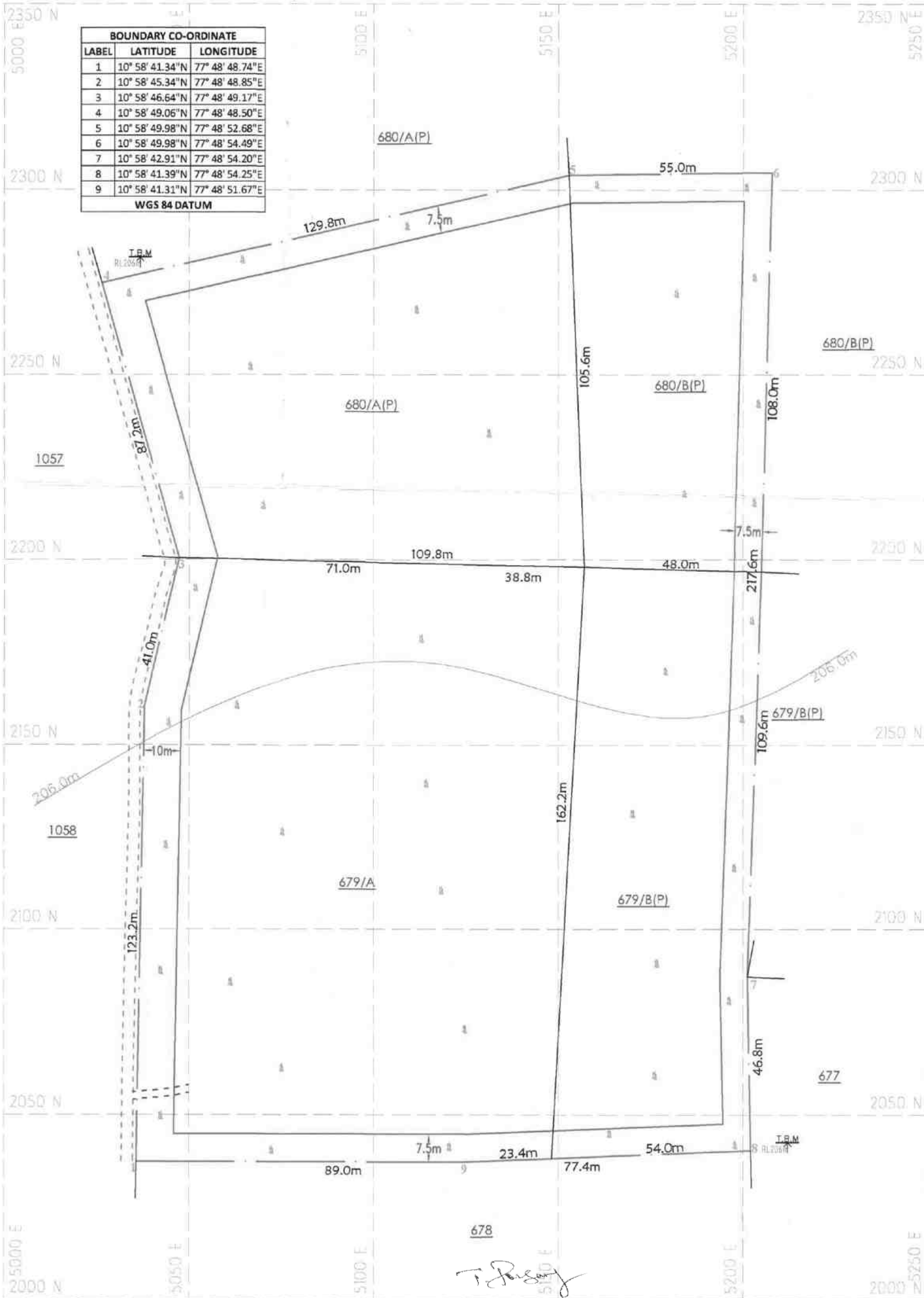


PLATE NO-II

DATE OF SURVEY : 24.06.2024

APPLICANT:

THIRU. T.PONNUSAMY,
S/o. THANGAVEL,
DOOR No.4,
PAVITHIRAM,
PUGALUR TALUK, KARUR DISTRICT.

QUARRY LEASE APPLIED AREA:

S.F.NO'S : 679/A, 679/B(P), 680/A(P) & 680/B(P).
EXTENT : 4.23.80 Ha,
VILLAGE : THENNILAI WEST,
TALUK : PUGALUR,
DISTRICT : KARUR.

INDEX

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

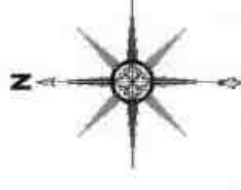
QUARRY LEASE & SURFACE PLAN

SCALE 1: 1000

PREPARED BY:

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

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



BOUNDARY CO-ORDINATE	
LABEL	LONGITUDE
1	10° 58' 41.34"N 77° 48' 48.74"E
2	10° 58' 45.34"N 77° 48' 48.85"E
3	10° 58' 46.64"N 77° 48' 49.17"E
4	10° 58' 49.06"N 77° 48' 48.50"E
5	10° 58' 49.98"N 77° 48' 52.68"E
6	10° 58' 49.98"N 77° 48' 54.49"E
7	10° 58' 42.91"N 77° 48' 54.20"E
8	10° 58' 41.39"N 77° 48' 54.25"E
9	10° 58' 41.31"N 77° 48' 51.67"E

WGS 84 DATUM

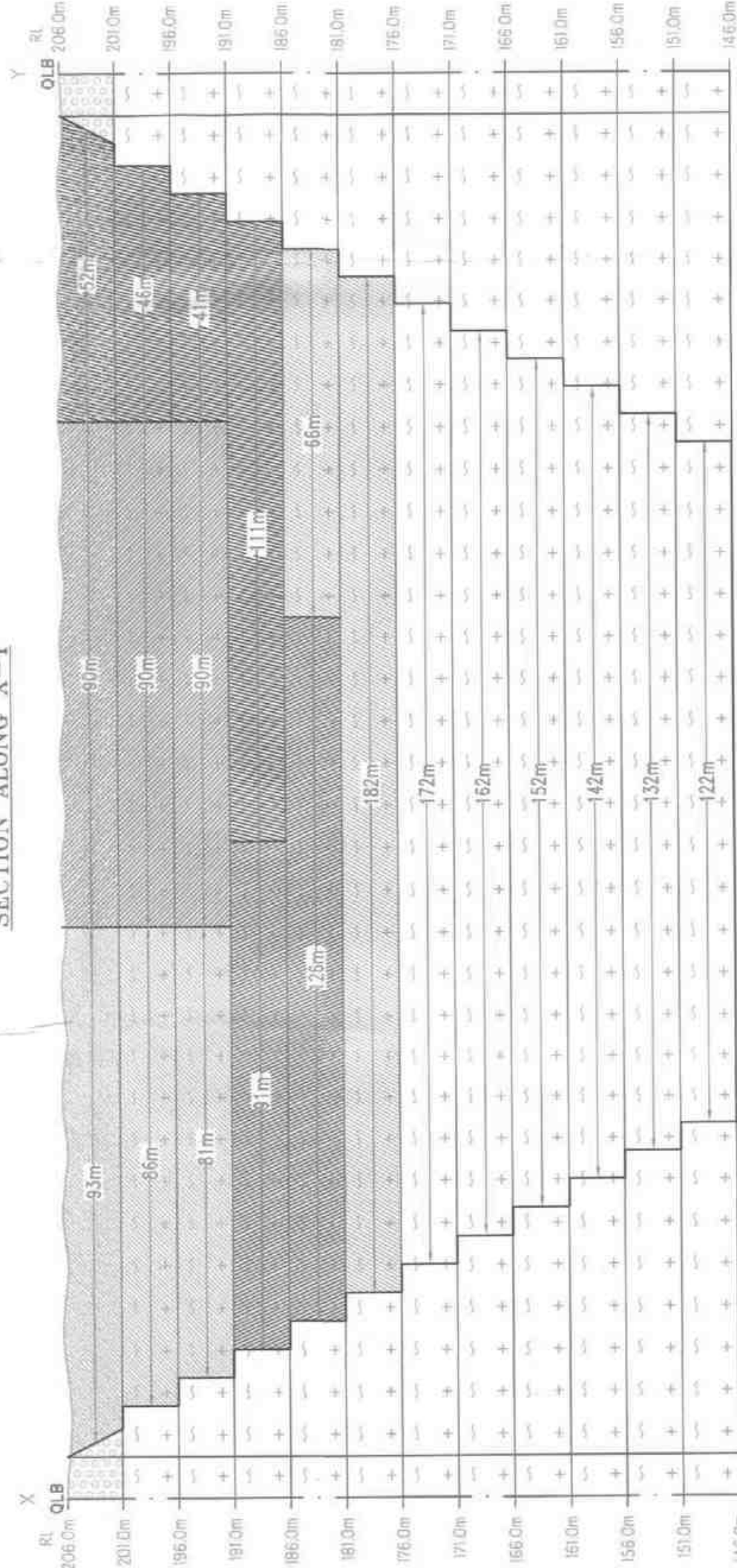


PROPOSED SITE SERVICES	
A	OFFICE
B	STORE ROOM
C	FIRST AID ROOM
D	BEST SHELTER
E	TOILET

Proposed area to be Planted

1st Year Proposed area to be Quarried
2nd Year Proposed area to be Quarried
3rd Year Proposed area to be Quarried
4th Year Proposed area to be Quarried
5th Year Proposed area to be Quarried

SECTION ALONG X-Y



SECTION ALONG A-B

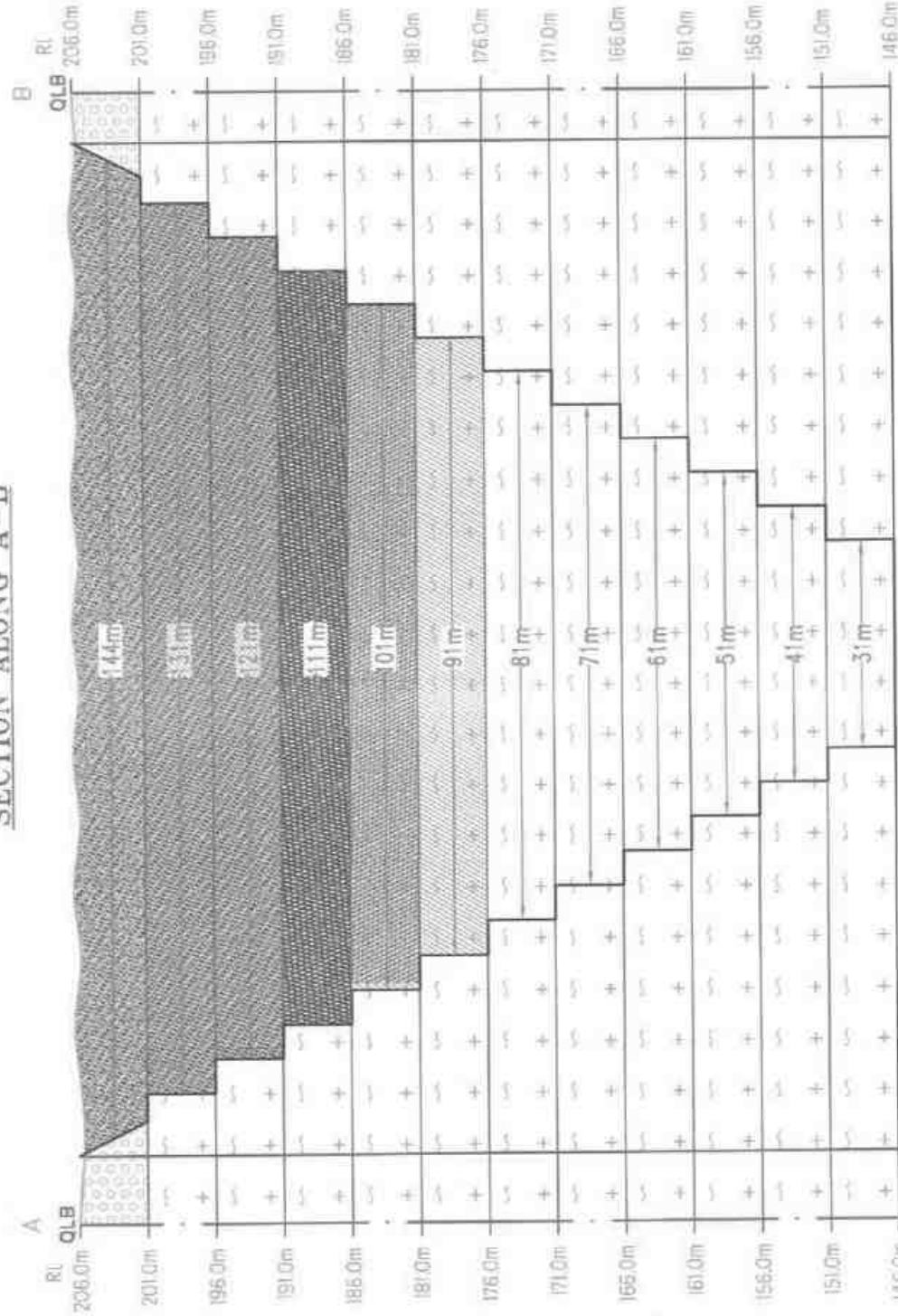


PLATE NO-V

DATE OF SURVEY : 24.06.2024

APPLICANT:

THIRU T.PONHUSANY,
S/G THANGAVEL
DOOR No.4,
PAVITHRAM,
PUCALUR TALUK, KARUR DISTRICT.

QUARRY LEASE APPLIED AREA:

S.F.NO'S: 679/A, 679/B(P), 680/A(P) & 680/B(P).
EXTENT : 4.23.80 Hg.
VILLAGE : THENNILAI WEST,
TALUK : PUGALUR,
DISTRICT : KARUR.

INDEX

Q.LEASE APPLIED BOUNDARY

7.5m & 10m SAFETY DISTANCE

TEMPORARY BENCH MARK

APPROACH ROAD

CARTRACK

CONTOUR

SCRUB

GRAVEL

ROUGH STONE

STRIKE & DIP

YEARWISE DEVELOPMENT & PRODUCTION PLAN & SECTION

SCALE 1 : 1000

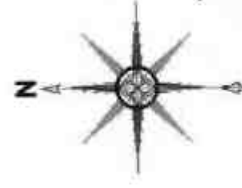
SECTION HOR 1 : 1000, VER 1: 500

PREPARED BY:

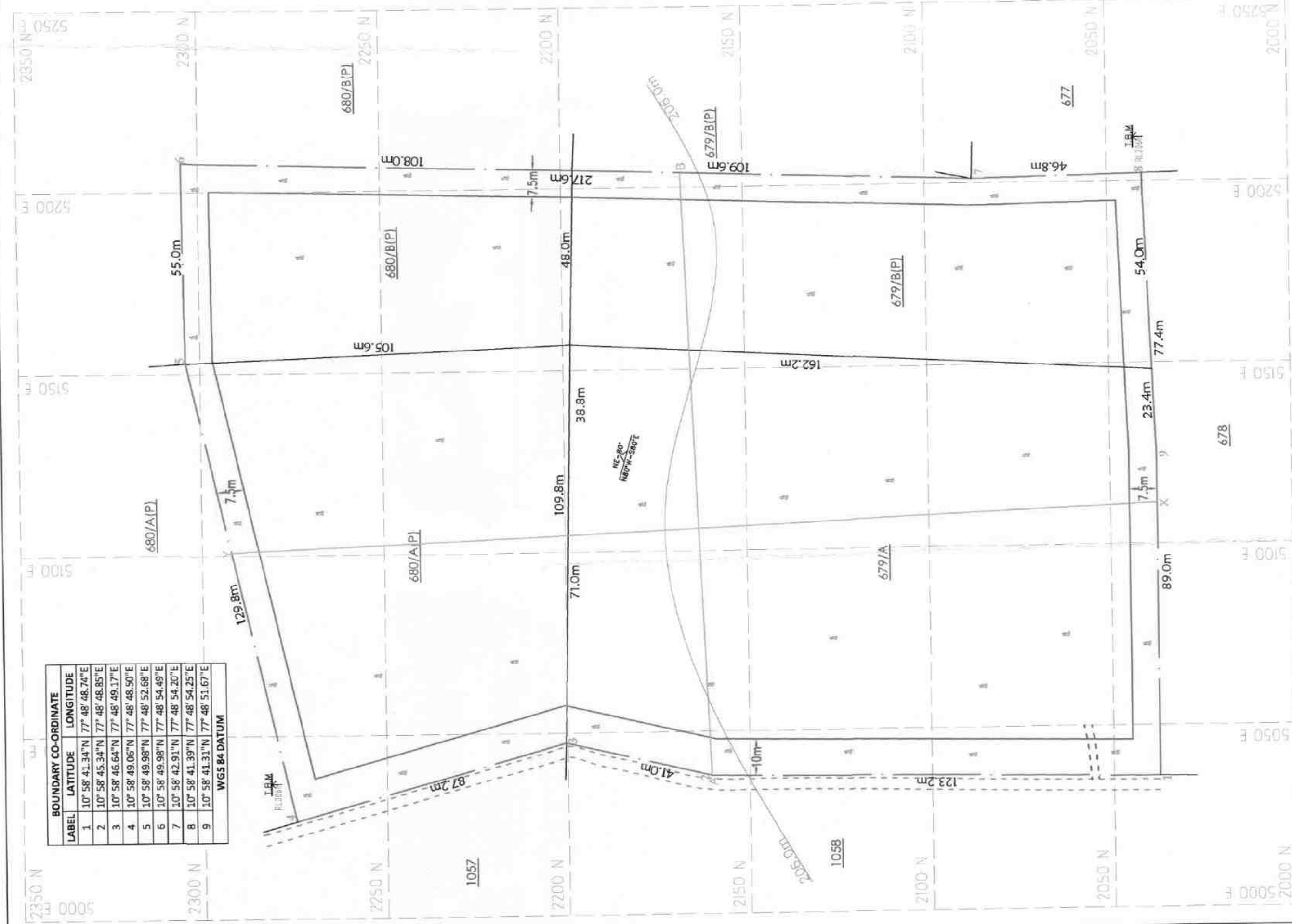
THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE BASED UPON THE LEASE MAP AUTHENTICATED BY STATE GOVERNMENT

QUALIFIED PERSON

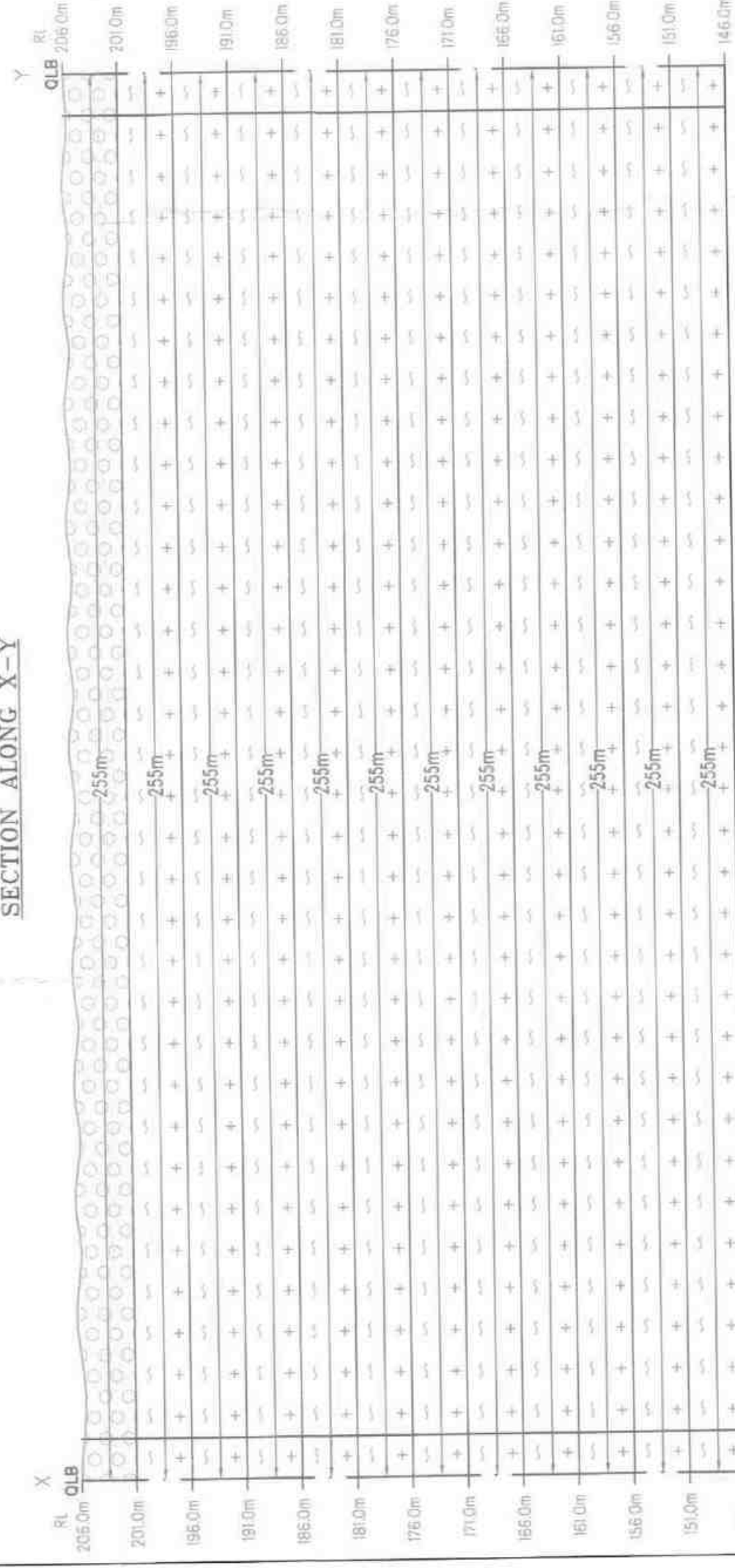
QUALIFIED PERSON



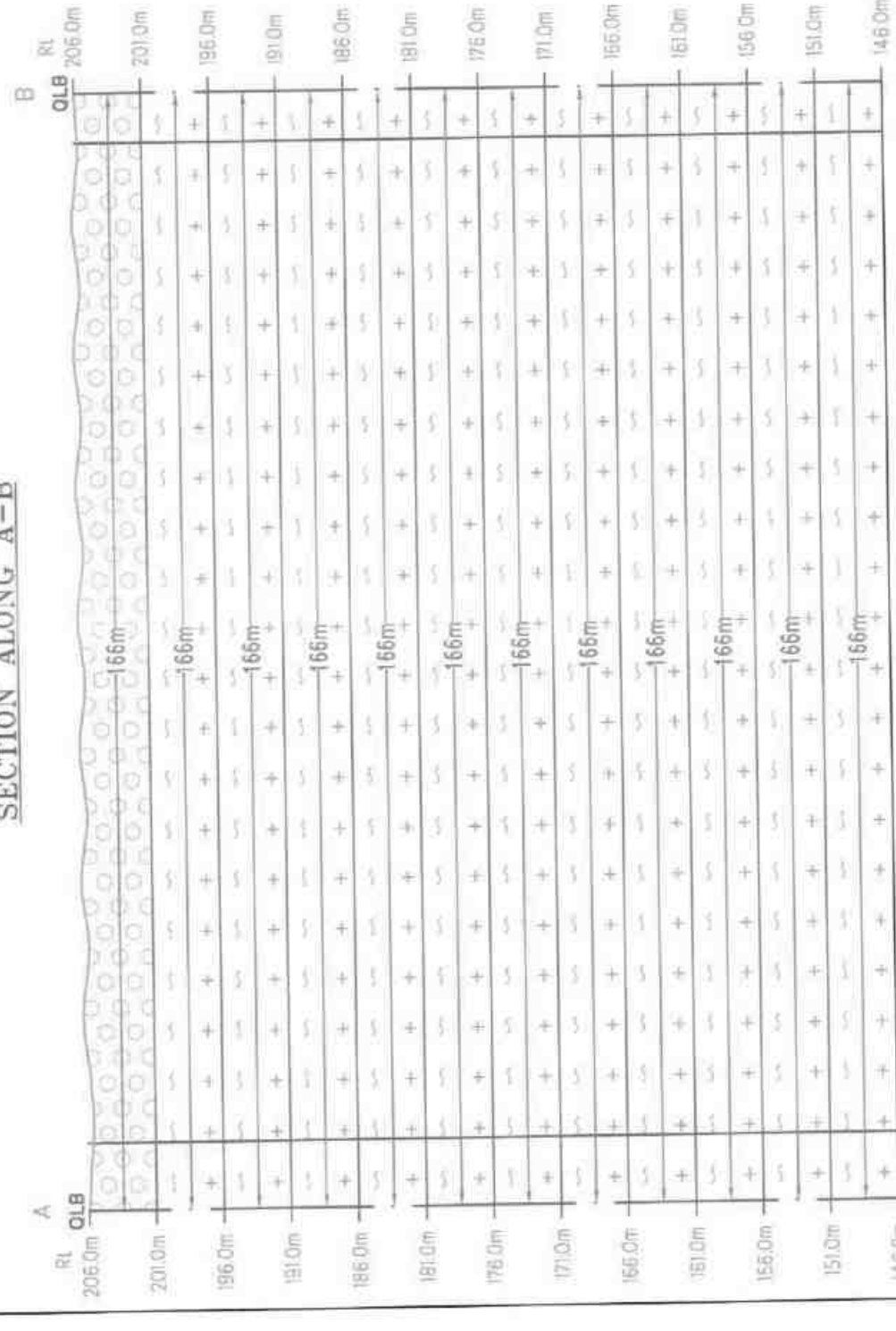
BOUNDARY CO-ORDINATE		
LABEL	LATITUDE	LONGITUDE
1	10° 58' 41.34" N	77° 48' 48.74" E
2	10° 58' 45.34" N	77° 48' 48.85" E
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5	10° 58' 49.98" N	77° 48' 52.68" E
6	10° 58' 49.98" N	77° 48' 54.49" E
7	10° 58' 42.91" N	77° 48' 54.20" E
8	10° 58' 41.39" N	77° 48' 54.25" E
9	10° 58' 41.31" N	77° 48' 51.67" E



SECTION ALONG X-Y



SECTION ALONG A-B



DATE OF SURVEY : 24.06.2024

PUCHAIK IAD

TALUK : PUGALUR,
DISTRICT : KARUR.

STRIKE & DIP

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

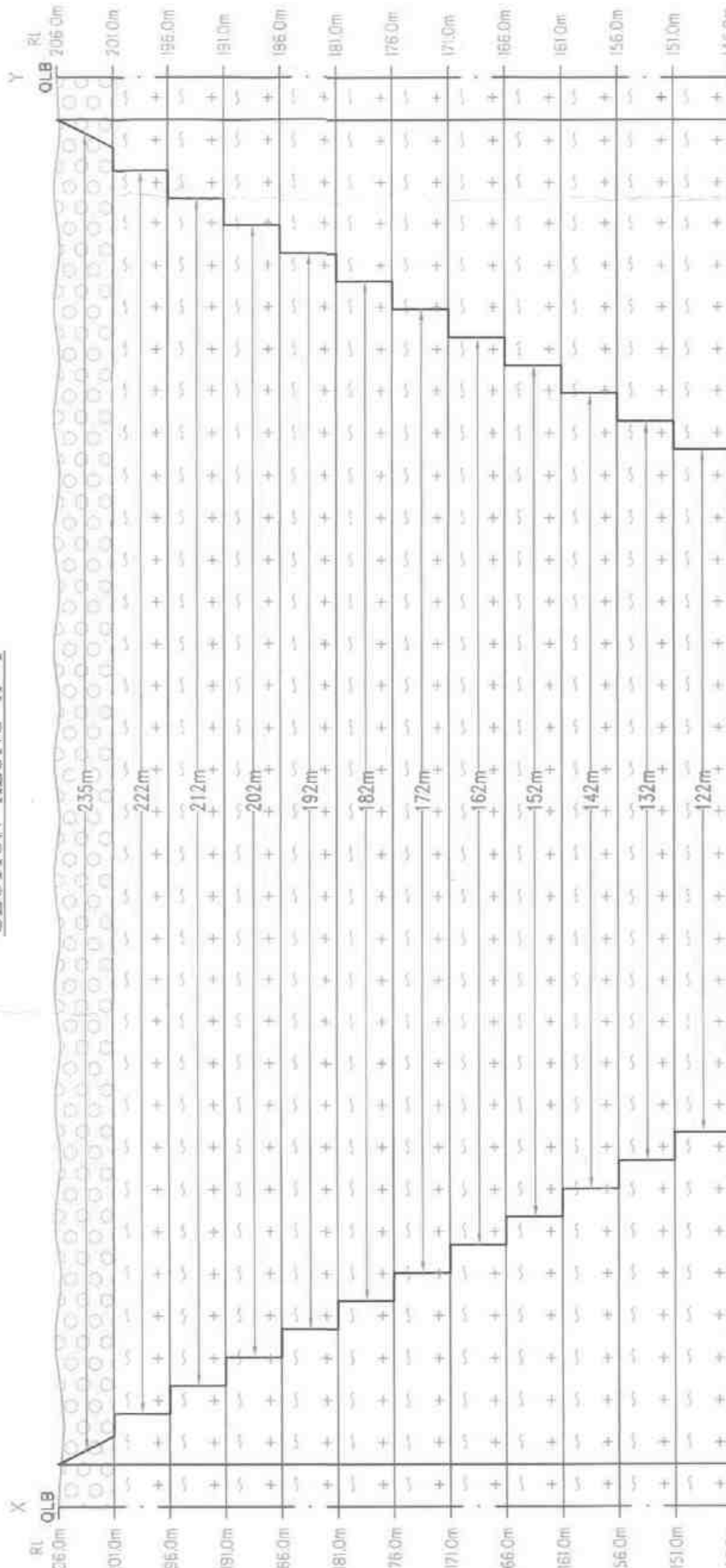
THIS IS TO CERTIFY THAT THE
INFORMATION IN THIS PLATE IS TRUE AND
CORRECT TO THE BEST OF MY
KNOWLEDGE BASED UPON THE LEASE MAP
AUTHENTICATED BY STATE GOVERNMENT


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



BOUNDARY CO-ORDINATE	
LABEL	LONGITUDE
1	10° 58' 41.34"N 77° 48' 48.74"E
2	10° 58' 45.34"N 77° 48' 48.85"E
3	10° 58' 46.64"N 77° 48' 49.17"E
4	10° 58' 49.06"N 77° 48' 48.50"E
5	10° 58' 49.98"N 77° 48' 52.68"E
6	10° 58' 42.91"N 77° 48' 54.20"E
7	10° 58' 41.39"N 77° 48' 54.25"E
8	10° 58' 41.31"N 77° 48' 51.67"E
9	10° 58' 41.31"N 77° 48' 51.67"E

SECTION ALONG X-Y



SECTION ALONG A-B

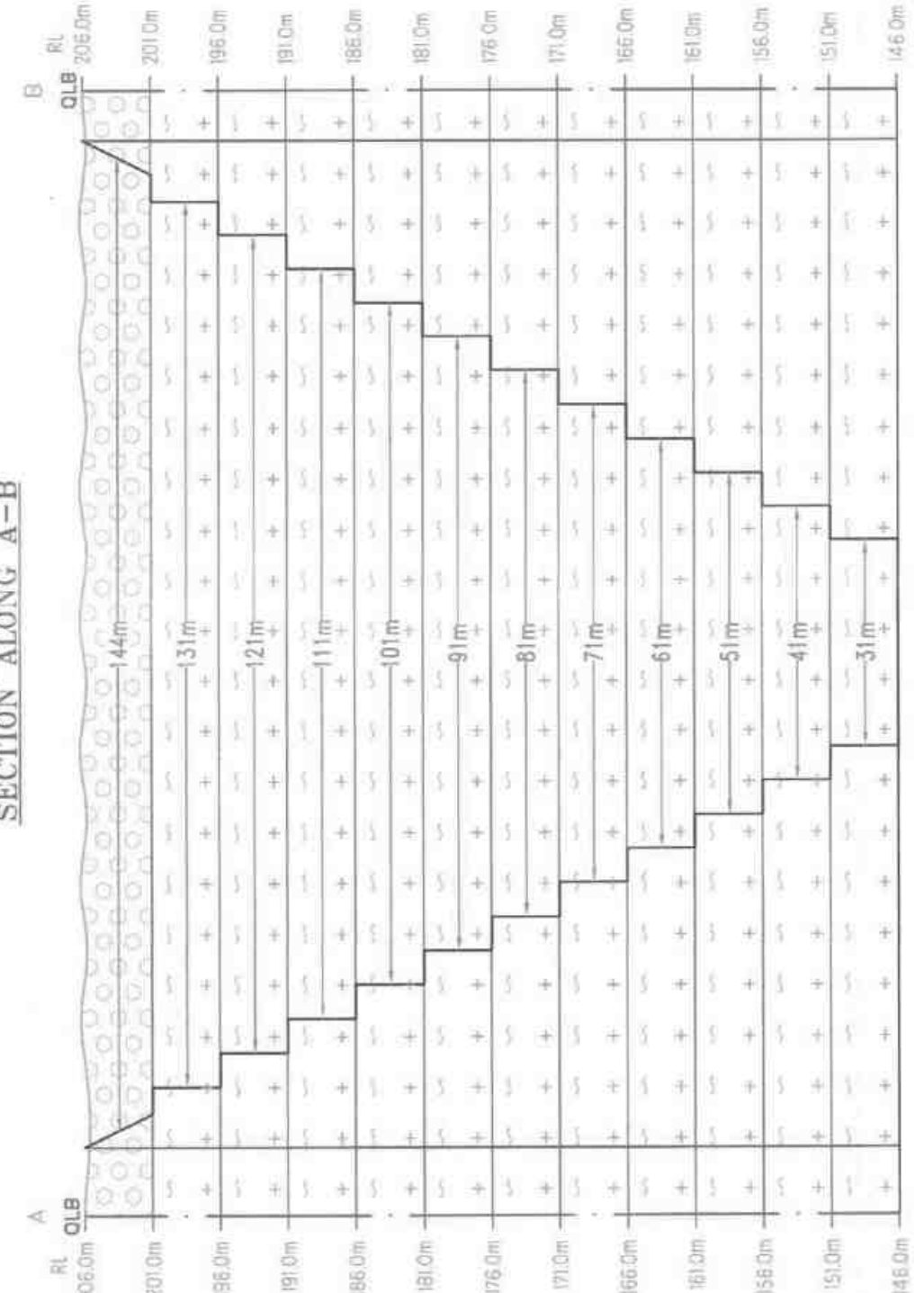


PLATE NO-IV

DATE OF SURVEY : 24.06.2024

APPLICANT:

THIRU T PONNUSAMY,

S/O THANCAVEL

DOOR No 4,

PAVITHRAM,

PUGALUR TALUK, KARUR DISTRICT.

QUARRY LEASE APPLIED AREA:

S.F NO'S : 679/A, 679/B(P), 680/A(P) & 680/B(P).

EXTENT : 4.23.80 Ha.

VILLAGE : THENNALAI WEST,

TALUK : PUGALUR,

DISTRICT : KARUR.

INDEX

Q. LEASE APPLIED BOUNDARY

7.5m & 10m SAFETY DISTANCE

TEMPORARY BENCH MARK

APPROACH ROAD

CARTTRACK

CONTOUR

SCRUB

GRAVEL

ROUGH STONE

STRIKE & DIP

MINEABLE PLAN & SECTION

SCALE 1 : 1000

SECTION HOR 1 : 1000, VER 1 : 500

PREPARED BY:

THIS IS TO CERTIFY THAT THE

INFORMATION IN THIS PLATE IS TRUE AND

CORRECT TO THE BEST OF MY

KNOWLEDGE BASED UPON THE LEASE MAP

AUTHENTICATED BY STATE GOVERNMENT

C. NATARAJAN

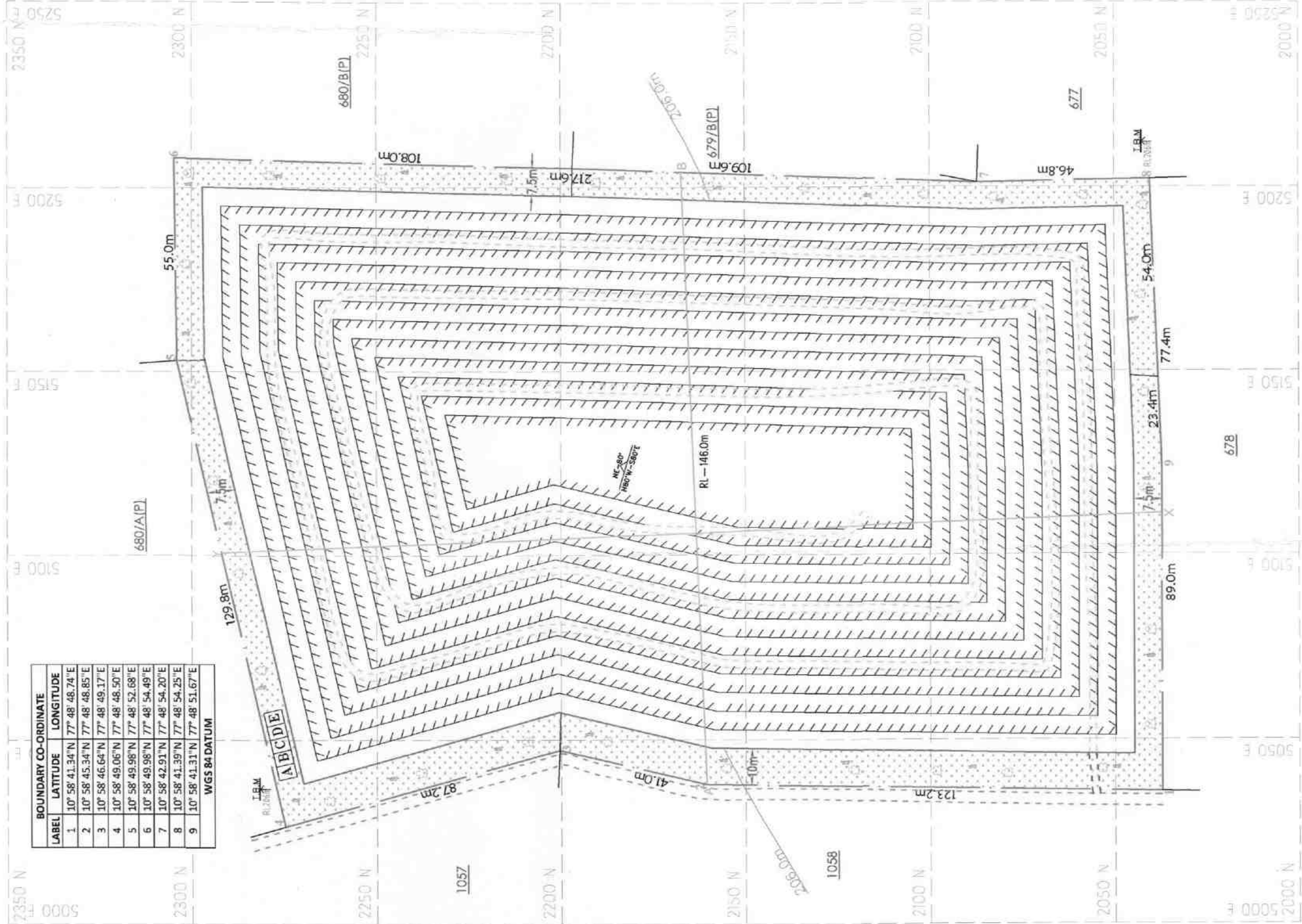
Phil.,

QUALIFIED PERSON



BOUNDARY CO-ORDINATE	
LABEL	LONGITUDE
1	10° 58' 41.34"N 77° 48' 48.74"E
2	10° 58' 45.34"N 77° 48' 48.85"E
3	10° 58' 46.64"N 77° 48' 49.17"E
4	10° 58' 49.06"N 77° 48' 48.90"E
5	10° 58' 49.98"N 77° 48' 52.68"E
6	10° 58' 49.98"N 77° 48' 54.49"E
7	10° 58' 42.91"N 77° 48' 54.20"E
8	10° 58' 41.39"N 77° 48' 54.25"E
9	10° 58' 41.31"N 77° 48' 51.67"E

WGS 84 DATUM

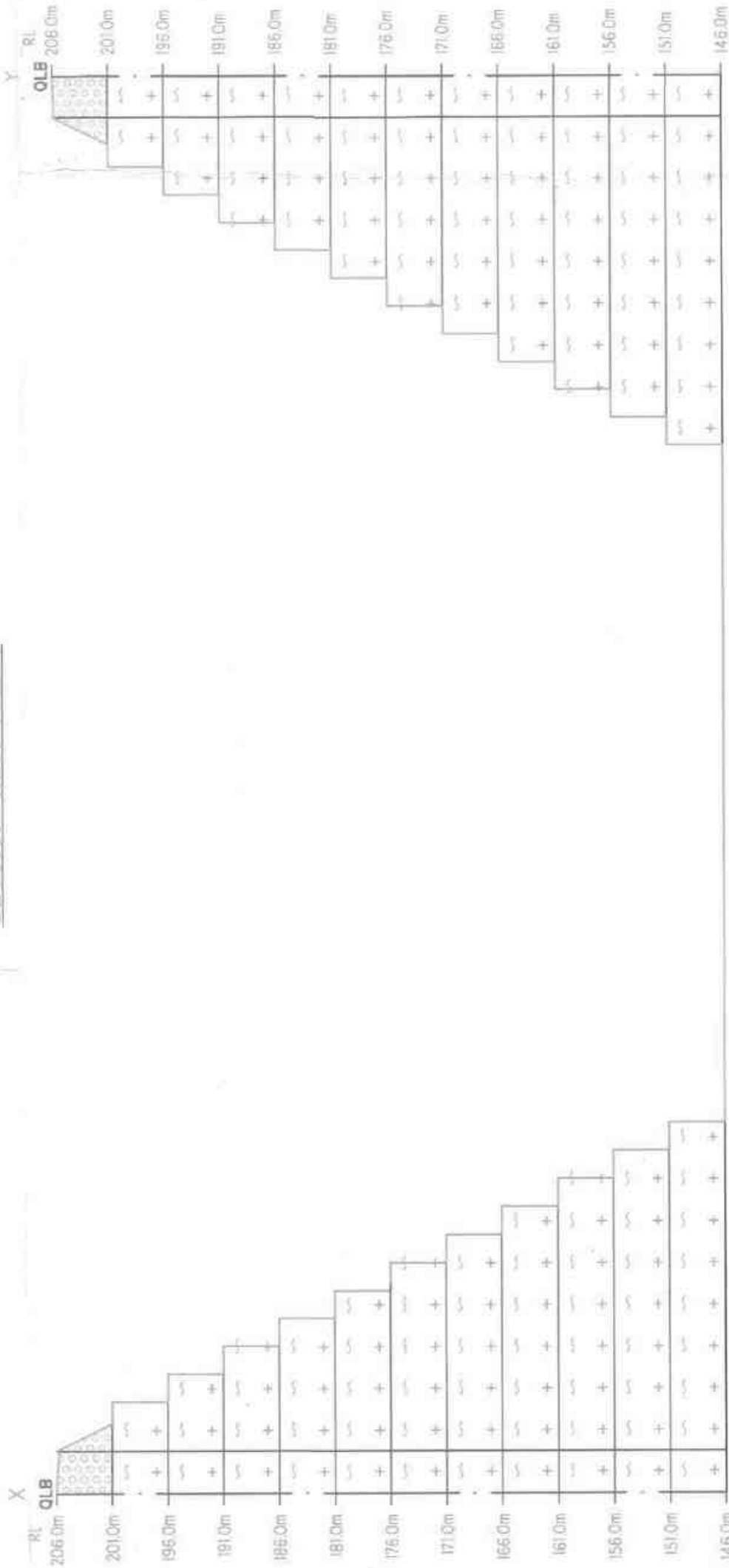


PROPOSED SITE SERVICES	
A	OFFICE
B	STORE ROOM
C	FIRST AID ROOM
D	BEST SHELTER
E	TOILET

Proposed area to be Planted

ULTIMATE PIT DIMENSION OF THE QUARRY LEASE PERIOD
1235(Max)mX144(Avg)mX660(Maz)m

SECTION ALONG X-Y



SECTION ALONG A-B

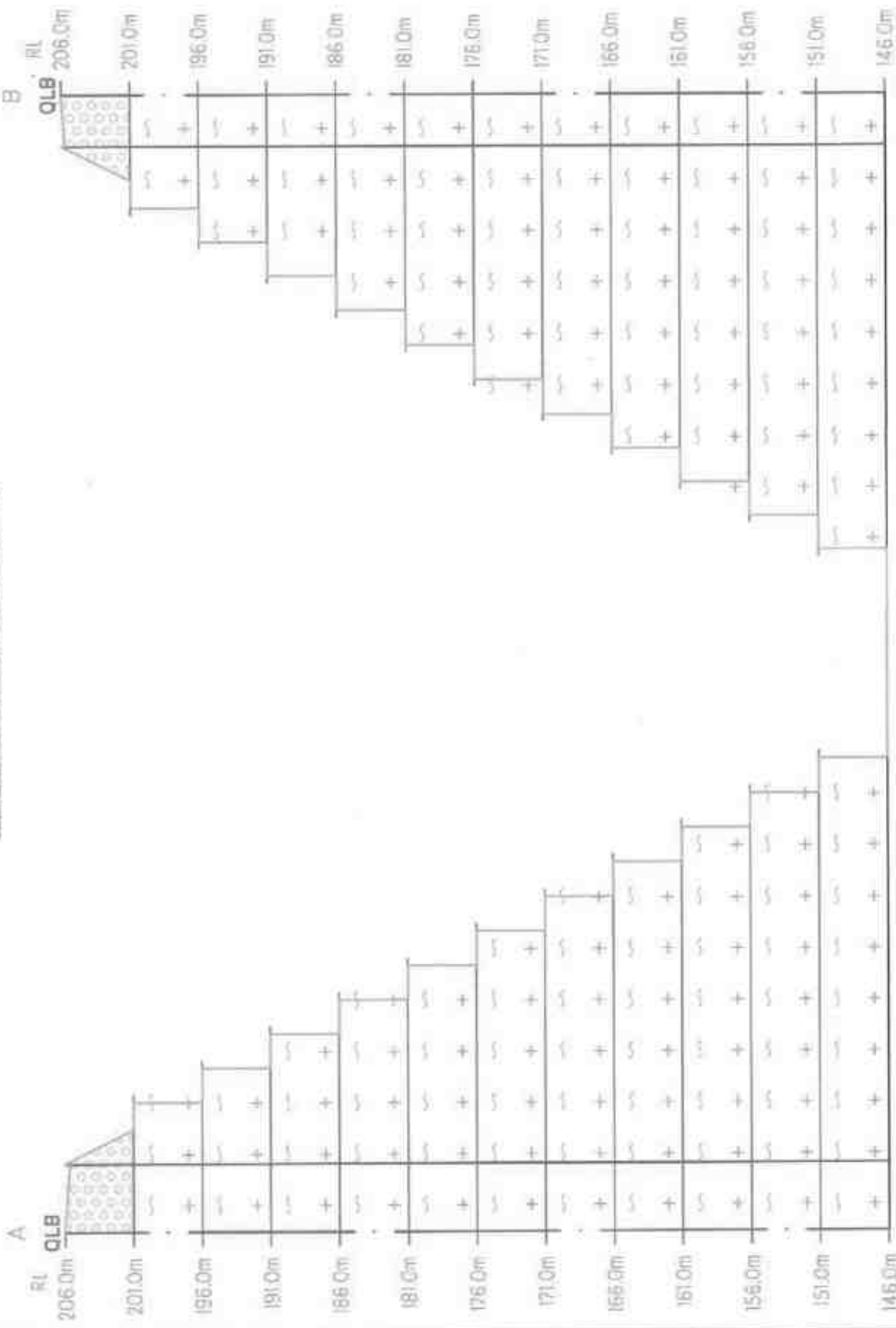


PLATE NO-VIII
DATE OF SURVEY : 24.06.2024

APPLICANT:
THIRU. T.PONNUSAMY,
S/O. THANGAVEL,
DOOR No.4,
PAVITHRAM,
PUGALUR TALUK, KARUR DISTRICT

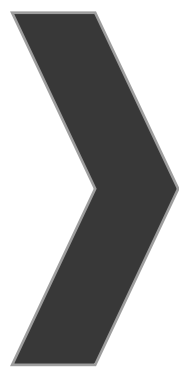
QUARRY LEASE APPLIED AREA:
S.F.NOS :679/A,679/B(P), 680/A(P)&680/B(P).
EXTENT : 4.23.80 Hq.
VILLAGE : THENNILAI WEST,
TALUK : PUGALUR,
DISTRICT : KARUR.

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

CONCEPTUAL PLAN & SECTION
SCALE 1 : 1000
SECTION HOR 1 : 1000, VER 1: 500

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

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



ANNEXURE-4

From
Thiru.S.Poornavel, M.Sc.,
Assistant Director,
Geology and Mining,
Karur.

To
Thiru.T.Ponnusamy,
S/o.Thangavel,
Door No.4, Pavithiram,
Pugalur Taluk,
Karur District.

Rc.No.51/Mines/2024, Dated: 15.07.2024

Sir,

Sub: Mines and Minerals – Minor Mineral – Karur District – Pugalur Taluk – Thennilai West Village – Patta lands in S.F.Nos.679/A(1.82.0 hectares), 679/B(Part) (0.78.80 hectares), 680/A(Part) (1.08.00 hectares) and 680/B(Part) (0.55.00 hectares) Over an extant of 4.23.80 hectares – Quarry lease application for Rough Stone and Gravel – Preferred by Thiru.T.Ponnusamy – Mining Plan approved – requested for the details of Existing/ Proposed/Expired and Abandoned quarries situated within 500 mts radial distance – furnished – Regarding.

- Ref:
1. Quarry lease application for Rough stone and Gravel preferred by Thiru.T.Ponnusamy, S/o.Thangavel, Door No.4, Pavithiram, Pugalur Taluk, Karur District, dated: 24.01.2024.
 2. Precise Area Communication Memorandum Rc.No. 51/Mines/2024, Dated: 20.06.2024.
 3. Mining Plan submitted by Thiru.T.Ponnusamy letter Dated: 25.06.2024
 4. The Assistant Director, Geology and Mining, Karur Mining Plan approved letter Rc.No.51/Mines/2024, Dated:05.07.2024.
 5. Thiru.T.Ponnusamy letter dated: 09.07.2024

In the reference 1st cited, Thiru.T.Ponnusamy has applied quarry lease for quarrying Rough stone and Gravel in S.F.Nos.679/A(1.82.0 hectares), 679/B(Part) (0.78.80 hectares), 680/A(Part) (1.08.00 hectares) and 680/B(Part) (0.55.00 hectares) Over an extant of 4.23.80 hectares of patta lands in Thennilai West Village, Pugalur Taluk, Karur District. The Assistant Director of Geology and Mining, Karur had issued precise area memorandum to the proposed lease area vide reference 2nd cited.

Accordingly, the applicant has submitted the 3 copies of draft Mining Plan and the same was approved by the Assistant Director, Geology and Mining, Karur vide reference 4th cited.

In the reference 5th cited, the applicant has requested the Assistant Director of Geology and Mining, Karur to provide the details of existing, proposed and abandoned quarries situated within 500 meter radial distance from subject area and the same has been furnished as follows:-

I. Existing Quarries: -

Sl No.	Name of the lessee/firm it holder	Name of the Mineral	Taluk & Village	S.F.No.	Extent (hect)	Lease Period
1	Thiru.T.Ponnusamy, S/o.Thangavel, Door No.4, Pavithram, Pavithram post, Pugalur Taluk, Karur District -639 002.	Rough Stone and Gravel	Pugalur, Thennilai West	1067/1(P) 1067/2 (P) 678 (P)	4.47.50	30.09.2023 to 29.09.2028

II. Proposed Quarries: -

Sl No.	Name of the lessee/firm it holder	Name of the Mineral	Taluk & Village	S.F.Nos.	Extent (hect)	Lease Period
1	Thiru.T.Ponnusamy, S/o.Thangavel, Door No.4, Pavithiram, Puglaur Taluk, Karur District	Rough Stone & Gravel	Pugalur Taluk, Thennilai West Village,	679/A 679/B(P) 680/A(P) and 680/B(P)	4.23.80	Proposed Area

III. Lease Expired Quarries : -

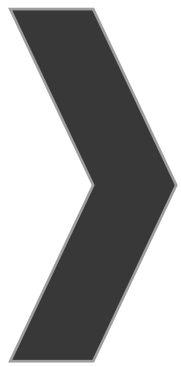
Sl No.	Name of the lessee/firm it holder	Name of the Mineral	Taluk & Village	S.F.No.	Extent (hect)	Lease Period
1	--- Nil---					

IV. Abandoned Quarries : -

Sl No.	Name of the lessee/firm it holder	Name of the Mineral	Taluk & Village	S.F.No.	Extent (hect)	Lease Period
1	--- Nil---					

[Signature]
Assistant Director,
Geology and Mining,
Karur

[Signature]
15.7.24

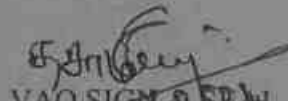


ANNEXURE-5

TOPOGRAPHICAL VIEW OF THENNILAI
ROUGH STONE AND GRAVEL QUARRY



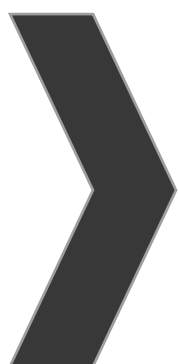
Name of the applicant : Thiru.T.Ponnusamy
S.F.Nos : 679/A, 679/B(P), 680/A(P) and 680/B(P)
Extent : 4.23.80Ha,
Name of the Village : Thennilai
Taluk : Pugalur
District : Karur


VAO SIGNATURE
கிராம நிர்வாக அலுவலர்
3, தென்னிலை மேல்பாகம் கிராமம்
புகளூர் வட்டம், கரூர் மாவட்டம்.

Place:

Date:





ANNEXURE-6

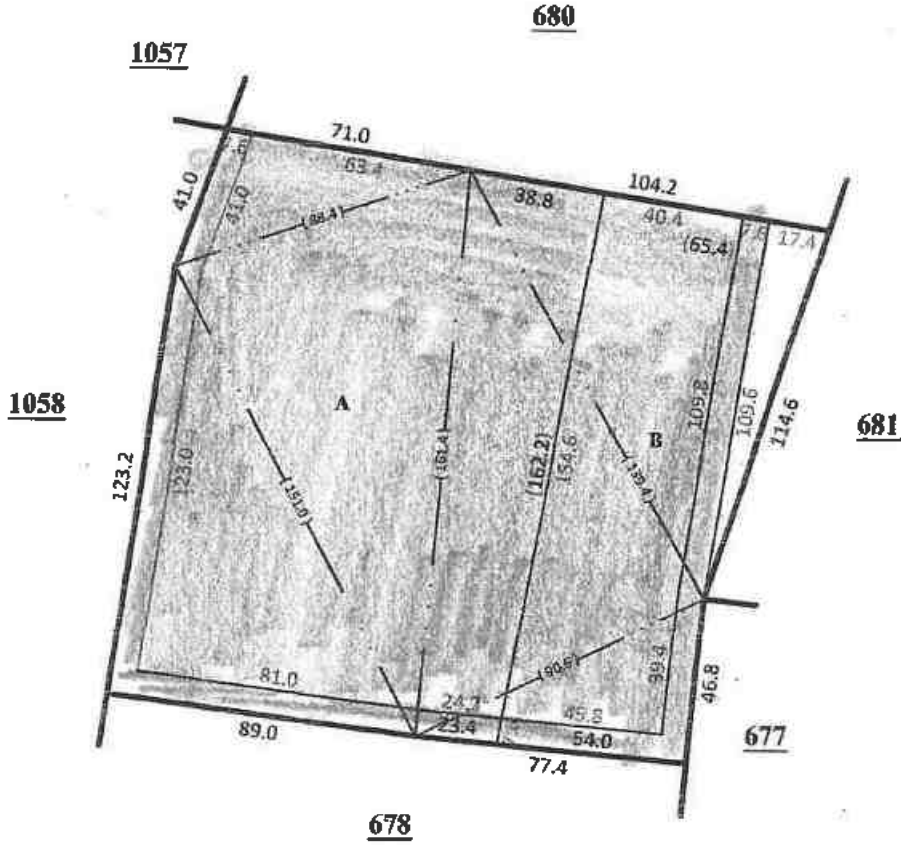
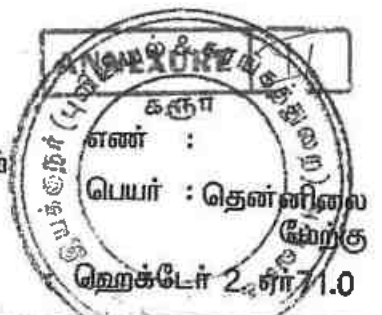
மாவட்டம் : கரூர்

வட்டம் : புகழூர்

புல எண் : 679

கிராமம்

பரப்பு



- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 679/A நெடுக்க 1.82.00 = ஏக்கர் 4.49½ சென்ட்
- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 679/B பகுதி நெடுக்க 0.78.80 = ஏக்கர் 1.94½ சென்ட்
- ☐ பாதுகாப்பு தூர இடைவெளி பகுதி

LEASE APPLIED AREA ☒

குறுவட்டி இளவர
தென்னிணை

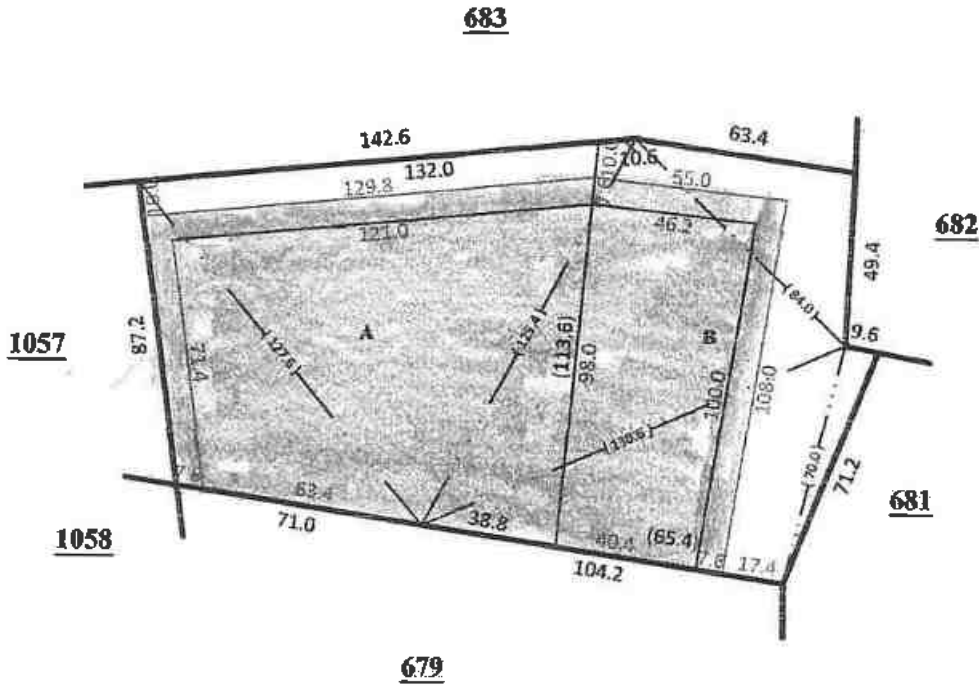
மாவட்டம் : கரூர்

வட்டம் : புகழூர்

புல எண் : 680

கிராமம்

பரப்பு : ஹெக்டேர் 2. ஏர் 02.5



- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 680/A பகுதி ஹெக் 1.08.00 = ஏக் 2.67 சென்ட்
- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 680/B பகுதி ஹெக் 0.55.00 = ஏக் 1.35 சென்ட்
- ☐ பாதுகாப்பு தூர இடைவெளி பகுதி



மாவட்டம் : கரூர்

வட்டம் : புகழூர்

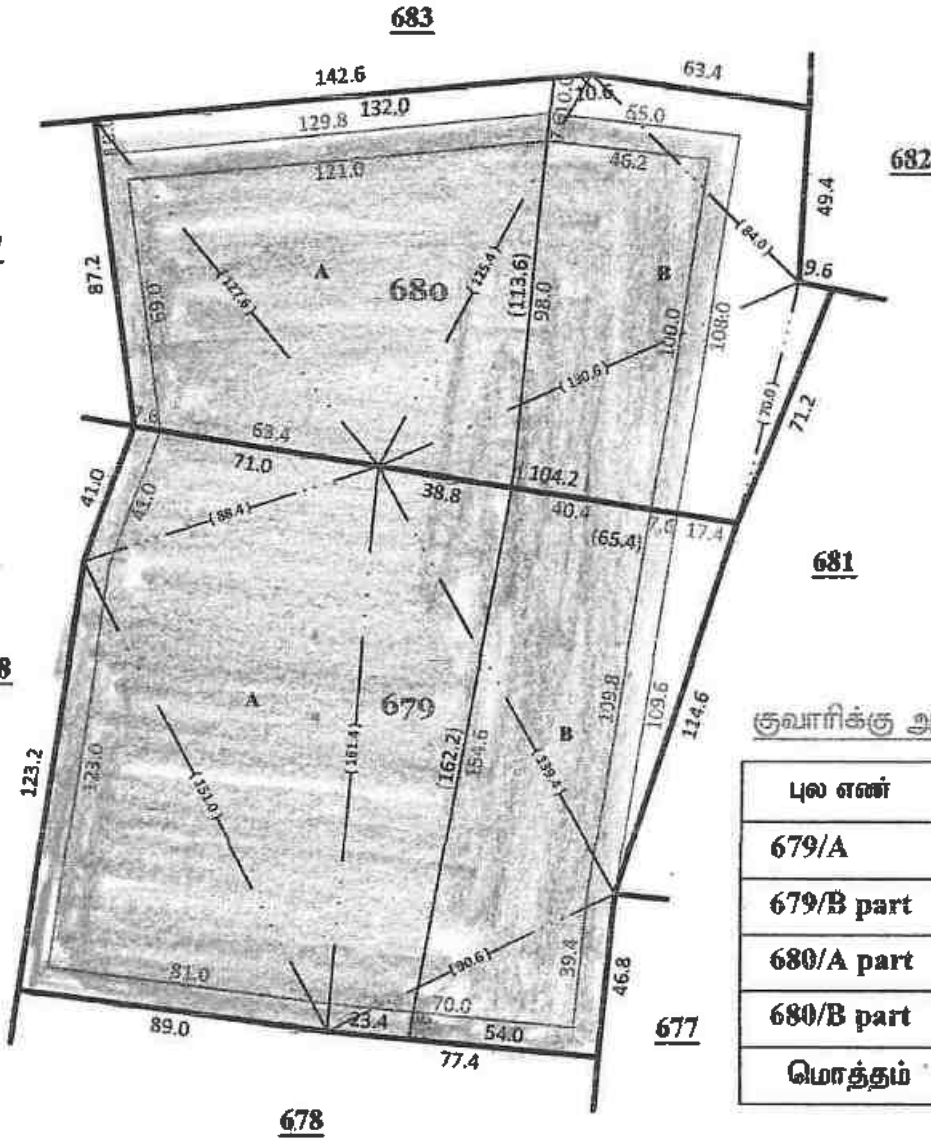
புல எண் : 679,680

கிராமம் :



1057

1058



குவாரிக்கு அனுமதி கோரும் பகுதி

புல எண்	ஹெக். ஏர்	ஏக்கர் சென்ட்
679/A	1.82.00	4.49½
679/B part	0.78.80	1.94½
680/A part	1.08.00	2.67
680/B part	0.55.00	1.36
மொத்தம்	4.23.80	10.47

- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 679/A ஹெக் 1.82.00 = ஏக் 4.49½ சென்ட்
- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 679/B பகுதி ஹெக் 0.78.80 = ஏக் 1.94½ சென்ட்
- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 680/A பகுதி ஹெக் 1.08.00 = ஏக் 2.67 சென்ட்
- ☐ குவாரிக்கு அனுமதி கோரும் பகுதி 680/B பகுதி ஹெக் 0.55.00 = ஏக் 1.36 சென்ட்
- ☐ பாதுகாப்பு தூர இடைவெளி பகுதி

LEASE APPLIED AREA

தமிழர் : தமிழ்நாட்டின் குடிமகன்.





தமிழ்நாடு அரசு
வருவாய்த் துறை

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

மாவட்டம் : கரூர்

வட்டம் : புகழூர்

வருவாய் கிராமம் : தெண்ணிலை மே

பட்டா

எண் : 3948

உரிமையாளர்கள் பெயர்

1. தங்கவேல் மகன் பொன்னுசாமி

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
679	A	1 - 82.00	3.64	—	—	—	—	2022/0103 /14/228056---- 13-09-2022
679	B	0 - 89.00	1.78	—	—	—	—	2022/0103 /14/228056---- 13-09-2022
680	B	0 - 87.00	1.74	—	—	—	—	2022/0103 /14/228056---- 13-09-2022
		3 - 58.00	7.16					

குறிப்பு2 :

barCode	1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் https://eservices.tn.gov.in என்ற இணைய தளத்தில் 14/07/003/03948/30354 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
	2. இத் தகவல்கள் 26-12-2023 அன்று 11:55:18 AM நேரத்தில் அச்சடிக்கப்பட்டது.
	3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

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**தமிழ்நாடு அரசு
வருவாய்த் துறை**

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

மாவட்டம் : கரூர்

வட்டம் : புகழூர்

வருவாய் கிராமம் : தெண்ணிலை மே

பட்டா

எண் : 3905

உரிமையாளர்கள் பெயர்

1. தங்கவேல் மகன் பொன்னுசாமி

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
680	A	1 - 15.50	2.32	-	--	--	--	2022/0103 /14/208341--- -- 20-04-2022
		1 - 15.50	2.32					

குறிப்பு2 :

barCode	1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் https://eservices.tn.gov.in என்ற இணைய தளத்தில் 14/07/003/03905/30327 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
	2. இத் தகவல்கள் 26-12-2023 அன்று 12:12:04 PM நேரத்தில் அச்சடிக்கப்பட்டது.
	3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

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1423 - ஆம் பக்கத்தில்

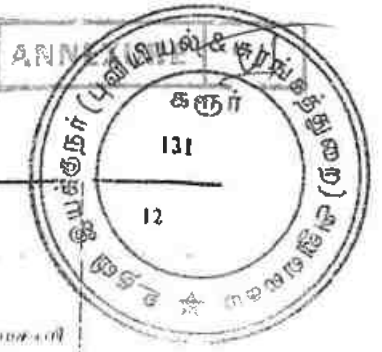
கீழ் மாவட்டம்

புதுச்சேரி

பிரதான அமைச்சர்

வட்டம் சென்னை

நில வரித் திட்டத்தின்படி புலன்களின் விபரம்.					சார்புப் பானளின் பெயர்.	முதல் போகம்.					
(1)	(2)	(3)	(4)	(5)		(7)	(8)	(9)	(10)	(11)	(12)
	சட்டத்தின் எண்.	பக்கம்	தீர்மானம்	ஒரு போகம் ஆகியது இரண்டு	கைப்பற்று தாரகுடைய பெயரும் என்னும் அல்லது அதுபோக தாரகுடைய பெயர்.	நிலத்தின் எந்த பகுதி மாவட்ட சார்புப் பானளால் பரிசீலிக்கப்பட்டது.	எந்த மாதத்தில் பரிசீலிக்கப்பட்டது எந்த மாதத்தில் அதுவரை பரிசீலிக்கப்படாது.	பரிசீலிக்கப்பட்டது.	பரிசீலனை / அனுமதி மாதம்.	உண்மையான மாதம்.	விவரங்கள் ஆகியது விவரங்கள்.
679	A	1820	2-64	29/12/21	ச. சிவசுப்பிரமணியன்	சென்னை	சென்னை				
679	B	1890	1-78	29/12/21	ச. சிவசுப்பிரமணியன்	சென்னை	சென்னை				
680	A	1150	2-22	29/12/21	ச. சிவசுப்பிரமணியன்	சென்னை	சென்னை				
680	R	1810	1-76	29/12/21	ச. சிவசுப்பிரமணியன்	சென்னை	சென்னை				
பிரதான அமைச்சர் சென்னை 29/12/21 சென்னை நகராட்சி மன்றம் 3. சென்னை நகராட்சி மன்றம் புதுச்சேரி வட்டம், சென்னை											



1	2	3	4	5	6	7	8	9	10	11
							நா. எண்.	மொ. எண்.	நா. எண்.	
676	676	ர	பு	...	8-3	5	2 00	1 87-0	3 74	472 ரா. ம. மகாபாதி கவுண்டர்.
677	1 677-A	ர	பு	...	8-3	5	2 00	1 42-0	2 85	633 சி. மலையப்ப கவுண்டர் (1), பழனிசாமி (2).
	2 -பா	ர	பு	...	8-3	5	2 00	1 25-0	2 50	672 ந. சின்னாச்சாமி (1), நா. பழனிசாமி கவுண்டர் (2).
								2 67-0	5 35	
678	678	ர	பு	...	8-3	5	2 00	1 98-5	3 97	175 ரா. சென்னியப்ப கவுண்டர்.
679	A 679-A	ர	பு	...	8-3	5	2 00	1 82-0	3 64	477 ரா. ராமசாமி.
	B -B	ர	பு	...	8-3	5	2 00	0 89-0	1 78	633 சி. பழனிச்சாமி (1), மலையப்ப கவுண்டர் (2).
								2 71-0	5 42	
680	A 680-A	ர	பு	...	8-3	5	2 00	1 15-5	2 32	632 சி. பழனிச்சாமி (1), மலையப்ப கவுண்டர் (2).
	B -B	ர	பு	...	8-3	5	2 00	0 87-0	1 74	671 சி. பழனிச்சாமி (1), மலையப்ப கவுண்டர் (2).
								2 02-5	4 06	
681	1 681-பா	ர	பு	...	8-3	5	2 00	1 27-0	2 54	333 க. பழனியப்ப கவுண்டர்.
	2 -பா	ர	பு	...	8-3	5	2 00	1 84-0	3 68	633 சி. பழனிச்சாமி (1), மலையப்ப கவுண்டர் (2).
								3 11-0	6 22	
682	682	ர	பு	...	8-3	5	2 00	4 17-5	8 35	100 ம. சூப்பாமி அம்மாள்.

உத்தரவு
29/12/23
தமிழ்நாடு சட்டமன்றப் பேரவை
3, தென்னிந்திய மெல்பாசம் கிராமம்
புதுச்சேரி வட்டம், கரூர் மாவட்டம்.

அ-பதிவேடு விவரங்கள் - ஊரகம்



மாவட்டம் : கரூர்

வட்டம் : புகழூர்

கிராமம் : தெண்ணிலை மே

1. புல எண்	679	9. மண் வயனமும் ரகமும்	8 - 3
2. உட்பிரிவு எண்	A	10. மண் தரம்	5
3. பழைய புல உட்பிரிவு எண்	679-A ,	11. தீர்வை (ரூ - ஹெ)	2.00
4. பகுதி	-	12. பரப்பு (ஹெக்டேர் - ஏர்)	1 - 82.00
5. அரசு / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ரூ - பை)	3.64
6. நிலத்தின் வகை	பஞ்சை	14. பட்டா எண்	3948
7. பாசன ஆதாரம்	-	15. குறிப்பு	-
8. இரு போகமா	-	16. பெயர்	1.பொன்னுசாமி

குறிப்பு:



மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து

1. பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய
தளத்தில் 14/07/003/679/A/60354 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி
செய்துகொள்ளவும்.

அ-பதிவேடு விவரங்கள் - ஊரகம்



மாவட்டம் : கரூர்

வட்டம் : புகழூர்

கிராமம் : தெண்ணிலை மே

1. புல எண்	679	9. மண் வயனமும் ரகமும்	8 - 3
2. உட்பிரிவு எண்	B	10. மண் தரம்	5
3. பழைய புல உட்பிரிவு எண்	679-B ,	11. தீர்வை (ரூ - ஹெ)	2.00
4. பகுதி	-	12. பரப்பு (ஹெக்டேர் - ஏர்)	0 - 89.00
5. அரசு / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ரூ - பை)	1.78
6. நிலத்தின் வகை	பஞ்சை	14. பட்டா எண்	3948
7. பாசன ஆதாரம்	-	15. குறிப்பு	-
8. இரு போகமா	-	16. பெயர்	1.பொன்னுசாமி

குறிப்பு:



மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து
1. பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய
தளத்தில் 14/07/003/679/B/60354 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி
செய்துகொள்ளவும்.

அ-பதிவேடு விவரங்கள் - ஊரகம்



மாவட்டம் : கஞ்சி

வட்டம் : புகழூர்

கிராமம் : தெண்ணிலை மே

1. புல எண்	680	9. மண் வயனமும் ரகமும்	8 - 3
2. உட்பிரிவு எண்	A	10. மண் தரம்	5
3. பழைய புல உட்பிரிவு எண்	680-A ,	11. தீர்வை (ரூ - ஹெ)	2.00
4. பகுதி	-	12. பரப்பு (ஹெக்டேர் - ஏர்)	1 - 15.50
5. அரசு / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ரூ - பை)	2.32
6. நிலத்தின் வகை	பஞ்சை	14. பட்டா எண்	3905
7. பாசன ஆதாரம்	-	15. குறிப்பு	-
8. இரு போகமா	-	16. பெயர்	1.பொன்னுசாமி

குறிப்பு:



மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து
1. பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய
தளத்தில் 14/07/003/680/A/60327 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி
செய்துகொள்ளவும்.

அ-பதிவேடு விவரங்கள் - ஊரகம்



மாவட்டம் : கரூர்

வட்டம் : புகழூர்

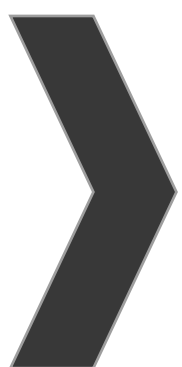
கிராமம் : தெண்ணிலை மே

1. புல எண்	680	9. மண் வயனமும் ரகமும்	8 - 3
2. உட்பிரிவு எண்	B	10. மண் தரம்	5
3. பழைய புல உட்பிரிவு எண்	680-B ,	11. தீர்வை (ரூ - ஹெ)	2.00
4. பகுதி	-	12. பரப்பு (ஹெக்டேர் - ஏர்)	0 - 87.00
5. அரசு / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ரூ - பை)	1.74
6. நிலத்தின் வகை	பஞ்சை	14. பட்டா எண்	3948
7. பாசன ஆதாரம்	-	15. குறிப்பு	-
8. இரு போகமா	-	16. பெயர்	1.பொன்னுசாமி

குறிப்பு:



மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து
1. பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய
தளத்தில் 14/07/003/680/B/60354 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி
செய்துகொள்ளவும்.



ANNEXURE-7



Shrient Analytical and Research Labs Pvt. Ltd

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

TEST REPORT

Report No.	SARL/24/3984	Report Date.	19.10.2024
------------	--------------	--------------	------------

Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-3984	Sample Received on	14.10.2024
Sample Collected by	LABORATORY	Test Commenced on	14.10.2024
Sample Collected on	08.10.2024	Test Completed on	19.10.2024
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	74.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	34.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	16.9	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

8 Paul
Verified



END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



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

TEST REPORT

Report No.	SARL/24/3985	Report Date.	19.10.2024
------------	--------------	--------------	------------

Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3985	Sample Received on	14.10.2024
Sample Collected by	LABORATORY	Test Commenced on	14.10.2024
Sample Collected on	08.10.2024	Test Completed on	19.10.2024
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	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

8 Paul
Verified



END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.
CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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

TEST REPORT

Report No.	SARL/24/3986	Report Date.	19.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-3986	Sample Received on	14.10.2024
Sample Collected by	LABORATORY	Test Commenced on	14.10.2024
Sample Collected on	09.10.2024	Test Completed on	19.10.2024
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	66.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.0	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	14.5	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

8 Paul
Verified



END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
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TEST REPORT

Report No.	SARL/24/3987	Report Date.	19.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3987	Sample Received on	14.10.2024
Sample Collected by	LABORATORY	Test Commenced on	14.10.2024
Sample Collected on	09.10.2024	Test Completed on	19.10.2024
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.6	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	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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

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

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TEST REPORT

Report No.	SARL/24/3988	Report Date.	19.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3988	Sample Received on	14.10.2024
Sample Collected by	LABORATORY	Test Commenced on	14.10.2024
Sample Collected on	10.10.2024	Test Completed on	19.10.2024
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	52.3	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	4.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/24/3989	Report Date.	19.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3989	Sample Received on	14.10.2024
Sample Collected by	LABORATORY	Test Commenced on	14.10.2024
Sample Collected on	10.10.2024	Test Completed on	19.10.2024
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	49.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	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/24/3990	Report Date.	19.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3990	Sample Received on	14.10.2024
Sample Collected by	LABORATORY	Test Commenced on	14.10.2024
Sample Collected on	11.10.2024	Test Completed on	19.10.2024
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.1	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	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/24/3991	Report Date.	19.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3991	Sample Received on	14.10.2024
Sample Collected by	LABORATORY	Test Commenced on	14.10.2024
Sample Collected on	11.10.2024	Test Completed on	19.10.2024
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	52.1	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	5.5	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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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/24/3992	Report Date.	19.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3992	Sample Received on	14.10.2024
Sample Collected by	LABORATORY	Test Commenced on	14.10.2024
Sample Collected on	12.10.2024	Test Completed on	19.10.2024
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.9	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

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TEST REPORT

Report No.	SARL/24/3993	Report Date.	19.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3993	Sample Received on	14.10.2024
Sample Collected by	LABORATORY	Test Commenced on	14.10.2024
Sample Collected on	12.10.2024	Test Completed on	19.10.2024
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	52.7	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	4.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/24/3994	Report Date.	19.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3994	Sample Received on	14.10.2024
Sample Collected by	LABORATORY	Test Commenced on	14.10.2024
Sample Collected on	13.10.2024	Test Completed on	19.10.2024
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	49.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.3	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

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TEST REPORT

Report No.	SARL/24/3995	Report Date.	19.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3995	Sample Received on	14.10.2024
Sample Collected by	LABORATORY	Test Commenced on	14.10.2024
Sample Collected on	13.10.2024	Test Completed on	19.10.2024
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	54.8	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	4.8	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/24/4009	Report Date.	26.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4008	Sample Received on	21.10.2024
Sample Collected by	LABORATORY	Test Commenced on	21.10.2024
Sample Collected on	15.10.2024	Test Completed on	26.10.2024
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4009	Report Date.	26.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4009	Sample Received on	21.10.2024
Sample Collected by	LABORATORY	Test Commenced on	21.10.2024
Sample Collected on	15.10.2024	Test Completed on	26.10.2024
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	49.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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



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TEST REPORT

Report No.	SARL/24/4010	Report Date.	26.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4010	Sample Received on	21.10.2024
Sample Collected by	LABORATORY	Test Commenced on	21.10.2024
Sample Collected on	16.10.2024	Test Completed on	26.10.2024
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.6	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	3.7	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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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4011	Report Date.	26.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4011	Sample Received on	21.10.2024
Sample Collected by	LABORATORY	Test Commenced on	21.10.2024
Sample Collected on	16.10.2024	Test Completed on	26.10.2024
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	23.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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J. GNANAPRAKASAM
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TEST REPORT

Report No.	SARL/24/4012	Report Date.	26.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4012	Sample Received on	21.10.2024
Sample Collected by	LABORATORY	Test Commenced on	21.10.2024
Sample Collected on	17.10.2024	Test Completed on	26.10.2024
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	58.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.9	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	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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Technical Manager

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TEST REPORT

Report No.	SARL/24/4013	Report Date.	26.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4013	Sample Received on	21.10.2024
Sample Collected by	LABORATORY	Test Commenced on	21.10.2024
Sample Collected on	17.10.2024	Test Completed on	26.10.2024
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	44.9	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	3.7	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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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4014	Report Date.	26.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4014	Sample Received on	21.10.2024
Sample Collected by	LABORATORY	Test Commenced on	21.10.2024
Sample Collected on	18.10.2024	Test Completed on	26.10.2024
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	49.3	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	4.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4015	Report Date.	26.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4015	Sample Received on	21.10.2024
Sample Collected by	LABORATORY	Test Commenced on	21.10.2024
Sample Collected on	18.10.2024	Test Completed on	26.10.2024
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	22.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4016	Report Date.	26.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4016	Sample Received on	21.10.2024
Sample Collected by	LABORATORY	Test Commenced on	21.10.2024
Sample Collected on	19.10.2024	Test Completed on	26.10.2024
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	31.9	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	15.2	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

8 Paul
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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4017	Report Date.	26.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4017	Sample Received on	21.10.2024
Sample Collected by	LABORATORY	Test Commenced on	21.10.2024
Sample Collected on	19.10.2024	Test Completed on	26.10.2024
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	60.4	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	5.5	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
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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

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



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TEST REPORT

Report No.	SARL/24/4018	Report Date.	26.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4018	Sample Received on	21.10.2024
Sample Collected by	LABORATORY	Test Commenced on	21.10.2024
Sample Collected on	20.10.2024	Test Completed on	26.10.2024
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	63.7	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	7.4	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4019	Report Date.	26.10.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4019	Sample Received on	21.10.2024
Sample Collected by	LABORATORY	Test Commenced on	21.10.2024
Sample Collected on	20.10.2024	Test Completed on	26.10.2024
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.8	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	4.7	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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J. K.
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4032	Report Date.	02.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4032	Sample Received on	28.10.2024
Sample Collected by	LABORATORY	Test Commenced on	28.10.2024
Sample Collected on	22.10.2024	Test Completed on	02.11.2024
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	74.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	34.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	17.1	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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END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4033	Report Date.	02.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4033	Sample Received on	28.10.2024
Sample Collected by	LABORATORY	Test Commenced on	28.10.2024
Sample Collected on	22.10.2024	Test Completed on	02.11.2024
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	62.8	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	5.7	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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J. GNANAPRAKASAM
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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4034	Report Date.	02.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4034	Sample Received on	28.10.2024
Sample Collected by	LABORATORY	Test Commenced on	28.10.2024
Sample Collected on	23.10.2024	Test Completed on	02.11.2024
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	72.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	33.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	16.3	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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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4035	Report Date.	02.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4035	Sample Received on	28.10.2024
Sample Collected by	LABORATORY	Test Commenced on	28.10.2024
Sample Collected on	23.10.2024	Test Completed on	02.11.2024
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	56.2	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	5.2	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4036	Report Date.	02.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4036	Sample Received on	28.10.2024
Sample Collected by	LABORATORY	Test Commenced on	28.10.2024
Sample Collected on	24.10.2024	Test Completed on	02.11.2024
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	61.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.6	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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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4037	Report Date.	02.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4037	Sample Received on	28.10.2024
Sample Collected by	LABORATORY	Test Commenced on	28.10.2024
Sample Collected on	24.10.2024	Test Completed on	02.11.2024
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	47.7	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	4.4	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
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4038	Report Date.	02.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4038	Sample Received on	28.10.2024
Sample Collected by	LABORATORY	Test Commenced on	28.10.2024
Sample Collected on	25.10.2024	Test Completed on	02.11.2024
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	54.7	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	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/24/4039	Report Date.	02.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4039	Sample Received on	28.10.2024
Sample Collected by	LABORATORY	Test Commenced on	28.10.2024
Sample Collected on	25.10.2024	Test Completed on	02.11.2024
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.9	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	5.2	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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TEST REPORT

Report No.	SARL/24/4040	Report Date.	02.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4040	Sample Received on	28.10.2024
Sample Collected by	LABORATORY	Test Commenced on	28.10.2024
Sample Collected on	26.10.2024	Test Completed on	02.11.2024
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	50.2	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	4.4	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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Technical Manager

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TEST REPORT

Report No.	SARL/24/4041	Report Date.	02.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4041	Sample Received on	28.10.2024
Sample Collected by	LABORATORY	Test Commenced on	28.10.2024
Sample Collected on	26.10.2024	Test Completed on	02.11.2024
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	55.2	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	4.9	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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J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4042	Report Date.	02.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4042	Sample Received on	28.10.2024
Sample Collected by	LABORATORY	Test Commenced on	28.10.2024
Sample Collected on	27.10.2024	Test Completed on	02.11.2024
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. K.
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J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4043	Report Date.	02.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4043	Sample Received on	28.10.2024
Sample Collected by	LABORATORY	Test Commenced on	28.10.2024
Sample Collected on	27.10.2024	Test Completed on	02.11.2024
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	52.8	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	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. 4
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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4056	Report Date.	09.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4056	Sample Received on	04.11.2024
Sample Collected by	LABORATORY	Test Commenced on	04.11.2024
Sample Collected on	29.10.2024	Test Completed on	09.11.2024
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.6	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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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4057	Report Date.	09.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4057	Sample Received on	04.11.2024
Sample Collected by	LABORATORY	Test Commenced on	04.11.2024
Sample Collected on	29.10.2024	Test Completed on	09.11.2024
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	22.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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J. GNANAPRAKASAM
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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4058	Report Date.	09.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4058	Sample Received on	04.11.2024
Sample Collected by	LABORATORY	Test Commenced on	04.11.2024
Sample Collected on	30.10.2024	Test Completed on	09.11.2024
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.7	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	4.1	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
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4059	Report Date.	09.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4059	Sample Received on	04.11.2024
Sample Collected by	LABORATORY	Test Commenced on	04.11.2024
Sample Collected on	30.10.2024	Test Completed on	09.11.2024
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	50.7	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	4.6	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4060	Report Date.	09.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4060	Sample Received on	04.11.2024
Sample Collected by	LABORATORY	Test Commenced on	04.11.2024
Sample Collected on	31.10.2024	Test Completed on	09.11.2024
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	47.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4061	Report Date.	09.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4061	Sample Received on	04.11.2024
Sample Collected by	LABORATORY	Test Commenced on	04.11.2024
Sample Collected on	31.10.2024	Test Completed on	09.11.2024
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.9	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	5.7	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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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4062	Report Date.	09.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4062	Sample Received on	04.11.2024
Sample Collected by	LABORATORY	Test Commenced on	04.11.2024
Sample Collected on	01.11.2024	Test Completed on	09.11.2024
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	51.5	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	4.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/24/4063	Report Date.	09.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4063	Sample Received on	04.11.2024
Sample Collected by	LABORATORY	Test Commenced on	04.11.2024
Sample Collected on	01.11.2024	Test Completed on	09.11.2024
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.1	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	4.5	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4064	Report Date.	09.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4064	Sample Received on	04.11.2024
Sample Collected by	LABORATORY	Test Commenced on	04.11.2024
Sample Collected on	02.11.2024	Test Completed on	09.11.2024
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	58.1	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	12.5	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/24/4065	Report Date.	09.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4065	Sample Received on	04.11.2024
Sample Collected by	LABORATORY	Test Commenced on	04.11.2024
Sample Collected on	02.11.2024	Test Completed on	09.11.2024
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	49.0	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	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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

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TEST REPORT

Report No.	SARL/24/4066	Report Date.	09.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4066	Sample Received on	04.11.2024
Sample Collected by	LABORATORY	Test Commenced on	04.11.2024
Sample Collected on	03.11.2024	Test Completed on	09.11.2024
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	62.9	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	7.3	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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Technical Manager

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TEST REPORT

Report No.	SARL/24/4067	Report Date.	09.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4067	Sample Received on	04.11.2024
Sample Collected by	LABORATORY	Test Commenced on	04.11.2024
Sample Collected on	03.11.2024	Test Completed on	09.11.2024
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	52.6	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	4.9	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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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4080	Report Date.	16.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4080	Sample Received on	11.11.2024
Sample Collected by	LABORATORY	Test Commenced on	11.11.2024
Sample Collected on	05.11.2024	Test Completed on	16.11.2024
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	60.8	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	7.1	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4081	Report Date.	16.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4081	Sample Received on	11.11.2024
Sample Collected by	LABORATORY	Test Commenced on	11.11.2024
Sample Collected on	05.11.2024	Test Completed on	16.11.2024
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	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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J. K.
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J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4082	Report Date.	16.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4082	Sample Received on	11.11.2024
Sample Collected by	LABORATORY	Test Commenced on	11.11.2024
Sample Collected on	06.11.2024	Test Completed on	16.11.2024
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	62.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.4	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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4083	Report Date.	16.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4083	Sample Received on	11.11.2024
Sample Collected by	LABORATORY	Test Commenced on	11.11.2024
Sample Collected on	06.11.2024	Test Completed on	16.11.2024
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	24.6	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	8.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4084	Report Date.	16.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4084	Sample Received on	11.11.2024
Sample Collected by	LABORATORY	Test Commenced on	11.11.2024
Sample Collected on	07.11.2024	Test Completed on	16.11.2024
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. 4
Authorized Signatory
J. GNANAPRAKASAM
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TEST REPORT

Report No.	SARL/24/4085	Report Date.	16.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4085	Sample Received on	11.11.2024
Sample Collected by	LABORATORY	Test Commenced on	11.11.2024
Sample Collected on	07.11.2024	Test Completed on	16.11.2024
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	44.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/24/4086	Report Date.	16.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4086	Sample Received on	11.11.2024
Sample Collected by	LABORATORY	Test Commenced on	11.11.2024
Sample Collected on	08.11.2024	Test Completed on	16.11.2024
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/24/4087	Report Date.	16.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4087	Sample Received on	11.11.2024
Sample Collected by	LABORATORY	Test Commenced on	11.11.2024
Sample Collected on	08.11.2024	Test Completed on	16.11.2024
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	47.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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



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TEST REPORT

Report No.	SARL/24/4088	Report Date.	16.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4088	Sample Received on	11.11.2024
Sample Collected by	LABORATORY	Test Commenced on	11.11.2024
Sample Collected on	09.11.2024	Test Completed on	16.11.2024
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.4	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	4.7	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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J. GNANAPRAKASAM
Technical Manager

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



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TEST REPORT

Report No.	SARL/24/4089	Report Date.	16.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4089	Sample Received on	11.11.2024
Sample Collected by	LABORATORY	Test Commenced on	11.11.2024
Sample Collected on	09.11.2024	Test Completed on	16.11.2024
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	56.4	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	5.2	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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J. GNANAPRAKASAM
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TEST REPORT

Report No.	SARL/24/4090	Report Date.	16.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4090	Sample Received on	11.11.2024
Sample Collected by	LABORATORY	Test Commenced on	11.11.2024
Sample Collected on	10.11.2024	Test Completed on	16.11.2024
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	48.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.1	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/24/4091	Report Date.	16.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4091	Sample Received on	11.11.2024
Sample Collected by	LABORATORY	Test Commenced on	11.11.2024
Sample Collected on	10.11.2024	Test Completed on	16.11.2024
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	24.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4104	Report Date.	23.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4104	Sample Received on	18.11.2024
Sample Collected by	LABORATORY	Test Commenced on	18.11.2024
Sample Collected on	12.11.2024	Test Completed on	23.11.2024
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4105	Report Date.	23.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4105	Sample Received on	18.11.2024
Sample Collected by	LABORATORY	Test Commenced on	18.11.2024
Sample Collected on	12.11.2024	Test Completed on	23.11.2024
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	56.2	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	5.1	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4106	Report Date.	23.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4106	Sample Received on	18.11.2024
Sample Collected by	LABORATORY	Test Commenced on	18.11.2024
Sample Collected on	13.11.2024	Test Completed on	23.11.2024
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	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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J. GNANAPRAKASAM
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TEST REPORT

Report No.	SARL/24/4107	Report Date.	23.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4107	Sample Received on	18.11.2024
Sample Collected by	LABORATORY	Test Commenced on	18.11.2024
Sample Collected on	13.11.2024	Test Completed on	23.11.2024
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4108	Report Date.	23.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4108	Sample Received on	18.11.2024
Sample Collected by	LABORATORY	Test Commenced on	18.11.2024
Sample Collected on	14.11.2024	Test Completed on	23.11.2024
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	62.6	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	5.1	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

For Shrient Analytical and Research Labs Pvt. Ltd

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Technical Manager

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TEST REPORT

Report No.	SARL/24/4109	Report Date.	23.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4109	Sample Received on	18.11.2024
Sample Collected by	LABORATORY	Test Commenced on	18.11.2024
Sample Collected on	14.11.2024	Test Completed on	23.11.2024
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	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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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4110	Report Date.	23.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4110	Sample Received on	18.11.2024
Sample Collected by	LABORATORY	Test Commenced on	18.11.2024
Sample Collected on	15.11.2024	Test Completed on	23.11.2024
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	55.9	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	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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

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TEST REPORT

Report No.	SARL/24/4111	Report Date.	23.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4111	Sample Received on	18.11.2024
Sample Collected by	LABORATORY	Test Commenced on	18.11.2024
Sample Collected on	15.11.2024	Test Completed on	23.11.2024
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	24.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. K.
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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4112	Report Date.	23.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4112	Sample Received on	18.11.2024
Sample Collected by	LABORATORY	Test Commenced on	18.11.2024
Sample Collected on	16.11.2024	Test Completed on	23.11.2024
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	32.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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/24/4113	Report Date.	23.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4113	Sample Received on	18.11.2024
Sample Collected by	LABORATORY	Test Commenced on	18.11.2024
Sample Collected on	16.11.2024	Test Completed on	23.11.2024
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	30.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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TEST REPORT

Report No.	SARL/24/4114	Report Date.	23.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4114	Sample Received on	18.11.2024
Sample Collected by	LABORATORY	Test Commenced on	18.11.2024
Sample Collected on	17.11.2024	Test Completed on	23.11.2024
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	75.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	35.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	17.2	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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Technical Manager

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TEST REPORT

Report No.	SARL/24/4115	Report Date.	23.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4115	Sample Received on	18.11.2024
Sample Collected by	LABORATORY	Test Commenced on	18.11.2024
Sample Collected on	17.11.2024	Test Completed on	23.11.2024
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	57.4	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	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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

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TEST REPORT

Report No.	SARL/24/4128	Report Date.	30.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4128	Sample Received on	25.11.2024
Sample Collected by	LABORATORY	Test Commenced on	25.11.2024
Sample Collected on	19.11.2024	Test Completed on	30.11.2024
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	73.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	33.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	16.5	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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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4129	Report Date.	30.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4129	Sample Received on	25.11.2024
Sample Collected by	LABORATORY	Test Commenced on	25.11.2024
Sample Collected on	19.11.2024	Test Completed on	30.11.2024
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	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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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

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

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Shrient Analytical and Research Labs Pvt. Ltd

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

TEST REPORT

Report No.	SARL/24/4130	Report Date.	30.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4130	Sample Received on	25.11.2024
Sample Collected by	LABORATORY	Test Commenced on	25.11.2024
Sample Collected on	20.11.2024	Test Completed on	30.11.2024
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	58.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	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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END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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TEST REPORT

Report No.	SARL/24/4131	Report Date.	30.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4131	Sample Received on	25.11.2024
Sample Collected by	LABORATORY	Test Commenced on	25.11.2024
Sample Collected on	20.11.2024	Test Completed on	30.11.2024
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	56.8	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	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
J. GNANAPRAKASAM
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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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TEST REPORT

Report No.	SARL/24/4132	Report Date.	30.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4132	Sample Received on	25.11.2024
Sample Collected by	LABORATORY	Test Commenced on	25.11.2024
Sample Collected on	21.11.2024	Test Completed on	30.11.2024
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4133	Report Date.	30.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4133	Sample Received on	25.11.2024
Sample Collected by	LABORATORY	Test Commenced on	25.11.2024
Sample Collected on	21.11.2024	Test Completed on	30.11.2024
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/24/4134	Report Date.	30.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4134	Sample Received on	25.11.2024
Sample Collected by	LABORATORY	Test Commenced on	25.11.2024
Sample Collected on	22.11.2024	Test Completed on	30.11.2024
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	55.3	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	4.6	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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TEST REPORT

Report No.	SARL/24/4135	Report Date.	30.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4135	Sample Received on	25.11.2024
Sample Collected by	LABORATORY	Test Commenced on	25.11.2024
Sample Collected on	22.11.2024	Test Completed on	30.11.2024
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	49.3	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	4.7	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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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/24/4136	Report Date.	30.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4136	Sample Received on	25.11.2024
Sample Collected by	LABORATORY	Test Commenced on	25.11.2024
Sample Collected on	23.11.2024	Test Completed on	30.11.2024
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	24.7	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	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. 4
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TEST REPORT

Report No.	SARL/24/4137	Report Date.	30.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4137	Sample Received on	25.11.2024
Sample Collected by	LABORATORY	Test Commenced on	25.11.2024
Sample Collected on	23.11.2024	Test Completed on	30.11.2024
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	57.2	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	5.4	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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TEST REPORT

Report No.	SARL/24/4138	Report Date.	30.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4138	Sample Received on	25.11.2024
Sample Collected by	LABORATORY	Test Commenced on	25.11.2024
Sample Collected on	24.11.2024	Test Completed on	30.11.2024
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.6	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	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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

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

TEST REPORT

Report No.	SARL/24/4139	Report Date.	30.11.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4139	Sample Received on	25.11.2024
Sample Collected by	LABORATORY	Test Commenced on	25.11.2024
Sample Collected on	24.11.2024	Test Completed on	30.11.2024
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	55.6	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	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.6	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

8 Paul
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END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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

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TEST REPORT

Report No.	SARL/24/4152	Report Date.	07.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4152	Sample Received on	02.12.2024
Sample Collected by	LABORATORY	Test Commenced on	02.12.2024
Sample Collected on	26.11.2024	Test Completed on	07.12.2024
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4153	Report Date.	07.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4153	Sample Received on	02.12.2024
Sample Collected by	LABORATORY	Test Commenced on	02.12.2024
Sample Collected on	26.11.2024	Test Completed on	07.12.2024
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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END OF THE REPORT

J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4154	Report Date.	07.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4154	Sample Received on	02.12.2024
Sample Collected by	LABORATORY	Test Commenced on	02.12.2024
Sample Collected on	27.11.2024	Test Completed on	07.12.2024
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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



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TEST REPORT

Report No.	SARL/24/4155	Report Date.	07.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4155	Sample Received on	02.12.2024
Sample Collected by	LABORATORY	Test Commenced on	02.12.2024
Sample Collected on	27.11.2024	Test Completed on	07.12.2024
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	23.4	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	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

J. K.
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4156	Report Date.	07.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4156	Sample Received on	02.12.2024
Sample Collected by	LABORATORY	Test Commenced on	02.12.2024
Sample Collected on	28.11.2024	Test Completed on	07.12.2024
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.9	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	4.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

8 Paul
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END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4157	Report Date.	07.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4157	Sample Received on	02.12.2024
Sample Collected by	LABORATORY	Test Commenced on	02.12.2024
Sample Collected on	28.11.2024	Test Completed on	07.12.2024
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.7	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	5.9	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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4158	Report Date.	07.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4158	Sample Received on	02.12.2024
Sample Collected by	LABORATORY	Test Commenced on	02.12.2024
Sample Collected on	29.11.2024	Test Completed on	07.12.2024
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	56.5	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	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

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

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TEST REPORT

Report No.	SARL/24/4159	Report Date.	07.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4159	Sample Received on	02.12.2024
Sample Collected by	LABORATORY	Test Commenced on	02.12.2024
Sample Collected on	29.11.2024	Test Completed on	07.12.2024
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	51.3	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	5.3	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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
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END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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

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

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

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

TEST REPORT

Report No.	SARL/24/4160	Report Date.	07.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4160	Sample Received on	02.12.2024
Sample Collected by	LABORATORY	Test Commenced on	02.12.2024
Sample Collected on	30.11.2024	Test Completed on	07.12.2024
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	66.1	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	7.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.3	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

8 Paul
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END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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



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TEST REPORT

Report No.	SARL/24/4161	Report Date.	07.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4161	Sample Received on	02.12.2024
Sample Collected by	LABORATORY	Test Commenced on	02.12.2024
Sample Collected on	30.11.2024	Test Completed on	07.12.2024
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	25.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.8	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

8 Paul
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END OF THE REPORT

J. K.
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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

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TEST REPORT

Report No.	SARL/24/4162	Report Date.	07.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4162	Sample Received on	02.12.2024
Sample Collected by	LABORATORY	Test Commenced on	02.12.2024
Sample Collected on	01.12.2024	Test Completed on	07.12.2024
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	70.1	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	8.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	15.8	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

8 Paul
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END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4163	Report Date.	07.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4163	Sample Received on	02.12.2024
Sample Collected by	LABORATORY	Test Commenced on	02.12.2024
Sample Collected on	01.12.2024	Test Completed on	07.12.2024
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	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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END OF THE REPORT

J. 4
Authorized Signatory
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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

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

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TEST REPORT

Report No.	SARL/24/4176	Report Date.	14.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4176	Sample Received on	09.12.2024
Sample Collected by	LABORATORY	Test Commenced on	09.12.2024
Sample Collected on	03.12.2024	Test Completed on	14.12.2024
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	61.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	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

8 Paul
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END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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

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



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TEST REPORT

Report No.	SARL/24/4177	Report Date.	14.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4177	Sample Received on	09.12.2024
Sample Collected by	LABORATORY	Test Commenced on	09.12.2024
Sample Collected on	03.12.2024	Test Completed on	14.12.2024
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	59.2	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	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
Verified



END OF THE REPORT

J. K.
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4178	Report Date.	14.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4178	Sample Received on	09.12.2024
Sample Collected by	LABORATORY	Test Commenced on	09.12.2024
Sample Collected on	04.12.2024	Test Completed on	14.12.2024
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	67.7	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	7.8	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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
Verified



J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

END OF THE REPORT

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TEST REPORT

Report No.	SARL/24/4179	Report Date.	14.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4179	Sample Received on	09.12.2024
Sample Collected by	LABORATORY	Test Commenced on	09.12.2024
Sample Collected on	04.12.2024	Test Completed on	14.12.2024
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	61.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	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

8 Paul
Verified



END OF THE REPORT

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

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TEST REPORT

Report No.	SARL/24/4180	Report Date.	14.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4180	Sample Received on	09.12.2024
Sample Collected by	LABORATORY	Test Commenced on	09.12.2024
Sample Collected on	05.12.2024	Test Completed on	14.12.2024
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.3	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	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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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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Please Contact:

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TEST REPORT

Report No.	SARL/24/4181	Report Date.	14.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4181	Sample Received on	09.12.2024
Sample Collected by	LABORATORY	Test Commenced on	09.12.2024
Sample Collected on	05.12.2024	Test Completed on	14.12.2024
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.9	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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TEST REPORT

Report No.	SARL/24/4182	Report Date.	14.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4182	Sample Received on	09.12.2024
Sample Collected by	LABORATORY	Test Commenced on	09.12.2024
Sample Collected on	06.12.2024	Test Completed on	14.12.2024
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	28.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5	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/24/4183	Report Date.	14.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4183	Sample Received on	09.12.2024
Sample Collected by	LABORATORY	Test Commenced on	09.12.2024
Sample Collected on	06.12.2024	Test Completed on	14.12.2024
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	46.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	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

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

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TEST REPORT

Report No.	SARL/24/4184	Report Date.	14.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4184	Sample Received on	09.12.2024
Sample Collected by	LABORATORY	Test Commenced on	09.12.2024
Sample Collected on	07.12.2024	Test Completed on	14.12.2024
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	53.4	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	5.1	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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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4185	Report Date.	14.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4185	Sample Received on	09.12.2024
Sample Collected by	LABORATORY	Test Commenced on	09.12.2024
Sample Collected on	07.12.2024	Test Completed on	14.12.2024
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	58.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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

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TEST REPORT

Report No.	SARL/24/4186	Report Date.	14.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4186	Sample Received on	09.12.2024
Sample Collected by	LABORATORY	Test Commenced on	09.12.2024
Sample Collected on	08.12.2024	Test Completed on	14.12.2024
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	51.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.5	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	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. K.
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J. GNANAPRAKASAM
Technical Manager

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



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TEST REPORT

Report No.	SARL/24/4187	Report Date.	14.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4187	Sample Received on	09.12.2024
Sample Collected by	LABORATORY	Test Commenced on	09.12.2024
Sample Collected on	08.12.2024	Test Completed on	14.12.2024
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	56.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/24/4200	Report Date.	21.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4200	Sample Received on	16.12.2024
Sample Collected by	LABORATORY	Test Commenced on	16.12.2024
Sample Collected on	10.12.2024	Test Completed on	21.12.2024
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	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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TEST REPORT

Report No.	SARL/24/4201	Report Date.	21.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4201	Sample Received on	16.12.2024
Sample Collected by	LABORATORY	Test Commenced on	16.12.2024
Sample Collected on	10.12.2024	Test Completed on	21.12.2024
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	50.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	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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J. K.
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4202	Report Date.	21.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4202	Sample Received on	16.12.2024
Sample Collected by	LABORATORY	Test Commenced on	16.12.2024
Sample Collected on	11.12.2024	Test Completed on	21.12.2024
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.1	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	3.9	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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TEST REPORT

Report No.	SARL/24/4203	Report Date.	21.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4203	Sample Received on	16.12.2024
Sample Collected by	LABORATORY	Test Commenced on	16.12.2024
Sample Collected on	11.12.2024	Test Completed on	21.12.2024
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	52.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.4	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4204	Report Date.	21.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4204	Sample Received on	16.12.2024
Sample Collected by	LABORATORY	Test Commenced on	16.12.2024
Sample Collected on	12.12.2024	Test Completed on	21.12.2024
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4205	Report Date.	21.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4205	Sample Received on	16.12.2024
Sample Collected by	LABORATORY	Test Commenced on	16.12.2024
Sample Collected on	12.12.2024	Test Completed on	21.12.2024
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	50.1	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	5.0	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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TEST REPORT

Report No.	SARL/24/4206	Report Date.	21.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4206	Sample Received on	16.12.2024
Sample Collected by	LABORATORY	Test Commenced on	16.12.2024
Sample Collected on	13.12.2024	Test Completed on	21.12.2024
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	25.6	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	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4207	Report Date.	21.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4207	Sample Received on	16.12.2024
Sample Collected by	LABORATORY	Test Commenced on	16.12.2024
Sample Collected on	13.12.2024	Test Completed on	21.12.2024
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.9	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	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

J. K.
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4208	Report Date.	21.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4208	Sample Received on	16.12.2024
Sample Collected by	LABORATORY	Test Commenced on	16.12.2024
Sample Collected on	14.12.2024	Test Completed on	21.12.2024
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	75.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	34.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	17.2	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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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4209	Report Date.	21.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4209	Sample Received on	16.12.2024
Sample Collected by	LABORATORY	Test Commenced on	16.12.2024
Sample Collected on	14.12.2024	Test Completed on	21.12.2024
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	24.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.3	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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TEST REPORT

Report No.	SARL/24/4210	Report Date.	21.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4210	Sample Received on	16.12.2024
Sample Collected by	LABORATORY	Test Commenced on	16.12.2024
Sample Collected on	15.12.2024	Test Completed on	21.12.2024
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	71.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	33.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	16.1	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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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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TEST REPORT

Report No.	SARL/24/4211	Report Date.	21.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4211	Sample Received on	16.12.2024
Sample Collected by	LABORATORY	Test Commenced on	16.12.2024
Sample Collected on	15.12.2024	Test Completed on	21.12.2024
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	55.6	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	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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

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TEST REPORT

Report No.	SARL/24/4224	Report Date.	29.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4224	Sample Received on	23.12.2024
Sample Collected by	LABORATORY	Test Commenced on	23.12.2024
Sample Collected on	17.12.2024	Test Completed on	29.12.2024
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	69.3	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	7.9	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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J. GNANAPRAKASAM
Technical Manager

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



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TEST REPORT

Report No.	SARL/24/4225	Report Date.	29.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4225	Sample Received on	23.12.2024
Sample Collected by	LABORATORY	Test Commenced on	23.12.2024
Sample Collected on	17.12.2024	Test Completed on	29.12.2024
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	50.2	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	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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TEST REPORT

Report No.	SARL/24/4226	Report Date.	29.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4226	Sample Received on	23.12.2024
Sample Collected by	LABORATORY	Test Commenced on	23.12.2024
Sample Collected on	18.12.2024	Test Completed on	29.12.2024
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	64.6	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	7.5	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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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4227	Report Date.	29.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4227	Sample Received on	23.12.2024
Sample Collected by	LABORATORY	Test Commenced on	23.12.2024
Sample Collected on	18.12.2024	Test Completed on	29.12.2024
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	59.8	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	5.5	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4228	Report Date.	29.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4228	Sample Received on	23.12.2024
Sample Collected by	LABORATORY	Test Commenced on	23.12.2024
Sample Collected on	19.12.2024	Test Completed on	29.12.2024
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	48.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.1	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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J. 4
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Technical Manager

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TEST REPORT

Report No.	SARL/24/4229	Report Date.	29.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4229	Sample Received on	23.12.2024
Sample Collected by	LABORATORY	Test Commenced on	23.12.2024
Sample Collected on	19.12.2024	Test Completed on	29.12.2024
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	48.5	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	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/24/4230	Report Date.	29.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4230	Sample Received on	23.12.2024
Sample Collected by	LABORATORY	Test Commenced on	23.12.2024
Sample Collected on	20.12.2024	Test Completed on	29.12.2024
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	58.3	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	4.9	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/24/4231	Report Date.	29.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4231	Sample Received on	23.12.2024
Sample Collected by	LABORATORY	Test Commenced on	23.12.2024
Sample Collected on	20.12.2024	Test Completed on	29.12.2024
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	52.5	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	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.6	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

8 Paul
Verified



END OF THE REPORT

J. K.
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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

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TEST REPORT

Report No.	SARL/24/4232	Report Date.	29.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4232	Sample Received on	23.12.2024
Sample Collected by	LABORATORY	Test Commenced on	23.12.2024
Sample Collected on	21.12.2024	Test Completed on	29.12.2024
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	45.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.0	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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J. 4
Authorized Signatory
J. GNANAPRAKASAM
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TEST REPORT

Report No.	SARL/24/4233	Report Date.	29.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4233	Sample Received on	23.12.2024
Sample Collected by	LABORATORY	Test Commenced on	23.12.2024
Sample Collected on	21.12.2024	Test Completed on	29.12.2024
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	50.4	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	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/24/4234	Report Date.	29.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4234	Sample Received on	23.12.2024
Sample Collected by	LABORATORY	Test Commenced on	23.12.2024
Sample Collected on	22.12.2024	Test Completed on	29.12.2024
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	48.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.4	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4235	Report Date.	29.12.2024
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4235	Sample Received on	23.12.2024
Sample Collected by	LABORATORY	Test Commenced on	23.12.2024
Sample Collected on	22.12.2024	Test Completed on	29.12.2024
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	53.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	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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J. 4
Authorized Signatory
J. GNANAPRAKASAM
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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4248	Report Date.	12.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4248	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	24.12.2024	Test Completed on	11.01.2025
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	24.9	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	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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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4249	Report Date.	12.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4249	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	24.12.2024	Test Completed on	11.01.2025
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	57.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	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

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

J. K.
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J. GNANAPRAKASAM
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CIN : U74999TN2017PTC116807 / **GST No :** 33AAYCS7325R1ZA / **PAN No:** AAYCS7325R



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TEST REPORT

Report No.	SARL/24/4250	Report Date.	12.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Karvazhi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4250	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	25.12.2024	Test Completed on	11.01.2025
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	49.4	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	4.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4251	Report Date.	12.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thukkachi Villages
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4251	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	25.12.2024	Test Completed on	11.01.2025
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	24.9	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	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. K.
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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4252	Report Date.	12.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4252	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	26.12.2024	Test Completed on	11.01.2025
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	28.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5	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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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TEST REPORT

Report No.	SARL/24/4253	Report Date.	12.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4253	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	26.12.2024	Test Completed on	11.01.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.0	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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TEST REPORT

Report No.	SARL/24/4254	Report Date.	12.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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- Thennilai East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4254	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	27.12.2024	Test Completed on	11.01.2025
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	53.6	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	4.5	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/24/4255	Report Date.	12.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Thennilai South Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4255	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	27.12.2024	Test Completed on	11.01.2025
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	50.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	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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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4256	Report Date.	12.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4256	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	28.12.2024	Test Completed on	11.01.2025
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	59.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.9	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/24/4257	Report Date.	12.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4257	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	28.12.2024	Test Completed on	11.01.2025
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	62.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.4	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	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Technical Manager

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TEST REPORT

Report No.	SARL/24/4258	Report Date.	12.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-PROPOSED 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-4258	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
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	65.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.3	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	14.2	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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J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4259	Report Date.	12.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-Monjanu East Village
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-4259	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
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	55.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Technical Manager

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

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TEST REPORT

Report No.	SARL/24/4274	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur 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-4274	Date of Monitoring	28.12.2024/ 29.12.2024
Sample Collected by	LABORATORY		

Time in hrs	N1	N2	N3	N4	N5	N6
06.00	40.2	39.5	40.3	40.6	42.6	43.8
07.00	43.1	40.5	40.7	38.7	45.1	46.5
08.00	45.7	42.5	41.5	41.6	43.1	44.3
09.00	41.6	44.6	43.6	43.7	46.2	48.8
10.00	42.4	43.2	42.6	40.2	43.2	51.4
11.00	46.1	50.1	44.8	40.7	45.7	46.3
12.00	43.2	49.3	45.6	43.2	47.2	47.5
13.00	45.6	45.3	42.6	42.1	46.1	44.3
14.00	48.2	43.2	43.2	40.6	44.2	49.8
15.00	50.4	44.1	41.3	43.2	45.1	47.6
16.00	46.7	42.8	40.3	41.4	47.2	44.4
17.00	49.5	43.3	42.1	44.2	44.2	48.6
18.00	50.2	42.1	41.3	40.6	40.6	43.8
19.00	48.6	38.4	40.8	38.7	42.2	41.9
20.00	45.2	39.6	38.2	40.6	46.6	39.3
21.00	40.6	40.8	39.3	38.7	45.1	44.5
22.00	38.7	37.9	37.4	37.2	40.2	43.3
23.00	35.7	36.8	35.7	36.1	43.2	41.8
24.00	37.2	35.6	36.1	35.7	38.4	43.4
01.00	35.1	35.4	35.2	36.1	41.6	39.8
02.00	37.3	34.8	36.4	37.2	38.7	43.6
03.00	39.2	36.2	36.8	39.1	35.7	40.8
04.00	36.1	38.2	39.1	37.6	38.6	43.4
05.00	35.7	39.3	40.5	36.2	37.4	42.8

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TEST REPORT

Report No.	SARL/24/4274
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Report Date.	11.01.2025
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	N1	N2	N3	N4	N5	N6
DAY EQUIVALENT	46.6	44.4	42.2	41.5	45.0	49.4
NIGHT EQUIVALENT	37.1	37.0	37.5	37.0	39.8	42.8
DAY & NIGHT EQUIVALENT	45.1	43.0	41.1	40.5	43.9	48.1

Remarks:

LOCATIONS:

N1-WITHIN MINE LEASE AREA

N2-Monjanu East Village

N3- Thennilai East Village

N4-Thennilai South Village

N5- Karvazhi Villages

N6- Thukkachi Villages

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4268	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	SOIL
Sample Mark	S1-PROPOSED MINE LEASE AREA

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-4268	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	7.62
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	62.47
3	Dry matter content	IS 15106: 2002	%	95.14
4	Water Content	IS 15106: 2002	%	4.86
5	Organic Matter	IS 2720: Part 22: 1972	%	0.87
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	221
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	%	30.56
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	51.16
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	18.28
	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	0.89
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	700
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	765
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	%	22.5
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	4.2

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4269	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	SOIL
Sample Mark	S2-Monjanu East Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-4269	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.12
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	54.89
3	Dry matter content	IS 15106: 2002	%	96.68
4	Water Content	IS 15106: 2002	%	3.32
5	Organic Matter	IS 2720: Part 22: 1972	%	1.02
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	329
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	%	27.02
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	61.50
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	11.49
	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	1.63
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	674
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	733
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	%	23.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	3.9

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4270	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	SOIL
Sample Mark	S3-Thennilai East Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-4270	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
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	76.58
3	Dry matter content	IS 15106: 2002	%	97.04
4	Water Content	IS 15106: 2002	%	2.96
5	Organic Matter	IS 2720: Part 22: 1972	%	0.56
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	165
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	LOAM
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	44.36
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	45.42
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	10.22
	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	1.58
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	799
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	897
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	20.5
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	4.5

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4271	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	SOIL
Sample Mark	S4-Thennilai South Village

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-4271	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	7.28
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	104.5
3	Dry matter content	IS 15106: 2002	%	93.91
4	Water Content	IS 15106: 2002	%	6.09
5	Organic Matter	IS 2720: Part 22: 1972	%	0.73
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	193
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	LOAM
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	40.58
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	47.24
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	12.18
	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	2.81
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	594
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	689
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	%	21.9
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	4.3

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4272	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	SOIL
Sample Mark	S5-Karvazhi Villages

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-4272	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	7.11
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	45.68
3	Dry matter content	IS 15106: 2002	%	95.91
4	Water Content	IS 15106: 2002	%	4.09
5	Organic Matter	IS 2720: Part 22: 1972	%	0.81
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	249
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	%	23.86
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	57.83
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	18.32
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.53
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	831
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	959
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	%	21.5
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	3.8

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For Shrient Analytical and Research Labs Pvt. Ltd


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Technical Manager

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TEST REPORT

Report No.	SARL/24/4273	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	SOIL
Sample Mark	S6-Thukkachi Villages

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-4273	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	7.36
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	87.11
3	Dry matter content	IS 15106: 2002	%	93.55
4	Water Content	IS 15106: 2002	%	6.45
5	Organic Matter	IS 2720: Part 22: 1972	%	1.40
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	442
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	%	45.70
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	43.82
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	10.48
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.92
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	402
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	539
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	%	25.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	4.1

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TEST REPORT

Report No.	SARL/24/4260	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	WATER
Sample Mark	W1-PROPOSED MINE LEASE AREA

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-4260	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
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	-	7.30	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	2064	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	1250	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	539	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	82.3	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	80.0	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	206	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	333	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	431	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	274	1000



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TEST REPORT

Report No.	SARL/24/4260
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Report Date.	11.01.2025
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Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissibl e
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	371	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.05	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	5.57	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.86	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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END OF THE REPORT


Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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

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



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TEST REPORT

Report No.	SARL/24/4261	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	WATER
Sample Mark	W2-Monjanu East Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-4261	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
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	-	7.45	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	611	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	267	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	539	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	72.1	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	20.7	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	180	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	86.2	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	155	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	56.7	1000



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TEST REPORT

Report No.	SARL/24/4261
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Report Date.	11.01.2025
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Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	85.1	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.05	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	BDL(DL-1.0)	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.65	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).

X

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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



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TEST REPORT

Report No.	SARL/24/4262	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	WATER
Sample Mark	W3-Thennilai East Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-4262	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
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	-	7.80	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	664	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	402	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	316	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	94.1	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	19.3	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	235	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	80.4	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	180	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	69.5	1000



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TEST REPORT

Report No.	SARL/24/4262
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Report Date.	11.01.2025
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Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	63.4	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.10	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	BDL(DL-1.0)	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.70	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).

X

For Shrient Analytical and Research Labs Pvt. Ltd


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END OF THE REPORT


Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/24/4263	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	WATER
Sample Mark	W4-Thennilai South Village

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-4263	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
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	-	7.52	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1039	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	640	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	480	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	114	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	47.0	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	284	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	196.0	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	225	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	186	1000



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TEST REPORT

Report No.	SARL/24/4263
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Report Date.	11.01.2025
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Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	94.5	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.02	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	2.03	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.75	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).

X

For Shrient Analytical and Research Labs Pvt. Ltd


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END OF THE REPORT


Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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

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



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TEST REPORT

Report No.	SARL/24/4264	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	WATER
Sample Mark	W5-Karvazhi Villages

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-4264	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
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	-	7.53	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1905	-
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	539	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	86.2	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	77.6	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	216	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	323	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	490	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	240	1000



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TEST REPORT

Report No.	SARL/24/4264
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Report Date.	11.01.2025
--------------	------------

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	367	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.08	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	BDL(DL-1.0)	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.71	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).

X

For Shrient Analytical and Research Labs Pvt. Ltd


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END OF THE REPORT


Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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TEST REPORT

Report No.	SARL/24/4265	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	WATER
Sample Mark	W6-Thukkachi Villages

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-4265	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
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	-	7.70	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1435	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	870	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	549	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	125	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	56.4	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	314	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	235	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	127	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	342	1000



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TEST REPORT

Report No.	SARL/24/4265
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Report Date.	11.01.2025
--------------	------------

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	125	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.02	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	BDL(DL-1.0)	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.87	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).

X

For Shrient Analytical and Research Labs Pvt. Ltd


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END OF THE REPORT


Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2024/4266	Report Date.	11.01.2025
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Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	WATER
Sample Mark	SW1-US : Noyyal River (Near Anjur Village)

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-4266	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result
A.				
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	-	7.26
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	864.5
B.	Chemical parameters			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	520
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	212
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	48.4
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	21.8
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	121
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	91.0
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	205
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	136



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045

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

www.shrientanalytical.com

TEST REPORT

Report No.	SARL/2024/4266
------------	----------------

Report Date.	11.01.2025
--------------	------------

Sl. No	Parameters	Protocol	Unit	Result
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	158
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(DL-0.01)
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	2.65
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	BDL(DL-0.1)
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)
19	Chemical Oxygen Demand	APHA 24th Edition 5220 B: 2023	mg/L	BDL (D.L - 4.0)
20	Bio Chemical Oxygen Demand 3 Days at 27°C	IS 3025 (Part 44): 1993	mg/L	BDL (D.L - 2.0)
21	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	22.0
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	5.7

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

8 Pal
Verified



END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

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

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



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

TEST REPORT

Report No.	SARL/2024/4267	Report Date.	11.01.2025
------------	----------------	--------------	------------

Customer Name & Address	Rough Stone and Gravel quarry of Thiru. T. Ponnusamy, Extent of 4.23.80 Ha, Thennilai West Village, Pugalur Taluk, Karur District, Tamil Nadu.
Sample Description	WATER
Sample Mark	SW2-DS : Noyyal River (Near Athipalayan Village)

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-4267	Sample Received on	30.12.2024
Sample Collected by	LABORATORY	Test Commenced on	30.12.2024
Sample Collected on	29.12.2024	Test Completed on	11.01.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result
A.				
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	-	7.68
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	905.8
B.	Chemical parameters			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	552
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	246
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	52.8
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	27.4
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	132
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	114
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	234
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	152



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TEST REPORT

Report No.	SARL/2024/4267
------------	----------------

Report Date.	11.01.2025
--------------	------------

Sl. No	Parameters	Protocol	Unit	Result
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	179
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(DL-0.01)
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	5.47
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	BDL(DL-0.1)
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)
19	Chemical Oxygen Demand	APHA 24th Edition 5220 B: 2023	mg/L	BDL (D.L - 4.0)
20	Bio Chemical Oxygen Demand 3 Days at 27°C	IS 3025 (Part 44): 1993	mg/L	BDL (D.L - 2.0)
21	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	34.0
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	6.2

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
Verified



END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

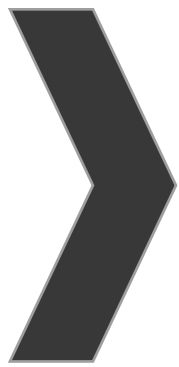
For any Technical Issues & Complaints: vimalnath@shrientanalytical.com

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

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



ANNEXURE-8

भारतीय गैर न्यायिक

बीस रुपये

रु.20



Rs.20

TWENTY
RUPEES

INDIA NON JUDICIAL

30 SEP 2023

TAMIL NADU

M. Prabu

92AB 023464

Global Mining Solutions
Chennai

THIS MEMORANDUM OF UNDERSTANDING (MOU) IS ENTERED INTO
ON THIS THE 30.09.2023
BETWEEN

M/s. GLOBAL MINING SOLUTIONS , duly represented by its Managing Director Mr.M.Prabhu, having its registered office at Plot No. 6 V.S. City,Kottamettupatti, Omalur, Salem - 636455, hereinafter referred to as "GMS" (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors, assigns, nominees, affiliated companies, etc.) of the One Part;

AND

SHRIENT ANALYTICAL AND RESERCH LABS PRIVATE LIMITED., represented by its General Manager- Technical Mr. V.Vimal Nath its registered at 416 /15 Dhargas Road ,Perunkolathur, West Tambara, Chennai -600045,Tamil NADu "SARL" (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns) of the Other Part.

(Hereinafter GMS and SARL will be individually referred to as "Party" and collectively referred to as "Parties")

WHEREAS,

- a) **GMS** is engaged in the Business of offering consultancy, EIA works, and Testing Services.
- b) **SARL** is engaged in manufacture and supply of wide range of chemicals for various water, process and waste water treatment applications. Besides having NABL accredited laboratory also.

NOW, THEREFORE IN CONSIDERATION OF THE MUTUAL PROMISES AND COVENANTS CONTAINED IN THIS MOU, IT IS HEREBY AGREED BETWEEN THE PARTIES AS FOLLOWS:

1) **GMS** will subcontract testing services of the NABL Accredited **SARL** scope for following

- ✦ Ambient Air Quality Monitoring and analysis
- ✦ Water and waste water Quality analysis
- ✦ Soil Quality Analysis
- ✦ Noise Monitoring

2) Prices will be as mutually agreed.

3) **DURATION AND RENEWAL**

This MoU is entered into initially for a period of 24 (Twenty-four) from the date of entering into this MoU, and the same is extendable for a further periods on mutually agreed terms and conditions between the parties herein.

Provided, if either party is unwilling to extend the term of the MoU for a second term. Notice in writing, of such intention not to extend the term of this MoU, should be given to the other party not later than three months before the expiry of the first term of six months.

4) **TERMINATION**

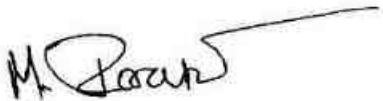
- a) Without prejudice to any other remedies both the parties may have, _____ the right at any time by giving notice in writing to the other party to _____ terminate the MoU.
- b) Termination of this MOU can be done by either party, with a 1 month _____ notice period by the terminating party. It is expected that the parties _____ will discuss any issues that arise that would lead to the need to _____ terminate this agreement prior to the written formal termination of the _____ agreement.
- c) Both the Parties shall on the termination of this MoU return to the other party forthwith any books, records, papers or other property in its possessions belonging to the other party.

5) CONFIDENTIALITY

Both during the term of this MoU as well as after the termination of this MoU, the Parties are obliged to keep confidential all proprietary information on such as technical data, know-how, business and operating conditions, technical experience, working methods and the like received from the other Party and not to disclose this information to anyone other than employees, directors and officers. The Parties are obliged to make sure that their employees, directors and officers who have a need to know, at the same time as they receive the said information, are informed.

IN WITNESS WHEREOF THE PARTIES HAVE SIGNED THESE PRESENTS, THE DAY AND YEAR FIRST HEREINABOVE WRITTEN IN THE PRESENCE OF THE FOLLOWING WITNESSES:

M/S GLOBAL MINING SOLUTIONS



**M/S SHRIENT ANALYTICAL AND
RESEARCH LABS PRIVATE
LIMITED**



WITNESSES:

M. Vasantha Kumar

Name: Vasantha Kumar

Address: 315, Ramaninagar,

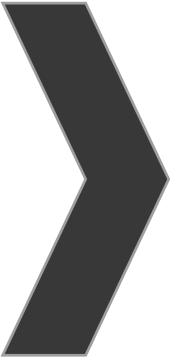
East Thiruvagavundanur, Salem-636005

J G

Name: J.Gnanaprakasam

Address: Plot No 11 Saraswathi Nagar

Old perunkolathur, Chennai-600059



ANNEXURE-9



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.

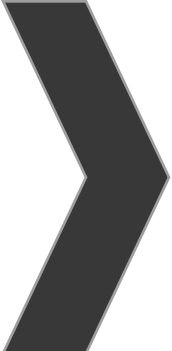
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: SHRIENT ANALYTICAL AND RESEARCH LABS PRIVATE LIMITED

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer



ANNEXURE-10

விடுநர் :

இரா.தமிழ்ச்செல்வி,
தலைமையாசிரியர்,
அரசு உயர்நிலைப்பள்ளி,
பவித்திரம்.

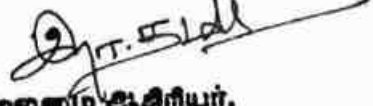
பெறுநர் :

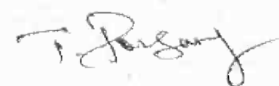
திரு. T. பொன்னுசாமி அவர்கள்,
கரைத்தோட்டம்,
தென்னிலை மேல்பாகம்,
தென்னிலை.

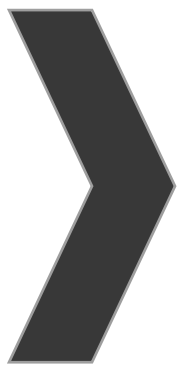
அய்யா,

பொருள் : பவித்திரம் - அரசு உயர்நிலைப்பள்ளி -பள்ளிக்கு தேவையான
வசதிகளை செய்து தர வேண்டுதல் - சார்பு.

அய்யா, பவித்திரம் அரசு உயர்நிலைப்பள்ளியில் அப்பகுதியை சேர்ந்த
ஏழை மாணவ மாணவிகள் பயின்று வருகின்றனர். அம்மாணவ மாணவிகள்
பயன் பெறும் வகையில், ஸ்மார்ட் வகுப்பறையில், குளிர்சாதன வசதி மற்றும்
மேம்படுத்தப்பட்ட ஸ்மார்ட் வகுப்பறையாக மேம்படுத்தித் தருமாறு கேட்டுக்
கொள்கிறேன். மேலும் அவ்வறைக்கு தேவையான கணினி, UPS, Printer , window
screen , computer covers,பச்சை நிற தரை விரிப்பான் , மின்விசிறிகள், மின்
விளக்குகள், அறை பாதுகாப்பிற்கான கண்ணாடி கதவு, ஆகியவை வழங்கி
உதவுமாறு தங்களை அன்போடு கேட்டுக் கொள்கிறேன்.


தலைமை ஆசிரியர்,
அரசு உயர்நிலைப்பள்ளி,
பவித்திரம். கரு - 639 002.





ANNEXURE-11

DISTRICT SURVEY REPORT

KARUR DISTRICT



DISTRICT ENVIRONMENT IMPACT ASSESSMENT
AUTHORITY (DEIAA), KARUR

SEPTEMBER - 2017

**DIRECTORATE OF GEOLOGY AND MINING
MINERAL RESOURCE DEPARTMENT
GOVERNMENT OF TAMILNADU**

**DISTRICT SURVEY REPORT
KARUR**

S.No	Content	Page No
1	Introduction	1-5
	1.1 Physiographic	6
	1.2 Location & accessibility	6
	1.3 Soil	6
	1.4 Geomorphology	7-8
2	GEOLOGY	8-9
3	Land utilization pattern in Karur District	9-10
4	Month wise Rainfall details in Karur District for the last three years.	10-11
5	Groundwater Potential of Karur District	11-12
6	Over view of Mining Activity in the District	12-21
	6.1 Granite	12-13
	6.2 Limestone	14
	6.3 Quartz and Feldspar	15-16
	6.4 Roughstone	16-18
	6.5 Dunite Quarry	18
	6.6 Gemstones	19
	6.7 Sand	20-21
List of Annexure		
Annexure:I	The list of mining leases in the district with location, area and period of validity	
Annexure:II	Details of royalty or revenue received in the last there years	
Annexure:III	Detail of production of sand or bajari or minor mineral in last three years	

Introduction

Karur district lies between 10 °63' and 11°14 ' north latitude and 77 °90' and 78° 61' east longitude. Karur town is located on the bank of Amaravathi river. Karur is one of the oldest towns in the State of Tamil Nadu and has played a very significant role in the history and culture of the Tamils. Its history dates back over 2000 years, and has been a flourishing trading centre even in the early Sangam days. In the ancient and medieval times, the area was ruled by the Cheras, Gangas and Cholas. Karur was the capital of Cheras during the past Karur district came to existence on 30th September 1995 by bifurcation of Tiruchirappalli district. According to 2011 census, Karur district had a population of 10,76,588 with a sex-ratio of 1,015 females for every 1000 males. The district average literacy is 81.74%. The total area of Karur district is 2,895 square kilo meter.

DISTRICT AT A GLANCE :

	Particulars			Statistics
	Geographical features			
	Geographical Data			2895.57 Sq.Kms
	i)Latitude			10.45" to 11.45" North
	ii)Longitude			77.45" to 78.07 East
	iii)Geographical Area			
				Administrative Units
	i)Sub divisions			2
	ii)Tehsils			6
	iii)Sub – Tehsil			-
	v)Patwar Circle			-
	v)PanchayatSimitis			10
	vi) Nagar nigam			4
	vii) Nagar Palika 11			11
	viii) Gram Panchayat			158
	xi) Revenue villages			203
	x) Assembly Area			
	II.Population			
	Sex-wise			
	i)Male			534392
	ii) Female			542196
	Rural Population			642415
	III.Agriculture			
	Land Utilization			
	i)Total Area	2010-2011		289557 Hec
	ii)Forest Cover	2010-2011		6187 Hec

	iii)Non Agriculture Land	2010-2011		37264 Hec
	v)Cultivable Barren land	2010-2011		2901 Hec
	Forest			
	(i)Forest	2010-2011		6187 Hec
	Livestock & Poultry			
	Cattle			
	i)Cows	2007		143953
	ii)Buffaloes	2007		73067
	Other Livestock			
	i)Goats	2007		173591
	ii) Pigs	2007		10205
	iii)Dogs & Bitches			31746
	IV) Railways (in km.)			
	(i)Length of rail line	2010-2011		93.85
	V)Roads			
	(a)National Highway	2010-2011		118.8
	(b) State Highway	2010-2011		222.731
	(c) Main District Highway	2010-2011		348.120
	(d) Other district & Rural Roads	2010-2011		3769.03
	road/Agriculture Marketing Board Roads	2010-2011		
	f) Kachacha Road	2010-2011		
	VI) Communication			
	(a)Telephone Connection	2010-2011		118268
	(b)Post offices	2010-2011		246
	(c)Telephone center	2010-2011		100
	(d)Density of Telephone	2010-2011	0 Person	126
	e) Density of Telephone	2010-2011	.Per KM	40
	(f) PCO Rural	2010-2011	No.	1339
	(g) PCO STD	2010-2011	No.	295
	(h) Mobile	2010-2011		373474
	(VII) Public Health			
	(a) Allopathic Hospital	2010-2011		6
	(b) Beds in Allopathic Hospitals	2010-2011		419
	(c) Ayurvedic Hospital			-
	(d) Beds in Ayurvedic Hospital			-
	(e) Unani Hospitals			-
	(f) Community Health centers			-

	(g) Primary health centers			36
	(h) Dispensaries			104
	i) Sub Health Centers			168
	(j) Private Hospitals			32
	(VIII) Banking			
	Commercial			
	(a) Commercial Bank			53
	(b) Rural Bank Products			52
	(c) Co-operative bank products			98
	(d) PLDB Branches			03
	(IX) Education			
	(a) Primary School			568
	(b) Middle Schools			186
	(c) Secondary & Senior Secondary Schools			107
	(d) Colleges			22
	(e) Technical University			-

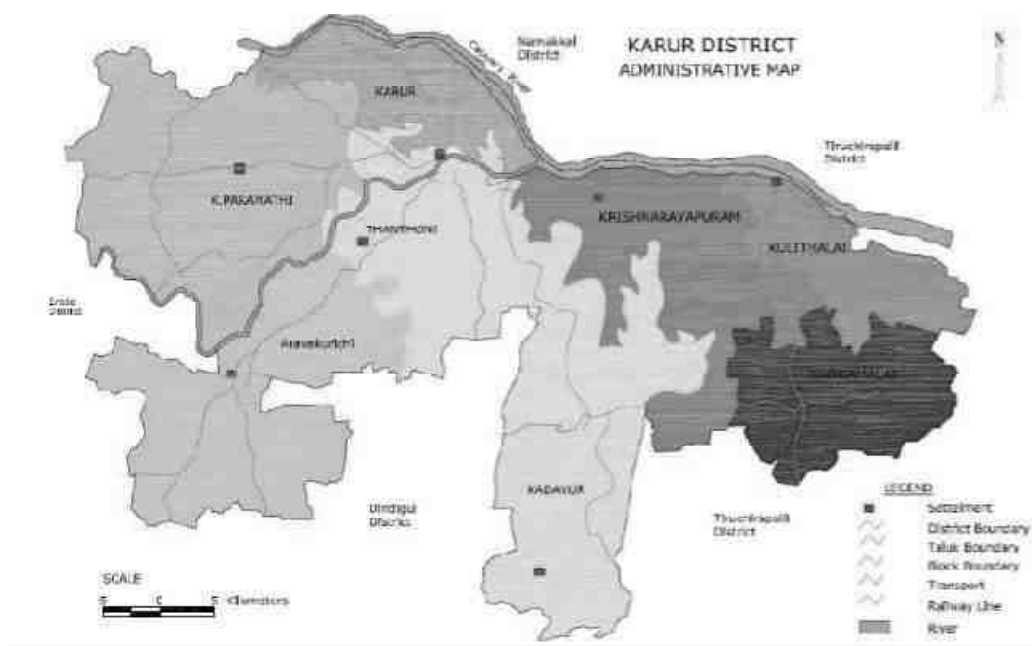


Figure :Karur District Administrative Map

Physiographic:-

The entire area of the district is a pediplain. The Rangamalai hills and Kadavur hills occurring in the southern side of the district constitutes the remnants of the much denuded Eastern Ghats and rise to heights of over 1031m above mean sea level. The district general slopes gently towards north east and forms a vast stretch of plain country till the eastern boarder of the district. There are numerous small residual hills represented by Ayyarmalai, Thanthonimalai and Velayuthampalayam hills. The general elevation of the area is ranging between 100 m and 200m above mean sealevel. The prominent geomorphic units identified in the district through interpretation of Satellite imagery are 1) Structural hill, 2) Pediments, 3) Shallow Pediments, 4) Buried Pediments and 5) Alluvial plain. *(Reference : State Govt. district report)*

Location & accessibility:-

There are two national highways: NH-44 (North South Corridor Road (Kashmir to Kanyakumari)) Srinagar - Kanyakumari and NH-67 (Nagapattinam - Trichy - Karur - Coimbatore - Gudalur), which connect with other major towns. The nearest airport is in Tiruchirappalli Airport (85 km). The nearest major sea port is at Thoothukudi (280 km).

Soil:-

Soil types of the area are more important, since soil deposition is important for agricultural production and also for the recharge of ground water. Different types of soil are derived from a geological formations. On the basis soil map of Karur district based on the survey by the Tamil Nadu Agricultural Department indicates four different types of soils viz., Red Soil, Thin Red Soil, Red Loam and River Alluvium Soil. The red soils are predominantly seen in Kadavur, Kulithalai, Krishnarayapuram, Thanthoni and Thogamalai blocks. The thin red soils are seen in Aravakurichi and K. Paramathy blocks. Major portion of Karur block is covered by red loom.. Various types of crops raised in different types of soil in different parts of district.

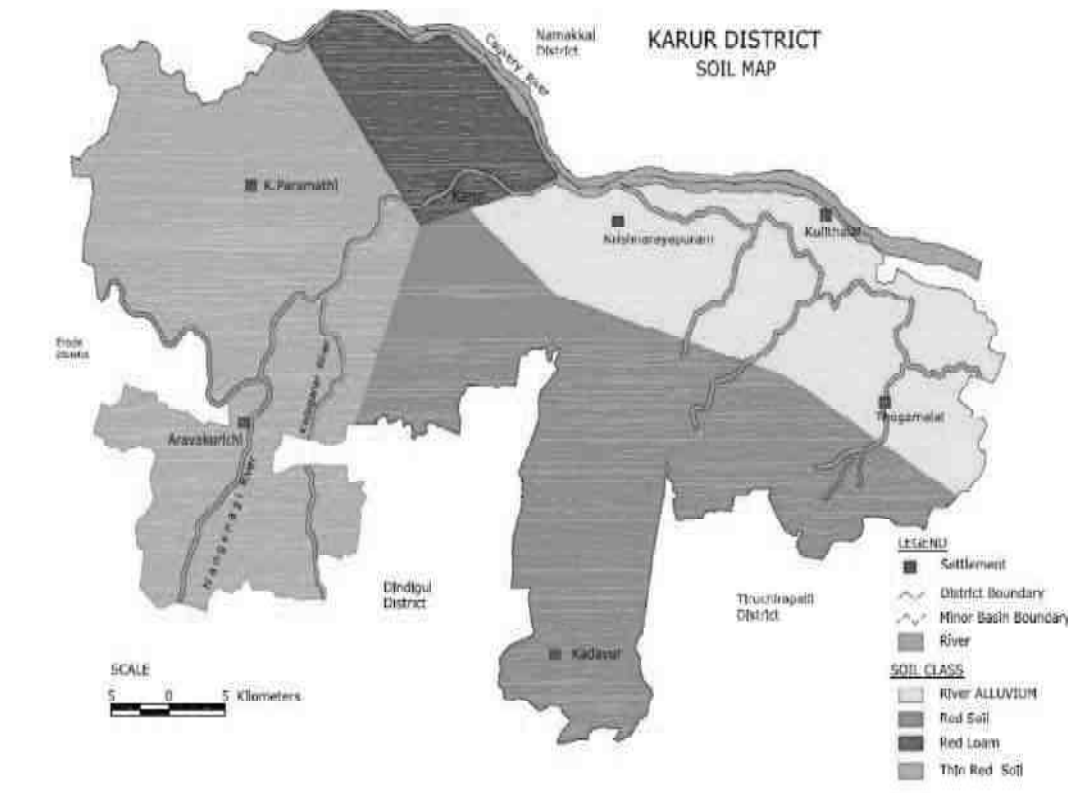


Fig: Karur District Soil Map

Geomorphology :-

The entire area of the district is a pediplain. The Rangamalai hills and Kadavur hills occurring in the southern side of the district constitutes the remnants of the much denuded Eastern Ghats and rise to heights of over 1031m above mean sea level. There are numerous small residual hills represented by Ayyarmalai, Thanthonimalai and Velayuthampalayam hills. The general elevation of the area is ranging between 100 m and 200m above mean sea level. The prominent geomorphic units identified in the district through interpretation of Satellite imagery are 1) Structural hill, 2) Pediments, 3) Shallow Pediments, 4) Buried Pediments and 5) Alluvial plain. An overall appraisal of groundwater occurrence in each geomorphic unit and the significance of its hydro geological characters are given, geomorphology and lineament details are given in

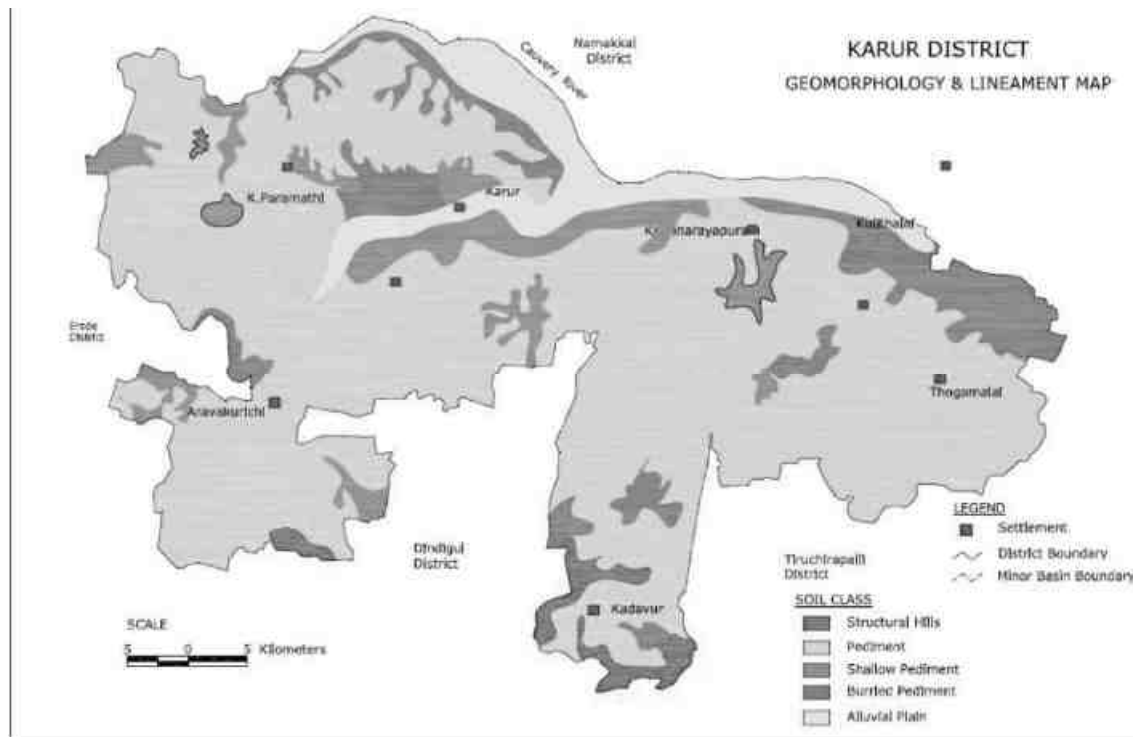
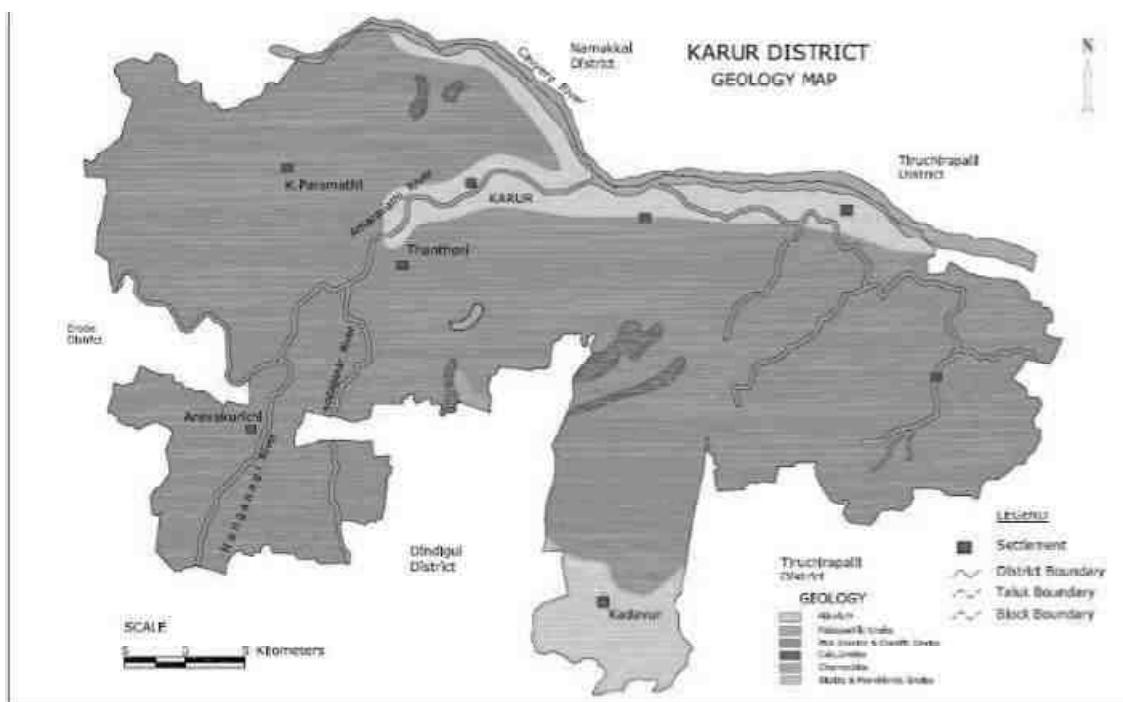


Fig: Karur District Geomorphology & Lineament Map

GEOLOGY:

Geologically, the entire district can be classified into hard rock and sedimentary formations.

Hard rock Formation: - More than 90 percent of the district is underlain by hard rock of Archaean age. The gneissic type of Formation is the major formation among the various types of hard rocks. Charnockite occurs in this district as pockets in Karur and Aravakurichi taluks. Quartzites which are resistant to weathering are also seen as patches in Charnockite and gneissic varieties and the above rock types are shown in Figure 3.5. **Sedimentary Formation:** - Recent alluvial deposits such as sand, silt, clay, gravel etc. which are transported sediments by river are found one other side of Cauvery river in Karur, Krishnarayapuram and Kulithalai blocks. These formations are overlying the hard rock.



Karur District Geological Map (Source: District report)

Land utilization pattern in Karur District:-

Karur District is a part of cauvery delta region and utilization of land area in the district is up to 44.59%. 4.76% of the land area remains as other uncultivated land. 2.74% is forest area in Karur district. Black soil is the predominant soil type in this district accounting for 35.51% followed by laterite soil for 23.85%. The remaining 20.31% is sandy, coastal and alluvium soil. The main crops are paddy, banana, sugarcane, beetle leaf, grams&pulses, tapioca, kora grass, groundnuts, oilseeds, tropical vegetables, garland flowers, and medicinal herbs.

b) LAND UTILIZATION DETAILS:-

Sl. No.	Particulars	Area in ha	% to the Total geographical area
1	Total geographical area	289557	
2	Area under Forest	6187	2.14
3	Barren and uncultivable land	2901	1.00
4	Land put into non-agricultural uses	37264	12.87

5	Cultivable waste	67831	23.43
6	Permanent pastures and other grazing lands	10801	3.73
7	Miscellaneous tree crops and grooves not included in the net area sown	1278	0.44
8	Current Fallow	4774	1.65
9	Other Fallow	46802	16.16
10	Net Area Sown	111719	38.58
11	Area sown more than once	2835	0.98
12	Gross Cropped Area	114554	39.56

Monthwise Rainfall details in Karur District for the last three years.

(Ref :Received from GW Board, Trichy)

RAINFALL READING FOR THE YEAR 2015 in Millimeter(mm)													
SL. NO	STATION NAME	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUGUST	SEP	OCT	NOV	DEC
1	Anaipalayam	95.0	0.0	15.2	141.2	127.2	6.0	0.0	29.2	174.0	86.0	284.0	65.0
2	Aravakurichi	10.2	0.0	5.0	114.0	168.7	59.2	0.0	6.0	219.6	44.6	299.4	34.2
3	K.Paramathy	69.6	0.0	47.4	65.0	69.6	9.2	0.0	41.5	75.4	95.8	279.6	79.0
4	Kadavur	8.6	0.0	0.0	90.0	104.6	98.2	0.0	0.0	36.4	79.4	200.1	102.9
5	Karur	12.4	0.0	0.0	92.0	85.6	4.0	0.0	38.0	233.0	91.7	219.0	35.5
6	Krishnarayapuram	53.0	0.0	0.0	0.0	123.4	13.2	0.0	91.9	149.0	115.7	172.7	23.5
7	Kulithalai	2.0	0.0	0.0	90.9	84.8	11.0	0.0	9.0	99.1	79.8	178.9	29.1
8	Mayanur	29.0	0.0	0.0	107.6	101.0	31.0	0.0	90.6	165.0	103.6	193.8	25.4
9	Palaviduthy	15.5	0.0	0.0	220.4	152.6	104.3	7.2	0.0	29.2	74.0	230.0	80.6
10	Panjapatti	7.4	0.0	6.0	214.4	74.2	47.0	0.0	23.4	107.2	155.0	224.0	31.4
11	Thogaimalai	7.0	0.0	3.0	68.3	147.0	10.0	0.0	49.0	45.0	128.0	166.0	40.0

RAINFALL READING FOR THE YEAR 2016 in Millimeter (mm)													
SL. NO	STATION NAME	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUGUST	SEP	OCT	NOV	DEC
1	Anaipalayam	0.0	0.0	0.0	0.0	77.2	48.0	48.0	0.0	12.0	120.0	12.0	20.2
2	Aravakurichi	0.0	0.0	0.0	0.0	161.8	46.2	0.0	1.2	2.2	32.4	30.4	25.6
3	K.Paramathy	0.0	0.0	0.0	13.6	71.2	37.8	0.0	2.0	8.0	1.8	18.2	13.3
4	Kadavur	0.0	0.0	0.0	4.2	66.2	12.2	12.2	5.2	7.2	58.9	4.0	48.6
5	Karur	0.0	0.0	0.0	0.0	70.0	16.0	16.0	75.4	20.7	1.0	48.0	25.2
6	Krishnarayapuram	0.0	0.0	0.0	0.0	130.3	30.8	30.8	23.2	17.4	58.0	5.0	40.9
7	Kulithalai	0.0	0.0	0.0	0.0	149.1	22.1	0.0	40.9	16.0	68.6	4.1	46.2
8	Mayanur	0.0	0.0	0.0	0.0	121.0	29.0	78.0	8.0	25.0	37.0	3.0	34.0
9	Palaviduthy	0.0	0.0	0.0	15.2	137.3	20.6	129.2	6.6	0.7	55.7	32.7	51.0
10	Panjapatti	0.0	0.0	0.0	0.0	226.4	0.0	78.0	36.6	33.6	2.6	1.2	42.2
11	Thogaimalai	0.0	0.0	0.0	0.0	168.5	0.0	12.2	2.0	9.5	12.0	0.0	25.7

Groundwater Potential of Karur District:-

Out of the total groundwater recharge, about 10% is kept reserved for natural recharge during non -monsoon period. The balance is earmarked a suitable groundwater recharge for further development of irrigation. When the groundwater development is more than 100%, it is categorized as over exploited. When it is between 90 and 100%, it is categorized as critical. When it is between 70 and 90%, it is categorized assemi-critical. When it is less than 70% it is categorized as safe.

Groundwater Quality:-

The groundwater quality is being monitored by PWD by analysing water samples from the monitoring wells in pre and post monsoon period. In Karur district 18 shallow open wells and 21 boreholes were selected for groundwater monitoring since 1972. In 2005 report PWD states that the ground water quality of both shallow open well and borehole in Aravakurchi taluk is moderate with TDS values ranging between 818 to 1591 mg/L in the villages Karveli,Puduvadi,Thirumanickampatti, Vattamangalam, Karudayampalayam, Esanatham, Nagampalli, Kodanthuran Sendamangalam. The poor water quality for drinking purposes is observed in the villages of Paraiyur and Venjamangudalurwith TDS value of 2570 and 2536

mg/L respectfully. In Karur taluk in general the groundwater quality is moderate in the shallow open well and bore hole with TDS values ranging between 799 to 1703 mg/L in the villages of Kaliyappagoundanur, Puliur, Kakkavadi, Kuppachiaplayam, Pudupalayam, 136Jellipatti and Jagathapi. Only one village namely Kuppam is having poor quality water with TDS value of 6664 mg/L and the water is not suitable even for agricultural purposes. In Krishnarayapuram taluk, the quality of water is good in the villages of Devarmalai, Vengampatti and Kannimarpalayam with TDS values ranging between 321 to 500 mg/L both in shallow open well and bore holes. The moderate quality is observed in the villages of Manchanaikeppatti, Valayalkaranpudur and Palaviduthi with TDS values between 566 to 1482 mg/L. The poor quality of water is observed in the village of Vayalur with TDS value of 5205 mg/L. In Kulithalaitaluk, the quality is moderate in all villages of Pulitheri, Nachchalur, Nallur and Pillaigodangipatti with TDS values ranging between 532 to 1313 mg/L. The quality of water in this district is generally good for irrigate on with sodium adsorption ratio (SAR) less than 10. However the quality of water 137 in Kuppam villages of Karur taluk, Vayalur villages of Krishnarayapuram taluk is having poor quality water for irrigation with SAR value 17.8 and 10.5 respectively.

Over view of Mining Activity in the District

Tamil Nadu is the leading holder of country's mineral resources of vermiculite, magnetite, dunite, rutile, garnet, molybdenum and ilmenite. The State accounts for the country's 81% lignite, 75% vermiculite, 69% dunite, 59% garnet, 52% molybdenum and 30% titanium minerals resources.

a) GRANITE

There are good quality of hard rocks which are particularly available at Kulithalai and Aravakurichi Taluks. But the rocks available at Thogamalai, Naganur, Kalugur and Porunthalur of Kulithalai Taluk are of export worthy and they are being operated for the extraction of granite block both by M/s. TAMIN and private companies. Calc-Gneiss (called as colonial white occurs in Pitchampatti Village of Karur Taluk are of export worthy quality.



Tvl.Maducon Granites K/Pitchampatti ,KarurTaluk latitude 10° 43' 50.34" Longitude 78° 24' 56.57" ,Multicolour Granite.



Tvl.TAMIN Ltd. Naganur village , Kulithalai Taluk latitude 10° 44' 30.27" Longitude 78° 23' 53.03" ,Multicolour Granite. N30°W, 70°Southerly dipping.

b) Limestone:-

Low grade to Cement grade limestone is found extensively at Kulithalai Taluk (Thevarmalai, Melapaguthi, Varavanai, Vellalapatti, Keeranur, Pothuravuthampatti, Kalladai, Kaliyapatti etc., villages), at Aravakurichi Taluk (Esanatham, Ammapadi, Alamarathupatti, Thennilai etc., villages) and K. Pitchampatti of Karur Taluk. The limestone is being used at Cement industries, as fillers in the fertilizer and in the cement factories. Presently 30 leases are existing at Karur District.



Devarmalai and Melapaguthi village ,Kaduvur Taluk latitude 10° 44' 37.35" Longitude 78° 10' 45.80" ,Chettinad Cement Co. Ltd. Limestone Quarry E-W trending 70°-75° Southerly dipping

c) Quartz and Feldspar:-

Milky to glassy variety of Quartz and Potash feldspar with an average of 12% potash is the common economic mineral available extensively at Aravakurichi Taluk (Pungambadi-West, Nagampalli, Punjaikalakurichi, Pavithram, Soodamani, Venjamangudalur (East), Aravakurichi, Kodanthur (South), Rajapuram, Kodaiyur etc., villages) less prominently at Kulithalai Taluk (D.Edayapatti, Sengal, Varavanai, Pannapatti, Vadavambadi etc., Villages) and at Karur Taluk (Velliyanai South Village). High grade Quartz is being exported, low grade used in the manufacture of glass and Feldspar in the ceramic and tile manufacturing industries. Presently 42 leases are existing at Karur District.



Quartz & Feldspar (T.S No.- 58F/13, Pungambadi Village Aravakurichi Taluk) latitude 10° 48' 5.48" Longitude 77° 57' 40.73". From E- W trending Pegmatite vein



Quartz & Feldspar (T.S No.- 58F/13, Pungambadi Village Aravakurichi Taluk) latitude $10^{\circ} 48' 5.48''$ Longitude $77^{\circ} 57' 40.73''$. From E- W trending Pegmatite vein

d) **ROUGHSTONE**

The Charnockite rocks are found to occur in K.Paramathi, Punnam areas etc., of Aravakurichi Taluk which are exploited to produce building materials and road metals.



Aravakurchi,Thennilai East,Rough Stone Charnockite ,E- W trending 60° - 70° northly dipping latitude $10^{\circ} 59' 3.29''$ Longitude $77^{\circ} 53' 15.57''$.



Aravakurchi, Thennilai East, Rough Stone Charnockite, E-W trending 60° - 70° northly dipping latitude $10^{\circ} 57' 57.20''$ Longitude $77^{\circ} 52' 33.92''$.

e) **Dunite Quarry:-**Aravakurchi, Thenilai Latitude $10^{\circ} 59' 03.29''$ Longitude $77^{\circ} 53' 15.57''$.

Latitude $10^{\circ} 55' 45.56''$ Longitude $77^{\circ} 48' 36.17''$.



Fig: Dunite Quarry. Abandoned Mines.

f) Gemstones:-

Apart from the above good quality of Gem variety such as Ruby (cordierite in the cordierite sillimanite gneiss) and beryl (aquamarine in the pegmatite vein in acicular shapes) are the common man's hunt at Keeranur, Muthunaickenpatti, Varavanai and Pannapatti villages of Kulithalai Taluk. Other gem variety such glassy crystallised quartz, amethyst and moonstone (catsey etc., are also found in this area)



Fig: Gemstone variety.

g) Sand:-

River Amaravathi and Cauvery are the sources of sand in Karur District. Due to lack of deposition Amaravathi is having poor sand deposition. The details of and present sand leases are in existence as detailed below.



Fig: Project of Sand quarry in upstream and downstream of Kattalai Bed regulator in main course of Cauvery River, near Mayanur

latitude 10° 57' 20.30" Longitude 78° 13' 56.28".T.S 58J/01.

<i>Sl. No.</i>	<i>Taluk</i>	<i>Village</i>	<i>S.F.No& Extent in Hects</i>	<i>Details of EIAA Clearance order No & Date</i>	<i>Collector's Proceedings No & Date</i>	<i>Lease Period</i>
01	Krishnarayapuram	Mayanur	1 (Part) 256.06 hec (Top 213.85.0 hec Bottom 42.21.0 hec)	MoEF-No.J- 11015/ 64/2014- IA-II(M), Dated:14.5.2015.	Proc No.225/Mines /2012, Dt:12.6.2015	12.6.2015 to 11.6.2017
02	Manmangalam	Nanjaithottakurichi	915 (Part) 24.00.0 hec	Lr.No.SEIAA- TN/F.No.4027/EC /1(a)/2297/2015 Dated:27.10.2015	Proc.No.349/ Mines/2015 dt.09.12.2015	09.12.2015 to 08.12.2017
03	Manmangalam	Nanjaikadambankur ichi	246/1A (Part) 24.00.0 hec	Lr.No.SEIAA- TN/F.No.4026/EC /1(a)/2290/2015 Dated:27.10.2015	Proc.No.350/ Mines/2015 dt.09.12.2015	09.12.2015 to 08.12.2017
04	Manmangalam	Nanjaipugalur	837 (Part) 24.00.0	Lr.No.SEIAA- TN/F.No.4025/EC /1(a)/2301/2014 Dated:27.10.2015	Proc.No.351/ Mines/2015 dt.09.12.2015	09.12.2015 to 08.12.2017
05	Krishnarayapuram	Sinthalavadi	1 (Part) 20.00.0 hec	SEIAA, TN/F.No.5478/EC	Rc.No.117/ Mines/2016,	22.9.2016 to 21.9.2018

				/1(a)/3253/2016, Dt:10.8.2016.	dt:22.9.2016	
06	Manmangalam	Vangal	1499 (Part) 20.00.0 hecets	SEIAA, TN/F.No.5479/EC /1(a)/3528/2016, Dt:10.8.2016.	Rc.No.118/ Mines/2016, dt:14.10.2016	14.10.2016 to 13.10.2018

List of existing Mining Leases as on 01.3.2017:-

Details of Mineralwise Royalty / Revenue received in Last Three Years

Sl. No.	Year	Limestone	Quartz	Feldspar	Magnesite	Dunite	R.Stone	Granite	Gravel
1	2013-14	48699353	1492849	368199	533610	0	65448015	70325104	3080625
2	2014-15	53508311	868706	515490	683175	2625	53835975	104483826	3360000
3	2015-16	68225602	1513118	978165	334065	0	37551600	93937741	423750

Details of Mineralwise Production during the last – 3 Years

Sl. No.	Year	Limestone	Quartz	Feldspar	Magnesite	Dunite	R.Stone	Granite	Gravel
1	2013-14	716475	2730	6795	6765	0	1453992	31907.24	123225
2	2014-15	658260	5535	9810	8595	75	1192155	45105.678	134400
3	2015-16	839130	8670	14370	3345	0	834150	44601.803	16950

Details of Sand production during Last Three Years

Sl. No.	Year	Production	Revenue collected Rs.
1	2013-14	225358.77 Lorry Load	3,83,10,991
2	2014-15	145825.55 Lorry Load	2,47,90,344
3	2015-16	-	-

Sl. No.	Major Mineral	Name of the lessee with address	Village & Taluk	S.F.No.	Extent in hectors	Classification Patta/ Poramboke	G.O. No and date/ Proc. No.	lease Period	Operation /Non Operation
1	2	3	4	5	6	7	8	9	10
1)	LIMESTONE	S.Sekar 73.Raja colony, Collector's Office Rd Cantonment, Tiruchirappalli-1	Varavanai Vge. Kulithalai Tk.	833/4B 836 (P) 843/2 Total	0.09.0 0.57.0 1.24.5 1.90.5	Patta Land	Ms.No.162 Ind. (MMA2) Dt: 14.6.94.	10.08.1994- 09.08.2014	Non operation
2)	LIMESTONE	E.Dhanapal, S/o.Erachi Reddiar, Pathiripatti, Kulithalai Taluk.	Thennilai Vge., Kulithalai Tk.,	806/5 806/6 807/3 Total	0.72.0 1.13.0 1.30.0 3.15.0	Poramboke Patta Patta	Ms.No.88 Ind. (MMA2) dt:29.3.95	17.06.1995- 16.06.2015	Non operation
3)	LIMESTONE	K.Panneerselvam Radha Chemicals, C.39.Cauvery Nagar, Kulithalai.	Thennilai Vge., Kulithalai Tk.	815/1 815/2 815/3 815/ 4A 815/ 4B 815/5 Total	0.19.5 0.37.0 0.58.5 0.57.0 0.53.0 0.79.5 3.04.5	Patta	3(D)No.261 Ind. (MMA.2) dt:20.09.95	31.10.1995- 30.10.2015	Non operation
4)	LIMESTONE	S.Sekar 73. Raja Colony, Collector's Office Rd., Cantonment, Tiruchirappalli-1.	Varavanai Vge. Kulithalai Tk.,	835/3 836 (P) 837/1B Total	0.32 1.41 3.80 5.53 Acr	Patta	3(D)No.292 Ind. (MMA.2) dt:04.10.95	18.11.1995- 17.11.2015	Non operation
5)	LIMESTONE	P.Muthukumaran, 33. Chinnappa Layout, Karungalpalayam, Erode-3.	K.Pitchampatti Karur Taluk.	441/3 (Part)	1.62.0 out of 3.60.5	Patta	Ms.No.64 Ind. (MMA2) dt:2.4.96	18.09.1996- 17.09.2016	Non operation

6)	LIMESTONE	N.Elango, 5/3.East Thiagarajar Polytechnic, Kasakaranur, Salem-5.	K.Pitchampatti Karur Taluk	250/2 (P)	1.38.2	Patta	3(D)No.65 Ind. (MMA2) dt:24.4.97	09.10.1997 08.10.2017	Non operation
7)	LIMESTONE	K. Gopal 22. Pandurenganathan Koil Street, Shevapet, Salem.	Devarmalai Vge Kulithalai Tk.,	5	4.93.5	Patta	3(D)No.66 Ind. (MMA2) dt:22.4.97	09.10.1997- 08.10.2017	Non operation
8)	LIMESTONE	E.Srinivasan, Sri Ambal Limestone Mines, 5/88.Chinnagoullapatti Kannankurichi Post, Salem-8.	PitchampattiVge Karur	380/1 385/1 386/1 386/2 386/3 Total	0.70.0 0.70.0 2.69.5 0.08.0 0.38.5 4.56.0	Patta	3(D)No.71 Ind. (MMA2) dt:30.4.97	09.10.1997- 08.10.2017	Non operation
9)	LIMESTONE	Sri Amara Ores, 48. No.1 Seerangam St., Dadagapatty, Salem	Devarmalai Vge Kulithalai Tk.,	65/2A (P) 66/1 66/2 66/3 (P) Total	0.65.0 0.50.0 0.14.5 1.47.0 2.76.5	Patta	3(D)No.70 Ind. (MMA2) dt:30.4.97.	23.10.1997- 22.10.2017	Non operation
10)	LIMESTONE	T.V.Elayaperumal 14B. Perumal Koil St, Peramanur, Salem.	Varavanai Vge. Kulithalai Tk.	847/3A2 847/3B 847/3C 847/3D 847/3E2 850/1 Total	0.02.0 0.13.0 0.25.5 0.22.0 0.02.0 0.64.5 1.29.0	Patta	3(D)No.83 Ind(MMA2) dt:26.5.97	29.10.1997- 28.10.2017	Non operation
11)	LIMESTONE	N.Subbiah 30.C. Velusamy St., Arisipalayam, Salem.	Varavanai Vge. Kulithalai Tk.	842/1A2 842/1B2 842/1C 842/1D 842/1E2 842/1G	0.07.0 0.06.5 0.39.0 0.38.5 0.05.5 0.37.0	Patta	3(D)No.142 Ind(MMA2) dt:19.8.97	11.12.1997- 10.12.2017	Non operation

				842/1K 842/2 842/1F2 542/1H2 892/1I2 Total	0.14.0 0.69.0 0.05.0 0.05.5 0.04.0 2.31.5				
12)	LIMESTONE	J.M.Mines and Minerals 7/A1 Williams Road, Cantonment, Tiruchirappalli-1	Devarmalai Kulithalai Tk.,	9 (P) 11/3A (P) 11/3B (P) 11/3C (P) 11/3D (P) Total	2.21.0 0.40.5 0.41.0 0.71.5 0.71.0 4.45.0	Patta	3(D)No.111 Ind. MMA2 14.07.1997	10.01.1998- 09.01.2018	Non operation
13)	LIMESTONE	Raj Vignesh Mines and Minerals 84/2 Kannagi Street, Cauvery Nagar, Kulithalai	Thennilai Vge. Kulithalai Tk.	811/2 811/3 Total	1.18.0 1.19.0 2.37.0	Patta	3(D)No.137 Ind (MMA2) dt:7.8.97	04.02.1998 03.02.2018	Non operation
14)	LIMESTONE	Amara Ores 48- 1 Seerangam St., Dadagapatty, Salem.	Devarmalai Kulithalai Tk.,	691/1	2.00.0	Patta	3(D) No. 147 Ind. (MMA2) 26.8.97	04.02.1998 03.02.2018	Non operation
15)	LIMESTONE	M.K.Elango, Salem Chemicals, 14/22, Agraharam, Shevapet, Salem.	Varavanai Kulithalai tk.,	833/1B2 833/4A2 Total	1.21.5 1.13.0 2.34.5	Patta	3(D)No.136 Ind. (MMA.2) dt:7.8.97.	05.02.1998- 04.02.2018	Non operation
16)	LIMESTONE	Divyam Mines and Minerals 1/97. Thoppukadu, Fairlands, Salem-630 016.	Kalladai Vge. Kulithalai Tk.	41/5 41/6 41/7 41/8A 41/10A 41/11A 42/2B 42/2C Total	0.19.0 0.18.0 0.17.0 0.96.5 0.22.0 0.23.0 0.18.0 0.17.5 1.81.0	Patta	3(D)No.207 Ind. (MMA2) dt:10.12.97	23.03.1998- 22.03.2018	Non operation

17)	LIMESTONE	N.Karunanidhi, Sathiya Maligai, Bye Pass Road, Thiruvakavendanur (East), Salem-636 005.	Thennilai Vge., Kulithalai Tk.,	843/1F1 844/6B 844/7B Total	0.40.5 0.55.5 0.04.0 1.00.0	Patta	3(D)No.87 Ind. (MMA2) Dt:29.5.97	28.03.1998- 27.03.2018	Non operation
18)	LIMESTONE	P.Nagarajan, Venkatramanan St., Gugai, Salem	Kaliyapatti Vge., Kulithalai Taluk	321/2A 321/2B Total	1.28.0 1.04.0 2.32.0	Patta	3(D)No.135 Ind. (MMA2) dt:7.8.97	25.07.1998- 24.07.2018	Non operation
19)	LIMESTONE	A.V. Elamurugu, Prop. Mother Earth Minerals No.8 30 feet Road, R.K.Puram, Karur	K.Pitchampatti Karur Tk.	644/2 (P) 645/2 (P) Total	0.74.5 0.27.5 1.02.0	Patta	3(D)No.215 Ind. (MMA2) 16.12.97	14.09.1998- 13.09.2018	Non operation
20)	LIMESTONE	M.Ramkumar, S/o.Muthusamy, No.2 Ashokapuram, Erode	Devarmalai Kulithalai Taluk.	35/2	2.26.5	Patta	3(D) No.30 Industries (MMA2) Dept Dated:3.4.98	24.9.1998- 23.9.2018	Non operation
21)	LIMESTONE	V.P.SakthiVel 184.D.1 Vinayagar Koil St Nedunsalai Nagar, Salem-636 005.	Varavanai Vge., Kulithalai Tk.	539/3A 539/3B 539/3C 539/5 539/3H 540 541/3 541/4 541/5 Total	0.06.5 0.03.5 0.02.5 0.13.0 0.11.5 0.79.0 0.22.5 0.38.0 0.65.0 2.41.5	Patta	3(D)No.92 Ind. (MMA2) dt:10.07.98	26.10.1998- 25.10.2018	Non operation
22)	LIMESTONE	Ragavendra Minerals And Chemicals, No.1. 4 th Cross (west) Annamalai Nagar, Salai Road, Tiruchirappalli.17.	Thennilai Vge., Kulithalai Tk.	809/2 809/3 809/4 809/5 (P) Total	0.42.0 0.40.0 0.42.0 1.27.5 2.51.5	Patta	3(D)No.63 Ind (MMA2) dt:19.05.98	12.11.1998- 11.11.2018	Non operation

23)	LIMESTONE	Ganesh Mineral Industries 10/2-A Main Road, Palayam, Vedachandur Dindigul District	Devarmalai Vge., Kulithalai Tk.,	3/2 P 8/1 (P) 8/2 (P) 8/3 P Total	1.50.5 0.91.0 0.73.5 0.92.0 4.07.0	Patta	DGM's Proc No/15214/ MM4/ 98 dt:22.6.2000	11.12.2000- 10.12.2020	Non operation
24)	LIMESTONE	M.Thangaraj, Mettukadu, Makkiripalayam, Sowdhapuram, Tiruchengode Taluk, Namakkal District	Varavanai Vge., Kulithalai Taluk	636/2 (P) 637/1(P) 711/1 (P) 816/1 (P) 816/2A(P) 817/1(P) Total	0.10.0 0.20.0 1.45.5 0.76.0 0.22.0 1.20.0 3.93.5	Patta	DGM's Proc No/8033/ MM4/ 2000 23.01.2001	13.03.2001- 12.03.2021	Non operation
25)	LIMESTONE	K. Panneerselvam, M/s.Radha Chemicals, C.39 Cauvery Nagar, Kulithalai.	Thennilai Keeranur Kulithalai Taluk	812 903/2B1 Total	3.63.0 1.03.0 4.66.0	Patta	DGM'sProc No.1674/ MM4/98 27.02.2001	26.11.2001- 25.11.2021	Non operation
26)	LIMESTONE	Sree Ganesh Mines, 4A Madurai Road, Tiruchirappalli-620008	Kaliapatti Devarmalai Kulithalai Tk.,	323/6 24/1 Total	2.02.0 1.87.5 3.89.5	Patta	DGM'sProc No.15215/ MM4/1998 24.10.2001	30.01.2002- 29.01.2022	Non operation
27)	LIMESTONE	Tmt. G. Revathi, Sri Mahamuni Mining Com., 17/281-AB-1 M.M. Street Kodaikanal Dindigul District.	Gudalur Vge., Kulithalai Tk.,	837/2A2 838/2A2 839/1 Total	0.36.5 0.88.5 2.11.0 3.36.0	Patta	DGM'sProc No.9137/MM4/200 0 13.11.2001	25.02.2002- 24.02.2022	Non operation
28)	LIMESTONE	P. Murugesan, Pudhuvalasu, Sowdhapuram, Tiruchengode Tk.,	Varavanai Kulithalai Tk.,	815/1 (P) 815/2 (P) 815/3 (P) 815/4 (P) 815/5 (P) 815/6 (P) 815/7 (P)	0.02.0 0.18.0 0.22.5 0.16.0 0.15.5 0.50.0 0.34.0	Patta	DGM'sProc No.8029/ MM4/2000 28.03.2001	08.03.2002- 07.03.2022	Non operation

				815/8 815/9 815/10 (P) 815/11(P) 816/2E(P) 816/2F 817/2(P) Total	0.03.5 0.07.0 0.10.5 0.29.0 0.21.0 0.02.0 1.55.0 3.86.0				
29)	LIMESTONE	C.Senthilkumar, Mayilankadu, Sowdhapuram, Tiruchengode Tk.,	Varavanai Kulithalai Tk.,	635/2A Pt 635/2B Pt 635/2C Pt 636/3 Pt 816/2A Pt 816/2B Pt 816/2C Pt 816/2D Pt 816/2E Pt 817/1P Pt Total	0.07.0 0.06.0 0.06.0 0.09.0 0.09.0 0.45.0 0.48.0 0.50.0 0.79.0 1.35.0 3.94.0	Patta	DGM's Proc No.8030/ MM4/2000 30.03.2001	08.03.2002- 07.03.2022	Non operation
30)	LIMESTONE	M.Murugesan, Angalamman Minerals, 2/103, S.Doctor's colony Sakthipuram, Reddipatty, Salem District.	Melapaguthi Kulithalai Tk.,	337/1 337/4 338/2 Total	0.54.5 0.75.5 0.96.5 2.26.5	Patta	DGM's Proc No.15061/ MM4/ 2000 16.07.2001	08.03.2002- 07.03.2022	Non operation
31)	LIMESTONE	Sri Ganesh Mining Work 1Q2 Jai Nagar, Omalur, Salem District.	Venjamangudalur (East) Aravakurichi Tk.,	1104/1 (P)	4.05.0	Patta	DGM's Proc No.16095/MM4/20 00, 20.11.2001	13.03.2002- 12.03.2022	Non operation
32)	LIMESTONE	Sri Krishna Mining Works, 47-K. Bharathiyar St., Gandhi Nagar, Dharmapuri-1	Venjamangudalur (East) Aravakurichi Tk.,	1104/2 (P)	3.75.0	Patta	DGM's Proc No.16096/MM4/20 00 22.11.2001	13.03.2002- 12.03.2022	Non operation

33)	LIMESTONE	E. Dhanapal, D/364 1 st Cross, Anna Nagar, Thennur, Trichy-17	Melapaguthy Vge., Kulithalai Tk.,	341/1A	1.63.0	Patta	DGM'sProc No.12938/ MM4/2000 05.09.2001	07.06.2002- 06.06.2022	Non operation
34)	LIMESTONE	Balaji Minerals, 10/2 8-A Main Road, Palayam Vedachandur Taluk Dindigul District	Devarmalai Kulithalai Tk.,	12/10	3.15.5	Patta	DGM'sProc No.15216/ MM4/1998 10.01.2001	02.08.2002- 01.08.2022	Non operation
35)	LIMESTONE	M/s. Suriya Mines, 62 Muniappan Koil St., Gugai, Salem – 636 006	Keeranur Vge., Kulithalai Tk	313/2 313/3 313/4 313/5 314/1A 314/1B 314/1C 314/1D 314/1E Total	0.31.0 0.29.0 0.28.0 0.50.0 0.59.0 0.57.0 0.57.0 0.45.0 0.39.5 3.95.5	Patta	DGM'sProc No.8032/ MM4/2000 29.03.2001	03.08.2002- 02.08.2022	Non operation

Sl. No.	Major Mineral	Name of the lessee with address	Village & Taluk	S.F.No.	Extent in hectors	Classification Patta/ Poramboke	G.O. No and date/ Proc. No.	lease Period	Operation/ Non Operation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Quartz & Feldspar	B.Pasupathi, Navamani Traders, 530. Karuppayee Koil Street, Karur	Pungambadi (W) Aravakurichi Tk.,	186/1	0.61.0	Patta	4(D)No.12 Ind.(MMA 2) dt:3.4.96	29.11.1997 28.11.2017	Non operation
2	Quartz & Feldspar	R.M.Raamanathan, 13. Ponnagaram, Manapparai-621 306	Varavanai Vge., Kulithalai Tk.,	178/1C	0.44.0	Patta	3(D)No.219 Ind. (MMA 2) dt:23.12.97	28.03.1998 27.03.2018	Non operation
3	Quartz & Feldspar	M.Selvaraj, 32/H. MGR Nagar, Chinna Andan Koil Rd Karur	Pannapatti Vge., Kulithalai Tk.,	554/1 554/3 554/4 554/9A Total	0.05.0 0.03.0 0.03.0 0.35.0 0.46.0	Patta	3(D)No.172 Ind. (MMA 2) dt:13.10.97	28.03.1998 27.03.2018	Non operation
4	Quartz & Feldspar	Radha Chemicals, C.39.Cauvery Nagar, Kulithalai.	Vadavambadi Kulithalai Taluk	414/2A	0.40.5	Patta	DGM's Proc.1681/MM3/ 2000 26.6.2000	29.11.1998 28.11.2018 (Renewal of lease)	Non operation
5	Quartz & Feldspar	S.P.Vaiyapuri, G.K.Mines, 67. Perumal Koil St., Karur.	Velliyanai (S) Karur Taluk	834/1B	0.75.0	Patta	DGM's Proc.No. 1832/MM3/ 2000 dt:04.8.2000	27.09.2000 26.09.2020	Non operation
6	Quartz & Feldspar	S.P.Vaiyapuri, G.K.Mines, 67. Perumal Koil St., Karur.	Velliyanai (S) Karur Taluk	1862/6	0.76.0	Patta	DGM's Proc.No.1833/ 2000 dt:2.8.2000	28.09.2000 27.09.2020	Non operation

7	Quartz & Feldspar	JVS International, Prop. K.N.Venkateswaran TC.23/805 Sivaprasad, Valiachala Street, Thiruvananthapuram.	Kodanthur (N) Aravakurichi Tk	25/1 26/A1 Total	0.39.0 0.82.5 1.21.5	Patta	DGM's Proc.7437/MM3/ 2000 15.11.2000	19.03.2001 18.03.2021	Non operation
8	Quartz & Feldspar	Lilly Enterprises, 22.A.Ramakrishna Road, Salem-7	Punjaikalakur ichi Aravakurichi	844/1	1.58.0	Patta	DGM's Proc..7351/MM3 2000 dt:26.9.2000	16.04.2001 15.04.2021	Non operation
9	Quartz & Feldspar	Soundappan, 22.A.Ramakrishna Road, Salem-7	Punjaikalakur ichi Aravakurichi Tk.,	843/1B 843/ 2 Total	1.48.5 1.54.0 3.02.5	Patta	DGM's proc.No.152245/ 2000 dt:16.2.2001	09.07.2001 08.07.2021	Non operation
10	Quartz & Feldspar	Karur Mines and Minerals, 1Q2. Jay Nagar, Agraharam Omalur Post, Salem District.	Venjamangu dalur (East) Aravakurichi Tk.,	1281/1 1281/3 Total	1.56.0 0.50.0 2.06.0	Patta	DGM's Proc. Rc.No.13396/MM3/2000 dt:29.3.2001	05.10.2001 04.10.2021	Non operation
11	Quartz & Feldspar	Om Sakthi Granites, C.39. Cauvery Nagar, Kulithalai-639 104	Nagampalli Aravakurichi Tk.,	1231/2	3.44.0	Patta	DGM's proc.1988/MM3/ 98,Dt:2.8.2000	10.10.2001 09.10.2021	Non operation
12	Quartz & Feldspar	M.Faiza Begum, Chithara Mines and Minerals 64. Nehru Nagar, Dindigul	Pungambadi (W) Aravakurichi Tk.,	354/17B	0.65.0	Patta	DGM's Proc.14634/MM3/ 2000 DT:23.6.2001	20.12.2001 19.12.2021	Non operation
13	Quartz & Feldspar	T. Rajeswari, Onthampatti, Nagampalli-639 201	Nagampalli Aravakurichi Tk.	744 (Part)	2.02.0	Patta	DGM's Proc. 2295/MM3/ 2001, Dt;11.02.2002	03.04.2002- 02.04.2022	Non operation

14	Quartz & Feldspar	M/s.Chettinad MB-F Hi Silica Limited, Old Mahabalipuram Rd., Kazhipattur Village, Chengleput Taluk.	Chinthalavadi Krishnarayapuram Tk.,	512/2 512/3 512/4 Total	0.10.0 0.10.0 0.10.0 0.30.0	Patta	DGM's Proc.14846/ MM3/2000 Dt:17.7.2001.	26.04.2002 25.04.2022	Non operation
15	Quartz & Feldspar	Tvl.Samy and Swamy Minerals, 92. LGB Nagar, Karur.	Puthambur Vge., Karur Tk.,	177/2 1.06.0	1.06.0	Patta	DGM's Proc.8856/MM3/ 2001,Dt:6.12.2001.	13.05.2002 12.05.2022	Non operation
16	Quartz & Feldspar	K.Panneerselvam, M/s.Radha Chemicals, C.39, Cauvery Nagar, Kulithalai.	Rajapuram Aravakurichi Tk.,	425/1C 425/ 1D Total	0.88.5 1.02.0 1.90.5	Patta	DGM's Proc.5006/MM3/ 2001 Dt:9.1.2002.	19.07.2002 18.07.2022	Non operation
17	Quartz & Feldspar	Ramayee W/o.Raman, Veppankudi, Kaniyalampatti, Kulithalai Tk.,	Pannapatti Vge., Kulithalai Tk.,	530/1 530/ 2 530/ 3 530/4 Total	0.53.5 0.16.0 0.01.5 0.07.0 0.78.0	Patta	DGM's Proc.8193/ MM3/98 dt:27.3.2001	26.07.2002 25.07.2022	Non operation
18	Quartz & Feldspar	Chettinad MB-F Hi Silica (P) Ltd., Kazhipattur, Chengleput Taluk.	Thennilai (West) Vg Aravakurichi Tk.,	764/2	1.10.0	Patta	DGM's Proc.8961/ MM3/2001 dt.10.1.2002.	30.07.2002 29.07.2022	Non operation
19	Quartz & Feldspar	Chettinad MB-F Hi Silica (P) Ltd., Kazhipattur, Chengleput Taluk.	Thennilai (South) Aravakurichi Tk.,	932/2A	1.21.5	Patta	DGM's Proc.8963/ MM3/2001 dt.11.1.2002	30.07.2002 29.7.2022	Non operation
20	Quartz & Feldspar	S.P. Vaiyapuri, G.K.Mines, 67 Perumal Koil St.,	Uppidamangalam	1108/4 1108/5 Total	0.45.0 0.44.0 0.89.0	Patta	DGM's proc.13934/ MM3/2001 dt.7.3.2002.	31.07.2002 30.7.2022	Non operation

		Karur.	(West)Vge Karur Taluk						
21	Quartz & Feldspar	K. Panneerselvam, Prop. Radha Chemicals, C.39 Cauvery Nagar Kulithalai.	Nagampalli Vge., Aravakurichi Tk.,	1359/B (P)	2.02.5	Patta	DGM's Proc.16423/ MM3/ 2001 dt.01.10.2002	22.11.2002 21.11.2022	Non operation
22	Quartz & Feldspar	K. Panneerselvam, Prop. Radha Chemicals, C.39 Cauvery Nagar Kulithalai.	Nagampalli Vge., Aravakurichi Tk.,	1366/2	1.39.5	Patta	DGM's Proc.16424/MM3/ 2001 dt.30.09.2002.	22.11.2002 21.11.2022	Non operation
23	Quartz & Feldspar	K. Panneerselvam, Prop. Radha Chemicals, C.39 Cauvery Nagar Kulithalai.	Nagampalli Vge., Aravakurichi Tk.,	1361/1	1.21.0	Patta	DGM's Proc.5007/ MM3/ 2001 dt.30.09.2002.	22.11.2002 21.11.2022	Non operation
24	Quartz & Feldspar	K.Ramachandran, S/o.Kasthuri, Kothapalayam, Aravakurichi Taluk, Karur District.	Aravakurichi Village, Aravakurichi Taluk	8/1(Part)	0.81.0	Patta	DGM's Proc.Rc.No.10310/MM3/ 99, Dated:25.10.2002.	11.12.2002 10.12.2022	Non operation
25	Quartz & Feldspar	K.K. Palanisamy, Prop. Southern Minerals and Abrasives, 1/38 Mallamoopanpatti, Ayyanperumalpatti. Salem Dt.,	Pungambadi (W) Aravakurichi Tk.,	428/1	1.01.0	Patta	CGM's Proc.17745/MM3/ 2001 dt:7.11.2002	02.01.2003 01.01.2023	Non operation
26	Quartz & Feldspar	K. Annammal, W/o.Kulandaisamy. 4/53 Thangavel Nagar Reddipalayam, Karur	P. Anaipalayam Aravakurichi Tk.,	220	3.02.5	Patta	CGM's Proc.1045/MM3/ 2002 dt:7.11.2002	08.01.2003 07.01.2023	Non operation
27	Quartz & Feldspar	K.P. Krishnan, 17 P. Rock Fort Nagar, Tiruchirappalli-21	D.Edayapatti Vge., Aravakurichi	395/1A 395/1B(P) Total	0.06.0 1.15.0 1.21.0	Patta	CGM's Proc.2834/ MM3/2002 dt.23.10.2003	29.01.2004- 28.01.2024	Non operation

28	Quartz & Feldspar	Chettinad MB F Hi Silica Pvt., Ltd., Kazhipathur Village Chengleput Tk.,	Tk., Kodanthur Village, Aravakurichi Tk.,	569/1 569/ 2 571/2 571/3 Total	0.81.0 1.16.5 0.92.0 0.40.5 3.30.0	Patta	DGM's Proc.8964/MM6/2001 dt.22.12.2003	26.04.2004-25.04.2024	Non operation
29	Quartz & Feldspar	M/s.Surya Minerals, A.18, Thinnappa Nagar, Pasupathipalayam Post, Karur.	P. Anaipalayam Vge., Aravakurichi	129/B2 130/2A Total	0.85.5 0.36.0 1.21.5	Patta	DGM's Proc.4535/MM6/2002 :dt.22.12.2003	24.05.2004-23.05.2024	Non operation
30	Quartz & Feldspar	S. Sreenivasa Babu, Babu Prasanna Mineral Works, 21 Coimbatore Road, Sengunthapuram Post Karur	Pungambadi (W) Aravakurichi Tk.,	146/1B	1.10.5	Patta	CGM's Proc.12267/MM6/2001 dt.27.02.2004	27.05.2004-26.05.2024	Non operation
31	Quartz & Feldspar	Malaram Minerals Pvt Ltd 652, III Block, 46 th Cross "A" Rajaji Nagar, Bangalore-10	Punjaikalakur ichi Aravakurichi Tk	602/1E 602/1F 602/1J 602/1K1 Total	0.17.0 0.27.5 0.33.6 0.34.3 1.12.4	Patta	CGM's Proc.8643/MM6/2003 dt.01.03.2004.	04.06.2004-03.06.2024	Non operation
32	Quartz & Feldspar	Chettinad MB F Hi Silica Pvt., Ltd., Kazhipathur Vge., Chengleput Tk.,	Nagampalli Vge., Aravakurichi	613/1 613/ 2 Total	0.61.0 0.61.0 1.22.0	Patta	CGM's Proc.3568/MM6/2003 dt.17.3.2004	18.06.2004-17.06.2024	Non operation
33	Quartz & Feldspar	Chettinad MB F Hi Silica Pvt., Ltd., Kazhipathur Village Chengleput Tk.,	Kodanthur (South) Aravakurichi Tk	650/2 651/1 Total	0.85.0 0.20.0 1.05.0	Patta	CGM's Proc. 8962/MM6/2001 dt.2.9.2004	07.01.2005-06.01.2025	Non operation
34	Quartz & Feldspar	Chettinad MB F Hi Silica Pvt., Ltd., Kazhipathur Village Chengleput Tk.,	Kodanthur (North) Aravakurichi Tk.	137/1 (P) 137/2 Total	0.20.0 0.81.0 1.01.0	Patta	CGM's Proc.11522/MM6/2001dt.07.09.2004	07.01.2005-06.01.2025	Non operation

35	Quartz & Feldspar	D. Ramesh Kumar, S/o.R. Duraisamy, D.V.R. Thottam, Pachudiyampalayam, Rasipuram, Namakkal	Nagampalli Vge., Aravakurichi Tk.,	1199/2 1202/1B (P) Total	0.61.0 0.60.5 1.21.5	Patta	DGM's Proc.14331/ MM6/2002 dt.12.04.2005	18.05.2005- 17.05.2025	Non operation
36	Quartz & Feldspar	V.S. Rajesh, 231, S.K.C. Road, Erode- 9	Thennilai (South) Aravakurichi	655/B2	2.02.0	Patta	DGM's Proc.14330/ MM6/2002 dt.09.03.2005	19.08.2005- 18.08.2025	Non operation
37	Quartz & Feldspar	Chettinad MB F Hi Silica Pvt., Ltd., Kazhipathur Village Chengleput Tk.,	Monjanur (East) Village, Aravakurichi Tk.,	306/1B	1.21.5	Patta	DGM's Proc.8642/ MM6/2003 dt.21.06.2005	19.08.2005- 18.08.2025	Non operation
38	Quartz & Feldspar	Chettinad MB F Hi Silica Pvt., Ltd., Kazhipathur Village Chengleput Tk.,	Anjur Village, Aravakurichi Tk.,	618/1C(P)	1.01.0 out of 4.13.0	Patta	DGM's Proc.6403/ MM6/2003 dt.20.07.2005	15.09.2005- 14.09.2025	Non operation
39	Quartz & Feldspar	Chettinad MB F Hi Silica Pvt., Ltd., Kazhipathur Village Chengleput Tk.,	Anjur Village, Aravakurichi Tk.,	619/1 (P) 620 (P) Total	0.90.5 0.11.5 1.02.0	Patta	DGM's Proc.6402/ MM6/2003 dt.20.07.2005	15.09.2005- 14.09.2025	Non operation
40	Quartz & Feldspar	N.R. Vijaya 22L Vivekananda Nagar 10 th Cross, Sengunthapuram, Karur-2	Nagampalli Aravakurichi Tk.,	1091	4.34.0	Patta	DGM's Proc.13214/ MM6/2005 dt.29.07.2005	21.08.2006- 20.08.2026	Non operation
41	Quartz & Feldspar	P. Kumarasamy, 22L Vivekananda Nagar 10 th Cross, Sengunthapuram, Karur-2	Kodanthur (South) Aravakurichi Tk.,	485/B	4.19.0	Patta	DGM's Proc.13215/ MM6/2005 dt.19.05.2006	29.08.2006- 28.08.2026	Non operation
42	Quartz & Feldspar	Jeya Murugan, M/s. Jai Enterprises,	Varavanai Kulithalai Tk.,	404/2 404/3	0.64.5 0.45.5	Patta	DGM's Proc.15601/ MM6/2002	10.09.2007 to 09.09.2027	Non operation

		N0. 2 Ponnagaram, Manapparai – 621 306		404/4 404/5 Total	0.23.5 0.48.5 1.82.0		dt.19.01.2006		
43	Quartz & Feldspar	S.Sreenivasa Babu, Pro. Babu Prasana Mineral Works, Senguthapuram Road, Karur.	Pungambadi west, Aravakurichi Taluk.	199/3(P)	1.08.5	Patta	DGM'S Proc.10595/ MM6/2005 dt.27.07.2007	30.11.2007 to 29.11.2027	Non operation
44	Quartz & Feldspar	Tmt. B.Maheswari, prop. M/s. Nanthini Manufacturing company, 21, Coimbatore Road, Senguthapuram, Karur.	Nanjaikalaku richi, Aravakurichi Tk.,	260/1(P) 261/2(P) Total	0.22.5 0.99.0 1.21.5	Patta	DGM's Proc.10594/ MM6/2005 dt.27.07.2007	03.12.2007 --- 02.12.2027	Non operation
45	Quartz & Feldspar	Tvl.Sanjay Mines, 62/7-N.G.G.O. Nagar, Cauvery Nagar, Kulithaai Taluk, Karur District.	Kallai Village, Kulithalai Taluk.	377/2	1.89.0	Patta	DGM's Proc.7031/ MM6/2007 dt.07.03.2008	14.05.2008 to 13.05.2028	Non operation
46	Quartz & Feldspar	K.A. Santhosh Kumar, S/o.(Late) Arumugam, 283/5, Street, Anna Nagar, Bhavani Taluk, Erode District.	E.R.Puram Village, Aravakurichi Taluk.	147/B2	1.33.5 Hects	Patta	DGM's Proc.11390/MM6/ 2007 dt.17.04.2008	25.06.2008 to 24.06.2028	Non operation
47	Quartz & Feldspar	Tmt. Faiza Begum, Prop. M/s.Chithara Mines & Minerals, 64/77A Municipal Colony, Nehruji Nagar, Dindigul Taluk.	Pungambadi Village, Aravakurichi Taluk.	274/1B 274/2A	1.01.0 0.52.5 1.53.5	Patta	DGM's Proc.1399/ MMb/2007 dt.03.07.2008	22.09.2008 21.09.2028	Non operation

48	Quartz & Feldspar	Thiru.N.Veeramalai, S/o. Nagamma Naickar, Manamettupatti, Easanatham Post, Aravakurichi Taluk, Karur District.	Easanatham Village, Aravakurichi Taluk,	540/2A	1.60.5	Patta	CGM Proc.15090/MM6/ 2007 dt: 5.11.08.	22.12.2008 to 21.12.2028	Non operation
49	Quartz & Feldspar	Thiru. M. Udhaya Kumar, No.55, Srivari Garden, New Siddhapudur, V.K.K.Memon Road, Coimbatore.	Veeriyampal ayam, Krishnarayap uram Tk.,	232/3	2.83.0	Patta	CGM R.C.No.16069/MM6/200 7 dt. 21.11.2008.	24.12.2008 to 23.12.2028	Non operation
50	Quartz & Feldspar	Tmt.M.Shobha, 22/150, Kamarajapuram North Sengunthapuram, Karur.	Nagampalli Village, Aravakurichi Taluk	1275/1	1.58.0	Patta	CGM Proc.No.10969/ MM6/2008, Dated:6.7.2009.	25.09.2009 24.09.2029	Non operation
51	Quartz & Feldspar	Chettinad MB F Hi Silica Pvt., Ltd., Kazhipathur Village Chengleput Tk.,	E.R.Puram Village, Aravakurichi Taluk	159/2	2.22.5	Patta	CGM Proc.No.13118/ MM6/2008, dated:26.8.2009	6.10.2009 5.10.2029	Non operation
52	Quartz & Feldspar	Chettinad MB F Hi Silica Pvt., Ltd., Kazhipathur Village Chengleput Tk.,	Kodanthur Village, Aravakurichi Taluk	574/1B etc.,	1.62.0	Patta	CGM Proc.Rc.No.10596/MM6/ 2005, Dated:25.8.2009	6.10.2009 5.10.2029	Non operation
53	Quartz & Feldspar	Chettinad MB F Hi Silica Pvt., Ltd., Kazhipathur Village Chengleput Tk.,	Nagampalli Village, Aravakurichi Taluk	1216/1A etc.,	3.54.5	Patta	CGM Proc.No.3624/MM6/200 7, Dated:03.07.2009	12.10.2009 11.10.2029	Non operation
54	Quartz & Feldspar	Chettinad MB F Hi Silica Pvt., Ltd., Kazhipathur Village Chengleput Tk.,	Kodanthur (North) Aravakurichi Taluk	64/1,2	1.13.5	Patta	CGM Pro Rc.No.10597/MM6/2005, Dated:28.5.2009.	12.10.2009 11.10.2029	Non operation
55	Quartz &	Tvl.Asphire Minerals,	Sengal	385/1,2	1.19.0	Patta	CGM	22.12.2009	Non

	Feldspar	B-6 11 th Cross Thillai Nagar, Trichy.	Village, K.R.Puram Taluk				Proc.Rc.No.15091/MM6/ 2007, Dated:02.07.2009	21.12.2029	operation
56	Quartz & Feldspar	Sukumaran, S/o.Kamalakanan, No.3, Beerjath Subthar Street, Arcot, Arcot Taluk, V\Vellore District.	Pillur Village, Kulithalai Taluk	<u>38/1C</u>	<u>1.00.0</u>	Patta	CGM Proc Rc.No.14808/MM6/2007, Dated:02.07.2009	24.12.2009 23.12.2029	Non operation
57	Quartz & Feldspar	Thiru.R.Prabhakaran, S/o.Ramasamy, Panduthakaran pudhur Manmangalam Post, Karur District.	Aravakurichi Taluk, Elavanue Village	118/1A 118/5A	1.02.20 <u>0.73.0</u> <u>1.75.0</u>	Patta	DGM Proc 9382/MM6/2009, Dt:31.5.2013	20.11.2013 to 19.11.2033	Non operation
58	Multicolour Granite	Tvl.TAMIN Ltd., 31.Kamarajar Salai Chepauk Chennai-5	Thogamalai Vge., Kulithalai Tk.,	276/2 (Part)	3.47.5 out of 8.36.0	Government Poramboke land Rule – 8 C	3(D)No.22 Ind. (MME2) Dept., dt:19.7.2002	26.08.2002 – 25.08.2022	Operation
59	Multicolour Granite	Tvl.TAMIN Ltd., 31.Kamarajar Salai Chepauk Chennai-5	Thogamalai Vge., Kulithalai Tk.,	239 (Part)	0.80.0 out of 20.22.5	Government Poramboke land Rule – 8 C	3(D)No.22 Ind. (MME2) Dept., dt:7.8.2003	22.03.2003- 21.02.2023	Non Operation
60	Multicolour Granite	Tvl.TAMIN Ltd., 31.Kamarajar Salai Chepauk Chennai-5	Thogamalai Vge., Kulithalai Tk.,	276/2 (Part)	4.18.5 out of 8.36.0	Government Poramboke land Rule – 8 C	(MS)No.97 Ind. (MME1) Dept., dt:6.10.2003	27.12.2003- 26.12.2023	Operation
61	Multicolour Granite	Tvl.TAMIN Ltd., 31.Kamarajar Salai Chepauk	Naganur Vge., Kulithalai Tk.,	120 (Part)	10.12.0 out of 10.63.5	Government Poramboke land	Go (MS)No.14 Ind. (MME1) Dept., dt:27.1.2005	27.01.2005- 26.01.2025	Operation

		Chennai-5				Rule – 8 C			
62	Multicolour Granite	Tvl.TAMIN Ltd., 31.Kamarajar Salai Chepauk Chennai-5	Naganur Vge., Kulithalai Tk.,	163	0.92.5	Government Poramboke land Rule – 8 C	Go 3(D) no.70. Idustries MME1 Department Dt:22.10.2008	18.12.2008 to 17.12.2038	Non Operation
63	Multicolour Granite	Millennium Granites, 127-B Cauvery Nagar, Kulithalai	Kodaiyur Village Aravakurichi Tk.,	649/2 650/2 650/4 Total	1.48.0 0.09.5 1.12.0 2.69.5	Patta	3(D) No.1 Ind. (MMB2) Dept., dt:04.01.2001	09.02.2001 – 08.02.2021	Non Operation
64	Multicolour Granite	Tvl. Maducon Granites, 1/7-70 jublipura Khamma Andhrapradesh.	K/Pitchampat ti, Karur Taluk.	424/2A 424/3A Total	0.50.0 0.88.5 1.38.5	Patta	3 (D) No.81/Ind. (MMB 11) Dept. dt: 4.11.2008.	5.12.2008 to 04.12.2028	Operation
65	Multicolour Granite	Thiru.K.S.Raja Mahendran, Kudeer 2nd Floor, Valmiki Nagar, Thiruvanimiyur, Chennai.	K.Pitchampat ti Village, Karur Taluk.	423/17 423/3 423/4 423/5 423/6 423/7B 452/15 452/16 452/17 452/22B Total	0.22.0 0.02.5 0.02.5 0.01.5 0.02.5 0.05.5 0.50.0 0.61.5 0.28.0 0.53.5 2.29.0	Patta	3(D) No.25 /Ind/MMB2/Dept, Dated:27.05.2010.	14.06.2010 to 13.06.2030	Non Operation
66	Multicolour Granite	Thiru.R.Anupkumar Lohia, 2/467, 6th Main Road, Gomathipuram. Madurai.	K.Pitchampat ti Village, Karur Taluk.	442/3 (Part)	4.80.0	Patta	G.O.(3D)No.15,Industries (MMB2) Department, dated :22.06.2012.	05.07.2012 to 04.07.2032	Operation
67	Multicolour Granite	Tvl.Blue Horse Granite Survey No.133-1	Aravakurichi Taluk	519/1 Part	01.03.0	Patta	Go.No(3D) No.42 Industries (MMB2)	05.07.2013 to 04.07.2033	Operation

		2A Slvagangai Main Road Near Arabic College Varichur, Madurai District .	inunganoor Village				Department Dt:20.09.2010		
68	Multicolour Granite	Tvl. Booma Stone Metals No.85 South Street Pasupathipalayam Post, Karur Taluk Karur District.	Karur Taluk Paganatham Village	292/5 292/6 292/7 292/8 Total	0.26.0 0.21.5 0.15.5 0.65.5 1.28.5	Patta	Go No 3(D) No.21 Industries (MMB2) Department Dt:16.07.2014	22.08.2014 to 21.08.2034	Operation
69	Multicolour Granite	M. Gandhi, Karattupatti, Andipatti Taluk Theni District	Thogamalai Village Kulithalai Taluk	279/2A	0.75.5	Patta	3(D) No. 108 Ind. (MMB2) Dept., dt:29.12.2000	30.10.2001 – 29.10.2021	Non Operation
70	Multicolour Granite	P.R.P. Granites, Keelavalavu Post Melur Taluk Madurai District.	Kalugur Village Kulithalai Taluk	540/6C 540/6D Total	0.50.5 0.49.5 1.00.0	Patta	3(D) No. 112 Ind. (MMB2) Dept., dt:29.12.2000	30.10.2001- 29.10.2021	Non Operation
71	Multicolour Granite	P.R.P. Granites, Keelavalavu Post Melur Taluk Madurai District.	Kalugur Village Kulithalai Taluk	536/1 536/4A 537/1B Total	0.71.0 0.20.5 0.65.5 1.57.0	Patta	3(D)No. 15 Ind. (MMB2) Dept., dt:14.02.2001	30.10.2001- 29.10.2021	Non Operation
72	Multicolour Granite	P.R.P. Granites, Keelavalavu Post Melur Taluk Madurai District.	Kalugur Village Kulithalai Taluk	902/2A2	2.16.5	Patta	3(D)No. 109 Ind. (MMB2) Dept., dt:29.12.2000	30.10.2001- 29.10.2021	Non Operation
73	Multicolour Granite	K. Yusuff Basha, 4/59 Bharathi Street, Swarnapuri, Salem	Naganur Village Kulitahali Taluk	164/1A 164/2A1 164/2A2 164/3 164/2A5	0.07.0 0.27.5 0.29.5 0.30.0 0.06.0	Patta	3(D)No. 111 Ind. (MMB2) Dept., dt:29.12.2000	20.06.2002- 19.06.2022	Non Operation

			Thogamalai Village	449/8 279/1A Total	0.27.0 0.61.0 1.88.0				
74	Multicolour Granite	E. Rengar, Pathiripatti, Kulithalai Tk Karur District.	Thogamalai Village Kulithalai Taluk	240 (Part)	0.20.0	Patta	Go No. 7 Ind. (MMB2) Dept., dt:02.02.2001	20.06.2002-19.06.2022	Operation
75	Multicolour Granite	Sri Balaji Granites, 21/7A, Chathram St, Trichy Road, Thogamalai Kulithalai Taluk. Karur District.	Kalugur Village Kulithalai Taluk	843/3C1	1.16.0	Patta	Go No. 20 Ind. (MMB2) Dept., dt:28.07.2003	23.09.2003-22.09.2023	Non Operation
76	Multicolour Granite	G.V. Granites, 19 G Main Road, Thogamalai, Kulithalai Taluk Karur District.	Naganur Village Kulithalai Taluk	160/2B 160/5A 160/5C 449/1B Total	0.62.5 0.60.0 0.04.5 0.12.0 1.39.0	Patta	3(D) No. 84 Ind. (MMB2) Dept., dt:10.08.2004	21.09.2004-20.09.2024	Operation
77	Multicolour Granite	P.R.P. Exports, Velu Complex, Madurai Main Road, Melur, Madurai Dist	Naganur Village Kulithalai Taluk	158/1A 158/1E 160/1A1 160/1A2 160/1A3 160/1B1 160/1B2 160/1B3 160/1B4 449/1A 449/2A 449/2B 449/4C1	0.04.0 0.12.0 0.09.0 0.18.5 0.18.0 0.20.5 0.06.0 0.02.0 0.07.0 0.50.5 0.09.5 0.27.0 0.26.0	Patta	3(D)No.113 Ind. (MMB2) Dept., dt:21.12.2004	21.01.2005-20.01.2025	Non Operation

				Total	2.10.0				
78	Multicolour Granite	P.R.P. Exports, Velu Complex, Madurai Main Road, Melur, Madurai Dist	Naganur Village Kulithalai	149/1B1 (P) 149/3A1 (P) 149/3B (P) 150 (P) Total	0.05.0 0.08.0 1.33.0 0.55.5 2.015	Patta	3(D)No. 13 Ind. (MMB2) Dept., dt:14.03.2005	08.06.2005-07.06.2025	Non Operation
79	Multicolour Granite	P.R.P. Granites, Keelavalavu Post Melur Taluk Madurai District.	Naganur Village Kulithalai Taluk	119/1	1.35.5	Patta	3(D)No. 71 Ind. (MMB2) Dept., dt:21.07.2005	28.07.2005-27.07.2025	Non Operation
80	Multicolour Granite	P.R.P. Exports, Velu Complex, Madurai Main Road, Melur, Madurai Dist	Kalugur Village Kulithalai Taluk	539/4 540/1 541/3 (P) 541/4 (P) 541/5 (P) Total	0.09.5 0.80.5 0.18.0 0.07.5 0.06.5 1.22.0	Patta	3(D)No. 67 Ind. (MMB2) Dept., dt:21.07.2005	28.07.2005-27.07.2025	Non Operation
81	Multicolour Granite	E. Rengar, Pathiripatti, Kulithalai Taluk	Thogamalai Village Kulithalai Taluk	240 (Part)	0.81.0	Patta	3(D)No. 37 Ind. (MMB2) Dept., dt:01.06.2005	16.08.2005 – 15.08.2025	Non Operation
82	Multicolour Granite	M. Gandhi, S/o.Masanam Karattupatti Andipatti Tk., Theni Dist.	Kalugur Village Kulithalai Taluk	536/2A2 536/3 536/4B Total	0.50.5 0.50.0 0.33.0 1.33.5	Patta	3(D)No. 75 Ind. (MMB2) Dept., dt:02.11.2006	14.11.2006-13.11.2026	Non Operation
83	Multicolour Granite	M. Singaram, 21/B Chathiram St	Naganur Village	161/3 449/6	0.68.5 0.32.5	Patta	3(D) No. 4 Ind. (MMB2) Dept.,	03.02.2007 – 02.02.2027	Non

		Thogamalai Kulithalai Taluk	Kulithalai Taluk	Total	1.01.0		dt:05.01.2007		Operation
84	Multicolour Granite	M. Singaram, 21/B Chathiram St Thogamalai Kulithalai Taluk	Naganur Village Kulithalai Taluk	148/1F2 (P) 160/2A1 160/.3 160/4 Total	0.61.0 0.07.5 0.25.0 0.08.0 1.01.5	Patta	3(D) No.84 Ind. (MMB1) Dept., dt:14.11.2006	06.07.2007 – 05.07.2027	Non Operation
85	Multicolour Granite	M/s. P.R.P. Exports, Tberkkutheru Village, Metur, Madurai District.	Naganoor, Kulithalai.	149/3B (Part) 150(Part) Total	0.83.0 1.00.0 1.83.0	Patta	3(D) No.94/Ind. (MMB 11/ Dept. dt: 27.11.2008.	17.12.2008 to 16.12.2028	Non Operation
86	Multicolour Granite	M/s. P.R.P. Exports, Tberkkutheru Village, Metur, Madurai District.	Veeriyampala yam K.R.Puram Taluk.	25/4A2 25/4B2 26/1A 26/1B 26/1C 26/1D 26/1E 26/1F 26/2A 26/2B 26/2C 26/2D 26/2E 26/2F 26/2G1 43/1 Total	0.20.0 0.20.0 0.17.0 0.07.0 0.20.0 0.17.5 0.19.0 0.20.5 0.25.0 0.10.0 0.27.5 0.23.5 0.25.5 0.26.0 0.37.0 1.62.0 4.77.5	Patta	3(D) No.91, Ind. /MMB11 dept. dt: 27.11.2008	17.12.2008 to 16.12.2028	Non Operation
87	Multicolour Granite	M/s. P.R.P. Exports, Tberkkutheru Village,	Naganoor, Kulithalai	123/4 134/1	0.83.5 1.11.5	Patta	3(D) No.96/Ind. MMB11/Dept. dt:	17.12.2008 to 16.12.2028	Non Operation

		Metur, Madurai District.	Taluk.	Total	1.95.0		27.11.2008		
88	Multicolour Granite	M. Gandhi, S/o. Masanam, Karuttupatti Village, Andipatti Taluk, Teni district.	Naganoor, Kulithalai Taluk.	135/1A 136/1A 136/2 Total	1.88.5 0.73.0 0.31.5 2.93.0	Patta	3(D) No.123/Ind. MMB11 Dept. dt: 10.12.2008.	25.12.2008 to 24.12.2028	Non Operation
89	Multicolour Granite	Thiru. M.Gandhi, S/o. Masanam, Karuttupatti Village, Andipatti Taluk, Theni Dist.	Veeriyapalay am K.R.Puram Taluk.	44/2B 44/2C 44/2D 44/2E Total	0.20.0 0.19.5 0.41.0 0.97.5 1.78.0	Patta	3(D) nO.116/iND. mmb11 dEPT. DT: 10.12.2008.	26.12.2008 TO 25.12.2028	Non Operation
90	Multicolour Granite	Thiru E.Dhanapal S/o Errachi Rddiyar Old NO D/364 New No.D/11 Ukkara Kaliamman Street Anna Nagar Thennur , Trichy District.	Krishnarayap uram Taluk Veeriyapalay am Village	74/2 74/3A1A 74/3A1B 74/3A2 74/3B 75/2A1 75/1A 75/2A2 75/2B 75/3B 75/3D Total	0.89.0 0.08.5 0.40.5 0.20.0 0.20.0 0.61.0 0.27.0 0.75.5 0.40.0 0.26.5 0.81.0 4.89.0	Patta	Go 3(D) No. 3 Industries (MMB2) Department Dt:12.02.2014	21.02.2014 to 20.02.2034	Operation
91	Multicolour Granite	Thiru.P.Sathish Kumar S/o Paranasivam 22 Sastha Illam Ponnagaram Broadway, Madurai	Kadavur Taluk Pannappatti Village	481/1(P) 482/4(p) 482/5(P) Total	0.08.0 0.67.5 0.35.5 1.11.0	Patta	Go No 3(D) Industries (MMB2) Department Dt:28.02.2014	04.03.2014 to 03.03.2034	Operation

92	Multicolour Granite	Tvl.S.R.P. Rock Exports, 12/51, Maruthapandiyar Street, K.K.Nagar, Madurai	Karur Taluk, K.Pitchampat ti Village	394/1B2 394/2 397/4	3.60.0	Patta	G.O.3(D) No.27, Industries (MMB2), Department, Dated:19.10.2015.	29.11.2016 to 28.11.2036	Operation
93	Multicolour Granite	M/s.M.P. Granite, No.131/29, R.R. Complex, Kollapatti, Animoor Post, Tiruchengode Taluk, Namakkal District	Karur Taluk, K.Pitchampat ti	343/1B, 343/2, 343/3, 343/4, 343/5, 343/6, 343/7, 343/8, 343/9, 343/10(P)34 3/11B (P), 344/A1, 354/A2, 354/A3, 354/A4, 354/A5, 354/B1A, 354/B13, 354/B14, 354/B15, 354/B16 Total	0.69.0 0.20.0 0.22.0 0.04.5 0.02.5 0.01.5 0.02.5 0.03.5 0.26.5 0.10.5 0.10.0 0.14.0 0.06.5 0.06.5 0.07.0 0.06.5 0.10.5 0.14.0 0.01.5 0.02.0 0.02.5 2.43.5	Patta	G.O.3(D) No.10, Industries (MMB2), Department, Dated:23.01.2016.	15.02.2016 14.02.2036	Operation
94	Multicolour Granite	Tmt.V.Shanthi, W/o.P.Velusamy, Kunnagoundampatty, Cudalore Village, Kulithalai Taluk, Karur District.	Krishnarayap uram Taluk, Sivayam (South) Village	1116/ 1A 1116/2	2.13.5	Patta	G.O.3(D) No.68, Industries (MMB2), Department, Dated:28.11.2016.	09.12.2016 to 08.12.2036	Operation
95	Multicolour Granite	M/S.Himalaya Enter Prises 255/C4 Anna Nagar	Kulithalai Taluk	544/1H2 549/2A1	3.31.5 0.23.0	Patta	Go No 3(D) No.11 Industries (MMB.2)	18.08.2017 to 17.08.2037	Operation

		Pillaiyar Koil Street Kulithalai Taluk, Karur District.	Gudalur Village	Total	<u>3.54.5</u>		Department Date: 11.08.2017		
96	Multicolour Granite	Thiru E.Dhanapal S/o Errachi Rddiyar Old NO D/364 New No.D/11 Ukkara Kaliamman Street Anna Nagar Thennur Trichy District.	Aravakurichi Taluk Venjamangu dalur East	1079/2B2 1081/1B 1086/A2B 1087/2B Total	2.38.0 1.05.0 0.74.0 0.08.0 <u>4.25.0</u>	Patta	Go No 3(D) No.7 Industries (MMB.2) Department Date: 11.08.2017	18.08.2017 to 17.08.2037	Operation
97	Multicolour Granite	M/S.PRS Granite D.No. Old No.7/2A New No.88 Gnanagiri Road Sivagasi	Kadavur Taluk Thennilai Village	775/3 775/4D 775/4A 790/1 775/1F 775/4F 775/1E 775/4H 775/4C 775/4E 775/4G 775/1G 775/1HB 775/4B2 Total	0.18.0 0.61.0 0.33.5 0.45.0 0.05.5 0.31.0 0.04.0 0.06.5 0.14.0 0.03.5 0.14.0 0.03.0 0.17.5 0.08.2 <u>2.64.7</u>	Patta	Go No 3(D) No.09 Industries (MMB.2) Department Date: 11.08.2017	18.08.2017 to 17.08.2037	Operation
98	Multicolour Granite	M/s M.P.Granite No.131/29 R.R.Complex Kollapatti Animoor Post Tiruchengodu Taluk Namakkal District.	Karur Taluk K.Pitchampat ti Village	260/A1 260/A2 260/A3 260/B1 260/B2 260/B3 260/C 262/A3(P) 262/A4	0.03.5 0.27.5 0.25.5 0.27.5 0.14.0 0.12.5 0.17.0 0.59.5	Patta	Go No 3(D) No.10 Industries (MMB.2) Department Date: 11.08.2017	18.08.2017 to 17.08.2037	Operation

				(P) 262/A5	0.29.0				
				(P) 262/A6	0.36.5				
				(P) 262/A7	0.78.0				
				262/A8 (P)	0.11.0				
				262/B1	0.16.0				
				262/B2	0.05.5				
				Total	0.38.5				
					4.01.5				
99	Multicolour Granite	Thiru.K.Sakthivel S/o. Karuppannan Porunthalur Village Kulithalai Taluk Karur District.	Kulithalai Taluk Nallur Village	351	2.51.5	Patta	Go No 3(D) No.12 Industries (MMB.2) Department Date: 11.08.2017	05.09.2017 to 04.09.2037	Operation
100	Multicolour Granite	Thiru.P.Ramachandran S/o.Paramasivam 12 Bharathiyar 5 th Steet SS Colony Ward – 18 Madurai District.	Karur Taluk K.Pitchampat ti Village	407/1 407/2 407/3 PART 407/4 408/3 408/4 PART Total	1.09.0 0.45.5 0.32.5 0.05.5 0.44.0 0.48.0 2.84.5	Patta	Go No 3(D) No.37 Industries (MMB2) Department Date: 19.07.2016	05.08.2016 to 04.08.2036	Operation
101	Multicolour Granite	Thiru.S.Ramachandran Proprietor M/s.Sand Rock Impex Old No D/364, New No. D/11 Ukkirakaliamman Kovil Street, Anna Nagar, Thennur Trichy	Krishnarayap uram Taluk Sengal Village	177/3 178/4 188/1 Part Total	1.61.0 1.57.5 1.71.5 4.90.0	Patta	Go No 3(D) No.49 Industries (MMB2) Department Date: 25.07.2016	09.08.2016 to 08.08.2036	Operation

102	Rough Stone and Gravel	Tvl.Ravi Blue Metals, S.F.No.2230, Door No.2E, Apple House, Ramanujam Nagar (South), Anna Nagar (West), Karur District	Aravakurichi Taluk, P.Anaipalayam Village	454/B (Part) 455/A1 455/A2 456/1A 456/1B 456/2A 456/2B1 456/3A 461/1A (Part)	4.94.0	Patta	Rc.No.199/ Mines/2012, Dt:29.04.2013	29.04.2013 to 28.04.2018	Operation
103	Rough Stone and Gravel	Tvl.Christy Blue Metals, 2/175, Rasipuram Main Road, Sappayapuram Post, Trichengode Taluk, Namakkal District.	Aravakurichi Taluk Thennilai (West) Village	522/C	2.34.0	Patta	Rc.No.198/ Mines/2012, Dt:09.05.2013	09.05.2013 to 08.05.2018	Operation
104	Rough Stone and Gravel	Tvl.Bala Blue Metals, Pavithram Village, Aravakurichi Taluk, Karur District.	Aravakurichi Taluk, Pavithiram Village	242/1 242/2 242/3 343/C	2.68.5	Patta	Rc.No.108/ Mines/2012, Dt:14.05.2013	14.05.2013 to 13.05.2018	Operation
105	Rough Stone and Gravel	Thiru.M.Sundarrajan, S/o.Marappa Gounder, 318, Bharathi Nagar, Enam Karur, Karur District.	Aravakurichi Taluk, Punnam Village	971/A2	1.69.0	Patta	Rc.No.114/ Mines/2012, Dt:24.05.2013	24.05.2013 to 23.05.2018	Operation
106	Rough Stone and Gravel	Thiru.P.Ramalingam, S/o.Ponnusamy Gounder, Kattumunnur Post, Aravakurichi Taluk, Karur District.	Aravakurichi Taluk Thennilai (East) Village	884/2 885/4B 889/1A 889/1C 884/1B	2.19.0	Patta	Rc.No.73/ Mines/ 2012, Dt:3.6.2013	03.06.2013 to 02.06.2018	Operation
107	Rough Stone and Gravel	Thiru.P.Kulanthaisamy S/o.Palaniappa Gounder, 3/1, Periyar Nagar, L.N.S. Post,	Karur Taluk Athur Village	676/1 677 678 692/B1	2.45.0	Patta	Rc.No.46/ Mines/2012, Dt:06.06.2013	06.06.2013 to 05.06.2018	Operation

		Karur District.							
108	Rough Stone	Thiru.R.Alagar, S/o.Rengasamy, Veeriyapatti, Kaniyalampatti Post, Manjanaickenpatti Vge, Kadavur Taluk, Karur District.	Kadavur Taluk, Manjanaickenpatti Village	637/2B (Part)	0.89.0	Patta	Rc.No.302/ Mines/2011, Dt:08.06.2013	08.06.2013 to 07.06.2018	Operation
109	Rough Stone and Gravel	Thiru.V.Rasappan, S/o.Velappa Gounder, 103-B Pari Nagar, Chinna Andan Kovil Salai, Karur District.	Aravakurichi Taluk, Kuppam Village	1099/3 and 1099/4	3.30.5	Patta	Rc.No.199/ Mines/2011, Dt:11.06.2013	11.06.2013 to 10.06.2018	Operation
110	Rough Stone	Thiru.P.Gopal, S/o.Pappu Reddiyar, Pathiripatti Village, Thogamalai (Via), Kulithalai Taluk, Karur District.	Kulithalai Taluk, Pathiripatti Village	286/2B2B (Part) 356/2	2.90.5	Patta	Rc.No.232/ Mines/2012, Dt:13.06.2013	13.06.2013 to 12.06.2018	Operation
111	Rough Stone	Thiru.P.Devaraj, S/o.Pichaimuthu, Puliyampalayam, Punnamchadram Post, Karur District.	Aravakurichi Taluk, Kuppam Village	104/2A 104/1 105/1A and 105/2	2.14.5	Patta	Rc.No.238/ Mines/2011 Dt:19.06.2013	19.06.2013 to 18.06.2018	Operation
112	Rough Stone	Thiru.S.Rajeshkumar, S/o.Subramaniam, 267/2 Sindhu Nagar, Andankovil Keelpagam, Karur District.	Aravakurichi Taluk, Kuppam Village	1160/1A and 1160/2A	2.33.5	Patta	Rc.No.190/ Mines/2012, Dt:20.06.2013	20.06.2013 to 19.06.2018	Operation
113	Rough Stone	Tvl.N.T.C. Blue Metals, Thiru.S.Muthusamy	Aravakurichi Taluk Kuppam Village	494/2	3.85.5	Patta	Rc.No.225/ Mines/2012,	26.06.2013 to	Operation

		Director, No.97 (Old No.47), Lingichetti Street, Chennai.					Dt:26.06.2013	25.06.2018	
114	Rough Stone	Tmt.M.Jeyamani, w/o.Manokaran, Punnam Nadupalayam, Aravakurichi Taluk, Karur District	Krishnarayapuram Taluk, Sivayam (North) Village	30/4 31/1 31/3 31/4	1.70.5	Patta	Rc.No.249/ Mines/2012, Dt:28.06.2013	28.06.2013 to 27.06.2018	Operation
115	Rough Stone	Thiru.R.Dhanuskodi, S/o.Rengasamy Naicker, H1/12, R.M. Nagar, Dindigul District.	Aravakurichi Taluk Alamarathupatti Village	311/2	1.06.0	Patta	Rc.No.299/ Mines/2011, Dt:28.06.2013	28.06.2013 to 27.06.2018	Operation
116	Rough Stone	Thiru.N.Sakthivel, S/o.Nallappa Gounder, 4/82, Andipatti, Kuppam Post, Aravakurichi Taluk, Karur District.	Aravakurichi Taluk Kuppam Village	105/1B 112/2A	2.52.0	Patta	Rc.No.40/ Mines/2012, Dt:16.07.2013	16.07.2013 to 15.07.2018	Operation
117	Rough Stone	Tvl.I Blue Minerals Private Limited, No.9, Rayapandaram St, Avinasi Road, Trippur District.	Aravakurichi Taluk Nadanthai (North) Village	968/1 967/1A 970 (Part) 971 (Part)	4.07.5	Patta	Rc.No.376/ Mines/2012, Dt:18.07.2013	18.07.2013 to 17.07.2018	Non- Operation
118	Rough Stone	Ganesh Murugan Blue Metals, 268 Karudayampalayam Aravakurichi Taluk Karur District.	Aravakurichi Taluk Karudayampalaya m Village	264/12 264/13 274/1 274/5	3.94.5	Patta	Rc.No.92/ Mines/2012 Dt:8.8.2013	08.08.2013 to 07.08.2018	Operation

119	Rough Stone	K.Subramanian S/o.Karuppasamy, No.14/29 Lakshmipuram South, Karur Taluk & District	Aravakurichi Taluk Thukkatchi Village	452/1 452/2 452/3	4.12.5	Patta	Rc.No.271/ Mines/2012 Dt.3.9.2013	3.09.2013 to 02.09.2018	Operation
120	Rough Stone	R.Palanisamy, S/o.Ramasamy, 19/201F Kalipalayam Panjamadevi Post Karur District.	Karur Taluk, Panjamadevi Village	760/2A	0.21.5	Patta	Rc.No.244/ Mines/2011 Dt:6.9.2013	06.09.2013 to 05.09.2018	Operation
121	Rough Stone	Tvl.Selvakumar Blue Metals, S.F.No.102, Gudalur Melpagam, Uthukaraipalayam, Gudalur Post, Aravakurichi Taluk, Karur District.	Aravakurichi Taluk Gudalur Melpagam Village	102 (Part)	1.87.0	Patta	Rc.No.301/ Mines/2011, Dt:09.10.2013	09.10.2013 to 08.10.2018	Operation
122	Rough Stone	Thiru.G.Kamaraj S/o.Gopal Kavalkaranpatti, Vadaseri Village, Kulithalai Taluk, Karur District.	Kulithalai Taluk, Vadaseri Village	254/1 255/1A	1.59.0	Patta	Rc.No.43/Mines/201 2 Dt:27.11.2013	27.11.2013 to 26.11.2018	Operation
123	Rough Stone	Thiru.V.Muthaiah S/o.Veeramalai, Therappadi, Pungambadi West Post, Aravakurichi Taluk, Karur District.	Aravakurichi Taluk Pungambadi (West) Village	222/2	3.17.0	Patta	Rc.No.65/Mines/201 2 Dt:29.11.2013	29.11.2013 to 28.11.2018	Operation
124	Rough Stone	S.S.M. Blue Metals, Vathrikaradu Pathai, Pungambadi Melpagam	Aravakurichi Taluk Pungambadi (West) Village	185/1 (Part) 185/2A (Part) 185/2B (Part)	3.83.0	Patta	Rc.No.362/Mines/20 12 Dt:29.11.2013	29.11.2013 to 28.11.2018	Operation

		Village, Aravakurichi Taluk, Karur District.		192/2 194/2					
125	Rough Stone	Thiru.R.Chidambaram, S/o.Ramasamy Pothiyampallam, Karuppampalayam, Karur Taluk & District	Karur Taluk, Paganatham Village	283/2B 284/1A 284/1B 284/2B	4.67.0	Patta	Rc.No.295/Mines/20 12 Dt:06.12.2013	06.12.2013 to 05.12.2018	Operation
126	Rough Stone	Thiru.S.Muthusamy, S/o.Subramaniam, Viswanathapuri, Pavitham Post, Aravakurichi Taluk, Karur Dt	Aravakurichi Taluk, Kodanthur (South) Village	614 (Part) 615/1 (Part) 629/1 (Part)	4.05.5	Patta	Rc.No.30/Mines/201 2 Dt:24.12.2013	24.12.2013 to 23.12.2018	Operation
127	Rough Stone	Thiru.K.M.Gurusamy, No.2/90 Ayyanur, Punnam Post, Aravakurichi Taluk, Karur District	Aravakurichi Taluk, Punnam Village	1092/2A2 1092/2B 1093/2A2 1093/2B 1094/2A2 1094/2B	1.78.5	Patta	Rc.No.363/Mines/20 12 Dt:30.12.2013	30.12.2013 to 29.12.2018	Operation
128	Rough Stone	K.Thirunavukarasu, S/o.Karuppiyah, 450/A College Road, Pothanur, Paramathi Velur Taluk, Namakkal District	Aravakurichi Taluk, Karudayampalaya m Village	527	3.80.5	Patta	Rc.No.285/Mines/20 13 Dt:31.01.2014	31.01.2014 to 30.01.2019	Operation
129	Rough Stone	Thiru.N.Saminathan, S/o.Nachappa Gounder, Mangalapatti Post, Kangeyam Taluk, Thiruppur District	Aravakurichi Taluk, Thennilai (South) Village	175/1	1.92.0	Patta	Rc.No.78/Mines/201 2 Dt:27.02.2014	27.02.2014 to 26.02.2019	Operation
130	Rough	R.Gunasekaran,	Aravakurichi Taluk,	492/A1	3.99.5	Patta	Rc.No.611/Mines/20	02.06.2014	Operation

	Stone	S/o.Ramasamy, K.V.B.Nagar, Andankovil West Village, Karur Taluk & District.	Kodanthur (South) Village	492/A2 492/A3 492/B1 492/B2			14 Dt:2.06.2014	to 01.06.2019	
131	Rough Stone	M.Palaniyandi, S/o.Mottaiyandi, 2/34, Ambalakkara Street, Somarasampettai, Srirangam Taluk, Trichy District.	Krishnarayapuram Taluk, Sivayam (North) Village	2/2	2.34.5	Patta	Rc.No.99/Mines/201 2 Dt:10.7.2014	10.7.2014 to 09.7.2019	Operation
132	Rough Stone	A.Devaraj, S/o.P.Arunachalam, Rengapalayam, Punnamchathiram, Aravakurichi Taluk, Karur District	Aravakurichi Taluk, Kuppam Village	252 (Part), 253 (Part) 254/2 (Part)	3.64.5	Patta	Rc.No.194/Mines/20 11 Dt:12.8.2014	12.8.2014 to 11.8.2019	Operation
133	Rough Stone	E.Arulmani, W/o.Elangovan, No.160, East Street, Kokkarayan Pettai, Trichengode Taluk, Namakkal District	Aravakurichi Taluk, Kuppam Village	749/2	1.61.5	Patta	Rc.No.479/Mines/20 13 Dt:14.8.2014	14.8.2014 to 13.8.2019	Operation
134	Rough Stone	M.Ramalingam, S/o.Muthusamy Gounder, 7/120 Pavithram Medu, Pavithram Post, Aravakurichi Taluk, Karur District.	Aravakurichi Taluk, Pavithram Village	343/A3 343/A4 343/A5 343/B1 343/B2 343/B3	2.16.0	Patta	Rc.No.60/Mines/201 3 Dt:20.02.2015	20.02.2015 to 19.02.2020	Operation
135	Rough	Tvl.Balavinayaga Blue	Aravakurichi Taluk,	571 (Part)	4.86.0	Patta	Rc.No.565/Mines/20	20.02.2015	Operation

	Stone	Metals, Saminathapuram, No.571, Munnur Post, Aravakurichi Taluk, Karur District.	Munnur Village	669 670 (Part) 671			13 Dt:20.02.2015	to 19.02.2020	
136	Rough Stone	R.Sirumbayee, W/o.Raman, Thanthiripatti, Kosur Village, Kadavur Taluk, Karur	Kadavur Taluk, Mathagiri Village	114/2A1 114/2B1	0.81.5	Patta	Rc.No.298/Mines/20 11 Dt:09.04.2015	09.4.2015 to 08.4.2020	Operation
137	Rough Stone	Karumana Gounder S/o Kaliappa Gounder Vallipuram Karudaiyampalayam Post Aravakurichi Taluk Karur District	Aravakurichi Taluk Punnam Village	1298/A1 1298/A2 1298/A8 1298/B	2.70.5	Patta	R.C.No.254/Mines/20 12 Date : 23.04.2015	23.04.2015 to 22.04.2020	Operation
138	Rough Stone	K.Manisekaran S/o Krishnasamy Gandhigramam South Thanthoni Karur Tluk Karur District	Aravakurichi Athipalayam	141/1A Part 141/2A 141/3A 140/2A 140/1	2.47.5	Patta	R.C.No.342/Mines/20 12 Date :23.04.2015	23.04.2015 to 22.04.2020	Operation
139	Rough Stone	B.Mohandass S/o T.Parathan Poorani Post Jegathabi Village, Karur Taluk & District.	Krishnarayapuram Taluk Chithalavai	302/1B6 303/3	0.85.0	Patta	R.C.No.66/Mines/ 2014 Date:30.04.2015	30.04.2015 to 29.04.2020	Operation
140	Rough Stone	Thiru.Natrayan S/o.Kaliappa Gounder Karudaiyampalayam Vge Aravakurichi Taluk Karur District.	Aravakurichi Taluk Gudalur West	215/2A 215/2B	2.29.0	Patta	R.C.No.107/Mines/ 2013 Date:06.05.2015	06.05.2015 to 05.05.2020	Operation

141	Rough Stone	Tvl.Sri Bharani Murugan Blue Metals S.F.No 84/5,6, Nalipalayam Aravakurichi Taluk Karur District	Aravakurichi Taluk Nadanthai North	82/1 Part 82/2 Part 83/1 Part 83/2 Part 83/3 Part 85 Part 87/1 Part 87/2 Part 88/1 Part 88/2 Part	4.89.5	Patta	R.C.No.357/Mines/ 2013 Date:06.05.2015	06.05.2015 to 05.05.2020	Operation
142	Rough Stone	Thiru.M.Manickam S/o Muthal Naicker Kutikkaranputhur Sengal Post Krishnarayapuram Taluk Karur District.	Krishnarayapuram Taluk Sengal Village	21/3	1.01.5	Patta	RC.No.339/Mines/20 14 Date:04.05.2015	04.05.2015 to 03.05.2020	Operation
143	Rough Stone	Thiru.S.Palanisamy S/o Samiyappa Gounder Saliyangkattupallam Udaiyam Village, Kangayam Taluk Tiruppur District.	Aravkurichi Taluk Anjur Village	761/2 762/2 763/2	2.89.0	Patta	RC.No.174/Mines/ 2012 Date:06.05.2015	06.05.2015 to 05.05.2020	Operation
144	Rough Stone	Tmt.S.Vijaya W/o Sundaram, Thatharakkatu Porasampalayam, Anjur Erode Taluk & District.	Aravkurichi Taluk Anjur Village	759/2 761/3 762/3 763/3	2.75.0	Patta	RC.No.243/Mines/ 2012 Date:06.05.2015	06.05.2015 to 05.05.2020	Operation
145	Rough Stone	TVI.Vinayaga Blue Metals Kurumpatti Pavithiram Post Aravakurichi Taluk Karur District.	Aravakurichi Taluk Kuppam Village	463/1, 463/2 464/2, 464/3 471 Part	0.24.0 1.24.0 0.99.5 0.65.5 1.61.0	Patta	R.C.No.948/Mines/20 15 Dt:15.12.2015	15.12.2015 to 14.12.2020	Operation

					(4.74.0)				
146	Rough Stone	TVI.Karpaga Vinayaga Blue Managing Partner Thiru.P.K.Ponnusamy Punnam Post Aravakurichi Taluk Karur District.	Aravakurichi Taluk Punnam Post Village	989/1A2 (P) 989/1B 989/2 991/2	0.98.0 2.03.5 0.89.0 0.40.5 (4.31.0)	Patta	R.C.No.823/Mines/20 13 Dt:19.12.2015	19.12.2015 to 18.12.2020	Operation
147	Rough Stone	Thiru.P.Kandasamy S/o.Palaniappa Gounder Kariyampatti Karudaiyampalayam Village Aravakurichi Taluk Karur District.	Aravakurichi Taluk Pavithiram Village	569/2 569/3 576/B2 576/B4 576/B5(P) 576/B5B	0.23.0 0.13.0 1.14.0 1.48.0 1.53.5 0.37.0 4.88.5	Patta	R.C.No.577/Mines/20 14 Dt:19.12.2015	19.12.2015 to 18.12.2020	Operation
148	Rough Stone	Tvl.Balamalai Murugan Blue Metals Thennilai East Village Vadapalani kovil Thennilai Post Aravakurichi Taluk , Karur District.	Aravakurichi Taluk Thennilai East Village	538	(4.18.0)	Patta	R.C.No.121/Mines/20 15 Dt:19.12.2015	19.12.2015 to 18.12.2020	Operation
149	Rough Stone	Pon Vinagayaga Blue Metals S.F.No.435/1,2 Karudaiyampalayam Post K.Paramathi Aravakurichi Taluk, Karur District.	Aravakurichi Taluk Karudaiyampalaya m Village	453/1 (P) 455/A1 (P) 455/A2 (P) 455/A3 (P) 455/B (P) 456/1 (P) 456/2 (P) 456/3, 456/4 456/5 Part 456/6 Part 457/1Part	0.92.0 0.14.0 0.82.0 0.64.0 0.84.0 0.18.5 0.02.0 0.14.5 0.12.5 0.01.5 0.16.0	Patta	R.C.No.182/Mines/20 15 Dt:19.12.2015	19.12.2015 to 18.12.2020	Operation

				457/2 Part 457/3 Part Total	0.08.0 0.16.0 0.69.0 (4.94.0)				
150	Rough Stone	P.K.Subramani S/o.Kaliyappa Gounder Pavithiram Post Aravakurichi Taluk Karur District.	Aravakurichi Taluk Munnur Village	509/1 Part	2.16.0	Patta	R.C.No.576/Mines/20 15 Dt:19.12.2015	19.12.2015 to 18.12.2020	Operation
151	Rough Stone	Thiru.S.Ragunathan S/o.Sakthivel Pullagoundanpalayam Gudalur West Village Aravakurichi Taluk Karur District.	Aravakurichi Taluk Munnur Village	265	4.10.5	Patta	RC.NO.514/Mines/20 14 Date: 20.01.2016	20.01.2016 to 19.01.2021	Operation
152	Rough Stone	TVI. Sri Vengatramana Samy Blue Metals 128 Bye Pass Road Karur District.	Aravakurichi Taluk Thennilai East Village	191/3 Part 192 Total	2.00.0 2.90.0 (4.90.0)	Patta	Rc.No1065/Mines/20 14 Date : 20.01.2016	20.01.2016 to 19.01.2021	Operation
153	Rough Stone	Thiru.V.Shanmuganathan S/o.Veerarajee Bhothupatti Village Bhothupatti Post Namakkal Taluk & District.	Aravakurichi Taluk Kuppam Village	1062/1B Part	2.73.0	Patta	RC.No.1384/Mines/2 014 Date: 20.01.2016	20.01.2016 to 19.01.2021	Operation
154	Rough Stone	Tvl.Ram Blue Metals Pavithiram Post Aravakurichi Taluk Karur District.	Aravakurichi Taluk Karudaiyampalaya m Village	289/1 290/1B 290/2 Total	0.42.0 0.40.5 0.40.5 (1.23.0)	Patta	RC.No.1265/Mines/2 014 Date: 20.01.2016	20.01.2016 to 19.01.2021	Operation
155	Rough	Thiru.G.Prabhakar	Aravakurichi Taluk	843/2	1.01.0	Patta	Rc.No.1385/Mines/2	20.01.2016	Operation

	Stone	S/o.Gunasekaran Andichettipalayam Nadanthai South Village Karur District.	Nadanthai North Village	844/1 844/2 Total	1.60.0 1.90.0 (4.51.0)		014 Date : 20.01.2016	to 19.01.2021	
156	Rough Stone	Thiru.S.Sivakumar S/o.Shanmugam Semmandampalayam Thennilai East Village Aravakurichi Taluk Karur District.	Aravakurichi Tlauk Thennilai East Village	1195/B1 1195/B2 Total	0.98.5 0.83.5 (1.82.0)	Patta	Rc.No.297/Mines/20 15 Date : 20.01.2016	20.01.2016 to 19.01.2021	Operation
157	Rough Stone	Thirumurugan Blue Metals SF.No 506 Kattumunnur Post Aravakurichi Taluk Karur District.	Aravakurichi Tlauk Thennilai East Village	126/2 Part 127/1 Part Total	1.23.0 1.05.0 (2.28.0)	Patta	Rc.No.314/Mines/20 15 Date : 20.01.2016	20.01.2016 to 19.01.2021	Operation
158	Rough Stone	Thiru.K.Periyasamy S/o. Kaliyanna Gounder N.Puthur Nanniyur Post Manmangalam Taluk Karur District.	Kadavur Taluk Manjanaickanpatti Village	624/5B 630/14 Total	1.84.0 1.34.0 (3.18.0)	Patta	Rc.No.225/Mines/20 15 Date: 15.02.2016	22.02.2016 to 21.02.2021	Operation
159	Rough Stone	Tvl.Aravind Blue Metals Komalivalasu Kodanthur North Village Aravakurichi Taluk Karur District.	Aravakurichi Taluk Kodanthur North	409	3.77.0	Patta	Rc.No.847/Mines/20 14 Date: 18.02.2016	26.02.2016 to 25.02.2021	Operation
160	Rough stone	Tvl.Kandan Blue Metals Thennilai South Village Masayampalayam Privu Thennilai Post Aravakurichi Taluk	Aravakurichi Taluk Thennilai South Village	753/B2 753/B3 755/A1 Total	1.21.5 2.52.5 0.69.0 (4.43.0)	Patta	Rc.No.993/Mines/20 14 Date: 19.02.2016	26.02.2016 to 25.02.2021	Operation

		Karur District.							
161	Rough Stone	Thiru.R.Subramani S/o.Ramasamy Nadupalayam Punnam Post Aravakurichi Taluk Karur District.	Aravakurichi Taluk Punnam Village	1093/1A Part 1093/B Part 1093/2A1 Part 1094/1A 1094/1B 1094/2A1	(3.20.5)	Patta	Rc.No.1445/Mines/2 014 Date : 18.02.2016	26.02.2016 to 25.02.2021	Operation
162	Rough Stone	M/s.Raja Vinayaga Blue Metals S.F.No.1171/1,2,3A & 3B Kuppam Village and Post Aravakurichi Taluk Karur District.	Aravakurichi Taluk Kuppam Village	700/2A	(1.85.0)	Patta	RC.No. 207/Mines/2011 Date : 29.02.2016	02.03.2016 to 01.03.2021	Operation
163	Rough Stone	Thiru.M.Gunasekaran S/o. Muthusamy Nadaiyanur Post Karur Taluk Karur District.	Aravakurichi Taluk Kuppam Village	710/1 710/3 712/2 Total	3.04.0 1.04.5 0.88.0 (4.96.5)	Patta	RC.No. 554/Mines/2014 Date : 05.07.2016	05.07.2016 to 04.07.2021	Operation
164	Rough Stone	Tvl.New Five Star S.Thottampatti Nadanthai Soth Village Aravakurichi Taluk Karur District.	Aravakurichi Taluk Nadanthai South Village	719 720 732 733 Part Total	1.30.5 0.84.0 0.30.0 2.54.0 (4.98.5)	Patta	RC.No. 533/Mines/2014 Date : 06.07.2016	06.07.2016 to 05.07.2021	Operation
165	Rough Stone	Thiru.P.Senthilkumar S/o.Periyasamy (Late) Majara Salipalayam Kuppuchipalayam Village Aravakurichi Taluk Karur District.	Aravakurichi Taluk Munnur Village	478/A Part 478/B1 Part Total	1.84.0 0.70.0 (2.54.0)	Patta	RC.No. 298/Mines/2015 Date : 14.07.2016	14.07.2016 to 13.07.2021	Operation

166	Rough Stone	Tmt.A.Gangammal W/o.Angamuthu Sokkalapuram Lingmanaickenpatti post Aravakurichi Taluk Karur District.	Aravakurichi Taluk Pallapatti Village	149/A Part	0.44.5	Patta	RC.No. 223/Mines/2015 Date : 05.08.2016	05.08.2016 to 04.08.2021	Operation
167	Rough Stone	Tmt.V.Kavitha W/o.Vadivel Nochi Kattur Kuppam Post Aravakurichi Taluk Karur District.	Aravakurichi Taluk Kuppam Village	75/1A 75/1B 75/2 Total	0.49.5 0.47.5 0.91.0 (1.88.0)	Patta	Rc.No.821/Mines/20 13 Date : 05.08.2016	05.08.2016 to 04.08.2021	operation
168	Rough Stone	Thiru.R.Selvam S/o. Ramasamy No.5/85A, Pathiripatti Post Manappparai (Via) Kulithalai Taluk Karur District.	Kulithalai Taluk Uthupatti Village	9/4A 4B 9/5 10/3 10/4 10/5 Total	0.06.5 0.22.0 1.08.0 0.07.5 0.19.0 0.22.5 1.85.5	Patta	R.C.No.1000/Mines/2 015 Dt:05.08.2016	05.08.2016 to 04.08.2021	Operation
169	Rough Stone	Thiru.S.Kandhasamy S/o.Shri.Samiyappa Gounder Malaikovil Post Semmandampalayam Aravakurichi Taluk Karur District.	Aravakurichi Taluk Thennilai East Village	750/1 Part 751 Total	1.15.5 3.21.5 4.37.0	Patta	RC.No.189/Mines /2015 Dt: 05.08.2016	05.08.2016 to 04.08.2021	Operation
170	Rough Stone	R.P.Kaliyappan S/o. Palaniyappa Gounder Periyarangapalayam Punnam Village Aravakurichi Taluk	Karur Taluk Paganatham Village	95/B1 95/B2 95/B3 95/B4 95/B5	0.41.0 0.21.0 0.20.0 0.22.0 0.41.0	Patta	R.C.No.192/Mines/20 14, Date : 09.08.2016	09.08.2016 to 08.08.2021	operation

		Karur District.		Total	(1.45.0)				
171	Rough Stone	Thiru .K.Palanisamy S/o Sri .Krishnasamy Gounder Uthukkaraipatti Pagantham Village Karur Taluk & District.	Aravakurichi Taluk Anjagoundanpatti Village	2/3 2/4A Total	0.20.0 0.95.0 (1.15.0)	Patta	RC.No.655/Mines /2014 Dt: 09.08.2016	09.08.2016 to 08.08.2021	operation
172	Rough Stone	Thiru.V.Saravanan S/o.R.K.Velu, 55/6, M.R.M.Complex Rayanur , Thorankalpatti Village Aravakurichi Taluk Karur District.	Aravakurichi Taluk Kuppam Village	71/A2	. (0.81.0)	Patta	R.C.No.887/Mines /2015 Dt:09.08.2016	09.08.2016 to 08.08.2021	operation
173	Rough Stone	Thiru. A.Natarajan S/o.Arjunan New No.3/80 Pullyamapalayam Punnam Village Aravakurichi Taluk Karur District	Karur Taluk Paganatham Village	106/2	(0.91.0)	Patta	R.C.No.660/Mines/20 13, Date : 11.08.2016	11.08.2016 to 10.08.2021	operation
174	Rough Stone	Thiru.R.Rengasamy, S/o.Ramasamy Gounder , Periyarengapalayam, Punnam Village Aravakurichi Taluk Karur District.	Aravakurichi Taluk Punnam Village	557/B	(0.57.0)	Patta	R.C.No.886/Mines /2015 Dt:11.08.2016.	11.08.2016 to 10.08.2021	operation
175	Rough Stone	Thiru.K.Manisekaran S/o.Krishanasamy	Krishanarayapuram Taluk	20/1B1 Part	0.80.0	Patta	R.C.No.1233/Mines /2015 Dt:11.08.2016.	11.08.2016 to	operation

		Ram Nagar Pasupathipalayam Post Karur Taluk & District.	Sengal Village					10.08.2021	
176	Rough Stone	Thiru.R.Loganathan S/o. Ramasamy Gounder Periyaranga Palayam Punnam Village Aravakurichi Taluk Karur District.	Aravakurichi Taluk Punnam Village	1243/A3	(1.41.)	Patta	RC.No.372/Mines /2013 Date :12.08.2016	12.08.2016 to 11.08.2021	operation
177	Rough Stone	Tvl.Diamond Blue Metals S.F.No.9/4-5 Eallaikatturamachandrapur am koonampatti road Thoppampatti Aravakurichi Taluk Karur District.	Aravakurichi Taluk Monjanur East Village	439 Part	(1.02.0)	Patta	Rc.No.24/Mines/201 4 Date : 12.08.2016	12.08.2016 to 11.08.2021	operation
178	Rough Stone	Tmt.S.Shanthimathi W/o.Sekar Punnamchathiram Post Punnam Village Aravakurichi Taluk Karur District.	Aravakurichi Taluk Thennilai Village	193/3B	(1.28.0)	Patta	R.C.No.450/Mines /2015 Dt:12.08.2016	12.08.2016 to 11.08.2021	operation
179	Rough Stone	Thiru.D.Elangovan S/o.Dhandapani Malachiyur Chinnadharapuram Post Aravakurichi Taluk Karur District.	Aravakurichi Taluk T.Vengidapuram	252/3 Part	1.56.5	Patta	Rc.No.367/Mines/20 12 Date : 16.08.2016	16.08.2016 to 15.08.2021	operation
180	Rough	R.Manoharan	Aravakurichi Taluk	1063/2	(1.31.0)	Patta	R.C.No.509/Mines/20	16.08.2016	operation

	Stone	S/o P.Rengasamy Kuppam Post Aravakurichi Taluk Karur District.	Thennilai East Village				14 Dt:16.08.2016	to 15.08.2021	
181	Rough Stone	Thiru.M.Siva, S/o.Maruthai No.2/179_B Mettuthirukampuliyur Thirukampuliyur Post Krishnarayapuram Taluk Karur District.	Kadavur Taluk Pappayampadi Village	9/3B 9/5A Total	0.44.5 0.49.0 (0.93.5)	Patta	R.C.No.863/Mines /2015 Dt:17.08.2016	17.08.2016 to 16.08.2021	operation
182	Rough Stone	Thiru.K.Nallasamy S/o. Krishnan Punnamchatram Post Aravakurichi Taluk Karur District.	Aravakurichi Taluk Kuppam Village	226/1 Part	(2.95.0)	Patta	RC.No. 899/Mines/2015 Date : 02.09.2016	02.09.2016 to 01.09.2021	operation
183	Rough Stone	Tmt.P.Suganya W/o. Prabhakaran Door No. 201, Old Post Office Street Vengamedu Post Innam Karur District.	Aravakurichi Taluk Punnam Village	1199/2 (P) 1199/3 (P) 1199/4 (P) 1199/5 (P) 1199/6 (P) 1199/7 (P) 1199/8 (P) 1199/9 (P) 1200/3 1200/4 1200/5 1200/6 1200/7 1200/8 1200/9 1200/10 1200/11	0.05.0 0.10.0 0.08.0 0.12.0 0.12.0 0.22.0 0.10.0 0.05.0 0.10.0 0.06.0 0.05.0 0.18.0 0.20.0 0.30.0 0.38.0 0.09.0 0.04.0	Patta	RC.No. 100/Mines/2016 Date :14.10.2016	14.10.2016 to 13.10.2021	operation

				1200/12 Part 1201	0.03.0 ----- (3.89.0)				
184	Rough Stone	Sri Ganesh Murgan Blue Metals Karudaiyampalayam Post Aravakurichi Taluk Karur District.	Aravakurichi Taluk Pavithiram Village	892	(3.03.5)	Patta	RC.No. 551/Mines/2016 Date :14.10.2016	14.10.2016 to 13.10.2021	operation
185	Rough Stone	Thirumalai Blue Metals No.538/4, Poolan Kadu Kuppam Post Aravakurichi Taluk Karur District.	Manmangalam Taluk Vettamangalam West	1238/2	(4.80.0)	Patta	R.C.No.299/Mines/20 15 Dt:14.10.2016	14.10.2016 to 13.10.2021	operation
186	Rough Stone	Thiru.K.Kulanthavel S/o. Kandasamy Chinnarengapalayam Punnam Village Aravakurichi Taluk Karur District.	Aravakurichi Taluk Punnam Village	1262/1	(0.94.0)	Patta	RC.No. 1025/Mines/2015 Date :14.10.2016	14.10.2016 to 13.10.2021	operation
187	Rough Stone	Thiru.P.Marappan S/o.Palaniyappan Andipatti Kuppam Village Aravakurichi Taluk Karur District.	Aravakurichi Taluk Kuppam Village	74 75/3B Total	0.74.5 1.37.0 (2.11.5)	Patta	R.C.No.1427/Mines/2 014 Dt:14.10.2016	14.10.2016 to 13.10.2021	operation
188	Rough Stone	Thiru.P.Balusamy S/o.Palaniyappan Punnamchathiram Aravakurichi Taluk	Aravakurichi Taluk Kaarvazhi Village	302 Part 305/A 305/B Total	1.26.0 2.87.0 0.68.0 4.81.0	Patta	R.C.No.185/Mines/20 12 Dt:29.11.2016	29.11.2016 to 28.11.2021	operation

		Karur District.							
189	Rough Stone	Thiru. M.Ramasamy S/o. Muthusamy Gounder Andankovil East Village Manmangalam Taluk Karur District.	Aravakurichi Taluk Athipalayam Village	127/3C Part 127/4c Part 127/5 127/6 Part 127/9 Part 130/A Part 130/B part Total	0.32.5 0.01.5 0.40.0 0.47.5 0.56.5 0.48.0 0.55.5 2.81.5	Patta	R.C.No.514/Mines/20 16 Dt:29.11.2016	29.11.2016 to 28.11.2021	operation
190	Rough Stone	Thiru.V.M.Nallasamy S/o. Malayappa gounder Old No. 1/20D New No.1/59 , Ariyur Kaspas Aravakurichi Taluk Karur District.	Aravakurichi Taluk K.Paramathi Village	484 Part 485 Part Total	0.74.5 1.33.0 2.07.5	Patta	R.C.No.1060/Mines/2 015 Dt:29.11.2016	29.11.2016 to 28.11.2021	operation
191	Rough Stone	Amman Arul Crusher No.5/41 -2 Nallipalayam K.Paramathi Village Aravakurichi Taluk Karur District.	Aravakurichi Taluk Thennilai Village	1064 (P) 1065/1A 1065/1B, 1066/2 Total	0.86.0 0.26.5 0.89.0 0.56.5 2.58.0	Patta	R.C.No.810/Mines/20 15 Dt:29.11.2016	29.11.2016 to 28.11.2021	operation
192	Gravel	Thiru.T.Murthy S/o. Dullikoonar Door No .5/92 Melakkadu Thayanur Village Srirangam Taluk Trichy District.	Kulithalai Taluk Aalathur Village	63/3 81/1 Total	0.63.0 0.70.0 1.33.0	Patta	R.C.No.675/Mines/20 16 Dt:29.11.2016	29.11.2016 to 28.11.2019	operation
193	Rough Stone	Tvl. New Star Blue Metals , S.F.No: 550,533,534,535, Poolankaradi,	Aravakurichi Taluk Kuppam Village	533/1 534/1 550/C3 Total	1.25.0 2.44.0 0.92.0	Patta	R.C.No.390/Mines /2015 Dt:02.12.2016.	02.12.2016 to 01.12.2021	Operation

		Kuppam Post, Aravakurichi Taluk Karur District.			(4.61.0)				
194	Rough Stone	Thiru.K.Subramaniyan S/o.Kandasamy Gounder 303, Aathi Appartment Anna Nagar West Karur Taluk & District.	Manmangalam Taluk Appipalayam Village	393 394 Total	1.46.0 1.46.5 (2.92.5)	Patta	RC.No.756/Mines/20 15 Date :09.12.2016	09.12.2016 to 08.12.2021	operation
195	Rough Stone	Dr.S.K.Palanivelu, S/o.K.S.Kuppusamy, No.7, Co-operative Colony, Mohanur Road, Namakkal District	Aravakurichi Taluk, Nagampalli Village	1341/3 Part	1.82.0	Patta	RC.No.41/Mines/201 6 Date :09.12.2016	09.12.2016 to 08.12.2021	operation
196	Rough Stone	K.Murugesan S/o.Kuppusamy Periyarengapalayam, Punnamchadhiram Post Aravakurichi Taluk, Karur District.	Aravakurichi Taluk Kuppam Village	801/1	(1.60.0)	Patta	RC.No239 /Mines/2015 Date :24.12.2016	24.12.2016 to 23.12.2021	operation
197	Rough Stone	Tmt. P.Selvamani W.o.Periyasamy Moolimangalam Post Punjai Pugalur Soth Village Manmangalam Taluk Karur District	Manmangalam Taluk Vettamangalam Village	1062/A2	0.92.0	Patta	RC.No.1024/Mines/2 015 Date :24.12.2016	24.12.2016 to 23.12.2021	operation
198	Rough stone	Thiru.S.Kuppusamy, S/o.Samiyappa Gounder, Saliyankattupallam, Udaiyam Village, Kangeyam Taluk, Trippur District.	Aravakurichi Taluk, Anjur Village	759/5 764/3 765/3 766/1 Part 766/2 767/1	1.40.0 1.14.0 0.48.0 0.65.0 1.14.0 0.11.5	Patta	Rc.No.173/Mines/20 12, Dt:23.6.2017	23.6.2017 to 22.6.2022	operation

				Total	4.92.5				
199	Rough stone	Tvl.Venkatachalapathi Blue Metals, S.F.No.233/1, Puthurpatti, Kuppam Post, Aravakurichi Taluk, Karur District.	Aravakurichi Taluk, Kuppam Village	213/1 214/2A 214/2B 214/2C 220/3P 221/P Total	0.56.5 1.08.0 1.07.5 0.30.0 0.22.0 0.81.0 4.05.0	Patta	Rc.No.654/Mines/20 14, Dt:23.6.2017	23.6.2017 to 22.6.2022	Operation
200	Rough stone	Thiru.M.Kolandaisamy, S/o.Mottaiyappagounder, Athipalayam Post, Aravakurichi Taluk, Karur District	Aravakurichi Taluk, Munnur Village	266/1A	1.92.0 hecets	Patta	Rc.No.1136/Mines/2 015, Dt:23.6.2017	23.6.2017 to 22.6.2022	Operation
201	Rough stone	Thiru.R.Natarajan, S/o.Ramasamygounder, Vettamangalam Melpagam Village, Ganapathipalayam, Manmangalam Taluk, Karur District.	Aravakurichi Taluk, Munnur Village	481/1 Part 481/2 Part Total	0.28.5 1.32.5 1.61.0	Patta	Rc.No.245/Mines/20 16, Dt:23.6.2017	23.6.2017 to 22.6.2022	operation
202	Rough stone	Thiru.P.Kulandaisamy, S/o.Palaniappagounder, Door No.3/1 Periyar Nagar, L.N.S. Post, Karur Taluk & District.	Manmangalam Taluk, Athur Village	659/1 659/13 659/14 659/15 Total	2.07.0 0.86.0 0.12.0 0.10.0 3.15.0	Patta	Rc.No.211/Mines/20 14, Dt:23.6.2017.	23.6.2017 to 22.6.2022	operation
203	Rough stone	Thiru.N.Sivakumar S/o. Narayasamy 25, 2th Gandhiji Veethi Kasipalayam, Erode Taluk & District.	Aravakurichi Taluk Monjanur Village	1002/B Part 1008 1009/B Part Total	0.81.0 3.54.0 0.61.0 4.96.0	Patta	Rc.No.240/Mines /2015 Date: 05.07.2017	05.07.2017 to 04.07.2022	Operation

204	Rough stone	Thiru.M.Kaliappan S/o. Marapagounder Periyarengapalayam Punnam Post Aravakurichi Taluk Karur District.	Aravakurichi Taluk Kuppam Village	25/3B	0.94.5	Patta	Rc.No.315/Mines /2015 Date: 05.07.2017	05.07.2017 to 04.07.2022	Operation
205	Rough stone	Thiru.S.Jeevanantham S/o. Samiappan 5/22 Ponniyaggoundanpudhur Punnamchathiram Post Aravakurichi Taluk Karur District.	Aravakurichi Taluk Kuppam Village	524/3A2 524/3B Total	0.70.0 1.11.5 1.81.5	Patta	Rc.No.1431/Mines /2015 Date: 05.07.2017	05.07.2017 to 04.07.2022	Operation
206	Rough stone	Thiru.R.Govindan S/o. Ramasamy P.Kalipalayam Panjamadevi Village Karur Taluk & District.	Manmangalam Taluk Panjamadevi Village	104/A1	0.37.0	Patta	Rc.No.657/Mines/20 15 Date: 05.07.2017	05.07.2017 to 04.07.2022	Operation
207	Rough stone	Thiru.P.Vijayakumar S/o. Perumal Periyamanjuvelli Village Aravakurichi Taluk, Karur District.	Aravakurichi Taluk Periyamanjuvelli Village	579/1A Part	0.98.0	Patta	Rc.No.1096/Mines/2 015 Date: 05.07.2017	05.07.2017 to 04.07.2022	operation
208	Rough stone	Thiru.K.Mahendran S/o.K.R.Kandasamy Kulathupalapalayam pudhur Kodumuti Post & Taluk Erode District.	Aravakurichi Taluk Kodanthur Village	92 Part	1.75.0	Patta	Rc.No.1000/Mines/2 016 Date: 05.07.2017	05.07.2017 to 04.07.2022	operation

209	Rough stone	Thiru.K.S.Kandasamy S/o. Sankarappa Gounder Kalipalayam , Aravakurichi Taluk, Karur District.	Aravakurichi Taluk Kuppam Village	387/A 388/1 Total	2.86.0 1.04.0 3.90.0	Patta	Rc.No.137/Mines/20 15 Date: 18.07.2017	18.07.2017 to 04.07.2022	Operation
210	Rough stone	Tmt.T.Sathiya W/o. Thangaraj New No. 2 Masagoundanpudhur , Punjai Pugalur South Village Manmangalam Taluk, Karur District.	Aravakurichi Taluk Punnam Village	1287/1 1287/3 Total	1.34.0 0.49.0 1.83.0	Patta	Rc.No.226/Mines/20 14 Date: 31.07.2017	31.07.2017 to 30.07.2022	Operation
211	Rough stone	Thiru.K.Palanisamy S/o. Krishnasamy Gounder Uthukkarappatti, Paganatham Village, Karur Taluk, & District.	Karur Taluk Paganatham Village	287/1 288/16A 290/5 <u>Total</u>	0.40.5 0.27.0 0.55.0 1.22.5	Patta	Rc.No.1131/Mines/2 015 Date: 31.07.2017	31.07.2017 to 30.07.2022	Operation
212		Tmt.S.Tamilselvi w/o.Sapapathi Ganesa Nagar 1 st Street Enam Karur Karur Taluk & District.	Aravakurichi Taluk Kuppam Village	706 part	3.36.0	Patta	Rc.No.888/Mines/20 16 Date: 18.08.2017	18.08.2017 to 17.08.2022	Operation
213	Rough stone	Thiru.R.Kandasamy S/o.Rasappa Gounder, Velliyampalayam , Punnam Village Aravakurichi Taluk, Karur District.	Aravakurichi Taluk Kuppam Village	28 Part	0.65.5	Patta	Rc.No.735/Mines/20 16 Date: 16.08.2017	16.08.2017 to 15.08.2022	Operation
214		Thiru.C.Perumal S/o.Chinnasamy Reddiyar Veeriappatti,	Kadavur Taluk Manjanaickanpatti Village	642/2A 642/3A 642/3B Part	0.44.5 0.34.0 0.07.0	Patta	Rc.No.162/Mines/20 16 Date: 16.08.2017	16.08.2017 to 15.08.2022	Operation

		Manjanaickanpatti Village, Kulithalai Taluk, Karur District.		642/3C Part 642/4 Part Total	0.11.5 0.39.0 1.36.0				
215		Tvl.NTC Infra Project Private Ltd., Thiru.S.Muthusamy, Director , No.97(Old No 47) Lingiseeti Street) Chennai	Aravakurichi Taluk Kuppam Village	491 Part	1.60.0`	Patta	Rc.No.889/Mines/20 16 Date: 24.08.2017	24.08.2017 to 23.08.2022	Operation
216		Tvl. Karur Blue Metals SF.NO1055/3,4,5, Kalimedu Ammappatti, Thennilai East Village, Aravakurichi Taluk Karur District.	Aravakurichi Taluk Thennilai East Village	1055/4 1055/5 Total	0.99.0 0.76.0 1.75.0	Patta	Rc.No.842/Mines/20 16 Date: 16.08.2017	16.08.2017 to 15.08.2022	Operation
217		Tmt.P.Amaravathi W/o.Palanisamy Ponniyang goundanpudhur Punnam Village, Aravakurichi Taluk Karur District.	Aravakurichi Taluk Kuppam Village	509/2A Part	0.89.5	Patta	Rc.No.135/Mines/20 17 Date: 18.08.2017	18.08.2017 to 17.08.2022	Operation
218		Thiru.V.Periyasamy S/o. Vaiyapuri Gounder Vadukapatti, Vennaiimalai Post Karur Taluk & District.	Manmangalam Taluk Athur Village	654/1	1.40.0	Patta	Rc.No.236/Mines/20 16 Date: 18.08.2017	18.08.2017 to 17.08.2022	Operation
219	Rough stone	Thiru.P.Duraisamy S/o.Periyasamy Gounder	Aravakurichi Taluk Anjur Village	762/4 763/4	0.24.5 1.05.0	Patta	Rc.No.171/Mines/20 12 Date: 07.08.2017	07.08.2017 to	Operation

		Thatharakadu Thottam, Anjur Village Erode Taluk & District.		764/1 765/1 <u>Total</u>	0.14.0 0.16.0 <u>1.59.5</u>			06.08.2022	
220	Rough stone	Tvl.Kowsick & Co Blue Metals Door No.24A Housing Unite Kollampalayam, Kasipalayam, Erode Taluk & District.	Aravakurichi Taluk Anjur Village	770/2B Part 778/3B2 778/3B1part <u>Total</u>	1.76.0 1.03.0 2.19.0 4.98.0	Patta	Rc.No.172/Mines/20 12 Date: 07.08.2017	07.08.2017 to 06.08.2022	Operation
221	Rough stone	Thiru.P.Ravi S/o.Palanisamy Chinnakangeyam palayam Mankalappatti post Kangeyam Taluk, Tiruppur District.	Aravakurichi Tluk Anjur Village	759/3 759/4 763/5 764/2 765/2 <u>Total</u>	1.24.0 1.27.5 0.18.0 0.98.5 0.50.0 4.18.0	Patta	Rc.No.169/Mines/20 12 Date: 07.08.2017	07.08.2017 to 06.08.2022	Operation
222	Rough Stone	Thiru.M.K.Kungumaraj No.32 M.G.R Nagar Chinnandankovil Road Karur District. (1913/2017 Date:1.9.2017 Sub Registrar Aravakurichi)	Aravakurichi Taluk Anjagoundanpatti	33 Part	1.61.0	Govt Poram boke Land Rule 8	RC.No.305/Mines/20 17 Date: 16.08.2017	16.08.2017 to 15.08.2022	Operation
223	Rough stone	R.Natrayan S/o. Ramasamy Gounder Suriyampalayam Karudaiyampalayam Aravakurichi Taluk Karur District.	Aravakurichi Taluk Kuppam Village	112/1B 112/2B 112/3 <u>Total</u>	0.25.0 0.64.0 0.56.5 <u>1.45.5</u>	Patta	Rc.No.261/Mines/20 13 Date: 06.09.2017	06.09.2017 to 05.09.2022	Operation

THANK YOU