

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

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

ToR Identification No. TO25B0108TN5875086N (F.No. 12472), dated 04/09/2025

PROPOSED QUARRY LEASE DETAILS	
SURVEY NOS	160/4, 159/1, 132/2B and 131/1C2(P)
VILLAGE	PULIYAMPATTI
TALUK	PALANI
DISTRICT	DINDIGUL
EXTENT	1.86.0 Ha
CLUSTER EXTENT	6.69.5 Ha
PROPOSED PRODUCTION OF ROUGH STONE AND GRAVEL (FIVE YEARS)	ROUGH STONE : 1,01,880 m ³ GRAVEL : 11,170 m ³
DEPTH	32 BGL
LAND	PATTA LAND

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

Category of the Project: B1 Cluster Mining, Total Cluster Area – 14.06.0 Ha

Baseline Monitoring Period – March 2025 to May 2025

APPLICANT

THIRU.S.AYYAPPAN,
S/O. SINGARAM CHETTIYAR,
NO. 193, LAKSHMIPURAM, PALANI TALUK,
DINDIGUL DISTRICT- 624 601.

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

AMENDMENT PAGE

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

ACKNOWLEDGEMENT

M/s. Global Mining Solutions, Salem is very much thankful Thiru.S.Ayyappan, Lessee for the confidence and trust placed on the organization for carrying out Environmental Impact Assessment (EIA) study for the proposed Rough Stone and Gravel quarry over a lease extent of 1.86.0 Ha., & Cluster extent of 6.69.5.0 Ha., located at Puliampatti Village, Palani Taluk, Dindigul 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 Puliampatti Village and the nearby villages for their whole hearted cooperation and constant involvement during the entire field study without which the study would not have been possible.

For: M/s. Global Mining Solutions



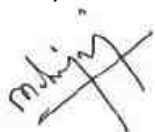
(M. Prabu)

Managing Director

UNDERTAKING

In line with MoEF OM No. J – 11013/41/2006-IA.II (I) dated 5th October 2011, we hereby give our undertaking for owning the content and information in the EIA/EMP report submitted for EC of the Rough Stone and Gravel quarry over a lease extent of 1.86.0 Ha & Cluster extent of 6.69.5 Ha., located at Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State.

For: M/s. Global Mining Solutions



Name: M.Manikandan

EIA Coordinator – Mining

UNDERTAKING

In Line with OM no. J-11013/41/2006-IA.II (1) dated 4th Aug 2009 and its Amendments, we hereby confirm that all Terms of Reference issued by Ministry of Environment, Forest and Climate Change vide ToR Identification No. TO25B0108TN5875086N (F.No. 12472), dated 04/09/2025 of Draft EIA/EMP report for the Rough Stone and Gravel quarry over a lease extent of 1.86.0 Ha., & Cluster extent of 6.69.5 Ha., located at Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State for the proposed production for five years is 32 BGL 1,01,880 m³ of Rough Stone and 11,170 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

**QUALITY COUNCIL
OF INDIA**
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**National Accreditation Board
for Education and Training**



Certificate of Accreditation

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

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

S. No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1	Mining of minerals-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

Certificate No.
NABET/EIA/2326/IA 0110

Valid up to
January 4, 2026

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

DECLARATION BY EXPERTS

Declaration by Experts contributing to the Rough Stone and Gravel quarry over a lease extent of 1.86.0 Ha. & Cluster extent of 6.69.5 Ha in Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State.

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

EIA Coordinator Name: M. Manikandan



Signature & Date

Period of involvement: March 2025 to May 2025.

Contact information:

M/s Global Mining Solutions

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

Kottamettupatty, Omalur,

Salem, Tamil Nadu – 636 455

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

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

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COMPLIANCE TO

TERMS OF REFERENCE

S.No	ToR Points	Reply	Pg. No
1. Seiaa Specific Conditions			
1	1. After detailed discussions, the Authority accepts the recommendation of SEAC-II and decided to grant Terms of Reference (ToR) along with Public Hearing for the quantity of 101880m3 of Rough Stone & 11170m3 of Gravel upto the depth of 32m BGL (including existing depth of 17m BGL) as per the approved mining plan, under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC-II & normal conditions & the conditions mentioned in Annexure of this minutes.	Agreed	-

S.No	ToR Points	Reply	Pg. No
2. Seac Conditions - Site Specific			
1	Major Condition: 1. The PP shall obtain Certified Compliance Report (CCR) from Integrated Regional Office, MoEF&CC, Chennai for the earlier Environmental Clearance. General Condition: 1. A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of required statutory	There are 3 quarries within a 500-metre radius. The proponent will take the initiative to form a cluster management committee once environmental clearance is obtained for this quarry as well as the other proposed quarry	-

	personnel, appropriate environmental management, system of maintaining the haul roads and village/panchayat roads, authorized blasting operation, Monitoring system of the environmental & other statutory compliances & its reporting status, etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal: (i) Copy of the agreement forming CMC. (ii) The Organisation chart of the Committee with defining the role of the members (iii) The 'Standard Operating Procedures' (SoP) executing the planned activities		
2	The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report	Agreed	
3	Since waterbodies are situated nearby, the PP shall carry out the hydrological study including the details of waterflow pattern to determine the impacts of the mining operation in the waterbodies	Agreed, Will be complied	
4	The details of enumeration of structures including schools, colleges, primary health centers should be submitted along with the EIA report	Agreed, Complied	
5	The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m & up to 1km shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc. and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations	Agreed, Complied	

6	The proponent shall furnish photographs of adequate fencing; garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	Agreed. Will be complied	
7	The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report	Agreed, Complied	
8	The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	Agreed, Complied	
9	The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding village and structures.	Agreed, Complied	
10	The PP shall prepare a conceptual action plan accommodating the inclusion of haul road accessibility keeping the benches intact, by ensuring the slope stability of the working benches to be constructed and existing quarry wall.	Agreed, Complied	
11	The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic/videographic evidence along with the EIA report.	Agreed, will be Complied	
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	The project proponent has prepared a 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, Department of Geology and Mining, Dindigul, vide Roc.No.535/2025/Mines dated	-

DRAFT EIA/EMP FOR THE ROUGH STONE AND GRAVEL QUARRY OF THIRU.S.AYYAPPAN OVER AN EXTENT OF 1.86.0 HA LOCATED AT THE SF. NOS. 160/4, 159/1, 132/2B AND 131/1C2(P) OF PULIYAMPATTI VILLAGE, PALANI TALUK, DINDIGUL DISTRICT, TAMIL NADU STATE.

	(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.	07.07.2025. The approval letter along with approved plan is enclosed as Annexure – 4. The Existing pit letter is obtained from AD Mines, Dindigul vide Rc.No.535/2025(Mines) dated 07.07.2025 The lease deed for the earlier quarrying operations was executed in accordance with the proceeding of the District Collector, Dindigul vide Roc.No.584/2018 (Mines) dated 30.05.2020 and the EC was issued by SEIAA-TN vide Lr. No. SEIAA-TN/F.No.7010/1(a)/EC.No: 4168/2020 dated 13.03.2020 over an area of 1.90.5 Ha at S.F.Nos. 160/3, 160/4, 160/5, 159/1, 132/2B and 131/1C2(P) in Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State	
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 720 km (S) 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.	50m interval for 300m radius enumeration incorporated chapter 3	87
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	106
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 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.	This is a new quarry. However, a slope stability study will be conducted once the quarry depth reaches 32m BGL.	-
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	Not applicable. This is a fresh quarry project.	-

	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).	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 - 3.25 & 3.26, Chapter - 3. - The Soil map is provided as Figure - 3.27, Chapter - 3.	66, 90, 132, 134
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 0.35.5 Ha will be under greenbelt and plantation. Refer section 4.2, chapter-4.	139
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 4,53,035 m ³ of Rough Stone The mineable reserves of 1,01,880 m ³ of Rough Stone & 11,170 m ³ of Gravel are observed.	64

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	183
20	The Project Proponent shall conduct the Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD/TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitoring data, it may clearly be shown whether working all intersect ground water. Necessary data and documentation in this regard may be provided.	The study is under progress. It will be incorporated in the final EIA & EMP.	-
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 March 2025 to May 2025 and detailed in Chapter-3.	88 – 136
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	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, Dindigul stating the quarries detail within 500m radius is enclosed in Annexure – 4. Accordingly, a detailed Environment Management Plan is prepared considering air, water,	169 – 174, Annexure No-4, 179

	surrounding habitations in the mind.	noise and soil environment and the details are given in Chapter - 10.	
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 of chapter 4. - The water balance is given in Figure 4.1 of chapter 4.	143 -144
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.	122, 139
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.	The impact of the mining operations due to this quarry on water environment is studied and	154

	Details of rainwater harvesting proposed in the Project, if any, should be provided.	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.	
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 7.3.1, Chapter - 7.	169
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 Chapter - 3 There is no standing trees in proposed mine lease area.	115
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 7.3.6, Chapter - 7. Land use at mine closure stage are given in Table - 2.4 and Figure - 2.11 of Chapter 2.	175, 69,84
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	- 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 0.35.5 Ha of safety zone will be developed with green belt.	68

	alternating with shrubs should be planted in a mixed manner.		
33	Taller/one year old saplings raised in appropriate size of bags; preferably eco-friendly bags should be planted as per the advice of local forest authorities/botanist/horticulturist with regard to site-specific choices. The proponent shall earmark the green belt area with GPS coordinates all along the boundary of the project site with at least 3 m wide and in between blocks in an organized manner	Accepted. Green belt development work is in progress. Photographs on green belt/plantation will be furnished in Final EIA EMP report.	-
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 7.3.5, Chapter 7.	175
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.	167
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 4.5.4 of Chapter-4.	156
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 750m from the lease area. Details of CER and CSR are discussed under Chapter- 8.	177
38	The Socio-economic studies should be carried out within a 5km buffer zone from the mining activity. Measures of socio-economic	Socio economic study is conducted both by visits and secondary data collection. Details	127

	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.	are given in section 3.3.8, Chapter 3.	
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.	177
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 chapter- 10. The sworn affidavit stating to abide the EMP for the entire life of mine will be submitted in Final EIA EMP report.	179 - 187
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	-

Standard Terms of Reference for (Mining of minerals)

1.1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.	Not applicable. This is not a Violation Category Project. This proposal is for Environmental Clearance for B1 Category Cluster Situation.	
1.2	A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.	The copy of LOI i.e. Precise Area Communication Letter in the name of all Lessee is attached as Annexure 2,	
1.3	All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.	Noted & agreed.	
1.4	All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).	Project coordinates superimposed in satellite imagery and given as Figure No – 2.2 in Chapter – 2. The geology and geomorphology map are provided in Figure No.3.25 3.26 Chapter 3.	66,133,134
1.5	Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.	The details are incorporated in chapter 3	90
1.6	Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.	The applied area is inspected by the VAO, Revenue Inspector of Mines, Assistant Director and confirmed the land is suitable for Rough stone quarrying operation with the land use policy of the state. VAO Certificate is attached as Annexure 5,	
1.7	It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the	Environment policy details given chapter- 10.	183

	EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.		
1.8	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.	It is an open cast mining project. Blasting details are incorporated in Chapter-2	79
1.9	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.	The study area comprise of 10 km zone around the mine lease from. in Chapter 2	
1.10	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	Satellite imagery has been used to study the lease area and the details of land use is given in Chapter 3.	90
1.11	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given	There is no proposal for use of land outside the mine lease area for OB dumps, etc. There are no R&R issues involved in the project.	
1.12	Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of	No forest land involved in the project.	

	forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.		
1.13	Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.	Not applicable since no forest land involved within mine lease area.	
1.14	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated	Not applicable since no forest land involved in mine lease area.	
1.15	The vegetation in the RF / PF areas in the study area, with necessary details, should be given.	• There is no Reserve Forest / Sanctuaries located within 10km radius of the study area. • Kodaikanal Wildlife Sanctuary – 13.86 km (S)	89
1.16	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.	Impact on Biological Environment is given in Chapter 3	115
1.17	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to	• There is no Reserve Forest / Sanctuaries located within 10km radius of the study area. • Kodaikanal Wildlife Sanctuary – 13.86 km (S)	89

	proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.		
1.18	A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan 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.	Details biological study (flora & fauna) within 10 km radius of the project site have been incorporated in Chapter 3	115
1.19	Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.	There is no critically polluted area within 10 km radius of the mining area. Also, the project does not come under the 'Aravali Range'.	
1.20	Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease 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).	The project does not fall under CRZ.	
1.21	R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in	There is no Rehabilitation and resettlement is involved. Land classified as patta land	

	view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.		
1.22	One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given	Baseline environmental monitoring was conducted in the core zone and buffer zone during Summer march 2025 to may 2025 . Site specific meteorological data was also collected during the study period. The monitoring location details and the monitoring results are discussed in Chapter 3 .	88
1.23	Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The	Air quality modeling was carried out for the rough stone mining project using AERMOD as incorporated in Chapter-4	146

	wind roses showing pre-dominant wind direction may also be indicated on the map.		
1.24	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.	Water requirement for the project and source are given in detail in Chapter 2	73
1.25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.	Not Applicable Water will be taken from out sources	
1.26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	Proposed water conservation measures including rainwater harvesting measures are discussed in Chapter 4	
1.27	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.	Impact of the project on the surface and ground water environment and necessary control measures are discussed in Chapter 4	139
1.28	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.	Hydro Geological Study will be submitted in final EIA	
1.29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.	There is no seasonal stream or nallah flowing through the mining area.	
1.30	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.	Highest elevation: 353 AMSL Depth: 72 m (below from existing ground profile)	

1.31	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.	There are no 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 0.35.5 Ha will be under greenbelt and plantation.	
1.32	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.	Traffic study details in chapter 7	173
1.33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.	Details of onsite facilities to be provided	
1.34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.	Conceptual Plan and Section of the mine lease area is given in chapter-2	84
1.35	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical	Details of anticipated occupational health impacts and proposed preventive measures are discussed in Chapter 4	156

	examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.		
1.36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations	No major impact on public health will be there since the villages are located more than 1km from the lease area.	
1.37	Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	Details of CER and CSR are discussed under Chapter No. 8	176
1.38	Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.	Environmental Management Plan for the project is discussed in detail in Chapter 9 .	
1.39	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project	The public hearing comments will be submitted during final EIA report	
1.40	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.	There is no litigation pending against the project.	
1.41	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.	90.54 Lakhs	
1.42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	Disaster Management Plan is included in Chapter 7	175
1.43	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate	The Project benefits are clearly spelt out in Chapter 8 .	176

DRAFT EIA/EMP FOR THE ROUGH STONE AND GRAVEL QUARRY OF THIRU.S.AYYAPPAN OVER AN EXTENT OF 1.86.0 HA LOCATED AT THE SF. NOS. 160/4, 159/1, 132/2B AND 131/1C2(P) OF PULIYAMPATTI VILLAGE, PALANI TALUK, DINDIGUL DISTRICT, TAMIL NADU STATE.

	environmental, social, economic, employment potential, etc.		
1.44	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. J11013/41/2006-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	All general are followed while preparing EIA/EMP.	

	the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable. i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.		
Seiaa Standard Conditions			
Cluster Management Committee			
1	Cluster management committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry	There are 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.	-
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	Risk management plan for the individual quarry is given in this report. As far as cluster working condition is concerned, once the	-

	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.	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	There is no standing trees in proposed mine lease area.	-

	of the proposed mining area shall committed mentioned in EMP.		
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 4.2, Chapter 4.	115, 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.	179
14	The project proponent shall study and furnish the impact of project on plantations in adjoining Government poramboke lands, Horticulture, Agriculture and livestock.	Complied. The details are given in, Chapter- 4.	130

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 core and buffer zone is given in section 3.3.6., Chapter- 3.	115
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	115
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.	The hydrogeological study from a reputed institute is in progress; The Final EIA EMP report will be incorporated with hydrological studies.	-

	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.	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.	139 - 158
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.	88 - 136 154
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 - 154
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 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 4.2, Chapter- 4).	115 139
25	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil	The impact of mining on soil environment has been discussed in section 4.3 under Chapter- 4.	145

	physical, chemical components and microbial components.		
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.	154
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 4.5 chapter- 4.	154
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 4.3.6, Chapter- 4.	149
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.	175
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.	179
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 0.35.5 Ha with 355 Nos of saplings and in addition, 200 Nos of saplings outside the lease area. - For this capital cost of INR 8.94 Lakhs and recurring cost of INR 10.94 Lakhs 5 year has been earmarked. - The breakup of the total EMP cost is detailed in Table 10.2 of Chapter 10.	184-187
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.	167
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.	175
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, <u>HT and LT lines</u> , bird sanctuaries, and wildlife sanctuaries within 300 meters of the proposed project area. In this regard, the project proponent has received an official letter from the Village Administrative Officer,	Annexure No-5

		Puliyampatti village, The letter copy enclosed as Annexure – 5.	
38	As per the MoEF& CC office memorandum F.NO.22-65/2017-1A.11I dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.	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 risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.	Complied. The PP has framed detail solid waste management system for the project area and the same will be executed by proper awareness and sign boards. The sign boards will be in two language i.e., Vernacular language (Tamil) and common language (English). The plastic waste generation is very negligible and it will be collected from the source level in specific dustbin and disposed through the municipal bins.	-

Standard Terms of Reference for (Mining of minerals)

1.1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.	Not applicable. This is not a Violation Category Project. This proposal is for Environmental Clearance for B1 Category Cluster Situation.	
1.2	A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.	The copy of LOI i.e. Precise Area Communication Letter in the name of all Lessee is attached as Annexure2,	
1.3	All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management,	Noted & agreed.	

	mining technology etc. and should be in the name of the lessee.		
1.4	All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).	Project coordinates superimposed in satellite imagery and given as Figure No – 2.2 in Chapter – 2. The geology and geomorphology map are provided in Figure No.3.25 3.26 Chapter 3.	66,133,134
1.5	Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.	The details are incorporated in chapter 3	90
1.6	Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.	The applied area is inspected by the VAO, Revenue Inspector of Mines, Assistant Director and confirmed the land is suitable for Rough stone quarrying operation with the land use policy of the state. VAO Certificate is attached as Annexure 5 ,	
1.7	It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.	Environment policy details given chapter- 10.	183

1.8	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.	It is an open cast mining project. Blasting details are incorporated in Chapter-2	79
1.9	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.	The study area comprise of 10 km zone around the mine lease from. in Chapter 2	
1.10	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	Satellite imagery has been used to study the lease area and the details of land use is given in Chapter 3.	90
1.11	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given	There is no proposal for use of land outside the mine lease area for OB dumps, etc. There are no R&R issues involved in the project.	
1.12	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.	No forest land involved in the project.	
1.13	Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of Net	Not applicable since no forest land involved within mine lease area.	

	Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.		
1.14	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated	Not applicable since no forest land involved in mine lease area.	
1.15	The vegetation in the RF / PF areas in the study area, with necessary details, should be given.	- There is no Reserve Forest / Sanctuaries located within 10km radius of the study area. - Kodaikanal Wildlife Sanctuary – 13.86 km (S)	89
1.16	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.	Impact on Biological Environment is given in Chapter 3	115
1.17	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.	- There is no Reserve Forest / Sanctuaries located within 10km radius of the study area. - Kodaikanal Wildlife Sanctuary – 13.86 km (S)	89
1.18	A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with	Details biological study (flora & fauna) within 10 km radius of the project site have been incorporated in Chapter 3	115

	budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.		
1.19	Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.	There is no critically polluted area within 10 km radius of the mining area. Also, the project does not come under the 'Aravali Range'.	
1.20	Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease 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).	The project does not fall under CRZ.	
1.21	R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.	There is no Rehabilitation and resettlement is involved. Land classified as patta land	

1.22	One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given	Baseline environmental monitoring was conducted in the core zone and buffer zone during Summer march 2025 to may 2025 . Site specific meteorological data was also collected during the study period. The monitoring location details and the monitoring results are discussed in Chapter 3 .	88
1.23	Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.	Air quality modeling was carried out for the rough stone mining project using AERMOD as incorporated in Chapter-4	146
1.24	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.	Water requirement for the project and source are given in detail in Chapter 2	73
1.25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.	Not Applicable Water will be taken from out sources	

1.26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	Proposed water conservation measures including rainwater harvesting measures are discussed in Chapter 4	
1.27	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.	Impact of the project on the surface and ground water environment and necessary control measures are discussed in Chapter 4	139
1.28	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.	Hydro Geological Study will be submitted in final EIA	
1.29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.	There is no seasonal stream or nallah flowing through the mining area.	
1.30	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.	Highest elevation: 353 AMSL Depth: 72 m (below from existing ground profile)	
1.31	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species	There are no 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 0.35.5 Ha will be under greenbelt and plantation.	

	to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.		
1.32	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.	Traffic study details in chapter 7	173
1.33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.	Details of onsite facilities to be provided	
1.34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.	Conceptual Plan and Section of the mine lease area is given in chapter-2	84
1.35	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Details of anticipated occupational health impacts and proposed preventive measures are discussed in Chapter 4	156
1.36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations	No major impact on public health will be there since the villages are located more than 1km from the lease area.	

1.37	Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	Details of CER and CSR are discussed under Chapter No. 8	176
1.38	Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.	Environmental Management Plan for the project is discussed in detail in Chapter 9 .	
1.39	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project	The public hearing comments will be submitted during final EIA report	
1.40	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.	There is no litigation pending against the project.	
1.41	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.	90.54 Lakhs	
1.42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	Disaster Management Plan is included in Chapter 7	175
1.43	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.	The Project benefits are clearly spelt out in Chapter 8 .	176
1.44	Besides the above, the below mentioned general points are also to be followed:- d) Executive Summary of the EIA/EMP Report e) All documents to be properly referenced with index and continuous page numbering. f) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.	All general are followed while preparing EIA/EMP.	

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. J11013/41/2006-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. i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.		

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.S.Ayyappan Lessee, has obtained Precise Area communication letter from the Assistant Director, Department of Geology and Mining, Dindigul to quarry out Mineable reserves 1,01,880 m³ of Rough Stone and 11,170 m³ of Gravel up to depth of 32m (BGL). Existing depth 17m reached. The project located at the Survey No. S.F.No. 160/4, 159/1, 132/2B and 131/1C2(P) of Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State. . The applied area was previously operated by this same pp during the lease period 30.05.2020 to 29.05.2025. CCR is applicable. The existing pit dimension as per approved mining plan is given below.

Pit No	length (Max) in(m)	Width (Max) in (m)	Depth (Max) in (m)
I	78	20	1
II	59	33	12
III	68	32	17
IV	55	12	1

The lease deed for the earlier quarrying operations was executed in accordance with the proceeding of the District Collector, Dindigul vide Roc.No.584/2018 (Mines) dated 30.05.2020 and the EC was issued by SEIAA-TN vide Lr. No. SEIAA-TN/F.No.7010/1(a)/EC.No: 4168/2020 dated 13.03.2020 over an area of 1.90.5 Ha at S.F.Nos. 160/3, 160/4, 160/5, 159/1, 132/2B and 131/1C2(P) in Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State.

Hence, this proposed quarry falls under the cluster situation due to the following proposed and abandoned quarries located within 500m radius. The details are given below.

Table 1.1 Cluster Mines Details				
S.No	Name of the Quarry Owner	S.F. Nos	Lease Period	Area
a. Existing Quarry				
1.	KNR Construction, Puliampatti, Palani	S.F.Nos. 131/1A, 1B, 2A, 2B, 1C1, 132/1, 2A Puliampatti Village Palani Taluk, Dindigul District	File No – 7721/2020 Lease Period - 3.09.2022 to 12.09.2027	4.83.5 Ha
b. Abandoned quarries				
2	V.Soundarapandian	S.F.No. 160/6 (P) Puliampatti Village Palani Taluk, Dindigul District	26.10.2015 to 25.10.2020	0.62.5 Ha
c. Proposed Quarry				
3.	S.Ayyappan, S/o. Singaram Chettiyar, No. 193, Lakshmipuram, Palani Taluk, Dindigul	S.F.Nos. 160/4, 159/1, 132/2B & 131/1C2(P) Puliampatti Village Palani Taluk, Dindigul District	-	1.86.0 Ha
Total Area Under Cluster				6.69.5 Ha

As per EIA notification, 2006 and its subsequent amendments the Thiru.S.Ayyappan Rough Stone and Gravel Quarry, cluster 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 6.69.5 Ha which is >5 Ha. Satellite image of Quarries in Cluster is shown in Fig 1.1.

Figure.1.1 Satellite Image showing cluster quarries



The ToR for preparation of EIA/EMP was approved vide ToR Identification No. TO25B0108TN5875086N, Dated: 04/09/2025. This report has been prepared in line with the approved TOR for production of maximum excavation of 1,01,880 m³ Rough stone and 11,170 m³ of Gravel up to the depth of 32m BGL (including existing depth of 17m BGL) for a period of five years.

1.2 IDENTIFICATION OF PROJECT & PROJECT PROPONENT

The proposed ML is the existing lease, which was operated by the present applicant Thiru.S.Ayyappan from 30.05.2020 to 29.05.2025 period with Environmental Clearance. The EC was issued by SEIAA-Dindigul vide Lr. No. SEIAA-TN/F.No.7010/1(a)/EC.No: 4168/2020 dated 13.03.2020 over an area of 1.90.5 Ha and now planning to propose for another 5 years in S.F.Nos. 160/3, 160/4, 160/5, 159/1, 132/2B and 131/1C2(P) in Puliampatti Village, Palani Taluk, Dindigul 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.

(a) Proposed project details

Sl.No	Description	Status/Remarks
1.	Sector	Non-coal Mining
2.	Category of the project	B1
3.	Proposed mineral	Rough Stone and Gravel
4.	Type of Lease	It is existing quarry lease applied area
5.	Extent of the lease	1.86.0 Ha
6.	Proposed depth of mining and Ultimate	32m (including existing depth of 17m BGL)
7.	Existing Pit Depth	17m BGL
8.	Method of Mining	Opencast Semi-mechanized
9.	Life of the Mine	5 Years
10.	Proposed Environmental Clearance	5 Years
11.	Proposed production quantity for five years (upto 32m)	Total Production of 1,01,880 m ³ Rough stone and 11,170 of Gravel

(b) Profile of the project proponent

The proposed lessee Thiru.S.Ayyappan is an individual with sound experience in the identification of quarry, operation and marketing in the field of Rough Stone quarry. The proposed land is patta land, please refer **Annexure no -6**.

(c) Project proponent details

Name of the proponent : S.Ayyappan,
 Status of the Proponent : Individual
 Address : S/o. Singaram Chettiyar,
 No. 93, Lakshmipuram,
 Palani Taluk,
 Dindigul District.
 Pincode - 624 601.

1.3 BRIEF DESCRIPTION OF NATURE, SIZE, LOCATION OF THE PROJECT AND ITS IMPORTANCE TO THE COUNTRY, REGION:

The proposed quarrying operation Opencast Semi-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.

1.3.1 SIZE AND LOCATION OF THE PROJECT

(a) Size of the project

Table 1.2 Proposed project details		
Sl. No.	Feature	Description
1	Type of land	Patta land
2	Extent of lease area	1.89.0 Ha
3	Type of lease	It is existing quarry lease applied area
4	Geological Resource	4,53,035 m ³ of Rough Stone and 16,816.25 m ³ of Gravel
5	Mineable reserves (Quantity in Ts)	1,01,880 m ³ of Rough Stone and 11,170 m ³ of Gravel
6	Proposed depth of mining	32m below ground level
7	Ultimate Pit Depth	32m below ground level

(b) Location of the project

The proposed project site is located in Puliyampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State and its Latitude: 10°30'41.32"N to 10°30'49.66"N and Longitude: 77°32'11.56"E to 77°32'17.75"E. with Survey of India Topo Sheet No. 58 F/ 10.

1.3.2 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.

1.4 SCOPE OF THE STUDY -DETAILS OF REGULATORY SCOPING CARRIED OUT (AS PER TERMS OF REFERENCE):

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, Tamil Nadu has issued a Terms of Reference ToR Identification No. TO25B0108TN5875086N, (F.No. 12472), dated 04/09/2025 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 summer season 2025 (March 2025 to May 2025) 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.

1.4.1 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 March 2025 to May 2025 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.

1.4.2 STATUS OF LITIGATIONS

This is Rough Stone and Gravel quarry project. There is no litigation/court case pending against this project.

a. Precise Area Communication:

Precise area communication letter received from the Assistant Director, Department of Geology and Mining, Dindigul, vide Rc.No.535/2025 (Kanimam) dated 27.06.2025. The letter copy enclosed as **Annexure – 2.**

b. 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, Dindigul, vide Roc.No.535/2025/Mines dated 07.07.2025. The approval letter along with approved plan is enclosed as **Annexure – 3.**

c. 500m radius quarry features:

The project proponent has obtained an official letter from Assistant Director, Dept. of Geology & Mining, Dindigul vide Roc.No.535/2025/Mines dated 07.07.2025. The letter copy enclosed as **Annexure – 4.**

d.VAO certification regarding 300 meter features of the project area.

There are no historical places, schools, cemeteries, 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, Puliampatti, dated 30.06.2025. **The letter copy enclosed as Annexure – 5.**

e. Project Proponent undertaking affidavit:

The project proponent has issued an affidavit under MoEF & CC O.M. No. 3- 50/2017-IA.III(Pt.) dated 30.05.2018 to comply with the direction of the Hon'ble SC made on 2.08.2017 in W.P. (C) 114 of 2014 in matter of Common Cause vs Union of India & Ors.

f. Land document of the proposed lease area:

The proposed land is a patta land in the name of Thiru.Palanisamy vide patta no. 466 and Thiru.Ayyappan (applicant) vide patta no. 36. The applicant has obtained consent from the other pattadar for a period of 11 years and got it registered. The copy of the Patta, Adangal, A-Register and Consent Document enclosed as **is enclosed as PFR Annexure – 6**

CHAPTER 2

PROJECT DESCRIPTION

2.1 TYPE OF PROJECT

The type of the project is Opencast Mechanized Mining to excavate Rough stone and Gravel within the proposed Mine Lease area with drilling, blasting, loading and transportation. This project is located at S.F. Nos. 160/4, 159/1, 132/2B and 131/1C2(P) over an extent of 1.86.0 Ha, in Puliampatti Village, Palani Taluk, Dindigul 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 6.69.5 Ha. The details of mines located in the cluster area is certified by Assistant Director, Dept. of Geology & Mining, Dindigul, vide Rc.No535/2025(Mines) dated 07.07.2025.

Table 2.1 500m Radius Cluster Mines Details				
S.No	Name of the Quarry Owner	S.F. Nos	Lease Period	Area
a. Existing Quarry				
1.	KNR Construction, Puliampatti, Palani	S.F.Nos. 131/1A, 1B, 2A, 2B, 1C1, 132/1, 2A Puliampatti Village Palani Taluk, Dindigul District	File No – 7721/2020 Lease Period - 3.09.2022 to 12.09.2027	4.83.5 Ha
b. Abandoned quarries				
2	V.Soundarapandian	S.F.No. 160/6 (P) Puliampatti Village Palani Taluk, Dindigul District	26.10.2015 to 25.10.2020	0.62.5 Ha
c. Proposed Quarry				
3.	S.Ayyappan, S/o. Singaram Chettiyar, No. 193, Lakshmipuram, Palani Taluk, Dindigul	S.F.Nos. 160/4, 159/1, 132/2B & 131/1C2(P) Puliampatti Village Palani Taluk, Dindigul District	-	1.86.0 Ha
Total Area Under Cluster				6.69.5 Ha

The total lease within the 500m radius (Existing + Proposed + Abandoned) (1 no + 1 no + 1 no) works out to 6.69.5 Ha, including this lease area. As such, the cluster situation TOR is applicable for this project.

2.2 NEED FOR THE PROJECT

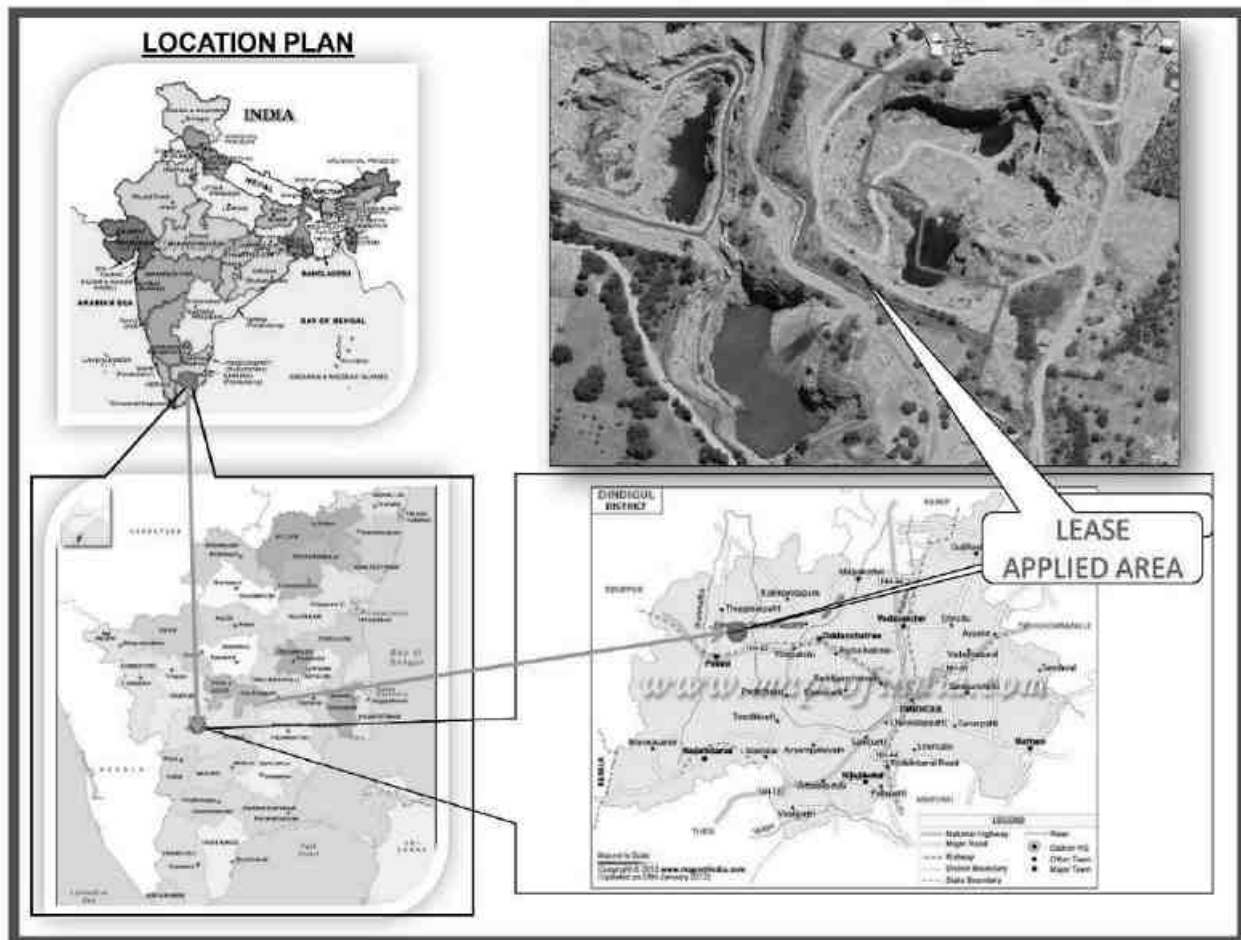
The need of the proposed Rough Stone and Gravel quarry of Thiru.Ayyappan.

Table 2.1a Salient features of the project		
S.No.	Type of Detail	Description
1	Sector	1(a) Non coal mining
2	Fresh/Existing project	Existing
3	Category	B1
4	Nature of mineral	It is existing quarry lease applied area
5	Life of the mine	5 years
6	Geological reserves	4,53,035 m ³ of Rough Stone and 16,816.25 m ³ of Gravel
	Mineable reserves	1,01,880 m ³ of Rough Stone 11,170 m ³ of Gravel
	Proposed production quantity for five years (32m below ground level)	1,01,880 m ³ of Rough Stone 11,170 m ³ of Gravel
7	Waste generation and management	Nil
8	Existing depth	17m (below ground level)
9	Bench height and width	Proposed bench height & width is 5.0m respectively and number of proposed benches is 6+1 Nos.
10	Ultimate pit depth	32m below ground level
11	End use	The excavated Rough Stone 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 (MAPS SHOWING GENERAL LOCATION, SPECIFIC LOCATION, PROJECT BOUNDARY & PROJECT SITE LAYOUT):

This project site is located in Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State. The Nearest Railway line is Dindigul to Palani Railway line – 6.1 km (SE) side of the area. The National Highway (NH-83) Dindigul – Coimbatore Road – 3.1 km (S). The State Highway (SH-83) Palani – Dharapuram Road – 840 m (W) of the area. The general location is given in Figure 2.1. The specific location is given in Figure 2.2.

FIGURE 2.1 LOCATION MAP



DRAFT EIA/EMP FOR THE ROUGH STONE AND GRAVEL QUARRY OF THIRU.S.AYYAPPAN OVER AN EXTENT OF 1.86.0 HA LOCATED AT THE SF. NOS. 160/4, 159/1, 132/2B AND 131/1C2(P) OF PULIYAMPATTI VILLAGE, PALANI TALUK, DINDIGUL DISTRICT, TAMIL NADU STATE.

Table 2.2 Co-Ordinates of the Project Site				
Corners	Co- ordinates		Distance between the corners	
	Latitude	Longitude		
1	10° 30' 46.18N	77° 32' 11.56E	1-2 =	110.0m
2	10° 30' 49.66N	77° 32' 12.40E	2-3 =	76.0m
3	10° 30' 48.92N	77° 32' 14.79E	3-4 =	97.0m
4	10° 30' 45.85N	77° 32' 14.02E	4-5 =	52.8m
5	10° 30' 45.32N	77° 32' 15.69E	5-6 =	39.8m
6	10° 30' 44.03N	77° 32' 15.51E	6-7 =	15.6m
7	10° 30' 43.53N	77° 32' 15.47E	7-8 =	72.0m
8	10° 30' 42.88N	77° 32' 17.75E	8-9 =	50.2m
9	10° 30' 41.32N	77° 32' 17.26E	9-10 =	130.0m
10	10° 30' 43.25N	77° 32' 13.45E	10-11 =	37.2m
11	10° 30' 43.82N	77° 32' 12.37E	11-12 =	50.2m
12	10° 30' 45.37N	77° 32' 12.90E	12-1 =	47.8m

FIGURE 2.2 GOOGLE IMAGE SHOWING PROJECT SITE



FIGURE 2.3 SURFACE PLAN OF THE PROJECT AREA

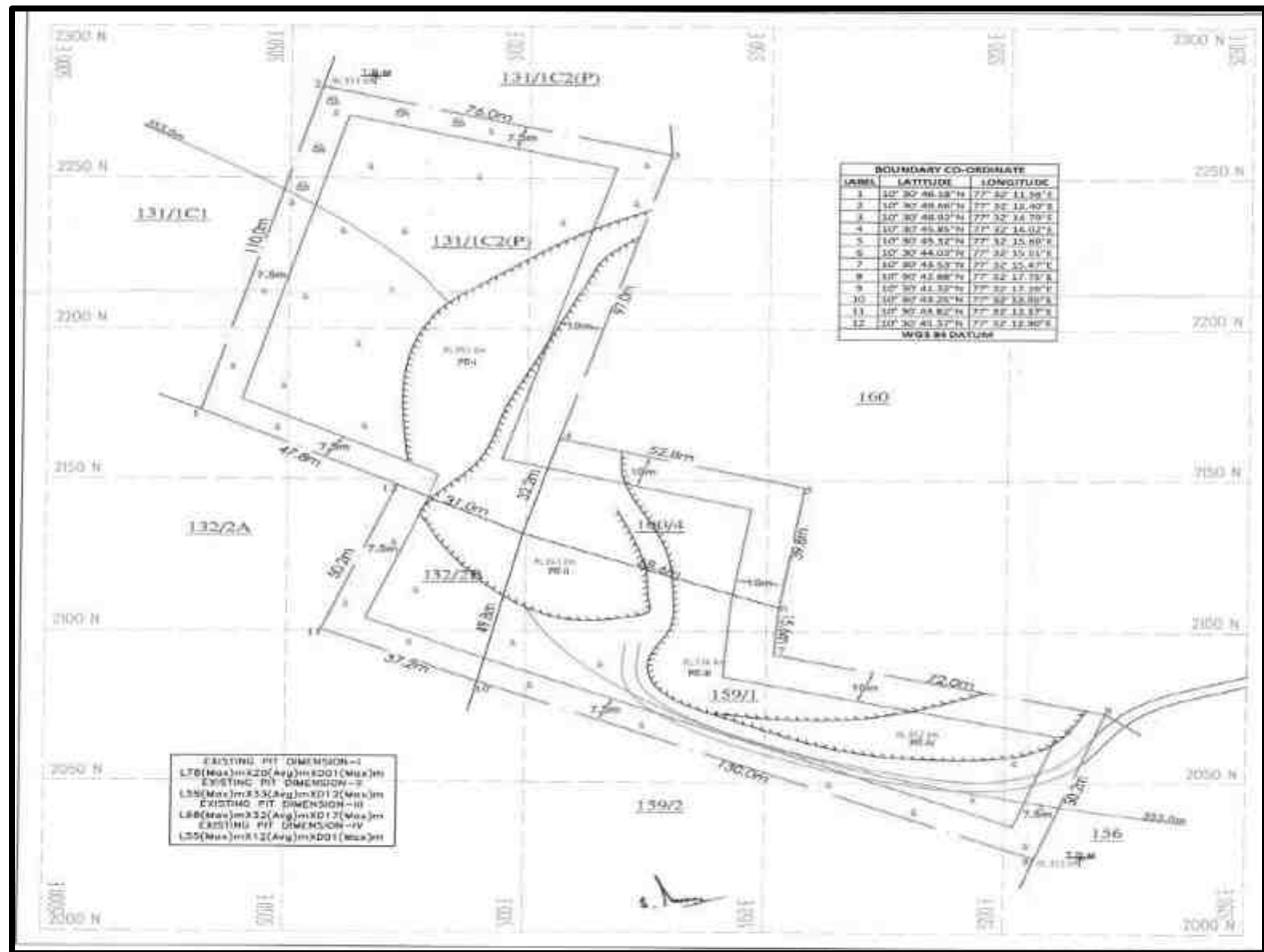
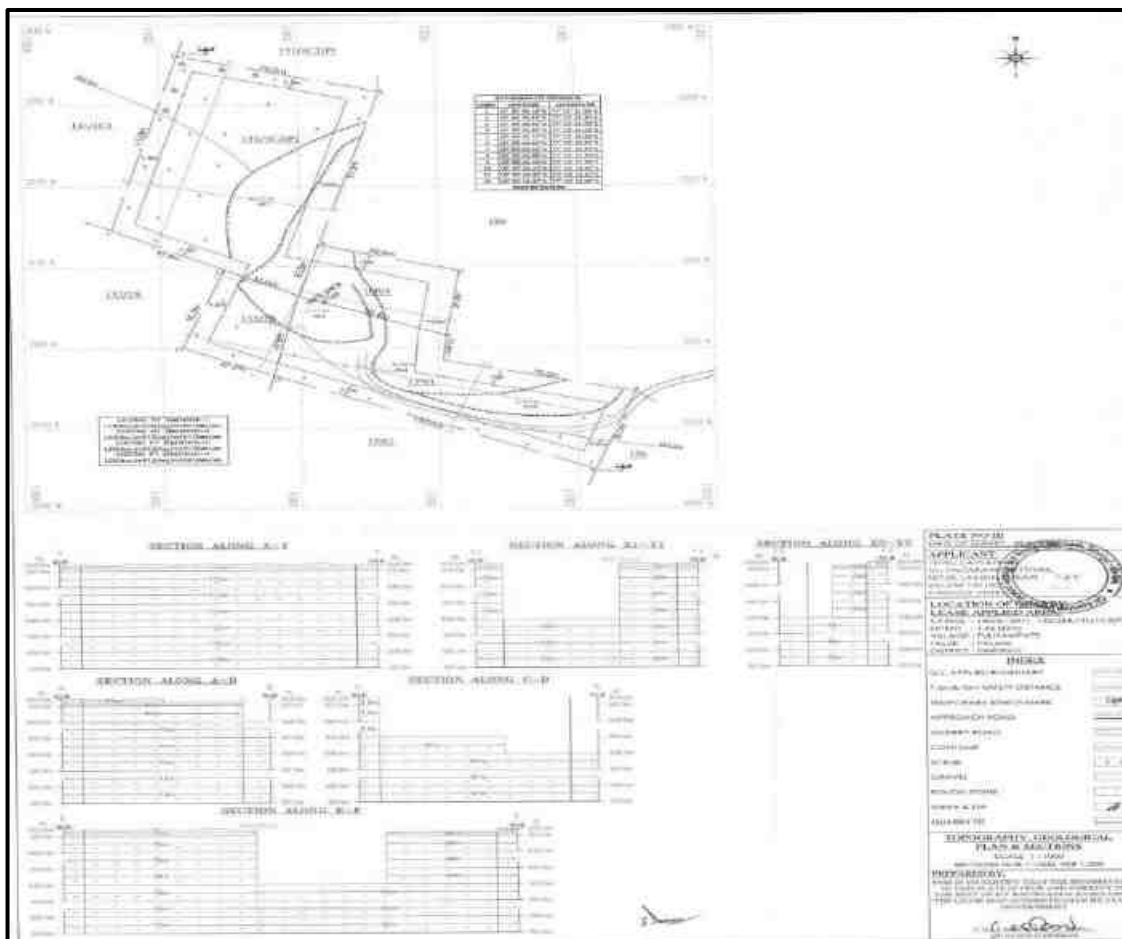


FIGURE - 2.4 GEOLOGY MAP OF PROJECT AREA



2.3.1 LAND USE OF THE PROJECT AREA

The proposed Mine Lease area is patta land and the Land use pattern of the project site is given below Table 2.3.

Table 2.3 Current Land Use Pattern			
S. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1	Quarrying Pit	0.63.5	1.48.5
2	Infrastructure	Nil	0.01.0
3	Roads	0.01.0	0.01.0
4	Green Belt	0.02.0	0.35.5
5	Unutilized	1.19.5	Nil
	Total	1.86.0	1.86.0

2.3.2 LAND USE AT MINE CLOSURE STAGE

Table 2.4 Land Use at Mine Closure Stage		
S. No.	Land Use	Area in use during the quarrying period (Hect)
1	Area left for water body	1.48.5
2	Green Belt	0.35.5
3	Remaining area	0.02.0
Total		1.86.0

2.3.3 SALIENT FEATURES OF THE LEASE AREA

S.No	Salient Features	Description
1	Nearest Roadway	Puliyampatti- Melakottai Village road – 190 m (E) (SH-83) Palani – Dharapuram Road -840 m (W) (NH-83) Dindigul – Coimbatore Road-3.1 km (S)
2	Nearest Village	Puliyampatti village – 720m (S)
3	Nearest Railway station	Palani Railway Station 6.09 km (SW)
4	Nearest Airport	Coimbatore International Airport 78.92 km (NW)

Figure 2.5 Topo Map showing existing site features

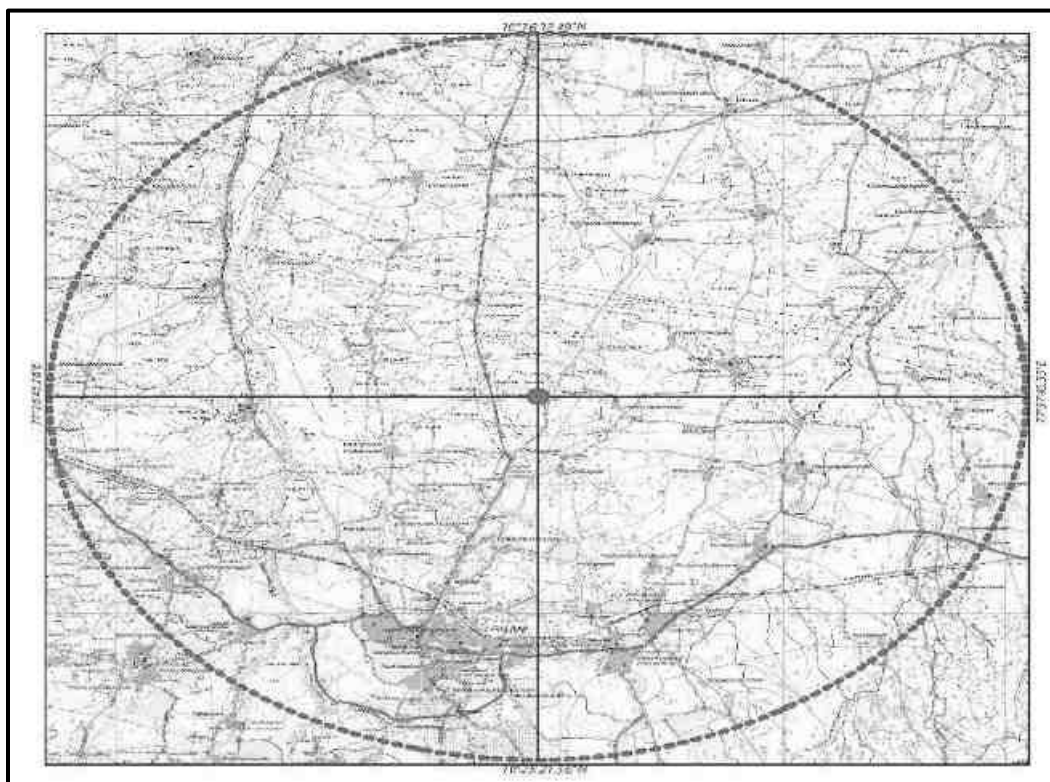


FIGURE 2.6 PROJECT SITE PHOTOGRAPHS



2.4 SIZE OR MAGNITUDE OF OPERATION(INCL.ASSOCIATED ACTIVITIES REQUIRED BY OR FOR THE PROJECT):

The proposed production is rough stone 1,01,880 m³ and 11,170 m³ of gravel by Opencast Semi-Mechanized mining method. Available Geological Resources of Rough stone 4,53,035 m³ and 16,816.25 m³ gravel for the Cost of the project is Rs. 90.54 lakhs including land cost. Capital cost for EMP is Rs. 8.94 Lakhs of Capital Cost + Rs.10.94 Lakhs of Recurring Cost Lakh/Annum.

2.4.1 STATUS OF STATUTORY CLEARANCES, PERMISSIONS, NO OBJECTION CERTIFICATES, CONSENTS:

The mining project will be implemented after getting all the Statutory Clearances, Permissions, No Objection Certificates, consents etc. which are required/necessary for this project under various Acts, Rules and Regulations is as given in table below:

Table - 2.5 Status of Statutory Clearances, Permissions, NOC, Consents

S.No	Particular	Status
1	Mining Plan Approval Status	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, Department of

		Geology and Mining, Dindigul, vide Roc.No.535/2025/Mines dated 07.07.2025
2	Environment Clearance Status	ToR Letter Received vide file no TO25B0108TN5875086N, dated 04/09/2025
3	Grant of Consent to Establish (CTE)	After 30 days from grant of EC (Duration as per TNPCB)
4	Grant of Consent to Operate (CTO)	After 30 days from grant of EC (Duration as per TNPCB)

2.5 PROPOSED SCHEDULE FOR APPROVAL & IMPLEMENTATION

Proposed schedule for approval of the proposed mining project is given as under:

Table - 2.6 Proposed Schedule for Approval

S.N	Activity Description	Dec 2025	Jan 2026	Feb 2026	Mar 2026
1	Submission of Final EIA/EMP Report to SEIAA-TN				
2	Consideration for EC by SEAC				
3	Recommendation of SEAC to SEIAA				
4	Grant of EC by SEIAA				

Proposed schedule has been prepared as per EIA Notification, 2006

Note: Application was submitted to Parivesh Portal on 19/07/2025, ToR was granted on 04.09.2025. Baseline data Collection during Summer Season (March to May 2025). After obtaining EC from SEIAA-TN, CTE and CTO under section 21 of the Air (Prevention and Control Act) 1981 and section 25/26 Water (Prevention and Control of Pollution Act) 1974 will be obtained from Tamil Nadu State Pollution Control Board (TNPCB).

2.5.1 IMPLEMENTATION

Implementation of the proposed mining project will be done in accordance with the existing Acts and Rules applicable on mining operations as well as in accordance with any Act/Rule/Guidelines issued by Central or State Government from time to time and as per Mining Plan and Progressive Mine Closure Plan approved by Assistant Director, Department of Geology and Mining, Dindigul, vide Roc.No.535/2025/Mines dated 07.07.2025.

2.6 TECHNOLOGY & PROCESS DESCRIPTION

2.6.1 BASIC REQUIREMENTS FOR THE PROJECT

The project requirements such as water, power, man-power, fuel, machinery with source of supply is described in the sections below.

2.6.2 WATER REQUIREMENTS

In the proposed mines water will be mainly used for domestic purpose, dust suppression & plantation. Total water requirement for the project is 3.0 KLD which will be sourced from outside agencies. Negligible sewage of 1.0 KLD will be generated, for which a septic tank with soak pit will be set up. The water balance diagram is given below.

FIG 2.7 WATER BALANCE DIAGRAM

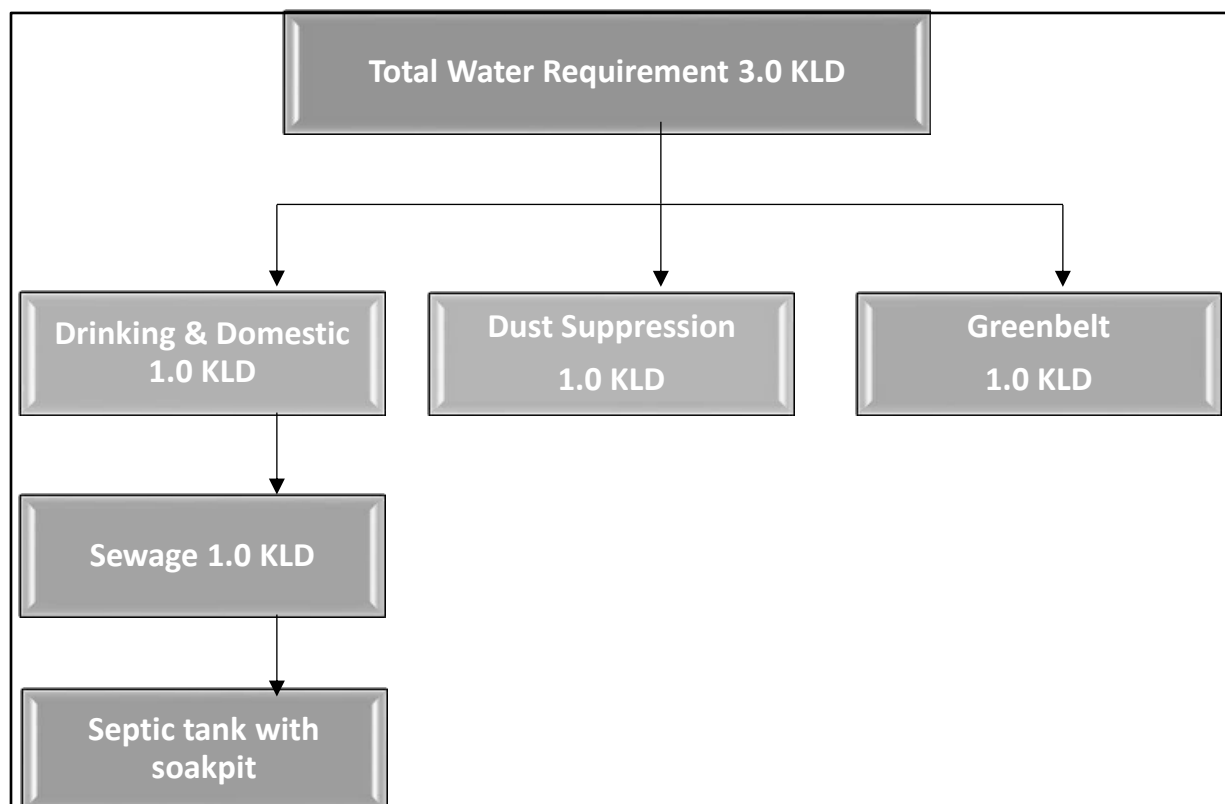


Table - 2.7 Water Requirement

S. No	Particular	Water Requirement (KLD)
1	Dust suppression	1.0
2	Drinking/Domestic	1.0
3	Greenbelt/Plantation	1.0
Total		3.0

2.6.3 POWER REQUIREMENT

Total Fuel requirement is 83,365 Litres for entire life of the project. Power will be used only in the office building

2.6.4 MAN POWER REQUIREMENT

Total Manpower requirement will be 24 persons which out of which 13 persons (Mines manager, Foreman, Mining Mate, etc.,) and other are drivers and workman's categories. Beside this, 11 workmen will be drivers and workmen. Preference will be given to the locals as per their eligibility.

S.No	Description	Employment potential
1	Mines Manager	1 No.
2	Foreman / Mate	2 Nos.
3	Operator	4 Nos.
4	Mechanic	1 No.
5	Driver	3 Nos.
6	Labours	13 Nos
Total		24 Nos

2.6.5 EXTENT OF MECHANIZATION

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

Source: Approved Mining Plan

Note: The mining equipment's of the above capacities are adequate for total material handling requirements for the proposed production of Rough stone in the ML area.

2.6.6 GEOLOGY AND TOPOGRAPHY

Topography

The mine lease area of 1.86.00 Ha is covered in the Survey of India Toposheet 58 F/10 and is bounded by Latitude: 10°30'41.32"N to 10°30'49.66"N and Longitude: 77°32'11.56"E to 77°32'17.75"E. No major river is found nearby the lease applied area. Water table is found at a depth of 72 m. Temperature of the area is reported to be 18⁰ C to a maximum of 42⁰ C during summer. Rainfall of this area is about 800 mm to 900 mm during the both NE & SW monsoons.

The topo map showing the lease area of the proposed quarry is given in Figure 2.1 and Satellite map showing proposed lease area is given in Figure 2.2.

The area applied for quarry lease is exhibits almost plain covered by Gravel formation. The massive Charnockite formation is noticed below 2m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 353m (maximum) from MSL.

2.6.7 Regional Geology

The Core and 10 Km buffered zone geological features (Figure 2.28) shows that the Dindigul District forms part of the Archean complex of peninsular gneiss. The district is essentially a high grade gneissic terrain characterized by highly deformed rocks, which can be classified under three groups as 1) Khondalite Group, 2) Charnockite Group and 3) Migmatite Group. The terrain also exposes basic/ultrabasic and younger acid intrusives. Khondalite Group comprises quartzite, calc granulite / crystalline limestone, garnetsillimanite gneiss, garnet-cordierite gneiss and garnet quartz-feldspar gneiss. Quartzite is an important member of the group, which occurs as linear bands of 5 m to 50 m thick and occupies the crest of linear ridges. It is white or smoky grey and consists of interlocking grains of quartz with minerals like garnet, biotite, diopside, sillimanite and magnetite as accessories. Magnetitequartzite bands are of restricted thickness. Calcgneiss is grey or green and banded, which shows typical ribbed weathering. It consists of diopside, calcite, scapolite, wollastonite and

sphene in various proportions with a small amount of quartz and garnet. With decrease in silicate minerals and increase in carbonates, it grades into crystalline limestone. Crystalline limestone is white, medium to coarse, with interlocking calcite, with a small amount of diopside, biotite and magnetite. Garnet-sillimanite gneiss is medium to coarse grained, 5 to 100 m thick and can be traced over a few kilometers along strike. It is mainly made of bands of quartz-k-feldspar rich layers alternating with layers rich in biotite, sillimanite and garnet. Garnet porphyroblasts upto 3 cm in diameter and sillimanite needles upto 5 cm x 2.5 mm size, are seen at a few places. This rock also has thin interbands of garnet-cordierite gneiss and garnetquartz-feldspar gneiss.

The metasedimentary rocks occur either as individual bands or as swathes of bands repeated several times with width varying from 10 m to 100 m and exposed length from 100 m to a few kilometers, within the Charnockites and Migmatites. These bands are repeated several times because of tectonic slicing.

The Charnockite Group comprises pyroxene granulite and charnockite. The pyroxene granulite is dark grey, medium grained granulitic rock with typical salt and pepper texture, seen on the weathered surface. It consists of diopside, hypersthene, plagioclase, hornblende, biotite and quartz. Charnockite is the predominant rock in the area. It is grey, medium to coarse grained, greasy looking with foliation seen prominently on the weathered surface. It is essentially made of smoky or grey quartz, pale grey microcline and hypersthene as major minerals with plagioclase, hornblende and biotite as accessories. It forms high hills / hill ranges and also occupies the plains, covered by 1-2 m thick soil.

Migmatite is a group of banded felsic rocks of varying mineralogical composition that are formed due to the influx of quartzo-feldspathic material into high grade metamorphic rocks. Two types of migmatite are seen in the Dindigul district, one is grey and the other is pink. Next to charnockite, migmatite gneiss is the second most extensive rock. The migmatite gneiss consists of quartz, kfeldspar, plagioclase, hornblende and biotite in varying proportions.

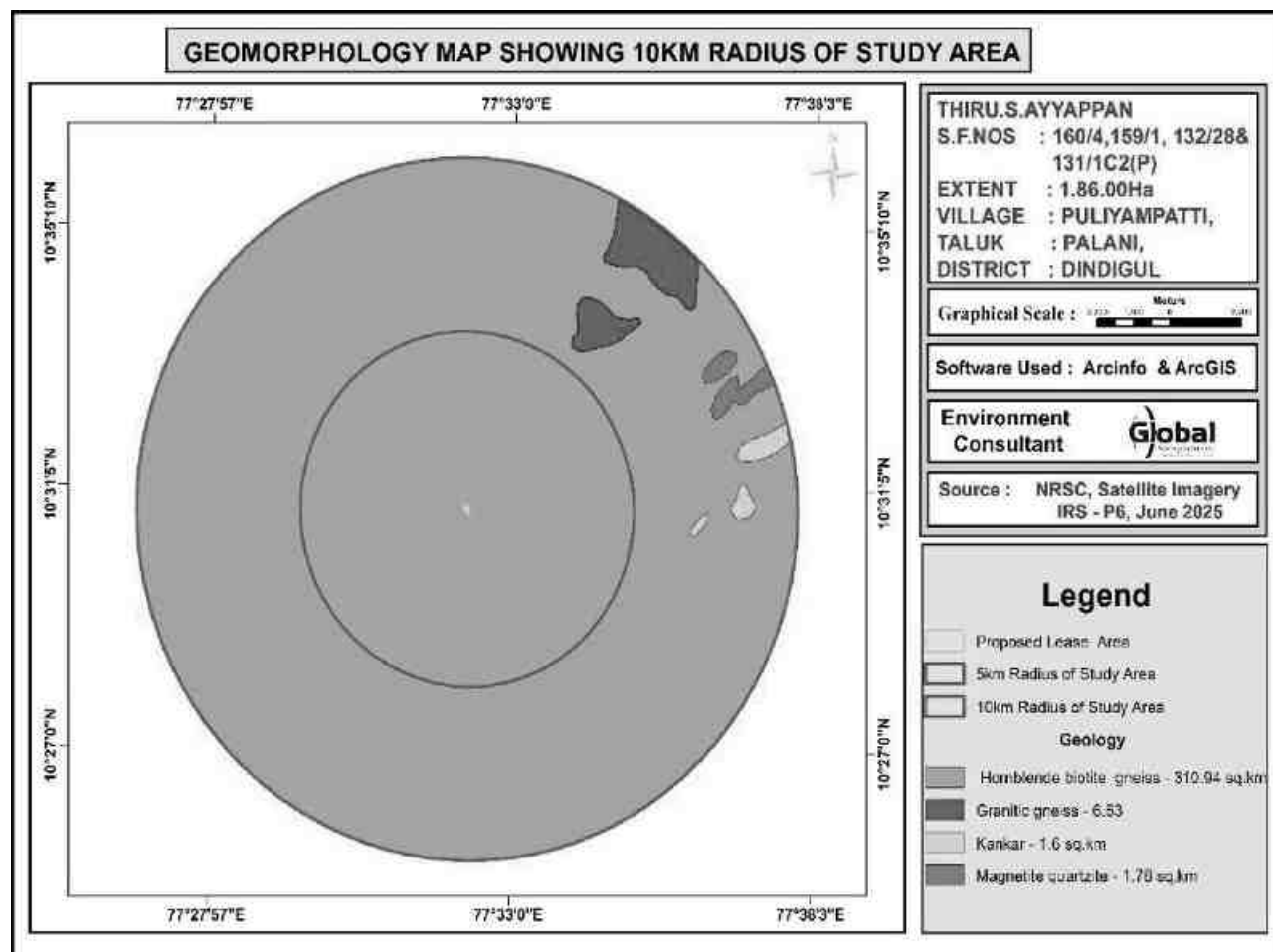
Intrusive igneous rocks are seen in the area are meta-gabbro and anorthosites as for example around Oddanchatram and east of Vendasandur. Meta gabbro is coarse

grained, dark grey, mainly comprising pyroxene, amphibole and plagioclase. Anorthosite is pale pink to light brown, medium to coarse grained rock essentially made up of plagioclase with a small amount of pyroxene and amphibole. Quartz and pegmatite veins are of restricted areal extent. Minor bodies of younger granite are exposed in the area east of Veda sandur.

Foliation/ gneissosity, the prominent planar structure seen in the metamorphic rocks is ENE-WSW in the west and near N-S in the central part of the district. The eastern part of the district shows complicated folded structures due to interference of two phases of folding, forming a series of domes and basins. Faults and shear zones trend N-S in the central part, and NW-SE in the southern part.

(Source – District Survey Report, Dindigul).

FIGURE 2.8 REGIONAL GEOLOGY MAP-10 Km RADIUS FROM PROJECT AREA



2.6.8 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 N45°E –S45°W with dipping towards SE60°. 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

2.7 PROJECT DESCRIPTION INCLUDING DRAWING SHOWING PROJECT LAYOUT COMPONENTS OF PROJECT ETC., SCHEMATIC REPRESENTATION OF THE FEASIBILITY DRAWING WHICH GIVE INFORMATION IMPORTANT FOR EIA PURPOSE.

2.7.1 PROCESS DESCRIPTION

PROPOSED METHOD OF MINING

Opencast method of Semi Mechanized Mining with a bench height of 5.0m and width of 5.0m and an overall bench slope of <45°. It is proposed to excavate 1,01,880 m³ of Rough Stone and 11,170 m³ of Gravel formation upto a depth of 32m (below ground level) for the period of Five years. No wastage is envisaged as the entire material available is Rough Stone only.

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.

BENCH GEOMETRY

Height (max) and Width (max) of the benches will be maintained as 5m each and number of proposed benches is 7, overall slope angle will be at around 70° with the horizontal.

DEVELOPMENT OF MINING FACES

The proposed mining method is Opencast Semi 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 March 2026.

DRILLING & BLASTING

Drilling will be done up to maximum depth of 32m (including existing depth of 17m BGL) Drilling diameter will be 32 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 6-7 Tonnes per Kg of explosives. Small dia 25 mm slurry explosive is proposed to be used for shattering and heaving effect for removal of Rough Stone & Gravel. The proposed blasting pattern is given as Figure 2.9.

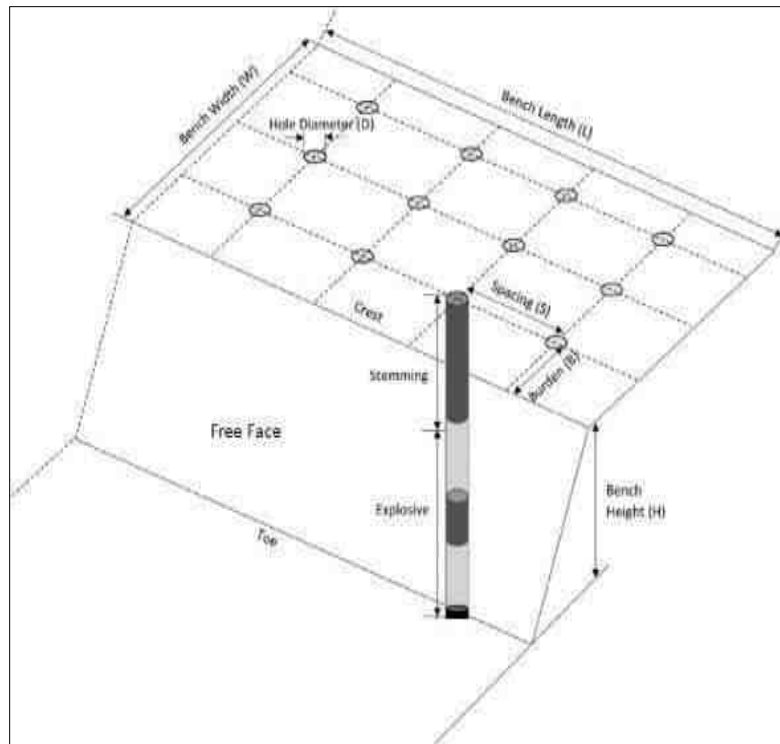


FIGURE 2.9 BLASTING PATTERN

LOADING& TRANSPORTATION OF ROUGH STONE AND GRAVEL

Hydraulic excavator will be used for lifting and loading of the rough stone and Gravel. This excavator in combination with Tippers (10MT) capacity of 3 nos will be used.

FIGURE 2.10 FLOW CHART OF THE QUARRY OPERATION

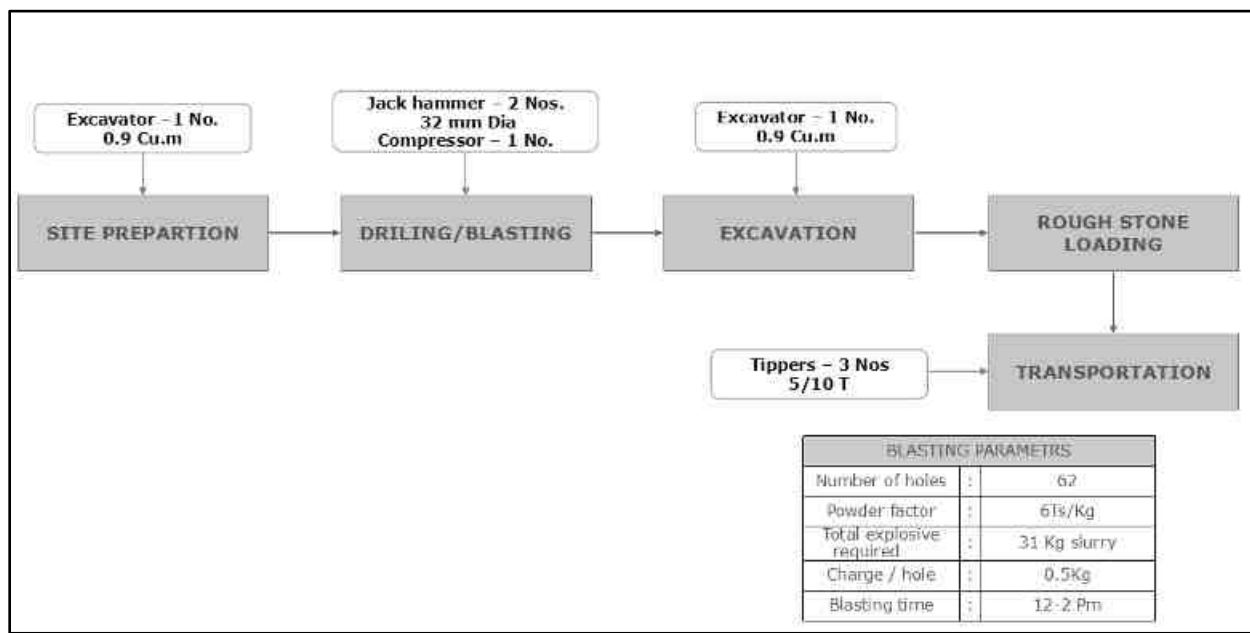


TABLE - 2.9 MINING DETAILS

Sl. No	Description	Details	Remarks
1.	Method of Mining	Opencast method of Semi Mechanized Mining with 5.0 m height 5.0 m width and overall <45° slope of the bench. Hydraulic excavator will be used for the excavation and 5/10T tippers will be used for the Hauling.	Excavator - 1 No. Tippers - 3 Nos.
2.	Mineral Use	The excavated Rough Stone will be used for construction industries for Government & Public sector projects besides catering for domestic housing and infrastructure projects in and around the district.	-
3.	Proposed Depth of mining for the first five years	32m (below ground level)	The water table in the area is around 72m BGL
4.	Proposed Production quantity	2,80,170Ts of Rough Stone 22,340Ts of gravel	5 years

5.	Safety Zone	Out of 1.86.0 Ha, 0.35.5 Ha will be maintained as a Safety Zone during mining operations.	Around 355 nos. of saplings will be planted in this safe area.
6.	Water requirement	3 KLD	Procured by the outside water.
7.	Energy requirement	83,365 Litres of HSD (Entire Project Life)	All the equipment will be diesel-operated. No electricity is needed for mining operations.
8.	Manpower	Total manpower	This project will give employment opportunities to 24 people.
9.	Shift	General Shift	8.00 AM – 5.00 PM
10.	Project Cost	90.54 Lakhs (Including operational + Fixed Asset + EMP cost + CER cost).	Including Fixed Asset + Operational & EMP cost
11.	EMP Cost	19.88 Lakhs	5 years
12.	CER Cost	The project proponent has proposed CER cost as 5.0 Lakhs.	The amount will be utilized for the development of nearby government schools.

2.7.2 YEAR WISE PRODUCTION & EXCAVATION DETAILS

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 2.10.

Table 2.10 Summary of production for 5 Years

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m³	Rough stone in m³	Bulk Density	Gravel in Ts	Mineable Reserves of Rough stone in Ts
I	XY-AB	I	74	29	1	2146	-	2	4292	-
		I	74	56	1	4144	-	2	8288	-
		II	71	54	5		19170	2.75	-	52717.50
Total						6290	19170	-	12580	52717.50
II	XY-AB	I	24	29	1	696	-	2	1392	-
		I	24	56	1	1344	-	2	2688	-
		II	21	54	5	-	5670	2.75	-	15592.50
		III	15	44	5	-	3300	2.75	-	9075.00
	X1Y1-EF	I	20	62	2	2480	-	2	4960	-
		II	17	59	5	-	5015	2.75	-	13791.25
		III	12	54	5	-	3240	2.75	-	8910.00
	X2Y2-EF	I	12	30	1	360		2	720	-
		II	12	30	5	-	1800	2.75	-	4950.00
		III	12	25	5	-	1500	2.75	-	4125.00
Total						4880	20525	-	9760	56443.75
III	XY-AB	III	67	44	5	-	14740	2.75	-	40535.00
		IV	32	34	5	-	5440	2.75	-	14960.00
Total						-	20180	-	-	55495.00
IV	XY-AB	IV	40	34	5	-	6800	2.75	-	18700.00
		V	34	24	5	-	4080	2.75	-	11220.00
	X1Y1-EF	IV	7	49	5	-	1715	2.75	-	4716.25
		IV	12	20	5	-	1200	2.75	-	3300.00
	X2Y2-EF	V	21	62	5	-	6510	2.75	-	17902.50
Total						-	20305	-	-	55838.75
V	XY-AB	V	28	24	5	-	3360	2.75	-	9240.00
		V	42	36	5	-	7560	2.75	-	20790.00
	X1Y1-CD	VI	32	44	5	-	7040	2.75	-	19360.00
		VII	22	34	5	-	3740	2.75	-	10285.00
Total						-	21700	-	-	59675.00
Grand Total						11170	101880	-	22340	280170.00

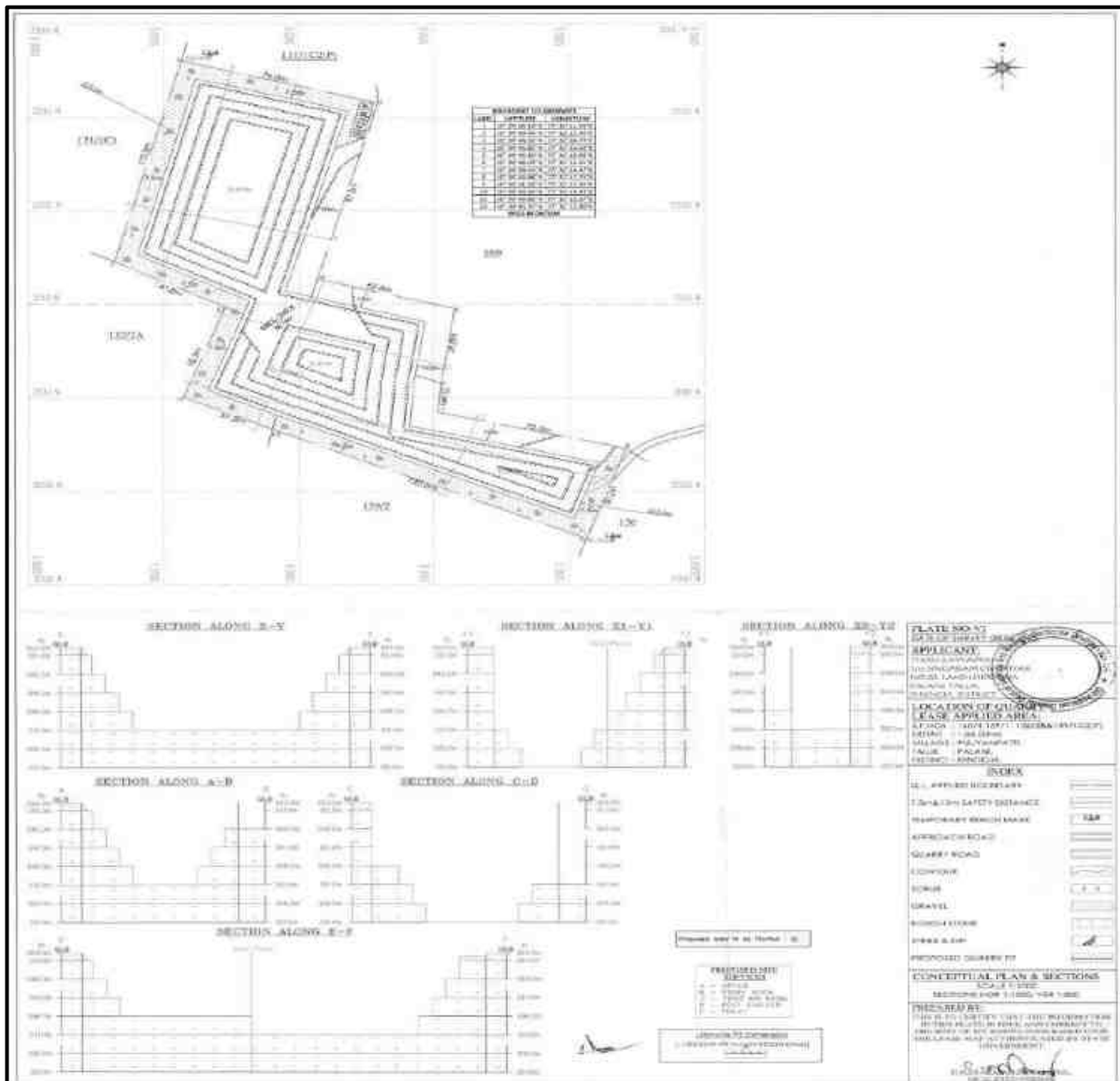
2.7.3 CONCEPTUAL PERIOD

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 2.11. Ultimate extent and size of the quarry at the conceptual stage is given below as Table 2.11 and Land Use pattern is given as Table 2.11 The conceptual plan is given as Figure 2.11.

DRAFT EIA/EMP FOR THE ROUGH STONE AND GRAVEL QUARRY OF THIRU.S.AYYAPPAN OVER AN EXTENT OF 1.86.0 HA LOCATED AT THE SF. NOS. 160/4, 159/1, 132/2B AND 131/1C2(P) OF PULIYAMPATTI VILLAGE, PALANI TALUK, DINDIGUL DISTRICT, TAMIL NADU STATE.

TABLE 2.11 Ultimate Pit Dimension			
Pit No.	Length (max) (m)	Width (Avg) (m)	Depth (max) (m)
Ultimate Pit dimension at the end of Mining Plan Period as per approved Mining Plan			
I	150	99	32 (below ground level)

FIGURE 2.11 CONCEPTUAL PLAN



2.8 DESCRIPTION OF MITIGATION MEASURES INCORPORATED INTO THE PROJECT TO MEET ENVIRONMENTAL STANDARDS ENVIRONMENTAL OPERATING CONDITIONS, OR OTHER EIA REQUIREMENTS (AS REQUIRED BY THE SCOPE)

The mitigation measures given in this section are for management of the emissions (particulate or gaseous), Noise pollution, wastewater & surface run-off generated from the mining operations to meet the environmental standards and environmental operating conditions are as follows:

2.8.1 AIR QUALITY MANAGEMENT

Drilling

Drilling machines are proposed to be equipped with wet drilling arrangements and cyclone dust collectors.

Blasting

- Controlled blasting is proposed to be adopted and optimum use of explosive energy will help in reducing the air pollution.
- Secondary blasting will be avoided.
- Rock breakers are proposed to be used for breaking over sized boulders in order to reduce the dust generation.
- Use of good quality of explosives having proper oxygen balance with regular monitoring.
- Ensuring proper stemming after charging of explosives. Proper stemming material will help in minimizing dust throw thereby lowering the spread of dust particles in ambient air pollution.
- Water spray on blasted muck pile before dozing/loading to control dust generation.

Loading & Transportation

- Water spray on haulage roads, access roads, operating benches and proper maintenance of haul roads.
- Development of green belt/plantation around mine boundary, roads and other places will be carried out to control the air pollution.

- Proper maintenance of the HEMMs & transportation vehicles will be done.
- Vehicular emissions will be kept under norms.
- Personal Protective Equipment like dust masks will be provided to all employees. ➤ Regular air quality monitoring will be carried out.
- Compliance of conditions laid by MoEF&CC and TNPCB to minimize environmental impacts

2.8.2 NOISE MANAGEMENT

Drilling

- Drilling with sharp drill bits to achieve optimum drilling performance and to reduce noise generation at source will be adopted.
- Personal protective equipments i.e. earplug in drilling & in high noise area shall be used.

Blasting

- As blasting will be done in accordance with standards prescribed by DGMS for controlled blasting; therefore, ground vibrations will not affect the structures in the vicinity of mine area.
- Explosives charge per hole and per delay will be maintained as per DGMS guidelines.
- Blasting will be carried out by use of non-electric detonators (NONEL) system and the impacts of noise generated due to blasting are momentary.
- Vibrations and noise generated by blasting will be monitored regularly

Transportation

- Adequate silencers in HEMMs will be provided to reduce generation of noise.
- Proper and regular maintenance, oiling and greasing of machines at regular intervals will be done to reduce generation of noise.
- All HEMMs will be equipped with acoustic a/c closed cabins for operators.
- The workers employed at HEMMs will be provided with protective equipment, earmuffs and earplugs as protective measures from the high noise level generated at the mine site and wherever required.

- Development of green belt & plantation around the mining activity and other areas, will be carried out.
- Regular monitoring of noise will be carried out.

2.8.3 WATER MANAGEMENT

Waste Water

Septic Tanks and soak pits will be provided for the disposal of effluent generated from mine office.

Surface Run-off

- Garland drains are proposed to be constructed around the temporary overburden soil dump to channelize the runoff water from dumps and also around the active pit to restrict rainy water from entering in to the working pit.
- Rain water falling directly into the mine pits will be stored and used for plantation & dust suppression.
- Regular monitoring of water quality will be carried out

GREENBELT/ PLANTATION

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 an area of 0.35.5 Ha. Trees like Pungai, Vagai, Vembu, Manjal konrai, Naval, Puvarasu, etc., will be planted around the mine lease area. A total of 355 trees are planned to be planted. Spacing will be 3m x 3m.

2.9 ASSESSMENT OF NEW & TESTED TECHNOLOGY FOR THE RISK OF TECHNOLOGICAL FAILURE:

From the nature and extent of the deposit, the reserves and the quality have been proved with adequate degree of reliability. Considering the type of mineralization, opencast mechanized method is the most feasible method for mining in the proposed mine lease. It is also a matter of fact that the mining machineries are upgrading with time and therefore the project proponent would act fast to adopt more advanced equipment and automation for safe and environment friendly mining technology in the years to come.

CHAPTER 3

DESCRIPTION OF THE ENVIRONMENT

3.1. STUDY AREA, PERIOD COMPONENTS AND METHODOLOGY

The project area is located in Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State over an extent of 1.86.0 Ha., The project area is considered as Core zone and the area in the surrounding 10km radius is considered as Buffer Zone. The baseline environmental monitoring was conducted by Shrient Analytical & Research Labs Private Limited, Chennai it is an NABL and MOEF recognized laboratory for various components of environment, viz. Air, Noise, Water, Land was carried out during Summer Season i.e. March 2025 to May 2025 in the study area covering 10 km radial distance from the Rough stone mine. Other environmental data on flora and fauna, land-use pattern, forest etc. were also generated through field surveys and secondary information collected from different State Govt. departments. Sampling methods and analysis. Socio-economic survey was conducted, through interaction with the people, sarpanch and medical officers by floating questionnaires and collection of information are supported by census data for demographic structures, amenities, and infrastructure availability within the study area. Baseline values for various environmental components are discussed in this Chapter.

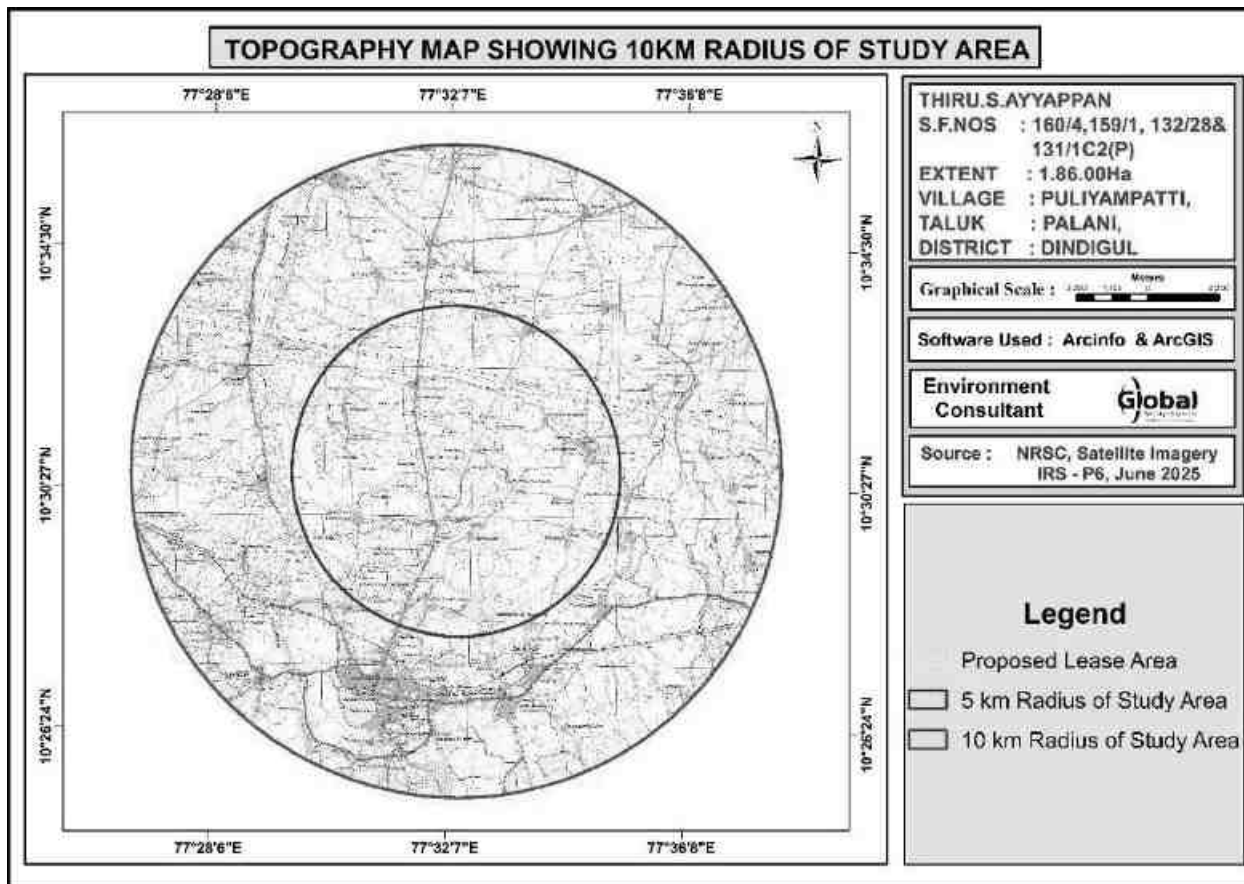
ENVIRONMENTAL SETTING OF THE STUDY AREA

Table 3.1 Description of the lease area		
S.No.	Areas	Distance from project site
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Nil within 15km radius
2	Areas which are important or sensitive for ecological reasons	

A	Wetlands, water courses or other water bodies,	1. Sambai Kulam – 3.53 km (E) 2. Thattan Kulam - 3.95 km (S) 3. Chinna Kulam – 4.29 km (SW) 4. Pudhu Kulam – 4.52 km (SW) 5. Shanmukha Nadi – 5.24 km (W) 6. Nallatungal Odai – 6.82 km (W) 7. Varattar River – 8.01 km (SW) Selvar Odai – 8.39 km (W)
B	Coastal zone, biospheres,	Nil within 10km radius
C	Mountains, forests	Nil within 10 km radius Kodaikanal Wildlife Sanctuary – 13.86 km (S)
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, overwintering, migration	Nil within 15km radius
4	Inland, coastal, marine or underground waters	Nil within 15km radius
5	State, National boundaries	Nil within 15km radius
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Nil within 15km radius
7	Defense installations	Nil within 15km radius
8	Densely populated or built-up area	Densely Populated Puliampatti, which is a distance away from 1.2km in the S
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Densely Populated Puliampatti, which is a distance away from 1.2km in the S
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	Nil
11	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	Nil

12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earth quakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions) similar effects	No. The area is not prone to earthquakes, floods, etc.

FIG 3.1 ENVIRONMENTAL SETTING OF THE STUDY AREA



STUDY PERIOD

The relevant information and data (both primary and secondary) were collected in core as well as buffer zone (10 km distance from the mine boundary) during Summer Season (March., to May., 2025) in accordance with the guidelines for preparation of EIA studies in order to assess the impact of the mine site within the 10 Km study area on existing physical, biological and social environment.

3.2 ESTABLISHMENT OF BASELINE FOR VALUED ENVIRONMENTAL COMPONENTS:

Information on the following components/parameters were collected to understand the existing scenario of the core and buffer area:

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

BASELINE DATA COLLECTION

Baseline environment data on various components of the environment in the study area were collected during Summer Season (March., to May., 2025) to assess the present scenario of the area. Details are given in the table given below.

Baseline data collection During Post Monsoon Season (March., to May., 2025)

Sr.No	Environment al Component	Primary data		
		Parameters	Frequency	Monitoring/ Sampling locations
1	Land	Agriculture, Habitation, Industry, Stony waste/ Quarries, Forest area, Plantation/ Vegetation, Open scrub, Water bodies etc.	Once in a Season	10 km radius study area
2	Meteorology	Temperature, Relative Humidity, Wind Speed, Wind Direction.	Hourly	1
3	Air	PM10, PM2.5, SO2, NO2, CO & PAH	twice a week (24 hourly)	6
4	Noise	Equivalent noise levels in Leq in dB (A)	Once in a season (day & night time)	6

5	Water	Parameters as per IS 10500 - 2012	Once in a season	
A	Ground Water & SW	Parameters As per IS 2720/USDA	Once in a season	6 +2(sw)
6	Soil	Parameters As per IS 2720/USDA	Once in a season	6
7	Biological Environment	Flora and Fauna	Once in a season	Study Area
8	Socio-Economic Environment	Socio-Economic Environment	Once in a season	Study Area

INSTRUMENTS USED FOR ENVIRONMENTAL BASELINE DATA COLLECTION

The following instruments were used at the site for environmental baseline data collection work.

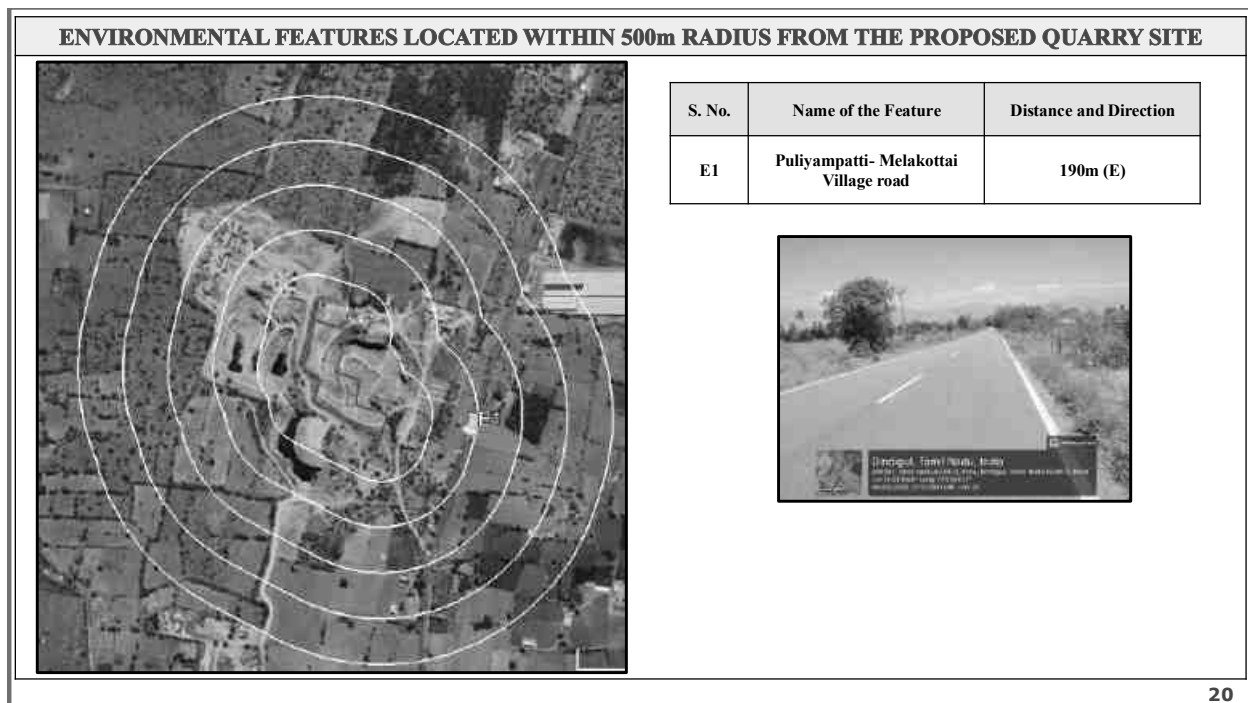
- Respirable Dust Sampler with attachment for gaseous Pollutants, Envirotech APM 460.
- Fine Particulate Matter (FPS) Sampler APM 550
- Sound Level Meter Model Envirotech SLM - 100
- Digital D.O. Meter Model - 831 E (CPCB Kit)
- Weather Monitoring Station Model Enviro WM 271
- Water Level Indicator and
- Global Positioning System (GPS) Apart from collecting samples of air, water, noise and soil from representative sampling points given in proceeding sections, the data on land use, vegetation and agricultural crops were also collected by the field team through interaction with a large number of local inhabitants of the study area and different Government departments/agencies. This provided an excellent opportunity to the members of the field team for obtaining clear scenario of the existing environment of the study area.

3.3. BASE MAP OF ALL ENVIRONMENTAL COMPONENTS

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

A site survey has been conducted to identify and list structures located within a 1 Km radius from the proposed Quarry and are detailed below. There are no permanent structures within a 1 km radius from the project site. The PP has obtained a letter from Village Administrative Office (VAO), Puliampatti Group dated 30.06.2025 stating that there are no structures situated within 300 Km radius. As per the field study, there are 17 structures within 300m radius, which includes 5 Sheds, 1 Labour house, 1 Unused Structure, 3 Farm Houses, 6 Crusher unit's structures & 1 Well. There is no habitation within 300m radius.

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

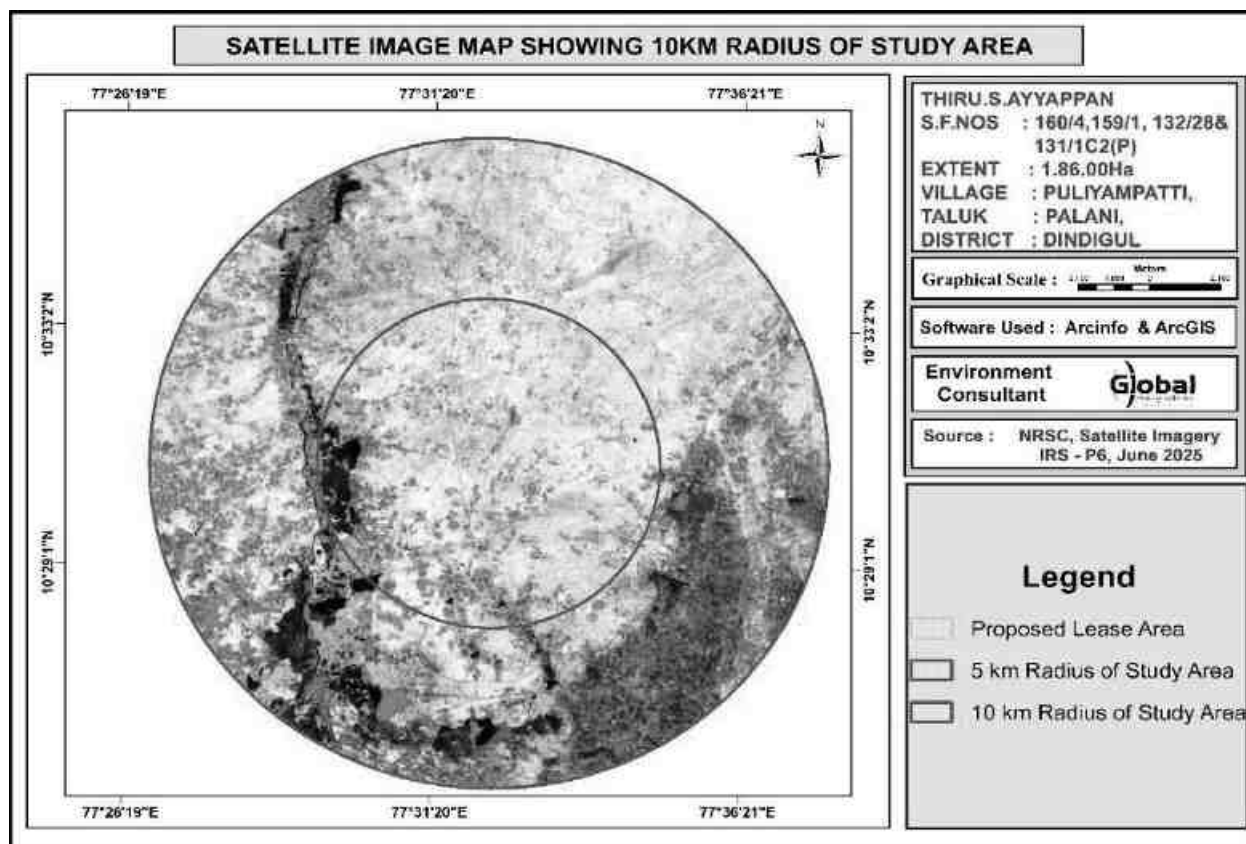


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Figure 3.3 PHOTOGRAPHS OF THE STRUCTURES LOCATED WITHIN 500 M RADIUS

ENUMERATION OF THE STRUCTURES LOCATED WITHIN 300m RADIUS FROM THE PROPOSED PROJECT SITE						
S. No	Name of the Structure	Distance and Direction	Ownership	Occupant	Type	Age
S1	Labour Shed	32m (N)	Belongs to the PP	Nil	Masonry	9 years
S2	Crusher	59m (N)	Not Belongs to the PP	-	-	>14 year
S3	Labour House	117m (NE)		-	Concrete	5 years
S4	Office Room	116m (NE)		1	Masonry	8 years
S5	Labour Shed	109m (S)		-	G.I sheet	4 years
S6	Unused Structure	131m (NW)		-	Masonry with tiled roof	9 years
S7 - S9	Crusher unit & their Mechanic shed	195m (NW)	Belongs to the PP	-	-	3 years
S10	Farm House	163m (SE)	Not Belongs to the PP	2	Brick building with G.I sheet roof	10 years
S11	Shed	193m (SE)		Nil		14 years
S12	Cattle Shed	168m (SE)		2	G.I sheet	7 years
S13	Cattle Shed	175m (SE)		2	G.I sheet	7 years
S14	Crusher Unit & control room	242m (NW)		-	-	3 years
S15	Well	227m (NE)		-	-	5 years
S16	Farm House	244m (E)		1	Brick building with tiled roof	5 years
S17	Farm House	227m (SE)		2	Brick building with G.I sheet roof	9 years

FIGURE - 3.3 a SATELLITE MAP OF THE PROJECT AREA (10 KM RADIUS)



3.3.1 METEOROLOGICAL ENVIRONMENT

Meteorological conditions prevailing in the buffer zone is given below

Climate

Dindigul district enjoys a typical semi-arid climate with hot summers and moderately cool winters. The hottest season is from March to May. During the period the maximum temperature often exceeds 40°C. The winter season is spread over two months viz. January and February and the nights are cool and pleasant. The district generally has a high humidity.

Rainfall

The Average Annual Rainfall data received from 2013 to 2017 are given below.

Table 3.2 - Rainfall data					
Annual Rainfall in mm					Normal rainfall in mm
2013	2014	2015	2016	2017	
531.3	994.3	1118.6	502.3	925.5	930.54

Source: http://www.twadboard.gov.in/twad/dgl_dist.aspx

Relative Humidity

The climate of the district on the whole is slightly humid. The driest months are February and March with average relative humidity of about 40% in the afternoons. During the rainy months the average humidity is appreciably below the saturation level. Skies are generally clear or lightly clouded during the period October to December

Seismic information

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

FIG 3.4 SEISMIC MAP OF INDIA

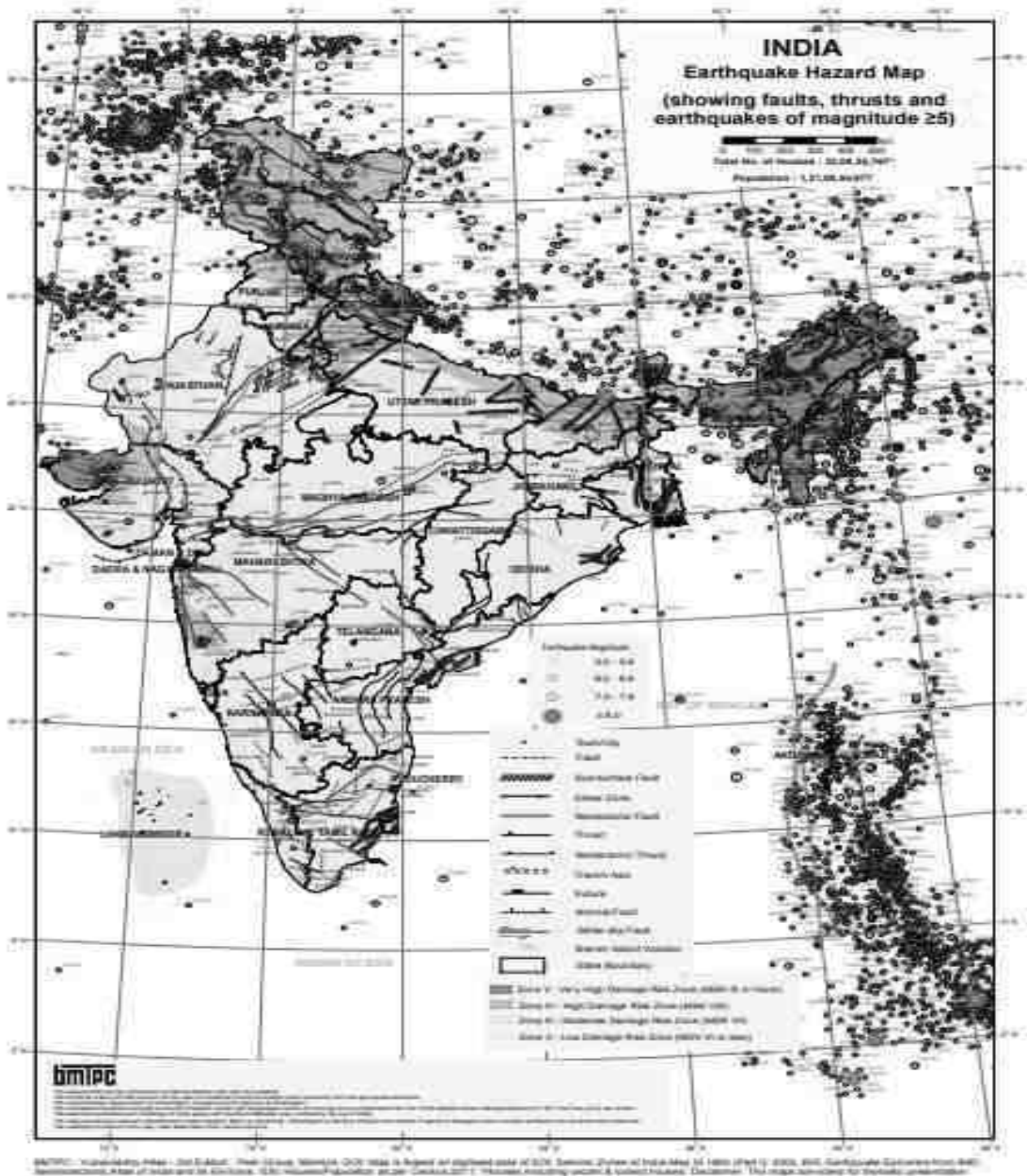
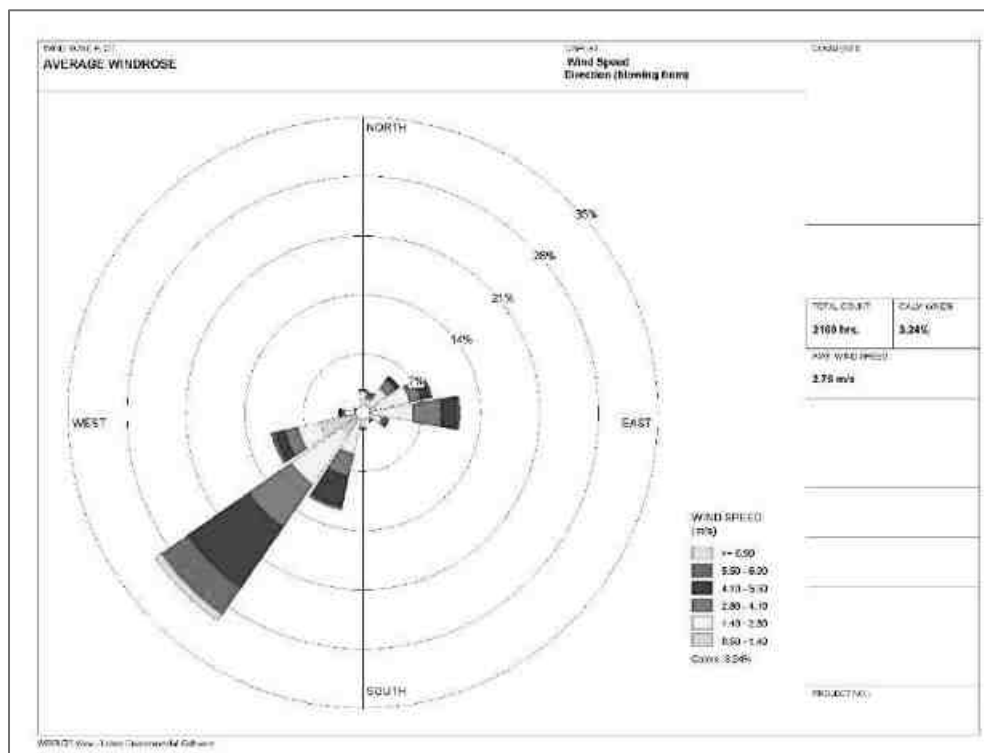


FIG 3.5 WIND ROSE PLOT DURING MARCH TO MAY 2025



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 – 3.3 and Figure 3.5 below.

Table 3.3 Methodology for Air Quality Monitoring

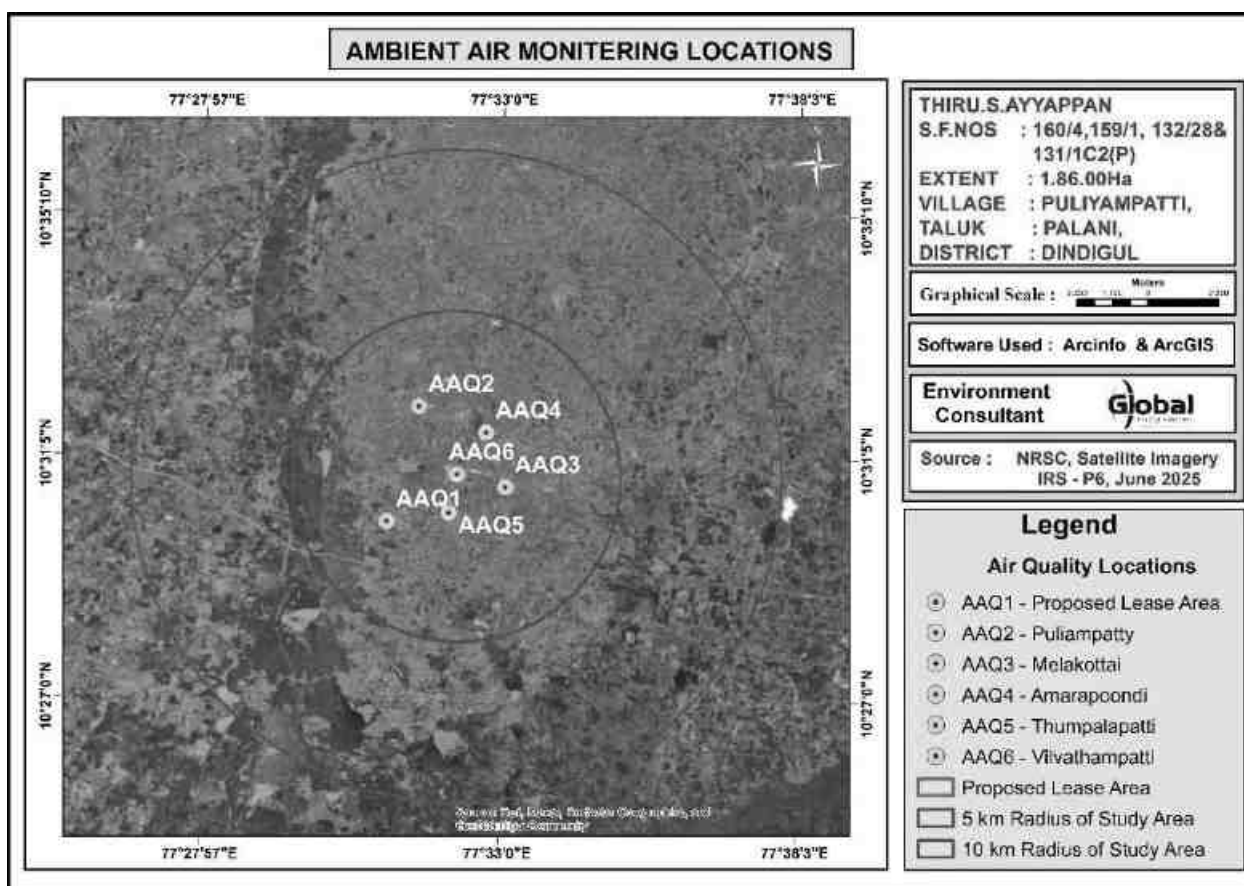
1.	Monitoring Period	Summer (March 2025 – May 2025)
2.	Monitoring Location	The monitoring locations for ambient air study is given in Table – 3.6 and Figure 3.6.
3.	Selection Criteria	The monitoring location is selected based on terrain & wind direction. Locations were chosen in upwind, downwind and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

Details Of Ambient Air Quality Monitoring Locations				
S. No.	Station Code	Locations	Distance & Direction	Coordinates
1	AAQ 1	Within Mine Lease area – Project site	-	10°30'44.68"N & 77°32'14.08"E
2	AAQ 2	Puliampatty	1.00 km S	10°30'8.89"N & 77°32'10.08"E

DRAFT EIA/EMP FOR THE ROUGH STONE AND GRAVEL QUARRY OF THIRU.S.AYYAPPAN OVER AN EXTENT OF 1.86.0 HA LOCATED AT THE SF. NOS. 160/4, 159/1, 132/2B AND 131/1C2(P) OF PULIYAMPATTI VILLAGE, PALANI TALUK, DINDIGUL DISTRICT, TAMIL NADU STATE.

Details Of Ambient Air Quality Monitoring Locations				
S. No.	Station Code	Locations	Distance & Direction	Coordinates
3	AAQ 3	Melakottai	1.56 km NE	10°31'28.59"N & 77°32'46.03"E
4	AAQ 4	Amarapoondi	1.36 km N	10°30'35.22"N & 77°33'6.03"E
5	AAQ 5	Thumpalapatti	2.30 km NW	10°31'54.38"N & 77°31'35.83"E
6	AAQ6	Vilvathampatti	2.60 km SW	10°29'56.97"N & 77°31'4.10"E

FIG 3.6 BASE MAP OF AMBIENT AIR MONITORING LOCATIONS



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.3.4 Results of Air sampling Analysis in 6 locations

Station ID	Min	Max	Avg.
Particulate matter PM-2.5 ($\mu\text{g}/\text{m}^3$)			
AAQ-1	25.9	32.7	29.3
AAQ-2	22.8	27.7	25.25
AAQ-3	25	31	28
AAQ-4	20.1	26.6	23.35
AAQ-5	21.8	27.1	24.45
AAQ-6	18.5	25	21.75
CPCB NAAQS 2009 for PM_{2.5} - 60 $\mu\text{g}/\text{m}^3$			
Particulate matter PM-10 ($\mu\text{g}/\text{m}^3$)			
AAQ-1	56.4	70.8	63.6
AAQ-2	47.6	57.8	52.7
AAQ-3	53.2	65.9	59.55
AAQ-4	43.8	57.6	50.7
AAQ-5	46.7	58.3	52.5
AAQ-6	40.8	54.6	47.7
CPCB NAAQS 2009 for PM₁₀ - 100 $\mu\text{g}/\text{m}^3$			
Sulphur Di-oxide as SO₂ ($\mu\text{g}/\text{m}^3$)			
AAQ-1	5.6	7.1	6.35
AAQ-2	4.6	6.2	5.4
AAQ-3	5.4	9.6	7.5
AAQ-4	4.6	6.8	5.7
AAQ-5	4.7	6.3	5.5
AAQ-6	4.4	6.6	5.5
CPCB NAAQS 2009 for SO₂ - 80 $\mu\text{g}/\text{m}^3$			
Oxide of Nitrogen as NO₂ ($\mu\text{g}/\text{m}^3$)			
AAQ-1	10.7	16.5	13.6
AAQ-2	10.1	12.8	11.45
AAQ-3	8.5	13.2	10.85
AAQ-4	9.3	11.6	10.45
AAQ-5	10.2	13.4	11.8
AAQ-6	9.2	11.5	10.35
CPCB NAAQS 2009 for NO₂ - 80 $\mu\text{g}/\text{m}^3$			

The results are summarized in graph and given as below Fig. 3.6

FIG 3.7 AMBIENT AIR QUALITY DATA A1 - MINE LEASE AREA

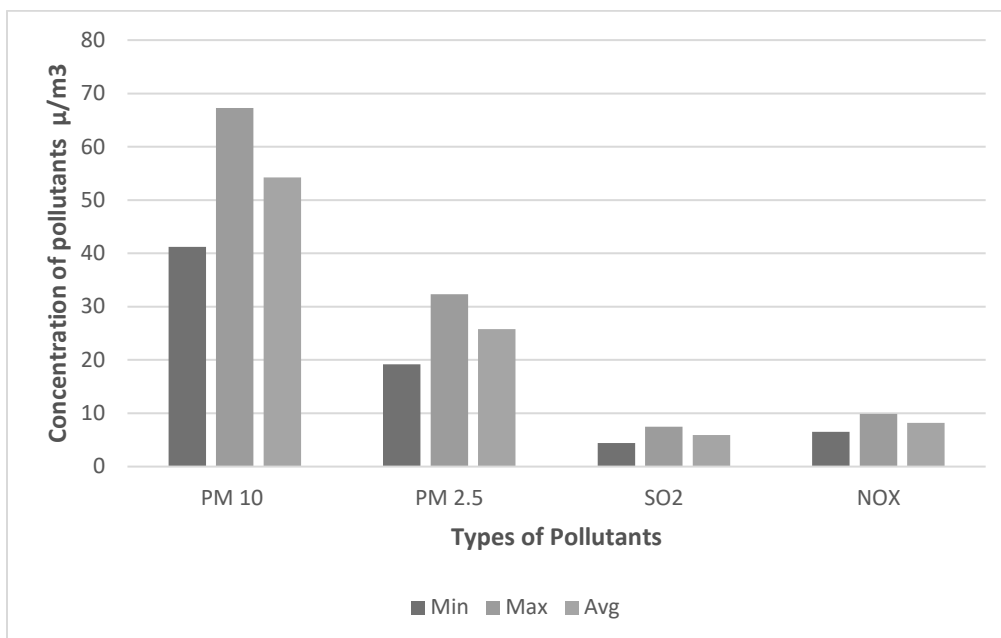


FIG 3.8 AMBIENT AIR QUALITY DATA A2 - PULIYAMPATTY VILLAGE

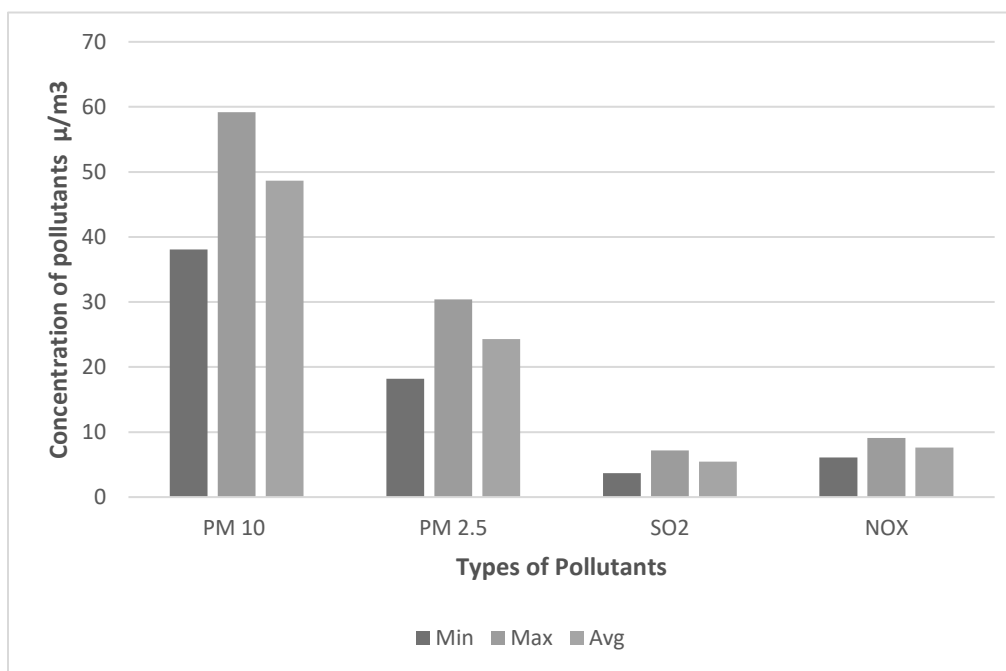


FIG 3.9 AMBIENT AIR QUALITY DATA A3 - MELAKOTTAI VILLAGE

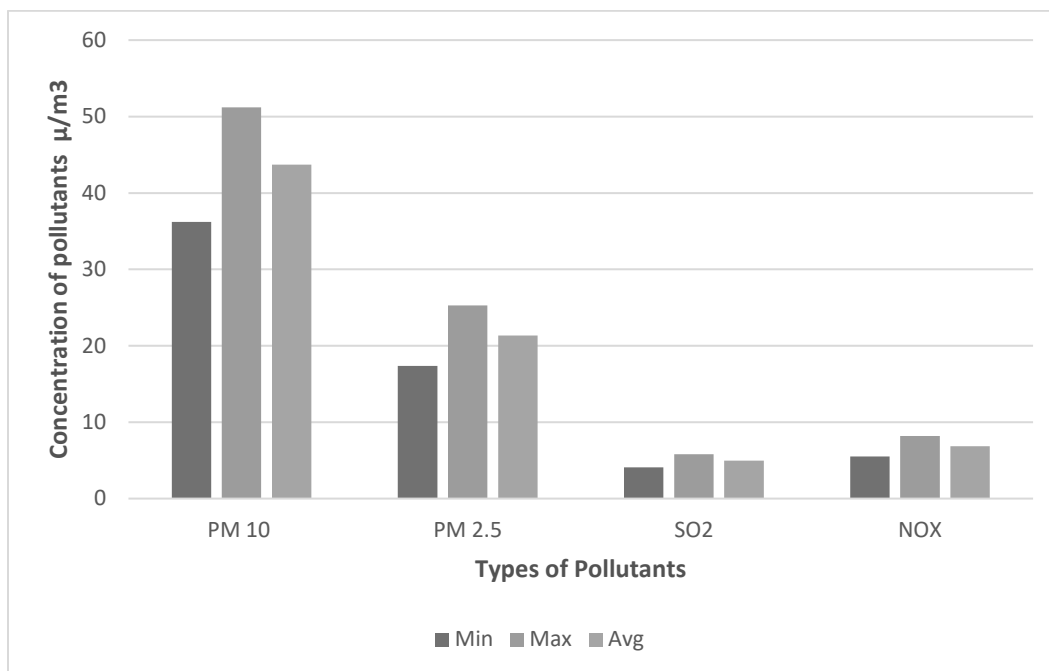


FIG 3.10 AAQ DATA A4 - AMARAPOONDI VILLAGE

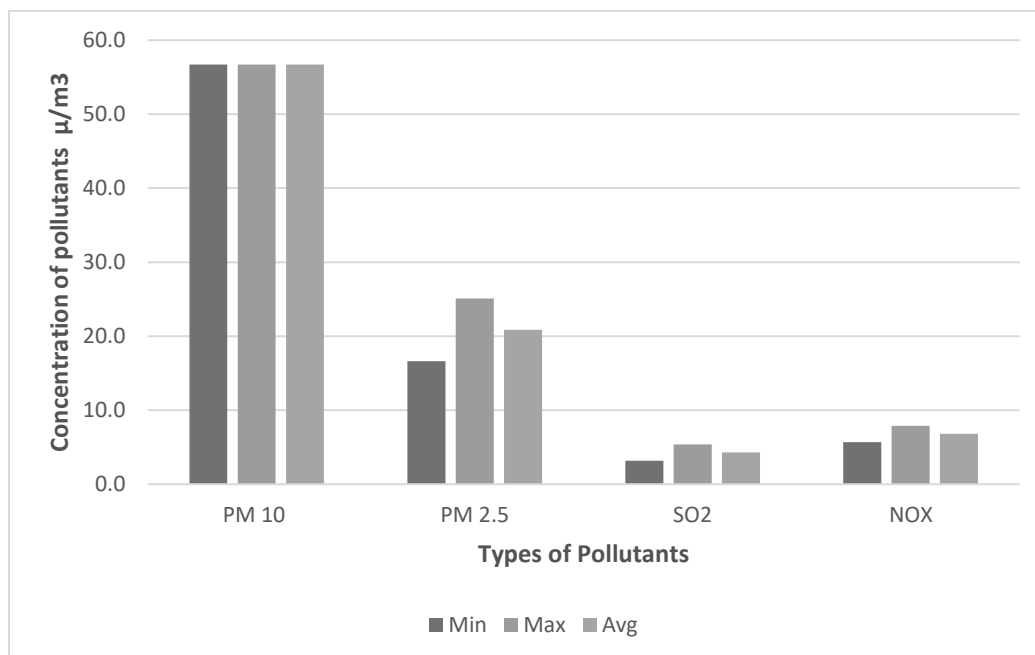


FIG 3.11 AMBIENT AIR QUALITY DATA A5 - THUMPALAPATTI VILLAGE

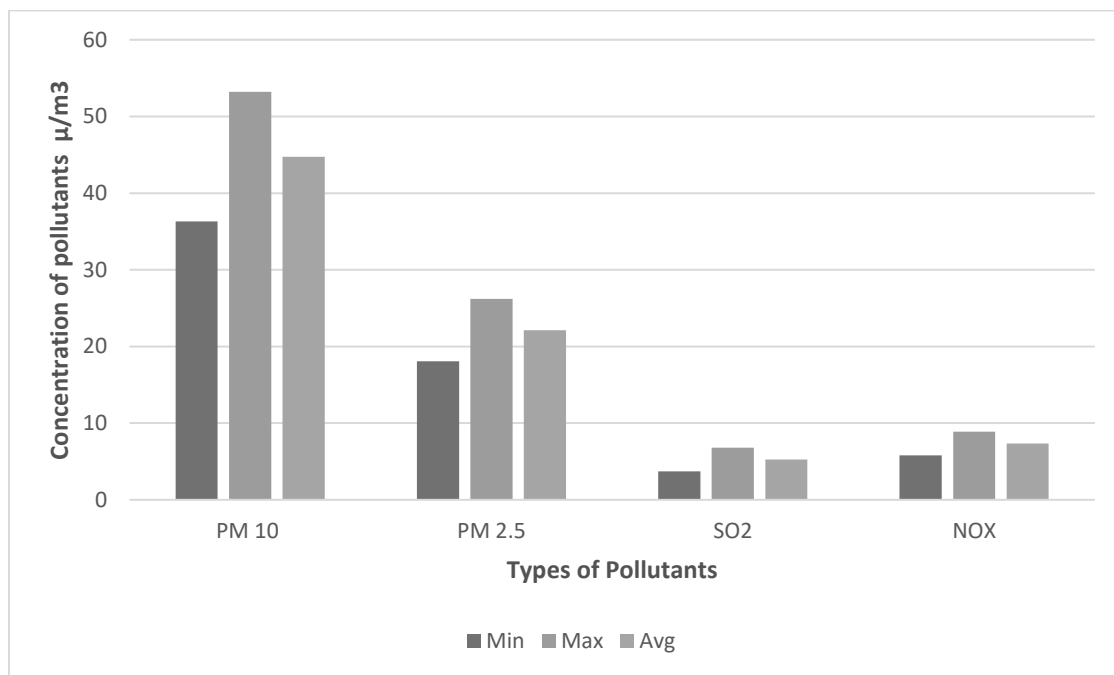
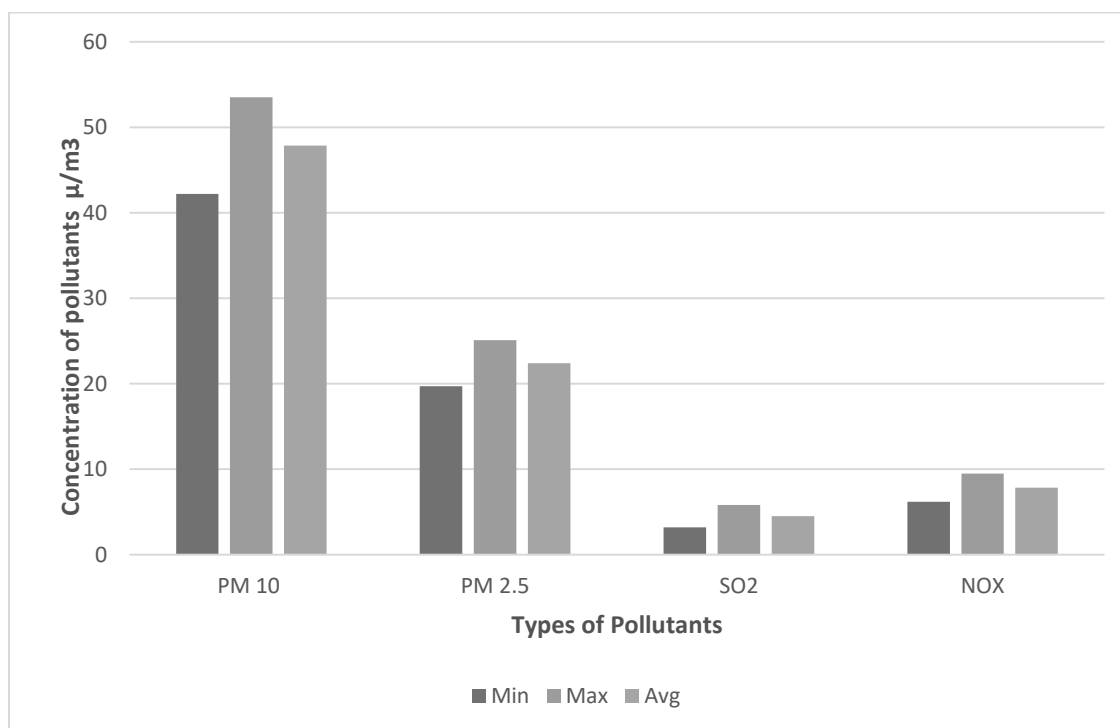


FIG 3.12 AMBIENT AIR QUALITY DATA A6 - VILVATHAMPATTI VILLAGE



From the above results, it is observed that the ambient air quality with respect to PM₁₀, PM_{2.5}, SO₂, and NO₂ at all the monitoring locations was within the permissible limits specified by CPCB.

3.3.3 WATER ENVIRONMENT

Assessment of baseline data on water environment includes:

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

Surface Water

The Shanmukha River is located at a distance of 5.24 km in west direction of lease area. 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 3-14 and Figure 3.11.

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 3.5 and Figure 3.11.

Sampling Locations

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 3.5 and shown as Figure 3.12.

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 3.5 Water Sampling Locations

S.NO	Location Code	Monitoring Locations	Latitude and longitude
Surface Water			
1	SW1	Shanmukha River – up stream	10°29'44.41"N & 77°29'30.89"E
2	SW2	Shanmukha River – down stream	10°32'2.68"N & 77°29'1.75"E
Ground Water			
1	GW1	Within Mine Lease area – Project site	10°30'44.68"N & 77°32'14.08"E
2	GW2	Puliampatty	10°30'8.89"N & 77°32'10.08"E
3	GW3	Melakottai	10°31'28.59"N & 77°32'46.03"E
4	GW4	Amarapoondi	10°30'35.22"N & 77°33'6.03"E
5	GW5	Thumpalapatti	10°31'54.38"N & 77°31'35.83"E
6	GW6	Vilvathampatti	10°29'56.97"N & 77°31'4.10"E

FIG 3.13 BASE MAP OF GROUND WATER SAMPLING LOCATIONS

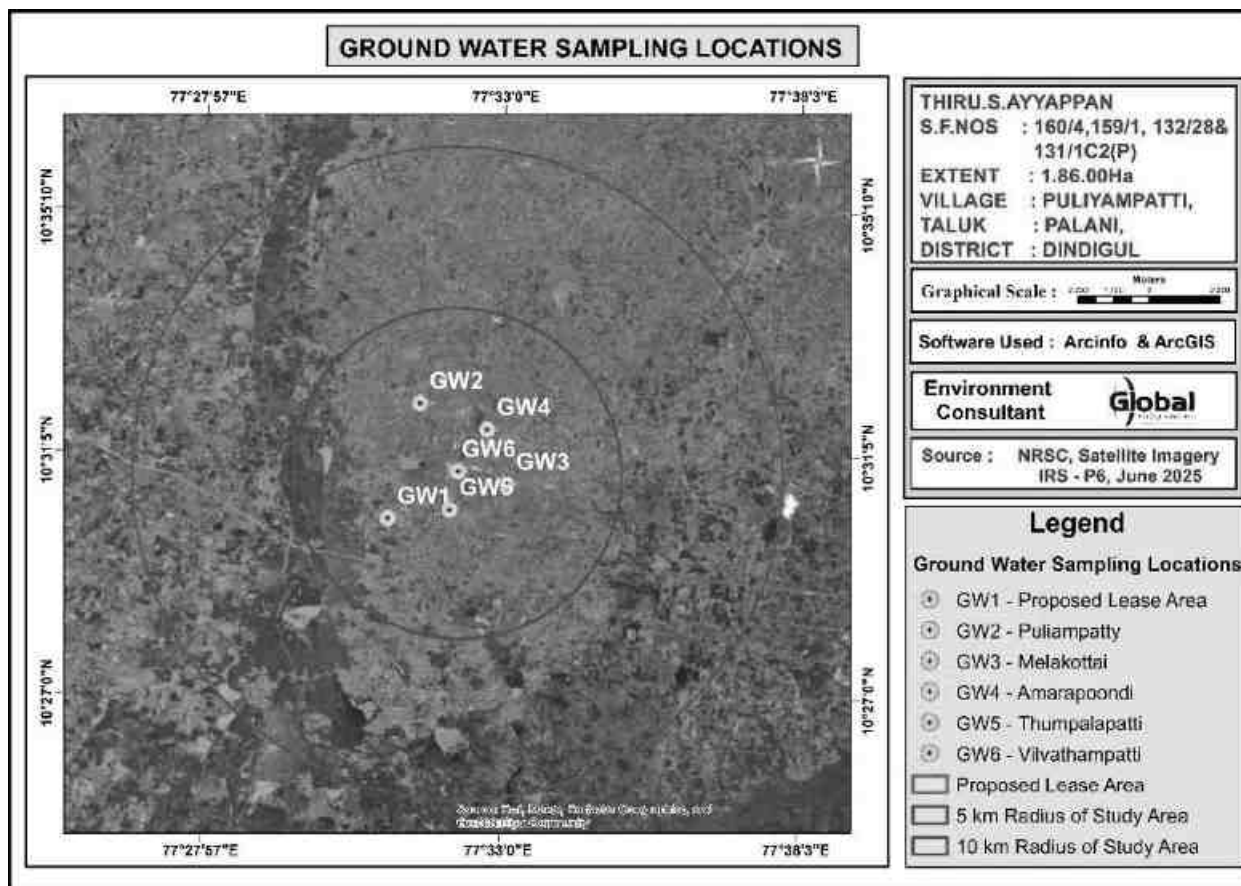


FIG 3.13a BASE MAP OF SURFACE WATER SAMPLING LOCATIONS

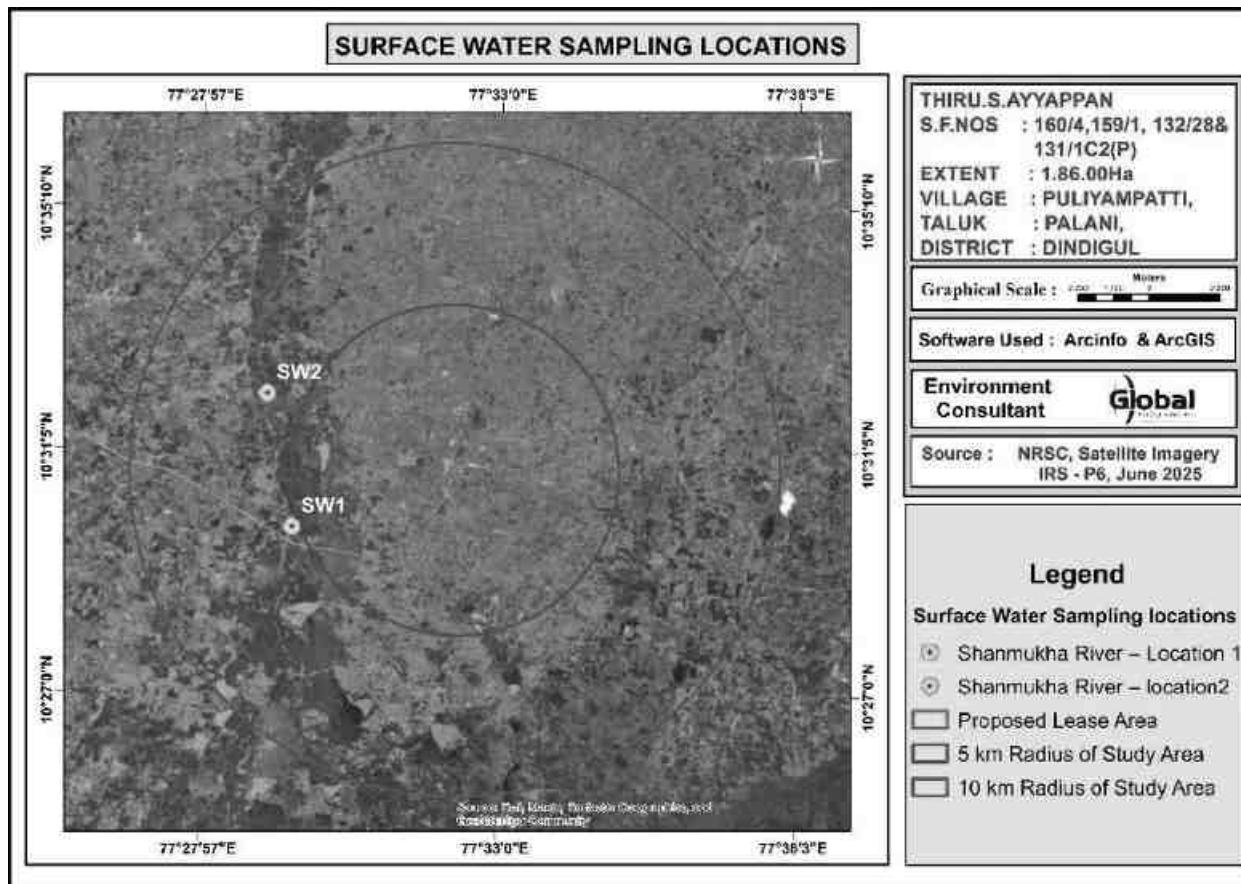


Table 3.6 Surface Water Analysis Results

Sr.No	Parameter	Unit	SW1	SW2	Surface water standard s (IS 2296 Class-A)
1	Odour	-	AGREEABLE	AGREEABLE	-
2	Turbidity	NTU	<1	<1	1
3	pH at 25 °C	-	7.86	7.81	6.5-8.5
4	Electrical Conductivity	µs/cm	236	202	-
5	Total Dissolved Solids	mg/l	142	124	500
6	Total hardness as CaCO3	mg/l	83.8	76.5	300
7	Calcium as Ca	mg/l	16.5	15.5	80.10
8	Magnesium as Mg	mg/l	10.2	9.1	24.28
9	Calcium as CaCO3	mg/l	41.3	38.7	-
10	Magnesium as CaCO3	mg/l	42.5	37.8	-
11	Total alkalinity as CaCO3	mg/l	48.9	39.7	-
12	Chloride as Cl-	mg/l	34.5	38.9	250
13	Free Residual chlorine as Cl-	mg/l	BDL (D.L - 0.2)	BDL(D.L-0.2)	-
14	Sulphates as SO42-	mg/l	15.5	16.2	400
15	Iron as Fe	mg/l	BDL(D.L - 0.01)	BDL(D.L - 0.01)	0.3
16	Nitrate as NO3	mg/l	BDL(DL-1.0)	1.65	20
17	Fluoride as F	mg/l	0.26	0.22	1.5
18	Manganese as Mn	mg/l	BDL (D.L - 0.05)	BDL(D.L-0.05)	0.5
19	COD	mg/l	BDL(DL-4.0)	BDL(DL-4.0)	-
20	BOD	mg/l	BDL(DL-2.0)	BDL(DL-2.0)	-
21	TSS	mg/l	BDL(DL-2.0)	BDL(DL-2.0)	-
22	DO	mg/l	6.3	6.2	6

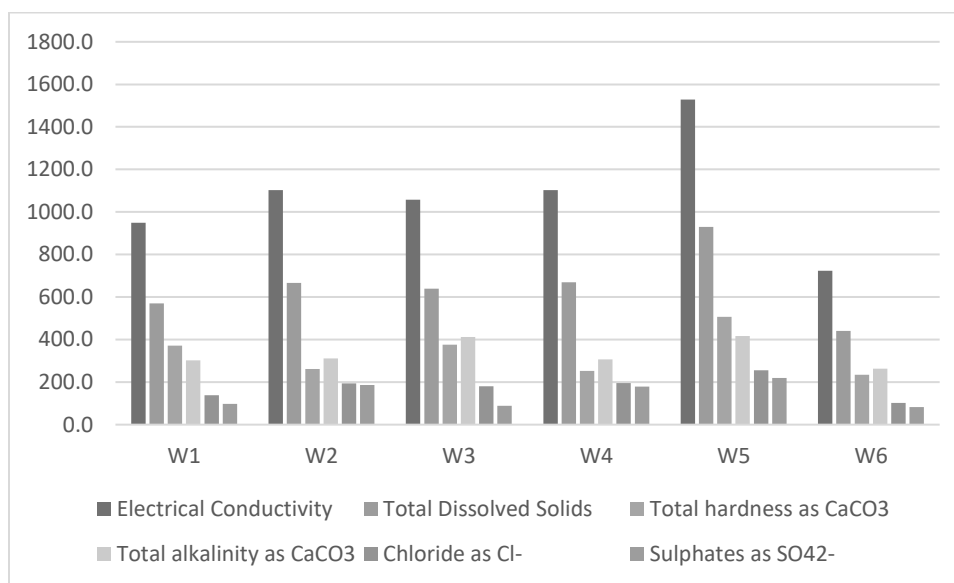
The samples were analyzed by Shrient Analytical & Research Labs Private Limited; Chennai and the results are summarized above.

DRAFT EIA/EMP FOR THE ROUGH STONE AND GRAVEL QUARRY OF THIRU.S.AYYAPPAN OVER AN EXTENT OF 1.86.0 HA LOCATED AT THE SF. NOS. 160/4, 159/1, 132/2B AND 131/1C2(P) OF PULIYAMPATTI VILLAGE, PALANI TALUK, DINDIGUL DISTRICT, TAMIL NADU STATE.

Table 3.7 Results of Ground Water sampling Analysis in 6 locations							Specification/ Limit (As per IS:10500: 2012)	
	GW1	GW2	GW3	GW4	GW5	GW6	Desirable	Permissible
Odour	AGREEABLE	AGREEABLE	AGREEABLE	AGREEABLE	AGREEABLE	AGREEABLE	Agreeable	Agreeable
Turbidity	<1	<1	<1	<1	<1	<1	Agreeable	Agreeable
pH at 25 °C	7.32	7.78	7.29	7.35	7.24	7.96	6.5 - 8.5	No Relaxation
Electrical Conductivity	1105	1021	847.5	1432	923.5	740.5	-	-
Total Dissolved Solids	664	612	510	860	554	445	500	2000
Total hardness as CaCO ₃	338	172	286	482	391	218	200	600
Calcium as Ca	83.2	44.0	72.8	110	108	50.4	75	200
Magnesium as Mg	31.2	14.9	25.0	49.9	29.0	22.1	30	100
Calcium as CaCO ₃	208	110	182	274	270	126	-	-
Magnesium as CaCO ₃	130	62.0	104	208	121	92.0	-	-
Total alkalinity as CaCO ₃	452	178	234	442	290	205	200	600
Chloride as Cl ⁻	126	378	154	216	152	134	250	1000
Free Residual chlorine as Cl ⁻	BDL (D.L- 0.2)	BDL(D.L-0.2)	BDL (D.L- 0.2)	BDL (D.L-0.2)	BDL(D.L-0.2)	BDL (D.L- 0.2)	0.2	1.0
Sulphates as SO ₄ ²⁻	150	78.9	57.8	152	34.0	54.2	200	400
Iron as Fe	BDL(D.L- 0.01)	BDL(D.L- 0.01)	0.05	BDL(D.L- 0.01)	BDL(D.L- 0.01)	0.05	0.3	No Relaxation
Nitrate as NO ₃	3.72	1.76	2.95	2.56	2.96	1.45	45	No Relaxation
Fluoride as F	0.36	0.32	0.55	0.38	0.34	0.56	0.1	1.5
Manganese as Mn	BDL (D.L- 0.05)	BDL(D.L-0.05)	BDL (D.L- 0.05)	BDL(D.L-0.05)	BDL(D.L-0.05)	BDL (D.L- 0.05)	0.1	0.3

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.

FIG 3.14 VALUES OF FEW COMMON PARAMETERS IN WATER ANALYSIS



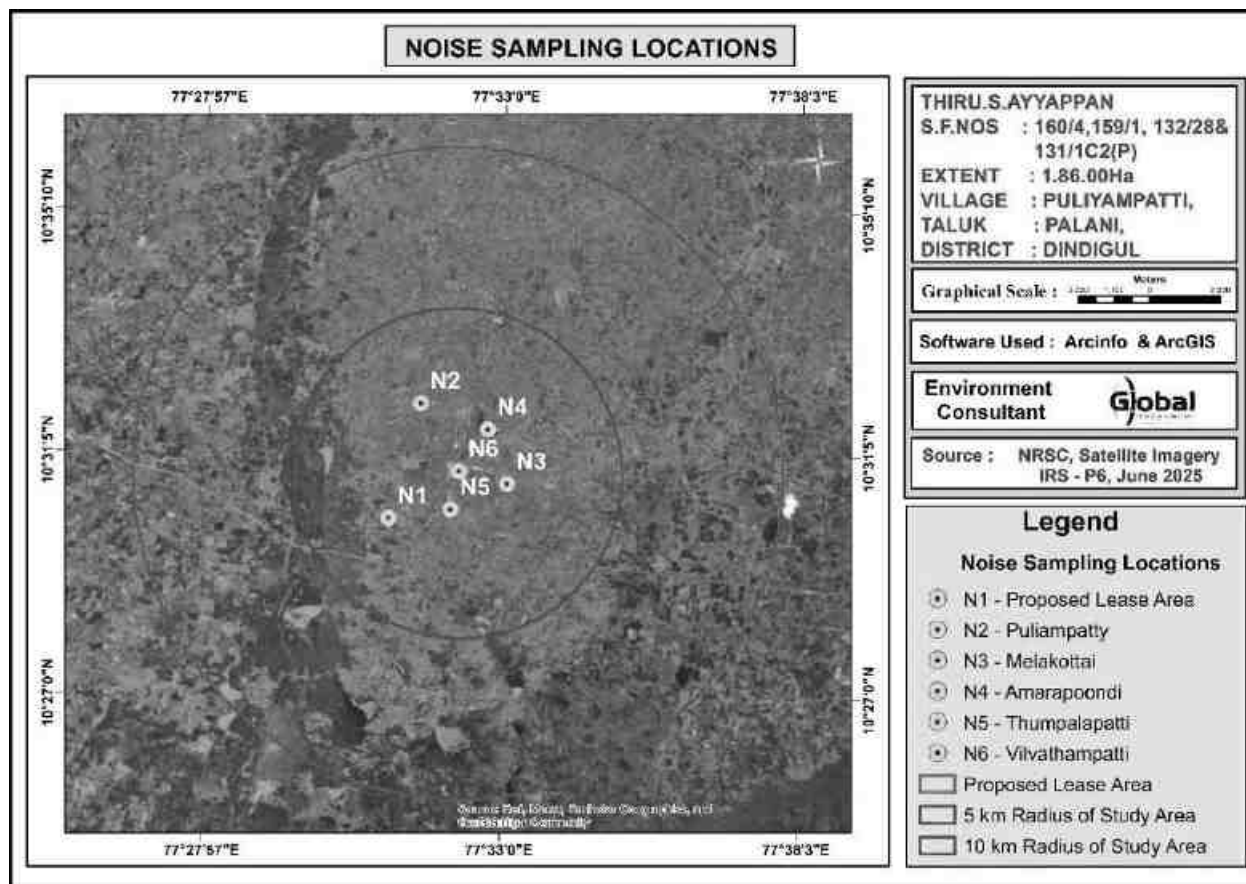
All the values were found to be within the permissible limits.

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 Fig 3.14

FIG 3.15 BASE MAP OF NOISE MONITORING LOCATIONS

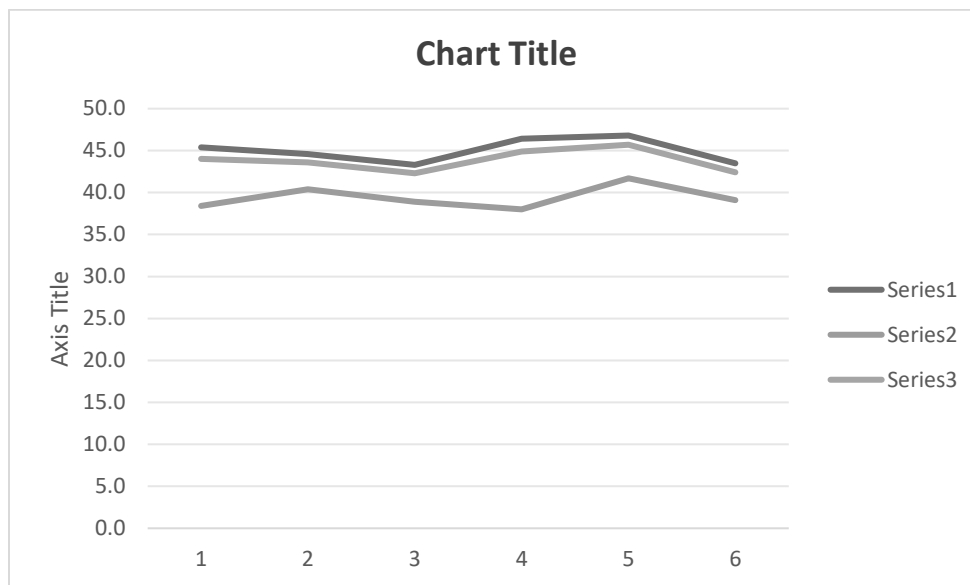


The results are given in Table below.

Table 3.8 Noise monitoring results					
S. No	Location	Day equivalent	Night equivalent	Day equivalent limits by CPCB	Night equivalent limits by CPCB
1	Project site core zone	51.2	44.2	55	45
2	Puliyampatty	51.2	40.8		
3	Melakottai	49.9	40.2		
4	Amarapoondi	47.6	39.6		
5	Thumpalapatti	48.7	41.1		
6	Vilvathampatti	47.4	39.8		

The results are plotted as below.

FIG 3.16 DAY AND NIGHT EQUIVALENT VALUES IN 6 LOCATIONS

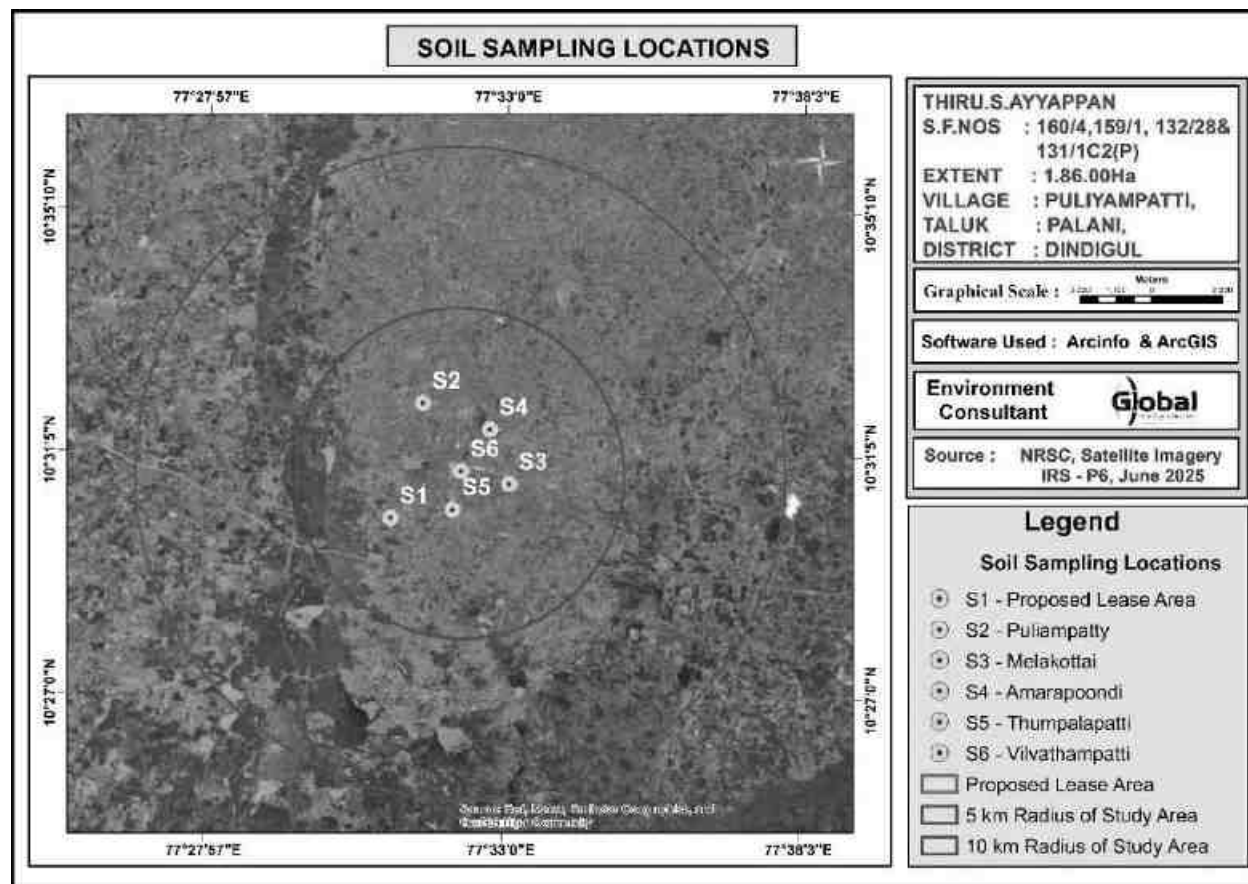


All the values are found to be within CPCB norms.

3.3.5 SOIL SAMPLING ANALYSIS

Soil samples have been collected from the mine lease area and 6 other locations from project site, Puliampatty village, Melakottai village, Amarapoondi, Thumpalapatti village, Vilvathampatti village. The locations are shown in figure below.

FIG 3.17 BASE MAP OF SOIL SAMPLING LOCATIONS



The results are summarized in the table below.

S. No	Parameter	Unit	S1	S2	S3	S4	S5	S6
1	pH at 25 °C	-	7.89	6.65	6.92	6.78	6.86	6.75
2	Electrical Conductivity	µmhos /cm	106	75.6	154	90.74	165	89.72
3	Dry matter content	%	91.23	94.55	93.54	96.74	94.65	97.03
4	Water Content	%	8.77	5.45	6.46	3.26	5.35	2.97
5	Organic Matter	%	0.68	1.36	1.21	0.98	1.25	0.99
6	Total soluble sulphate	-	BDL(D.L. 0.02)	BDL(D.L. 0.02)	BDL(D.L. 0.02)	BDL(D.L. 0.02)	BDL(D.L. 0.02)	BDL(D.L. 0.02)
7	Phosphorous	%	0.94	1.45	2.32	1.73	1.65	1.29
	Texture	%	SILT LOAM	silty clay	silty clay loam	silt loam	silty clay loam	silt loam
8	Sand	%	26.58	8.95	13.35	24.92	13.55	29.37
9	Silt	%	58.69	47.52	47.56	68.57	48.21	53.56

10	Clay	%	14.73	43.53	39.09	6.51	38.24	17.07
11	Nitrogen & Nitrogenous Compounds	mg/kg	356	268	289	642	320	230
12	Sodium as Na	mg/kg	780	430	1025	598	1090	374
13	Potassium as K	mg/kg	530	664	895	792	876	715
14	Water Holding Capacity	Inches /foot	44	40	42	40	46	45
15	Porosity	%	19.6	18.8	19.7	18.4	19.5	19.8

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 and Gravel quarry area including core and buffer zone were carried out to identify various species occurring in the area.

Flora in the study area

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.

FLORISTIC COMPOSITION IN CORE ZONE

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

FLORISTIC SCENARIO IN BUFFER ZONE AREA

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

Table 3.10 Assessment of trees

S. No.	Scientific Name	Local Name	Total No. of species	Total of Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Dominance	Relative Density	Relative Frequency	Relative Dominance	IVI
1	Citrus limon	Lemon	2	2	4	0.50	50.00	1	0.28	1.80	3.85	6.07	11.72
2	Ficus benghalensis	Krishna Fig, Krishna's	5	2	4	1.25	50.00	2.5	0.07	4.50	3.85	1.52	9.87
3	Thespesia lampas	Common mallow, kattupparuthi	2	4	4	0.50	100.00	0.5	0.28	1.80	7.69	6.07	15.57
4	Musa paradisiaca	Plantain, vazhai	10	4	4	2.50	100.00	2.5	0.50	9.01	7.69	10.79	27.50
5	Azadirachta indica	Veppai,	14	4	4	3.50	100.00	3.5	0.44	12.61	7.69	9.49	29.79
6	Psidium gujava	Guava	5	2	4	1.25	50.00	2.5	0.16	4.50	3.85	3.42	11.77
7	Syzygium cumini	Nagai	3	3	4	0.75	75.00	1	0.20	2.70	5.77	4.22	12.69
8	Adina cordifolia	Manjakadambu	1	1	4	0.25	25.00	1	0.14	0.90	1.92	2.98	5.80
9	Acacia chundra		1	1	4	0.25	25.00	1	0.18	0.90	1.92	3.89	6.71
10	Erythrina indica	Mullu murungai	1	1	4	0.25	25.00	1	0.15	0.90	1.92	3.12	5.94
11	Euphorbia antiquorum	Kalli	15	4	4	3.75	100.00	3.75	0.27	13.51	7.69	5.87	27.08
12	Ailanthus excelsa	Perumaram	7	2	4	1.75	50.00	3.5	0.21	6.31	3.85	4.56	14.71
13	Pongamia pinnata	Indian beech, pungam	4	2	4	1.00	50.00	2	0.15	3.60	3.85	3.27	10.72
14	Acacia leucophloea	Velvelam	10	4	4	2.50	100.00	2.5	0.26	9.01	7.69	5.48	22.18
15	Morinda tinctorial	Nuna	4	1	4	1.00	25.00	4	0.09	3.60	1.92	1.95	7.48
16	Dalbergia sissoo	nukkam totakatti	1	1	4	0.25	25.00	1	0.20	0.90	1.92	4.22	7.04

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

Table 3.11 Assessment of Shrubs

S. No.	Scientific Name	Local Name	Total No. of species	Total of Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Relative Density	Relative Frequency	IUCN Conservation Status
1	Jatropagossypifolia	Kaatamanaku	28	17	24	1.17	0.71	1.65	14.43	17.17	Not Assessed
2	Lantana trifolia	Shrub verbana	10	3	24	0.42	0.13	3.33	5.15	3.03	Not Assessed
3	Robiniapseudoacacia	Black locust	17	5	24	0.71	0.21	3.4	8.76	5.05	Least Concern
4	Lantana camara	Unnichi	9	6	24	0.38	0.25	1.5	4.64	6.06	Not Assessed
5	Calotropis gigantea	Erukam	14	12	24	0.58	0.50	1.17	7.22	12.12	Not Assessed
6	Stachytarphaeurticifolia	Rat tail	15	9	24	0.63	0.38	1.67	7.73	9.09	Not Assessed
7	Datura metal	Ummattangani	5	4	24	0.21	0.17	1.25	2.58	4.04	Not Assessed
8	Hibiscus rosa sinensis	Sembaruthi	3	2	24	0.13	0.08	1.5	1.55	2.02	Not Assessed

9	Tabernaemontanadivaricata	Crepe Jasmine	3	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
10	Chloromolaena odorata	Venapacha	9	6	24	0.38	0.25	1.5	4.64	6.06	Least Concern
11	Euphorbia geniculata	Amman Pacharisi	3	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
12	Catharanthus roseus	Nithyakalyani	3	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
13	Woodfordiafruticosa	Velakkai	3	3	24	0.13	0.13	1	1.55	3.03	Least Concern
14	Morindapubescens	Mannanunai	2	2	24	0.08	0.08	1	1.03	2.02	Not Assessed
15	Acalypha indica	Kuppaimeni	20	8	24	0.83	0.33	2.5	10.31	8.08	Not Assessed
16	Parthenium hysterophorous	Vishapoundu	50	13	24	2.08	0.54	3.85	25.77	13.13	Not Assessed

Table 3.12 Assessment of herbs and grasses

S. No.	Scientific Name	Local Name	Total No. of species	Total of Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Relative Density	Relative Frequency	IUCN Conservation status
1	Plumbago zeylanica	Chittiramoolam	3	3	30	0.10	0.10	1	1.19	3.23	Not assessed
2	Mimosa pudica	Thottacherungi	6	5	30	0.20	0.17	1.2	2.38	5.38	Least concern
3	Sida acuta	Malaidangi	10	3	30	0.33	0.10	3.33	3.97	3.23	Not assessed
4	Scrophularia nodosa	Sarakkothini	15	7	30	0.50	0.23	2.14	5.95	7.53	Not assessed
5	Helicteresisora	Valampuri	2	2	30	0.07	0.07	1	0.79	2.15	Not assessed
6	Cynodondactylon	Arugu	12	6	30	0.40	0.20	2	4.76	6.45	Not assessed
7	Sporobolus fertilis	Giant Parramatta Grass	9	4	30	0.30	0.13	2.25	3.57	4.30	Not assessed
8	Viburnum dentatum	Viburnum	5	5	30	0.17	0.17	1	1.98	5.38	Least concern
9	Heraculem spondylium	Hog Weed	20	10	30	0.67	0.33	2	7.94	10.75	Not assessed
10	Laportea canadensis	Peruganchori	30	20	30	1.00	0.67	1.5	11.90	21.51	Not assessed
11	Euphorbia hirta	Amman Pacharisi	5	4	30	0.17	0.13	1.25	1.98	4.30	Not assessed
12	Tridax procumbens	Vettukaayathalai	5	4	30	0.17	0.13	1.25	1.98	4.30	
13	Tephrosia purpurea	Kavali	20	4	30	0.67	0.13	5	7.94	4.30	
14	Sida cordifolia	Maanikham	45	4	30	1.50	0.13	11.25	17.86	4.30	

15	Tridax procumbens	Cuminipachai	15	4	30	0.50	0.13	3.75	5.95	4.30	
16	Ruellia strepens	Grandinayagam	25	4	30	0.83	0.13	6.25	9.92	4.30	
17	Senna occidentalis	Nattamsakarai	25	4	30	0.83	0.13	6.25	9.92	4.30	

Table 3.13 Evenness and species Richness by Margalef

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

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

Fauna in the study area

There is no specific Fauna found within ML area. The buffer zone Fauna in the area is studied by direct observation method. Secondary data collected from Forest department and the same is used in this report. People in the nearby locality were also consulted. The commonly found fauna in the area are given below.

Table 3.14 List of Fauna

S.No	Common name	Scientific name	Family	IUCN / WPA schedule
MAMMALS				
1	Indian Palm squirrel	Funambulus palmarum	Squirrel	IV
2	Hare	Lepus nigricollis	Leporids	IV
3	House rat	Rattus rattus	Murids	IV
4	Mannuli paambu	Eryx johani	Boidae	-
5	Indian Grey Mongoose	Herpestes edwardsii	Mongoose	IV
6	Field mouse	Rattus norvegicus	Murids	IV
7	Rusty spotted Cat	Felis rubiginosa	Felidae	IV
REPTILES				
1	Common Garden lizard	Calotes versicolor	Agamid lizards	IV
2	Rough tailed Sand boa	Gongylophis conicus	Boidae	IV
3	Indian Cobra	Naja naja	elapid snakes	II
4	Indian mud turtle	Lissemys punctate	Softshell turtles	IV
5	Common Green Snake	Passerita mycterizaris	Colubrid Snakes	IV
6	Common rat snake	Ptyas mucosus	Colubrid Snakes	II
BIRDS				
1	Grey Partridge	Francolinus pondicerianus	Phasianidae	IV
2	Indian Ring Dove	Streptopelia decaocto	Pigeons and doves	IV
3	Red collared dove	Streptopelia tranquebarica	Pigeons and doves	IV
4	Astur badius	Shikra	Accipitridae	IV

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

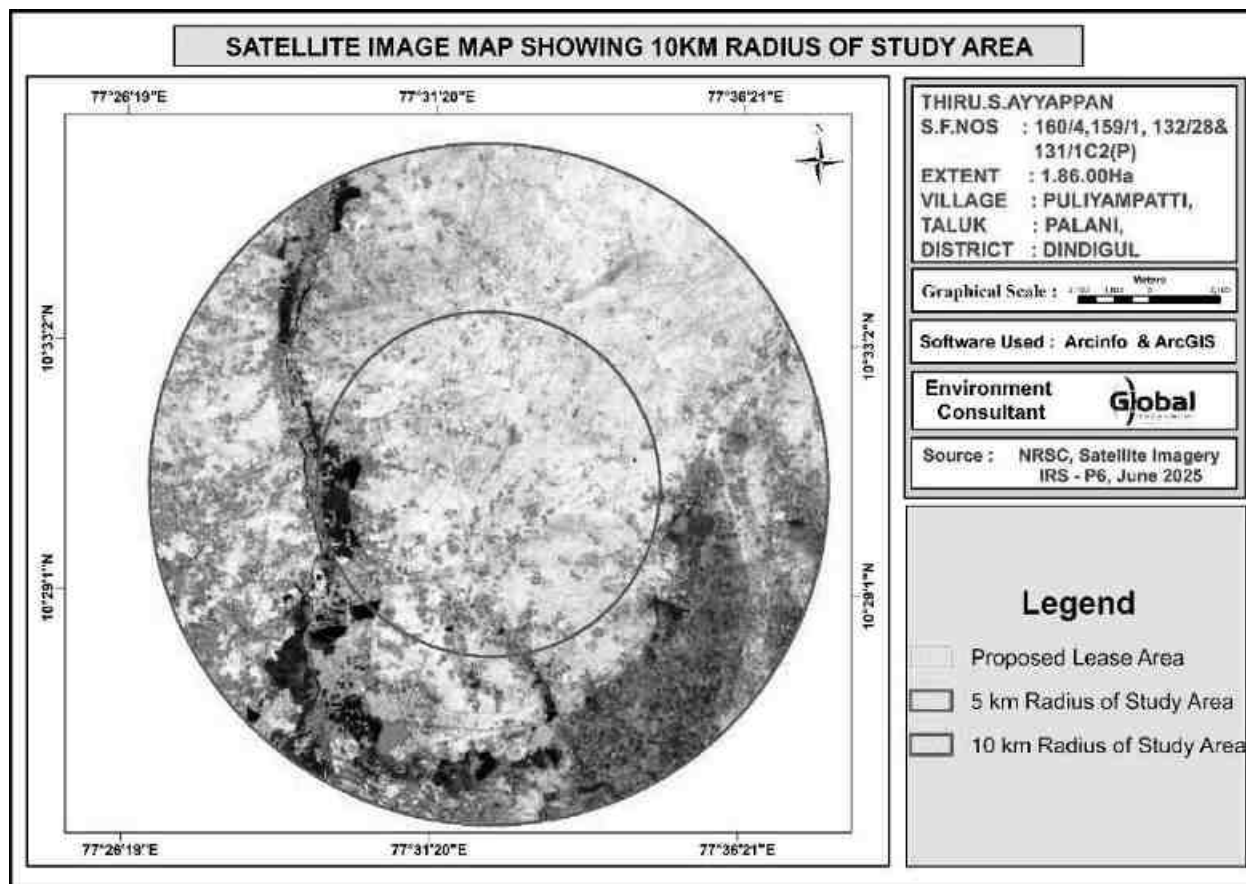
The core zone of the area is Patta land, no forest land is involved in the project area. The proposed quarry area is covered by thorny bushes. There is no Wild Life Sanctuary or National Park within the study area of 10km. There is no schedule I species of animals observed within study area as per Wildlife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

3.3.7 LAND USE

Remote Sensing Satellite Data Used for the Study

For Land-use and land cover study, sensing satellite data of Geo EYE has been used as per Figure No. 1. A land use map showing 10 Km radial distance. The geographical coordinates of the project are by **Latitude:** 10°30'41.32"N to 10°30'49.66"N **Longitude:** 77°32'11.56"E to 77°32'17.75"E.

Figure No. 3.18: Remote Sensing Satellite Image



Selection of remote sensing satellite image (RSI) is on the availability of cloud free data and interpretability of predominant landuse and land cover (LULC) category. The examination of satellite data showed that the region is always covered by clouds with lesser percentage during summer due to cluster habitation. But rained crops are cultivated during southwest monsoon and hence a data acquired during first onset of precipitation is preferred so as to delineate crop and fallow land parcels of agricultural category. Delineation of scrub land is also possible since land with scrub could be easily distinguished from crop vegetation and separated. This may be an arduous task during monsoon since the entire area would be witnessed with sudden sprout of lush natural vegetation, mostly *prosopis*, with first onset of precipitation.

Methodology Adopted for the Land Use Study

Present study involves micro level analysis of landuse pattern showing 10 km radius

and changes in landuse pattern using satellite data. This necessitates a careful analysis of satellite data adopting a well-defined methodology.

To cater the requirement, a preliminary assessment of terrain using digital analysis helping to infer relationship between terrain and landuse has been carried out. Such an approach provides lucid understanding of landuse units and enhances the knowledge on the landuse pattern assisting in impact assessment.

The knowledge base thus generated is used to delineate various landuse units while carrying out interpretation of the satellite image. The derived landuse information is transformed into a GIS based spatial database using geo-referencing techniques. Besides, a limited but well focused field investigation also carried out and coordinates of significant landuse units using handheld GPS (Global Positioning System) are gathered to be used as control points for geo-referencing. Interpreted landuse units are verified in the field to carryout necessary corrections wherever is required before preparing final landuse map.

Using the image elements such as color, tone, texture, size, shape and associated elements various landuse units are delineated following the categorization and nomenclature adopted for the national level landuse classification system as recommended by National Remote Sensing Centre (NRSC), Department of Space, Government of India. Some of the landuse units that are identified in the study area are listed in Table No. 3.13 given below.

Field Verification:

Field verification involved collection, verification and record of the different surface features that create specific spectral signatures / image expressions on FCC. In the study area, doubtful areas identified in course of interpretation of imagery is systematically listed and transferred on to the corresponding SOI topographical maps for ground verification. In addition to these, traverse routes were planned with reference to SOI topographical maps to verify interpreted LU/LC classes in such a manner that all the different classes are covered by at least 5 sampling areas, evenly distributed in the area. Ground truth details involving LU/LC classes and other ancillary information about crop growth stage, exposed soils, landform, nature and

type of land degradation are recorded and the different land use classes are taken the Land use map.

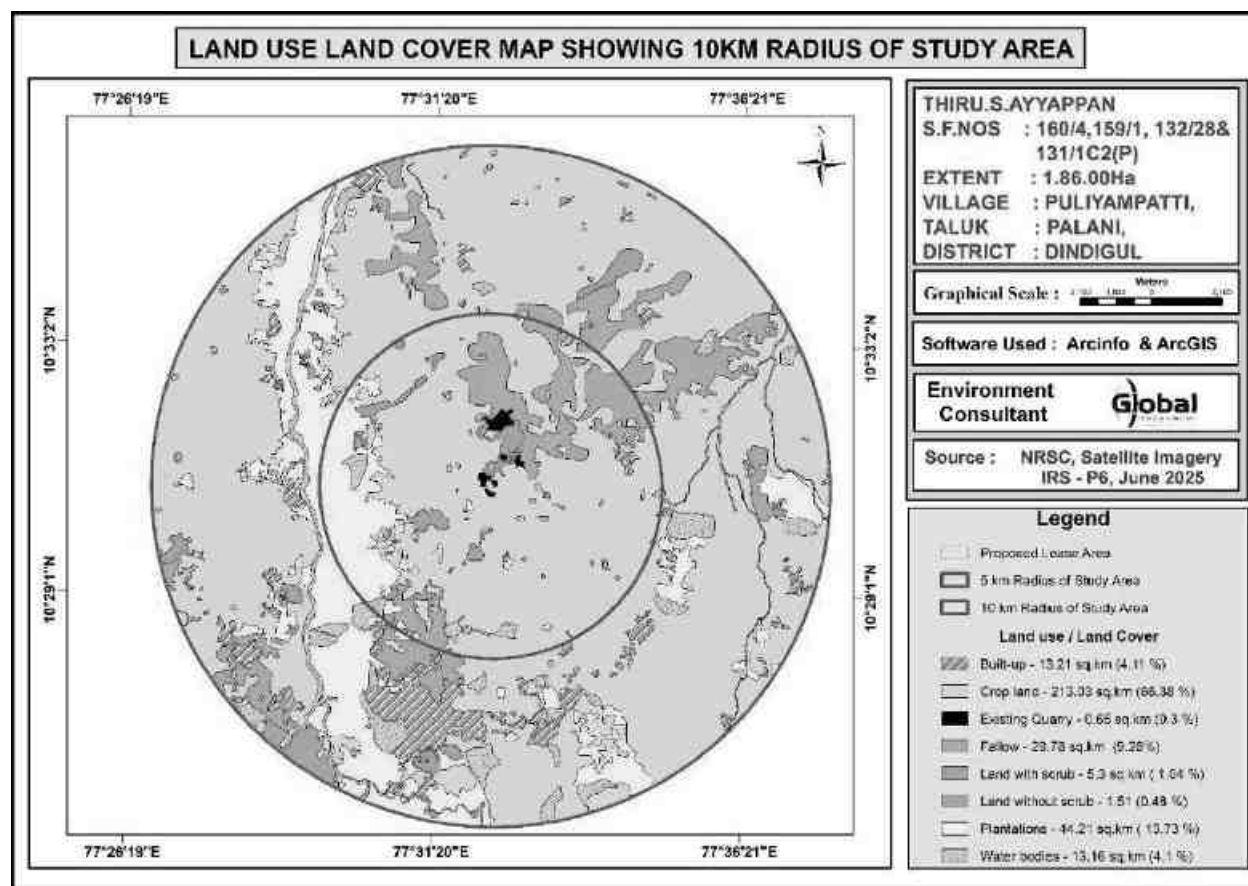
Table No.3.15: Major Land use Units of the Study Area

Sr.No	1st level classification	2nd level classification
1	Built-Up Or Habitation	Residential
		Commercial / Industrial
2	Agriculture	Crop / Fallow Land
		Plantation
3	Water Bodies	Reservoir / Lake / Pond
		River
4	Vegetation Cover	Scrub
		Open Vegetation
		Close Vegetation
		Mangroves
5	Waste Land	Open Without Scrub
		Open With Scrub
6	Others	Mudflow
		Salt Pan
		Brick Manufacturing

Land Use Pattern of 10 km Radial Buffer Area of Project Site

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 3.18

FIG 3.19 LAND USE/LAND COVER MAP OF THE STUDY AREA



Land Use / Land Cover Classification classified into first level classification and second level classification and major land use/land cover classes were demarcated in the study area following Level II classification. A thematic map of 1:50,000 scale was generated incorporating these classified categories considering the area of the project.

Table No. 3.16: Major Land Use Units of the Study Area in Percentage

Sl.No.	Land Use / Land Cover	Area in Sq.Km	Area in Percentage
1	Built up	13.21	4.11
2	Crop land	213.03	66.38
3	Existing quarry	0.65	0.3
4	Fallow	29.78	9.26
5	Land with scrub	5.3	1.64
6	Land without scrub	1.51	0.48

7	Plantation	44.21	13.73
8	Water bodies	13.16	4.1
	Total Area	320.85	100.00

3.3.8 SOCIOECONOMIC ENVIRONMENT

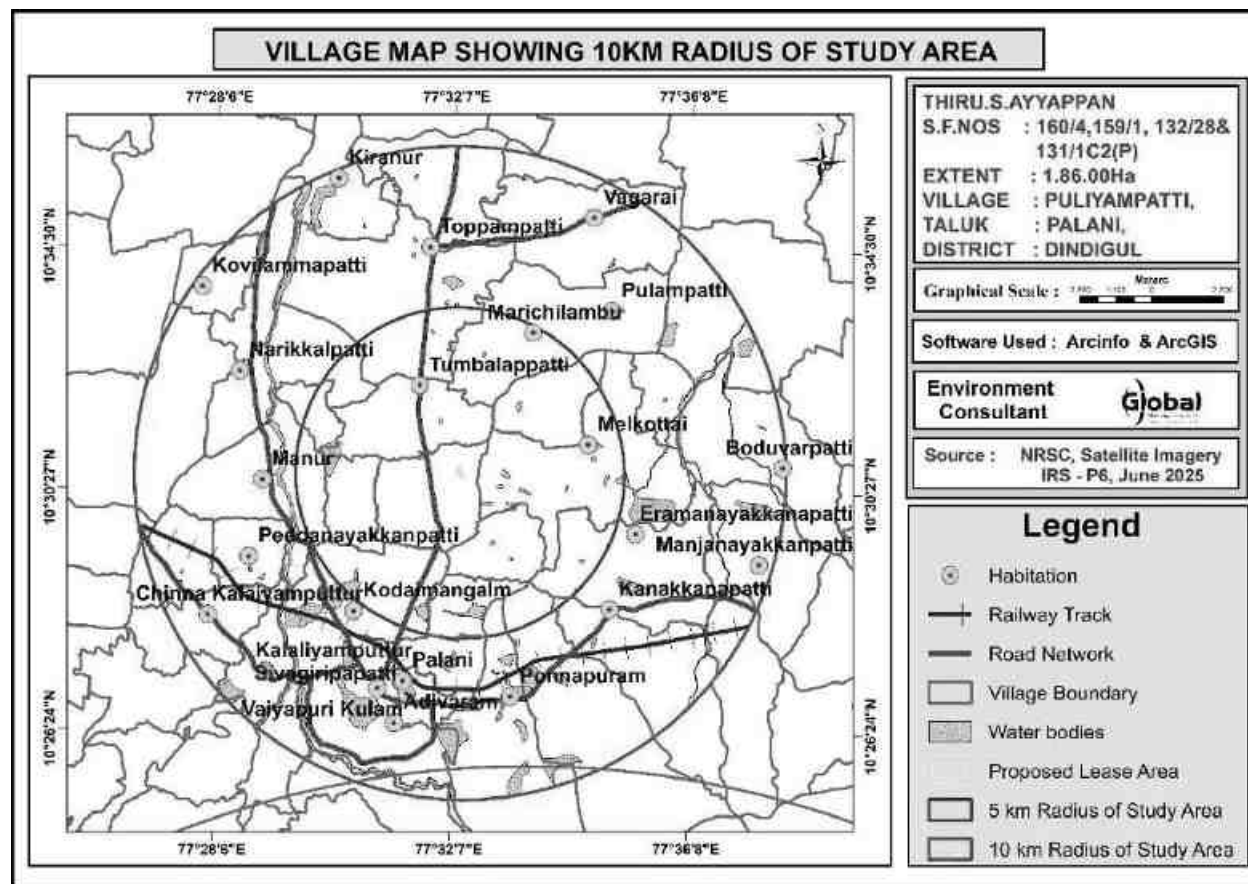
The socio-economic environment of the study area is studied by conducting primary sites through site visits and conducting sample surveys. The secondary data obtained from Census 2011 is also used. The following data area collected from secondary data:

- Demographic pattern.
- Health pattern
- Occupational structure.

3.11.1 DETAILS OF VILLAGES

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

FIG 3.20 VILLAGE MAP OF THE STUDY AREA



DETAILS OF VILLAGES

The project is located in Palani Taluk, Dindigul 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 3.17 - Village details in study area				
S.No.	Village/Town Name	Radius	Taluk Name	District Name
1	Manur	1-10km	Palani	Dindigul
2	Tumbalappatti			
3	Melakottai			
4	Kodaimangalam			
5	Peddanayakkanpatti			
6	Palani			
7	Kanakkanpatti			

8	Manjanayakkanpatti			
9	Ponnapuram			
10	Boduvarpatti			
11	Kiranur			

Table 3.18 - Population profile of the study area

AREA AND POPULATION	2001 Census	2011 Census
Area (Sq.Km)	6266.64	6266.64
Population	19,23,014	21,59,775
Density	306	345
Modern Medicine		
a. No.of Hospitals	12	
b. Primary Health Centres	49	
c. Health Sub Centres	311	
d. Beds in Hospitals and Dispensaries	1227	
e. Total Number of Doctors	224	
f. Total Number of Nurses	619	
INDIAN MEDICINE		
a. No.of Hospitals	14	
b. Primary Health Centres	12	
EDUCATION		
1. Universities	2	
2. Arts and Science Colleges	13	
3. Engineering and Technology	5	
4. Colleges for Special Education	1	
5. Schools for General Education	2006	
TRANSPORT		
Road Length (Km.)		
1. National Highways	148.75	
2. State Highways	2268.66	

FIG 3.21 GENDER-WISE POPULATION DISTRIBUTION

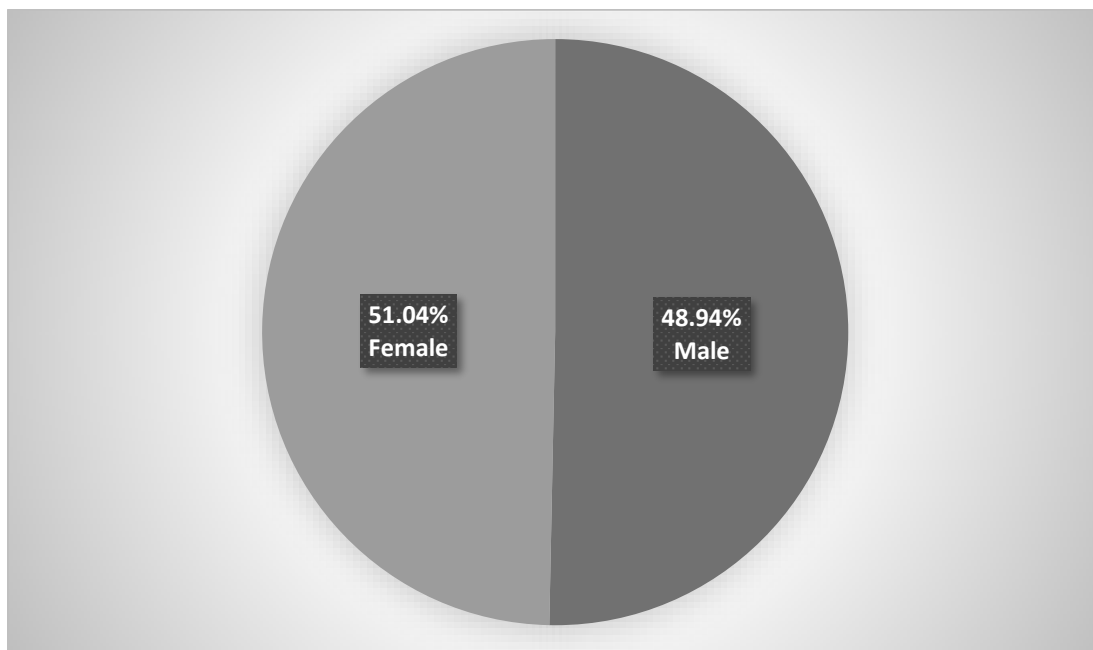


FIG 3.22 GENDER WISE LITERACY DISTRIBUTION

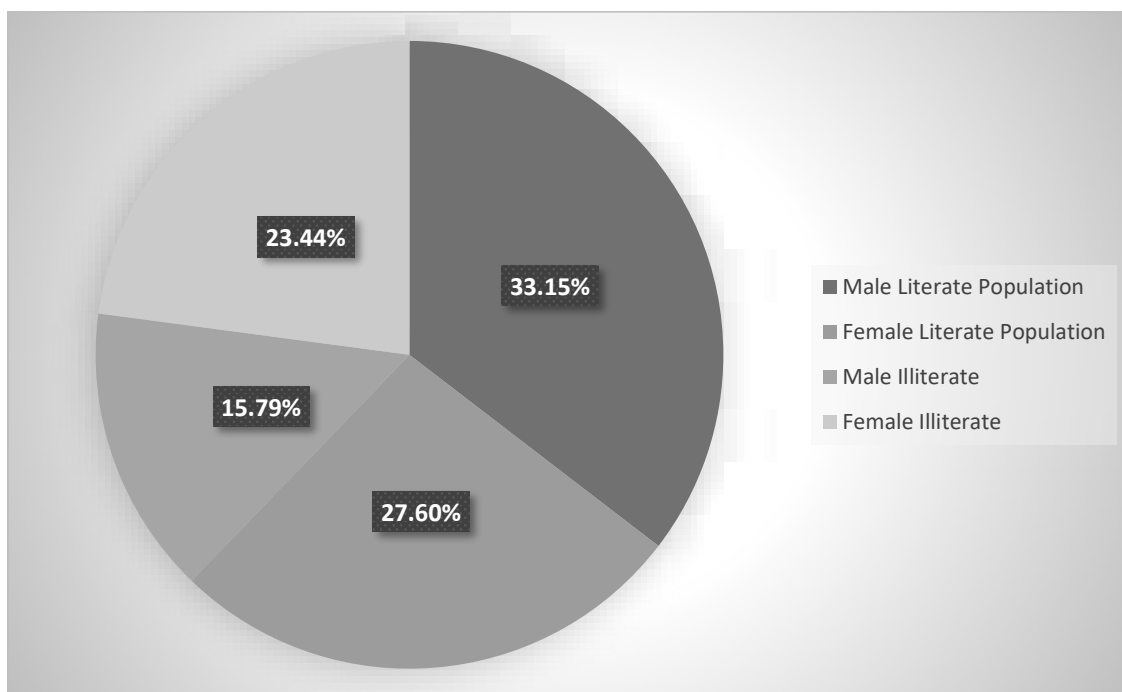
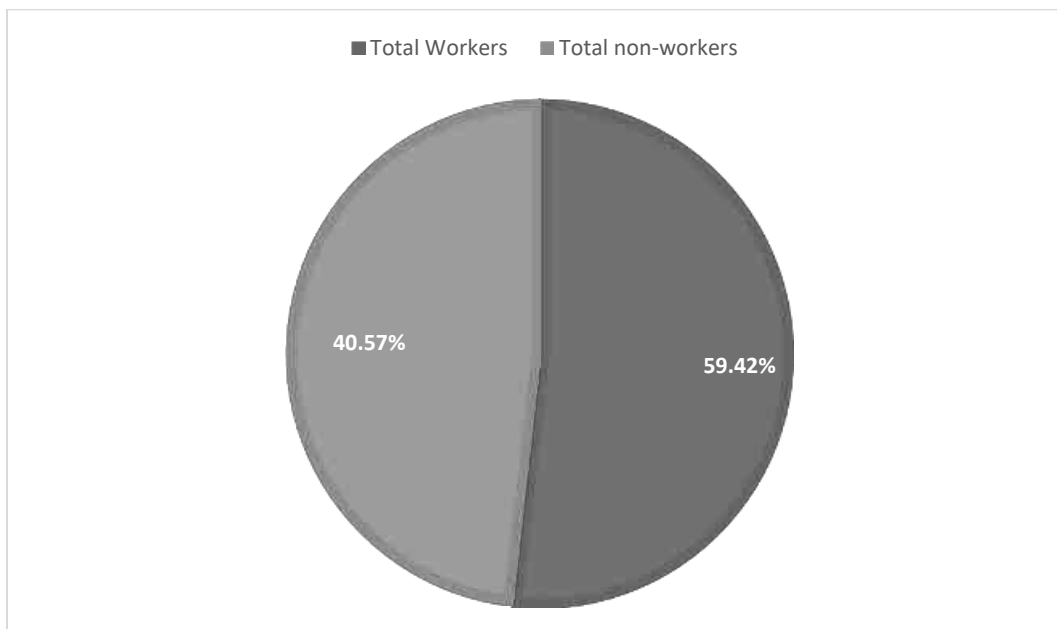


FIG 3.23 OCCUPATIONAL STRUCTURE WITHIN BUFFER ZONE



3.3.9 HYDROGEOLOGY OF THE STUDY AREA

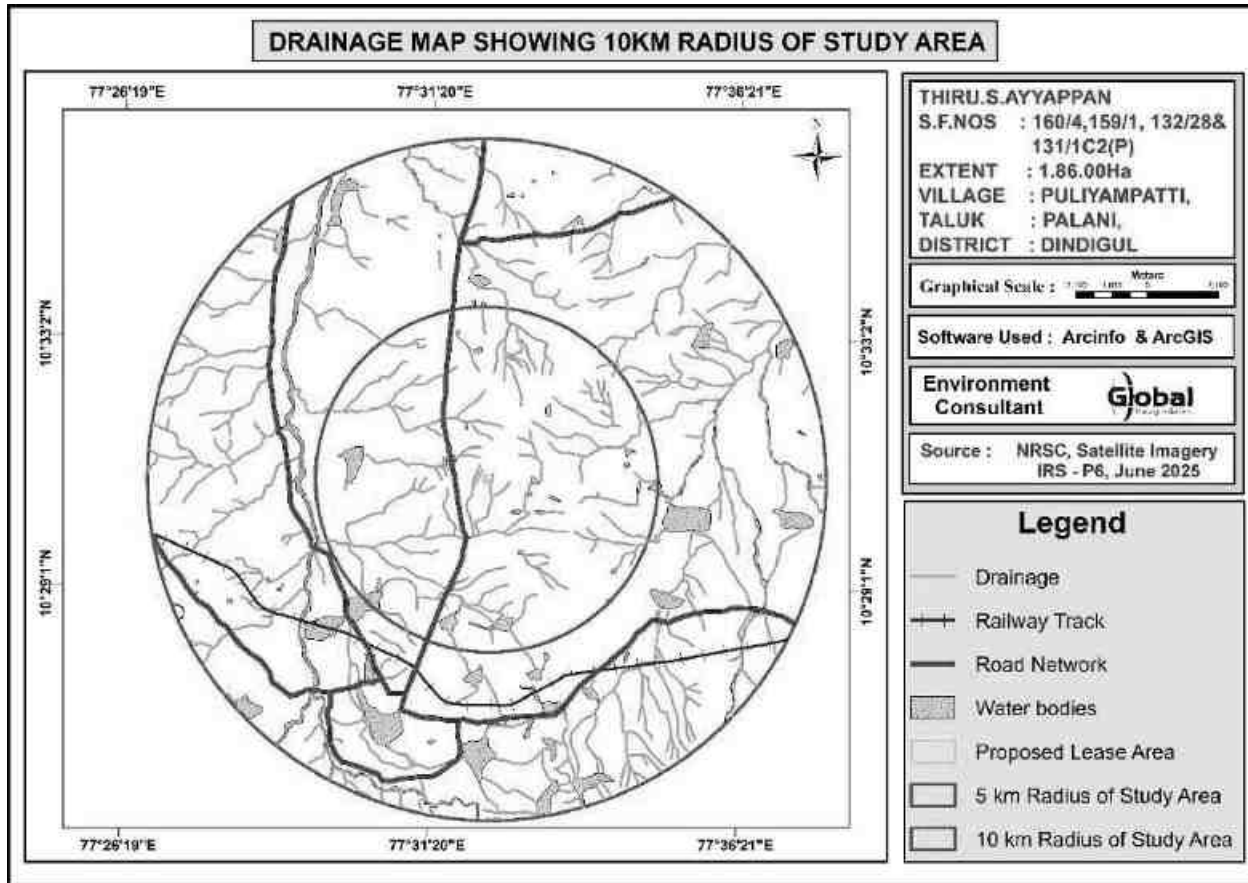
Nearest water body

1. Sambai Kulam – 3.53 km (E)
2. Thattan Kulam - 3.95 km (S)
3. Chinna Kulam – 4.29 km (SW)
4. Pudhu Kulam – 4.52 km (SW)
5. Shanmukha Nadi – 5.24 km (W)
6. Nallatangal Odai – 6.82 km (W)
7. Varattar River – 8.01 km (SW)
8. Selvar Odai – 8.39 km (W)

HYDROGEOLOGICAL STUDY

To assess the hydrogeological condition of the surrounding proposed mine lease area. The study area is located in Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State is considered to understand the nature of the general hydrogeological conditions of the surrounding proposed mine lease area.

FIGURE 3. 24 10 KILOMETER RADIUS OF THE DRAINAGE MAP



PHYSIOGRAPHY AND DRAINAGE

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.

Drainage: The drainage pattern study reveals that from the proposed mine lease area with around 1 Km radius and 10 Km study observed in Figure 3.20. There is 5. Shanmukha Nadi – 5.24 km (W) is located at a distance of 5.24 km in west direction of lease area of the proposed site.

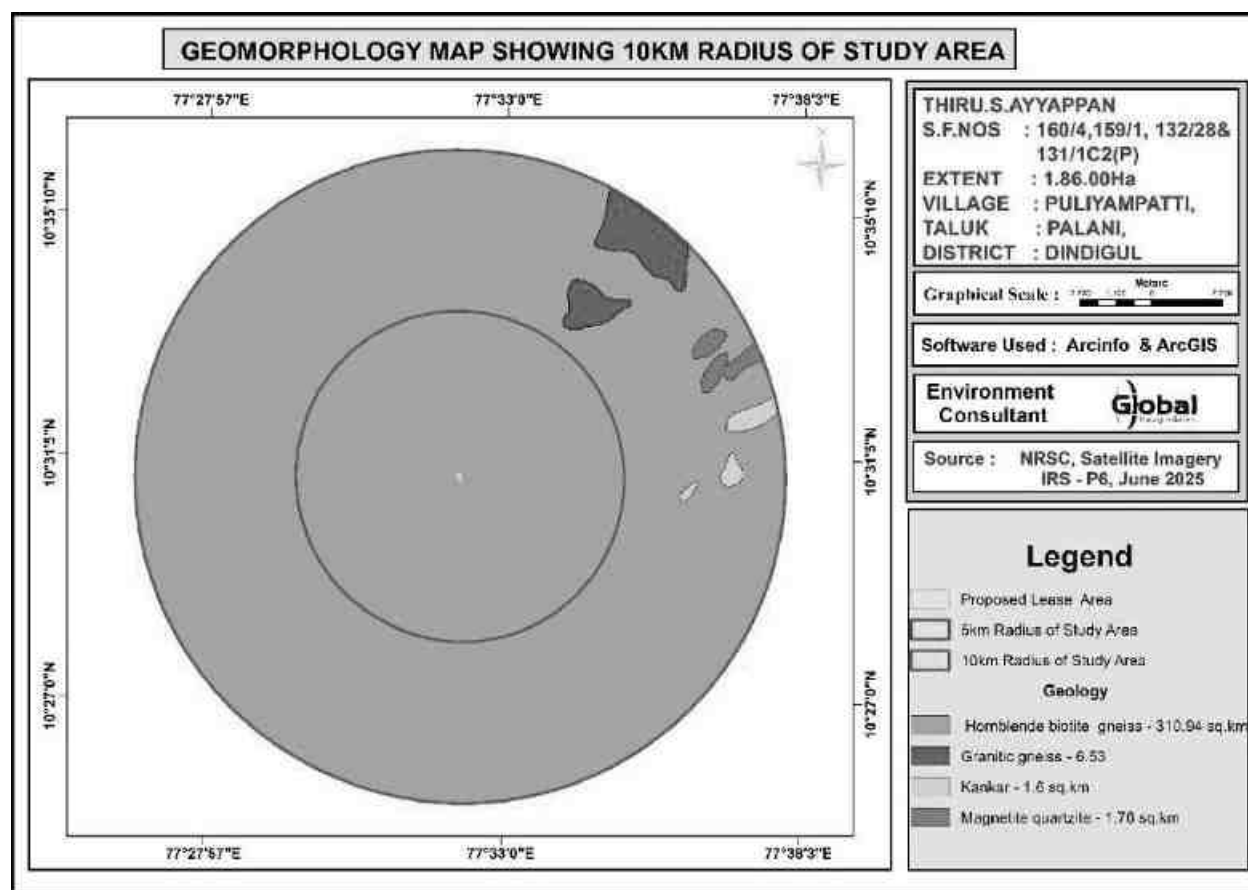
GEOLOGY, GEOMORPHOLOGY AND SOIL

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 Hornblende biotite gneiss, Granitic gneiss, Kankar, Magnetite quartzite. The geology of the study area is detailed below.

Sl.No.	Geological description	Area in sq.km	Area in percentage
1	Hornblende biotite gneiss	310.94	96.91
2	Granitic gneiss	6.53	2.03
3	Kankar	1.6	0.49
4	Magnetite quartzite	1.76	0.54
Total		320.83	100.00

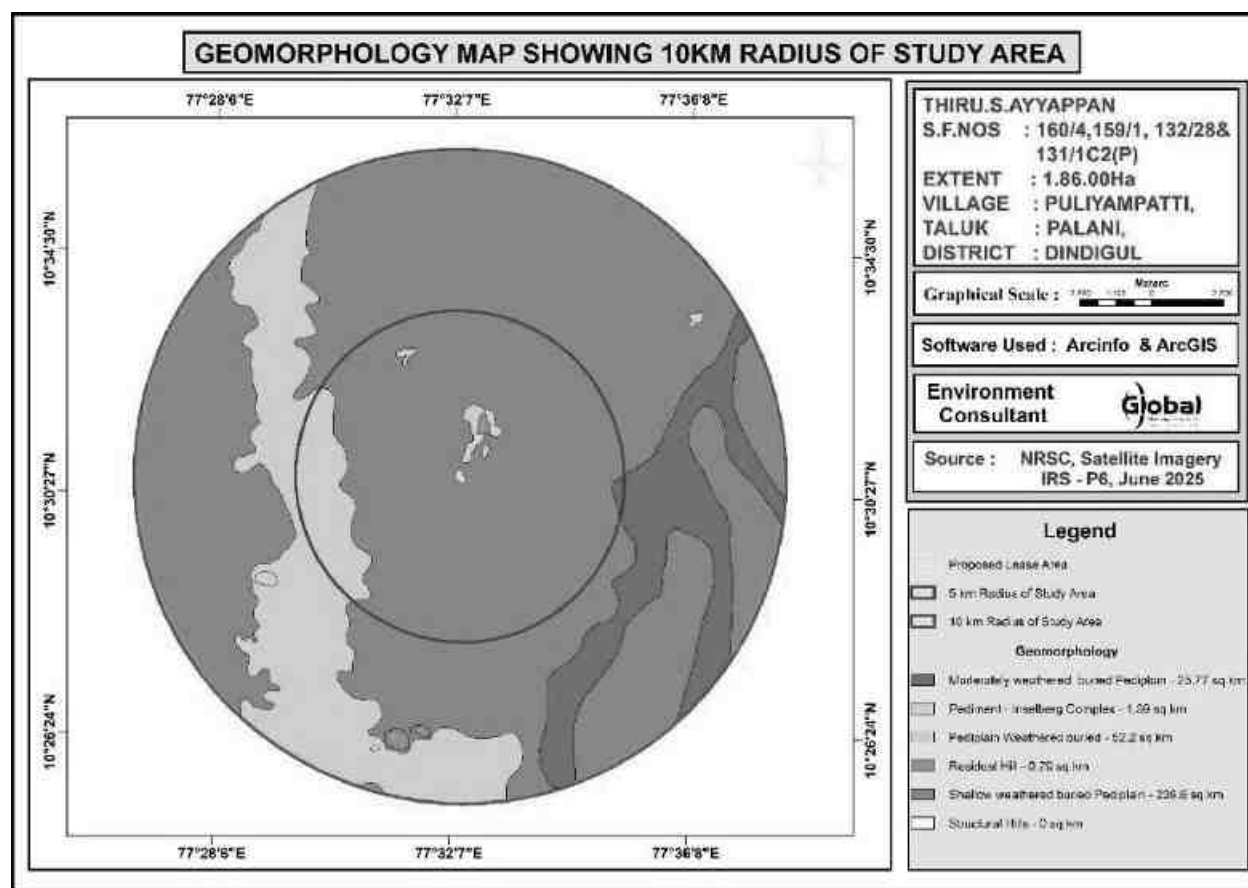
FIGURE 3. 25 10 KILOMETER RADIUS OF THE GEOLOGY MAP



Geomorphology: Predominantly the buffer zone is dominated by Shallow weathered buried pediplain 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	Moderately weathered buried pediplain	25.77	8.05
2	Pediment- Inselberg Complex	1.39	0.43
3	Pediplain weathered buried	52.2	16.32
4	Residual hill	0.79	0.24
5	Shallow weathered buried pediplain	239.6	74.93
6	Structural hills	0	0
Total		319.75	100.00

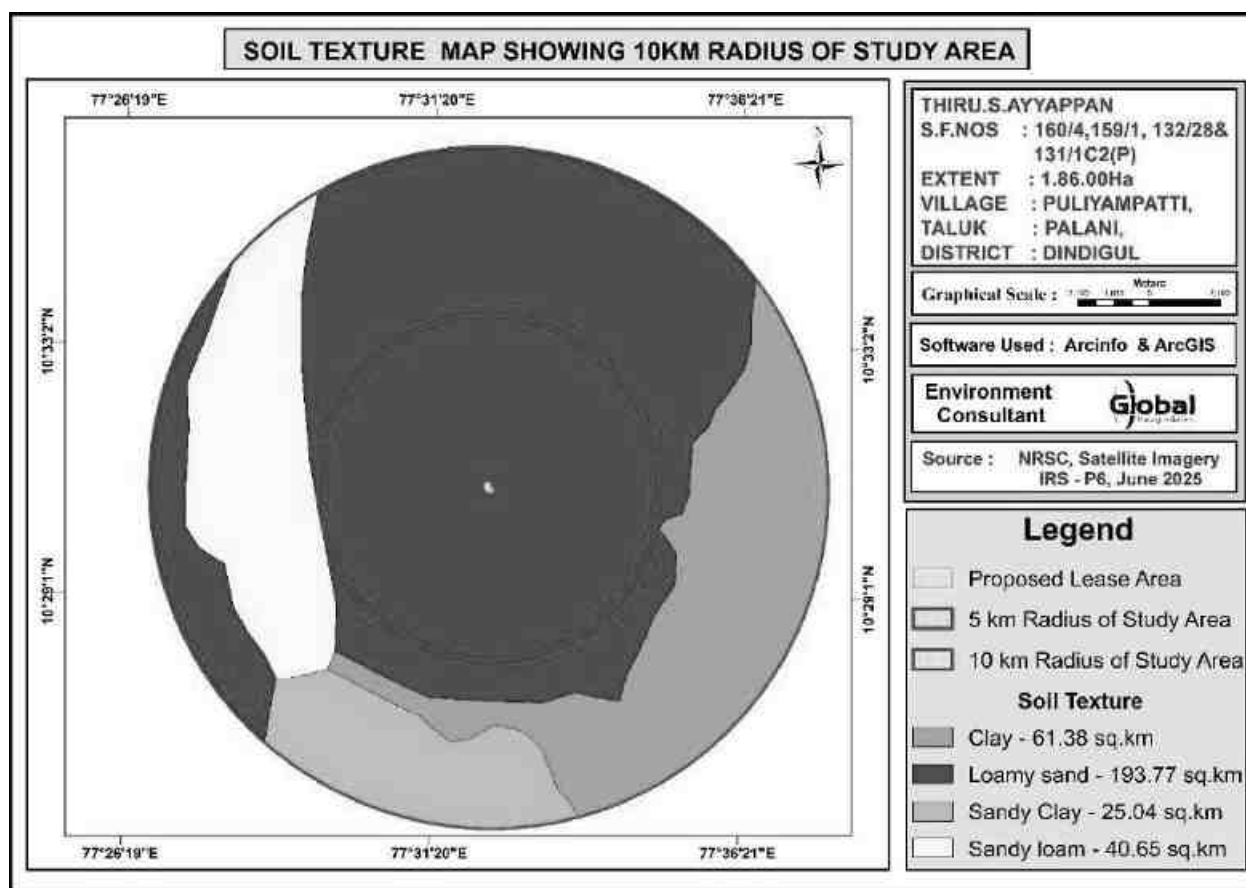
FIGURE 3. 26 10 KM RADIUS OF THE STUDY AREA GEOMORPHOLOGY MAP



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	Clay	61.38
2	Loamy sand	193.77
	Sandy clay	25.04
	Sandyloam	40.65

FIGURE 3.27 10 KM RADIUS OF THE STUDY AREA SOIL TYPE MAP



FIELD INVESTIGATION

There is the Sambai Kulam- 3.53 km (E),Thattan Kulam - 3.95 km (S), Chinna Kulam - 4.29 km (SW), Pudhu Kulam - 4.52 km (SW), Shanmukha Nadi - 5.24 km (W), Nallatungal Odai - 6.82 km (W) ,Varattar River - 8.01 km (SW),Selvar Odai - 8.39 km (W)

The water is temporarily found only during the rainy season.

In this representation in the two seasons, the water level substantially gets fall-down in the non-monsoon season, because of the rainfall impact and it extended up to the Monsoon season. Some of the wells water level is shallow depth in both seasons. These dug wells are located nearby water bodies. So, clearly shows that surface water is impact in these wells.

The shallow depth of groundwater level in the monsoon season. It is interesting to note that the water level is increased because of heavy rainfall during the southwest and northeast monsoon. The groundwater table level is substantially increased in the monsoon season.

In the study area, the shallow aquifer is developed through dug wells and deeper aquifer through tube wells. The study has revealed that potential fractures are encountered at deeper levels. The water in the wells are available mainly monsoon and it reduces during non-monsoon demanding the groundwater. Bore wells are deep and it reflects that the yield is only better at deeper water levels.

Rain water collected in the tanks in the region acts as a good source of water during monsoon season. In order to increase the recharge, tanks, and percolation ponds may be provided with the recharge wells/recharge shafts penetrating this impervious layer to make it more effective in recharging the aquifer.

CHAPTER 4

ANTICIPATED ENVIRONMENTAL IMPACTS AND **MITIGATION MEASURES**

INTRODUCTION

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

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

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

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

This is a proposed Rough Stone and Gravel quarry & Gravel Quarry of S.F.No. 160/4, 159/1, 132/2B and 131/1C2(P) over an extent of 1.86.0 Ha in Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State. The method of mining is Opencast mechanized with a bench width and height of 5m. It is proposed to excavate to 1,01,880 m³ of Rough Stone and 11,170 m³ of Gravel upto a depth of 32m (maximum) below ground level. for the proposed mining plan for the period of five years. 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 1.86.0 Ha boundary barrier except in eastern direction. It is proposed to be altered by effective quarrying operation such as excavation (1.48.5 Ha), Infrastructure (0.01.0), Road (0.01.0 Ha) and green belt will be developed in the safety zone of 0.35.50 Ha. The ultimate depth of quarrying is proposed with maximum depth of 32m (below ground level) and will not intersect the ground water table.

4.2 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. The massive Charnockite formation is noticed below 2m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 353m (maximum) from MSL. 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>0.63.5</td><td>1.48.5</td></tr><tr><td>Infrastructure</td><td>Nil</td><td>0.01.0</td></tr><tr><td>Roads</td><td>0.01.0</td><td>0.01.0</td></tr><tr><td>Green Belt</td><td>0.02.0</td><td>0.35.5</td></tr><tr><td>Unutilized</td><td>1.19.5</td><td>Nil</td></tr><tr><td>Total</td><td>1.86.0</td><td>1.86.0</td></tr></table>	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)	Quarrying Pit	0.63.5	1.48.5	Infrastructure	Nil	0.01.0	Roads	0.01.0	0.01.0	Green Belt	0.02.0	0.35.5	Unutilized	1.19.5	Nil	Total	1.86.0	1.86.0	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 32 m Below ground level. At the end of mining period, the quarried pit will act as a water reservoir to store the rain water. Land Use at the end of mine will be as follows. <table><tr><th>Land Use</th><th>Area in use during the quarrying period (Hect)</th></tr><tr><td>Area left for water body</td><td>1.48.5</td></tr><tr><td>Green Belt</td><td>0.35.5</td></tr><tr><td>Remaining area</td><td>0.02.00</td></tr><tr><td>Total</td><td>1.86.0</td></tr></table> At the mine closure stage 1.86.0 Ha of lease area will be left as rain water harvesting pond 0.35.5 Ha will be developed with green belt. Greenbelt shall be developed around the mine lease area and the details has been given below. <table><tr><th>Year</th><th>Species</th><th>No. of trees</th><th>Spacing</th><th>Survival</th></tr><tr><td>I</td><td rowspan="5">Pungai, Vagai, Vembu, Manjal konrai, Naval,</td><td>355</td><td rowspan="5">3m x 3m</td><td rowspan="5">80%</td></tr><tr><td>II</td><td>-</td></tr><tr><td>III</td><td>-</td></tr><tr><td>IV</td><td>-</td></tr><tr><td>V</td><td>-</td></tr></table>	Land Use	Area in use during the quarrying period (Hect)	Area left for water body	1.48.5	Green Belt	0.35.5	Remaining area	0.02.00	Total	1.86.0	Year	Species	No. of trees	Spacing	Survival	I	Pungai, Vagai, Vembu, Manjal konrai, Naval,	355	3m x 3m	80%	II	-	III	-	IV	-	V	-
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IV		-																																																	
V		-																																																	

	The ultimate pit dimension of the mine lease area is given below.	<table><tr><td></td><td>Puvarasu, etc</td><td></td><td></td><td></td></tr><tr><td colspan="2">Total</td><td>355</td><td></td><td></td></tr></table>					Puvarasu, etc				Total		355			Due to the thick vegetation around the mine lease area and sprinkling of water around the haul roads the dust emissions arise from the vehicles will be controlled. At the end of mining period, fencing will be provided around the mine lease area to arrest the entry of public/cattle to the mining area. The Rough stone are proposed to quarry 5m bench height and 5m width with 45⁰ slope and with conventional opencast Mechanized method. As per the approved mining plan a safety distance of 10m 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.					
			Puvarasu, etc																		
		Total		355																	
		<table><tr><td colspan="5">Ultimate Pit dimension at the end of Mining plan Period</td></tr><tr><td>Pit No.</td><td>Length (max) (m)</td><td>Width (Avg) (m)</td><td colspan="2">Depth (max) (m)</td></tr><tr><td>I</td><td>150</td><td>99</td><td colspan="2">32 (below ground level)</td></tr></table>				Ultimate Pit dimension at the end of Mining plan Period					Pit No.	Length (max) (m)	Width (Avg) (m)	Depth (max) (m)			I	150	99	32 (below ground level)	
		Ultimate Pit dimension at the end of Mining plan Period																			
Pit No.	Length (max) (m)	Width (Avg) (m)	Depth (max) (m)																		
I	150	99	32 (below ground level)																		
If mining is not done systematically it will leads to the dumping failure in the mining area																					
Drainage	Mine drainage is surface water or groundwater that drains from an active or abandoned mine. One of the adverse impact of mine drainage is it will contaminate the ground water.	As per the approved mining plan the ultimate pit limit is 32 (below ground level).The ground water table is reported as 72 m. In the proposed mining plan only 32m 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 32 (below ground level).The ground water table is reported as 72 m. 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 32 m BGL. In the post mining stage, the quarried out pit will be used for rainwater harvesting.

4.2.1 SOLID WASTE GENERATION AND MANAGEMENT

The plastic waste generation is very negligible and it will be collected from the source level in specific dustbin and disposed through the municipal bins.

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

4.2.2 WATER ENVIRONMENT

Impact on Surface Water Resources

There is no seasonal or 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.

There is the Sambai Kulam- 3.53 km (E),Thattan Kulam - 3.95 km (S), Chinna Kulam – 4.29 km (SW), Pudhu Kulam – 4.52 km (SW), Shanmukha Nadi – 5.24 km (W), Nallatangal Odai – 6.82 km (W) ,Varattar River – 8.01 km (SW),Selvar Odai – 8.39 km (W)

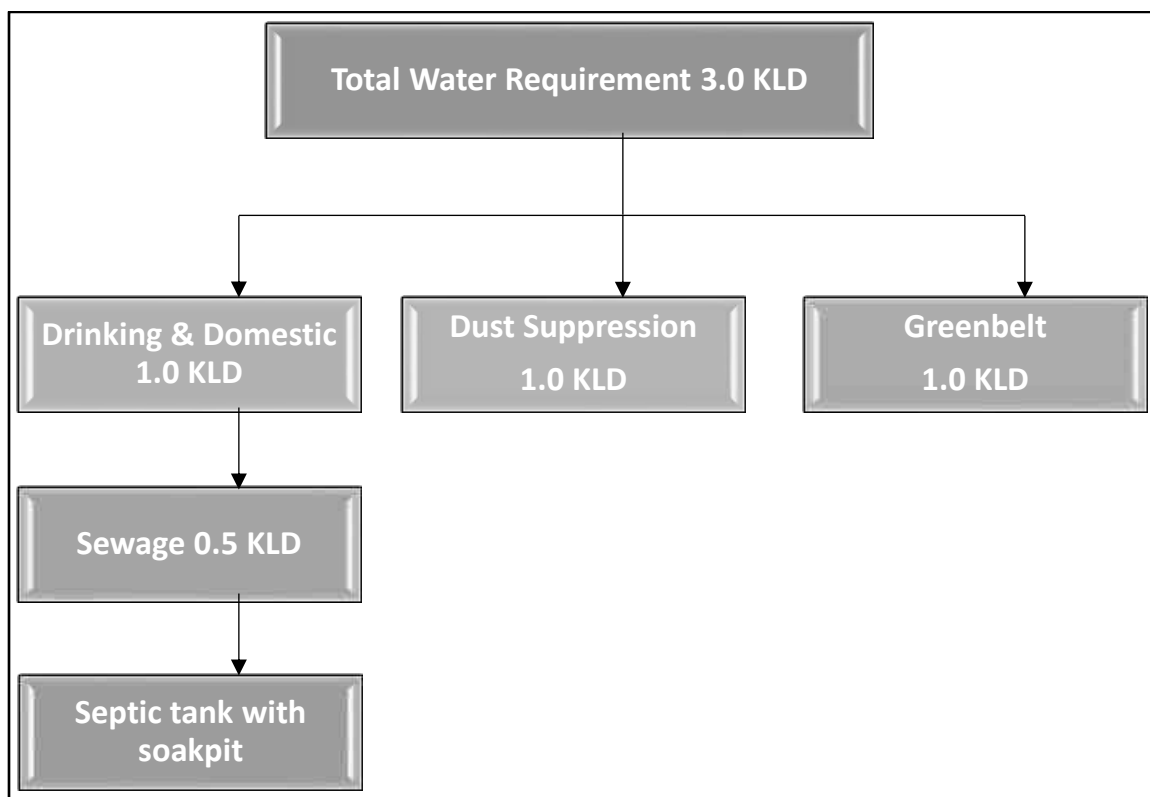
Water table is found at a depth of 72m.

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. The project proponent will restrict the mining operation only within the lease and no other work will be carried out near the canal or any area outside the mining lease.

Impact due to Water use in Mines

In the proposed mines water will be mainly used for domestic purpose, dust suppression & plantation. Total water requirement for the project is 3.0KLD which will be sourced from outside agencies. Negligible sewage of 1.0 KLD will be generated, for which a septic tank with soak pit will be set up. The water balance diagram is given below.

FIG 4.1 WATER BALANCE DIAGRAM



Impact on Ground Water

The mining activity is not likely to intersect ground water as the ground water table occurs at a depth of 72 m. The mining will go up to the maximum depth of 32 below ground level) 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)

RAINWATER HARVESTING PLAN

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

- Development of garland drain around the quarry connected to settling tank.
- Cleaning of drain periodically to prevent siltation
- The supernatant clear water from the settling pond will drain into the nearby channel on the eastern side of the lease.
- Utilizing the rainwater harvested in the mine pit to meet the water requirement of the project.

The average annual rainfall of the area is 816 mm. Taking into consideration of 0.35 as runoff co-efficient for mining area, the total quantity of rain water can be harvested per annum from the area has been tabulated as below.

Table 4.1 – Rainwater Harvesting Plan

S.NO	Rainwater Harvesting Area	Area in Sq.m	Average annual rainfall	Volume of harvestable quantity (Cum) of rain water per annum
1	Quarry Area	18600	0.82	5338
Total Harvested Rainfall				5338

Total surface water runoff is 5338 Cum per Annum. 10% of this amount will be evaporated and rest 4804 m³ will be recharged in the rain water harvesting pit.

The sumps will be provide with each capacity 3500 Cu.m (2 Nos).. The rain water stored in the pond will be utilized for plantation, dust suppression activities. The capacity of Rain water harvesting post will be sufficient to arrest the surface runoff from the lease area considering the highest amount of rain fall.

4.2.3 VEGETATIONVEGETATION 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 an area of 0.35.5 Ha. Trees like Pongamia pinnata, Syzigium cumini, Albizia lebbeck, Thespesia populnea, Bauhinia racemose, Cassia siamea, Azadirachta indica will be planted around the mine lease area. A total of 355 trees are planned to be planted. Spacing will be 3m x 3m.

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 Chapter III. During mining activity the impacts and mitigation measures for Fauna are given in below table.

Table 4.2 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.

4.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF ENVIRONMENTAL COMPONENTS.

4.3.1 IMPACT DUE TO MINING OPERATION

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

4.3.2 IMPACT ON AIR ENVIRONMENT

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

4.3.3 Air Emissions

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

4.3.4 Quantitative Estimation of Impacts on Air Environment

An attempt has been made to predict the incremental rise of various ground level concentrations above the baseline status in respect of air pollution due to proposed is 1,01,880 m³ of Rough Stone and 11,170 m³ of Gravel formation upto a depth of 32m below ground level) for the period of five years.

Cluster quarries production Thiru.S.Ayyappan 1,01,880 m³ of Rough Stone and 11,170 m³ of Gravel.

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

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

4.3.5 Sources of Dust Emission

The proposed mining is carried out by mechanized opencast method. The air borne particulate matter generated by ore handling operations, transportation and screening of ore is the main air pollutant. The emissions of sulphur dioxide (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.

4.3.6 Emission Details

All the emissions discussed above are quantified for proposed maximum production of is 1,01,880 m³ of Rough Stone and 11,170 m³ of Gravel formation upto a depth of 32m (below ground level) for the period of five years.

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 and Gravel.

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

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

4.3.7 Meteorological Data

The meteorological data recorded continuously during the month of March 2025 – May 2025 on hourly basis on wind speed, wind direction and temperature has been processed to extract the 24- hourly mean meteorological data as per the guidelines of IMD and MoEF for application of AERMOD model. Stability classes computed for the mean hours is based on guidelines issued by CPCB on modeling. Mixing heights representative of the region have been taken from the available published literature.

4.3.8 Summary of Predicted Ground Level Concentrations

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

The maximum ground level concentration is estimated to be about PM₁₀ are in the range of 47.9 µg/m³ to 64.50 µg/m³ and for PM_{2.5} are in the range of 21.81 µg/m³ to 29.72 µg/m³, where mining operations are being carried out. The impact of mining operations would be negligible beyond 0.5 km.

Figure – 4.1 represents the spatial distribution of the predicted ground level concentrations of PM₁₀ due to emissions from mine.

4.3.9 Emission sources & Quantification

Various point and non-point sources of emissions from Proposed Rough Stone and Gravel quarry of Thiru.S.Ayyapan is quantified and presented below:

Area Emissions – Total Material handling (Rough Stone& Gravel)

Quantity, TPA	Rough Stone: 1,01,880 m ³ of Rough Stone and 11,170 m ³ of Gravel formation upto a depth of 32m (below ground level) for the period of five years.
Operational Hours Per Year	2400
Activity Rate, t/hr.	396.41362
Emission of dust, g/t.	0.19
Emission of dust, g /hr.	54.42854
Area of influence, m ²	629
Uncontrolled emission rate g/s/m ²	0.0000422
Controlled emission rate, PM ₁₀ g/s/m ²	0.00000907
Controlled emission rate, PM _{2.5} g/s/m ²	0.00000422

Line Source – Transport of Rough Stone & Gravel from Pit to Boundary

Quantity, TPA	Thiru.S.Ayyapan 1,01,880 m ³ Rough Stone

	11,170 m ³ Gravel
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	3285
Lead length/trip, Km	0.9
Total VKT/Year	20574
Emission Kg/VKT	0.19
Total emission Kg/Year	34785
Uncontrolled emission rate g/s/m	2.6458
Controlled emission rate, PM10 g/s/m	0.26458
Controlled emission rate, PM2.5 g/s/m	0.13763

Area Emissions – Total Material handling (Cluster Rough Stone)

Quantity, m ³	- Thiru.S.Ayyappan is 1,01,880 m³ Rough Stone and 11,170 m³ - KNR Construction is 10,51,260 m³ of Rough Stone and 80,944 m³ Gravel
Operational Hours Per Year	2400
Activity Rate, t/hr.	391.84
Emission of dust, g/t.	0.31
Emission of dust, g /hr.	86.451
Area of influence, m ²	610
Uncontrolled emission rate g/s/m ²	0.00042756
Controlled emission rate, PM10 g/s/m ²	0.00042756
Controlled emission rate, PM2.5 g/s/m ²	0.00031793

Line Source – Transport of Rough Stone (Cluster)

Quantity, m3	- Thiru.S.Ayyappan is 1,01,880 m3 Rough Stone and 11,170 m3 - KNR Construction is 10,51,260 m3 of Rough Stone and 80,944 m3 Gravel
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	28835
Lead length/trip, Km	0.19
Total VKT/Year	42785
Emission Kg/VKT	0.20
Total emission Kg/Year	44751
Uncontrolled emission rate g/s/m	4.75389
Controlled emission rate, PM10 g/s/m	0.47538
Controlled emission rate, PM2.5 g/s/m	0.35218

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

FIG 4.2 Isopleth of GLC Prediction for PM_{2.5}

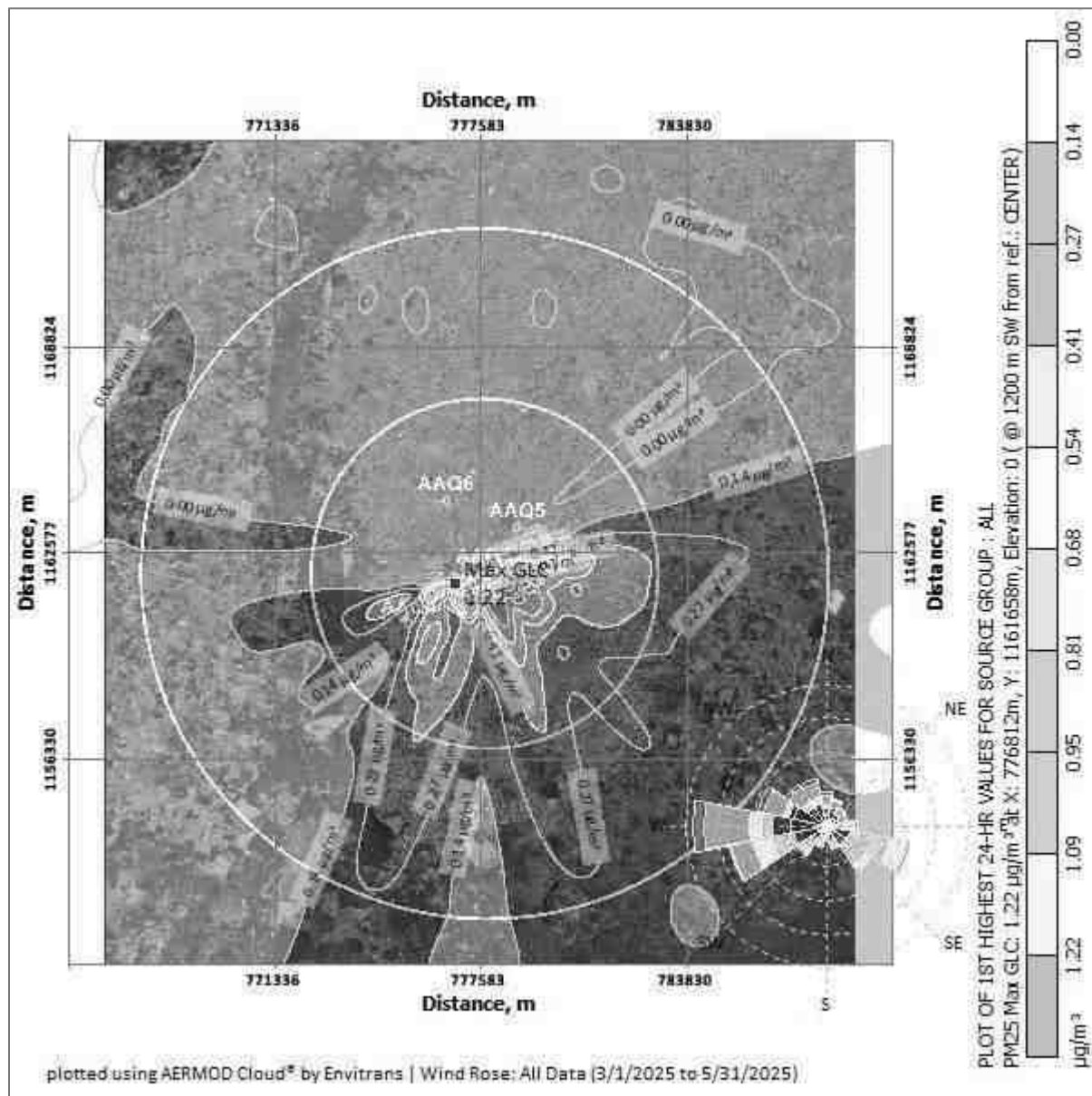
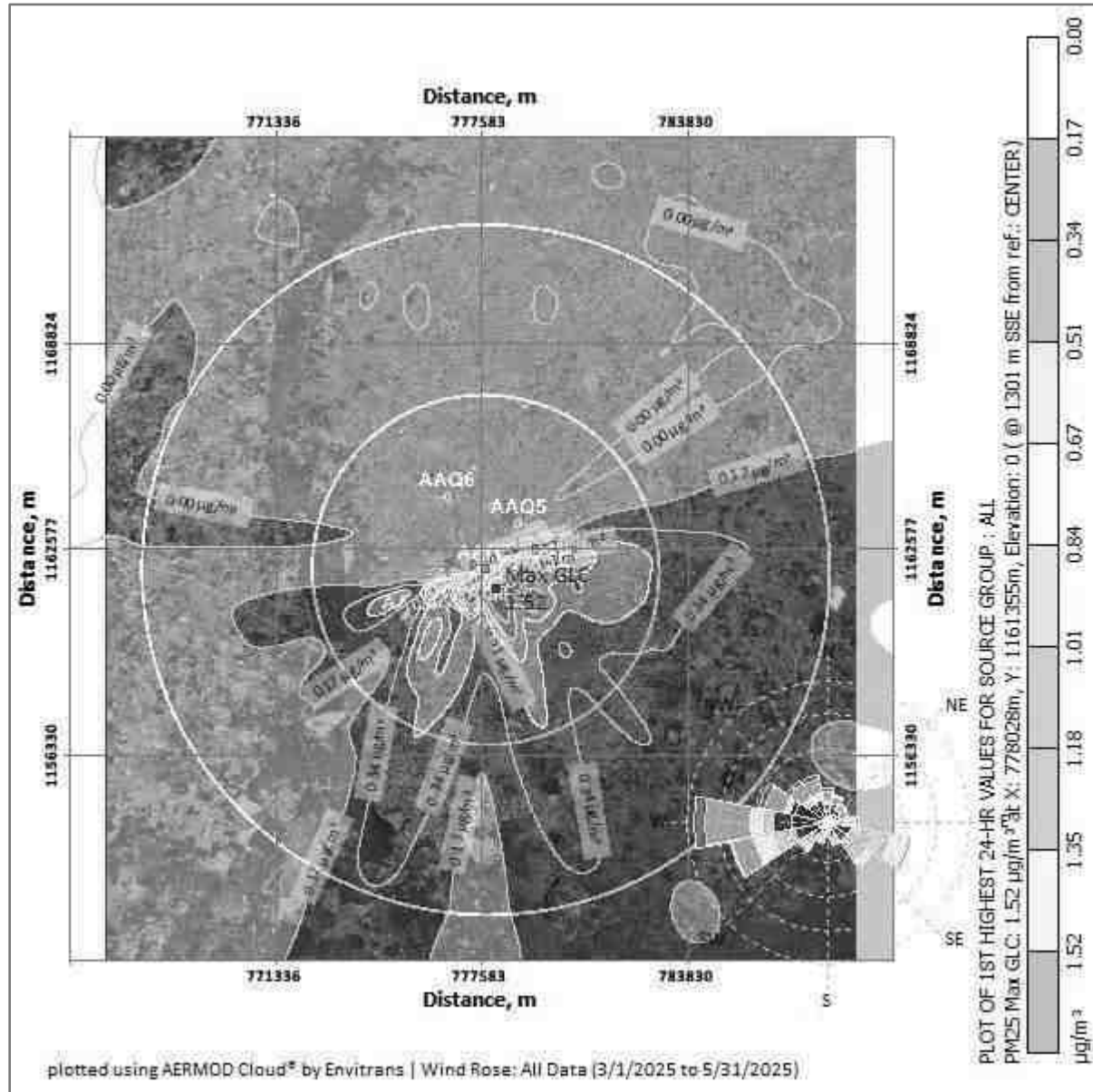


FIG 4.4 Isopleth of GLC Prediction –Cumulative for PM_{2.5}



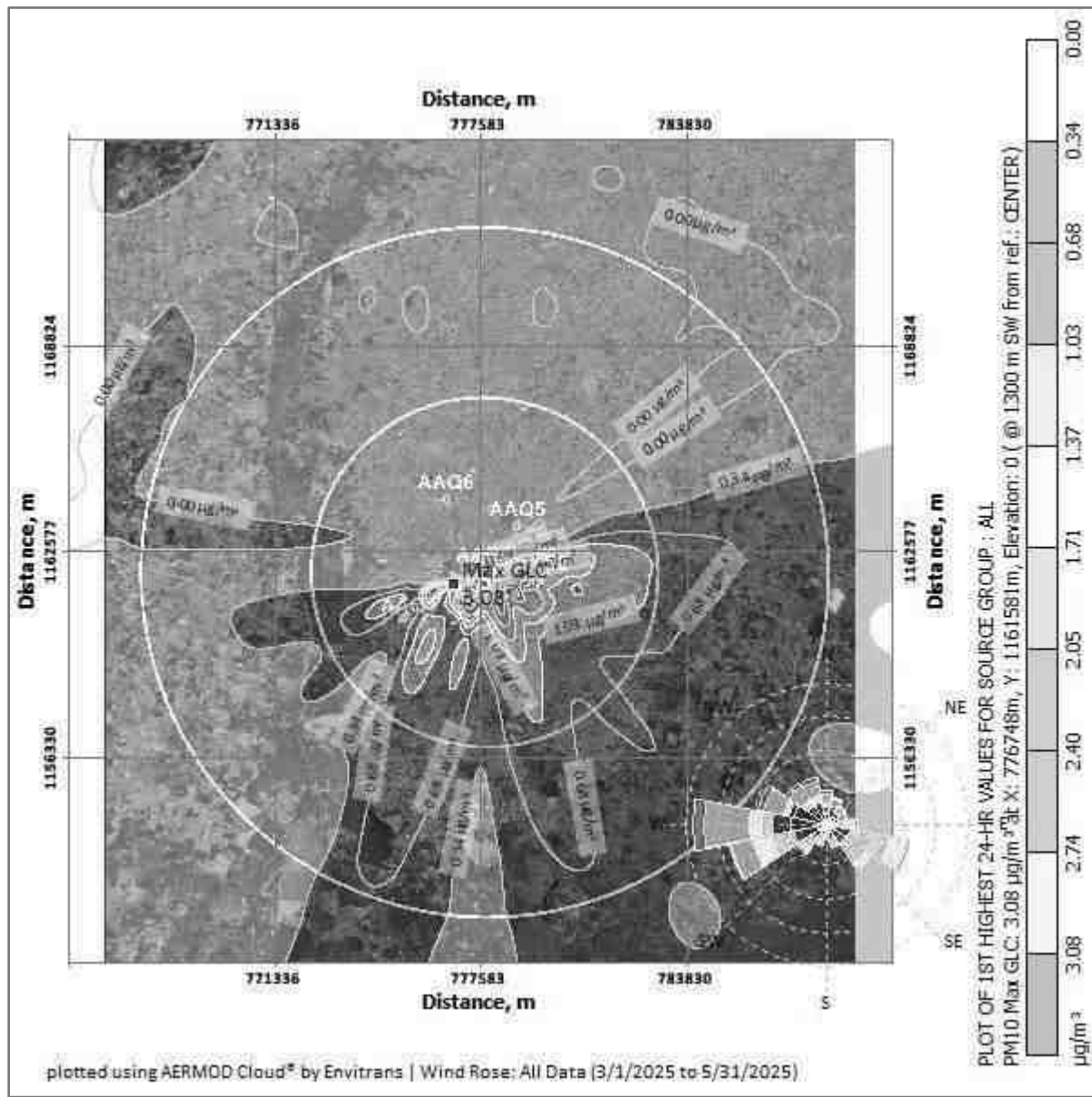


FIG 4.5 Isopleth of GLC Prediction –Cumulative for PM₁₀

PREDICTED AMBIENT AIR QUALITY:

The post project Concentrations of PM₁₀, PM_{2.5}, (GLC) (base line + incremental) after adopting necessary control measures is given in Table No - 4.3 to 4.4.

Table 4.3 Concentrations of PM2.5 after Project Implementation

SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Project site	32.7	1.22	33.92	60
2	Puliampatty	27.7	1.09	28.79	
3	Melakottai	31	<1.0	32.0	
4	Amarapoondi	26.6	<1.0	27.6	
5	Thumpalapatti	27.1	<1.0	28.1	
6	Vilvathampatti	25	<1.0	26.0	

Table 4.3a Cluster Concentrations of PM2.5 after Project Implementation

SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Project site	32.7	1.52	34.22	60
2	Puliampatty	27.7	1.35	29.05	
3	Melakottai	31	1.18	32.18	
4	Amarapoondi	26.6	1.01	27.61	
5	Thumpalapatti	27.1	<1.0	28.1	
6	Vilvathampatti	25	<1.0	26.0	

Table 4.3b Concentrations of PM10 after Project Implementation

SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Project site	70.8	2.62	73.42	100
2	Puliampatty	57.8	2.33	60.13	
3	Melakottai	65.9	2.04	67.94	
4	Amarapoondi	57.6	1.75	59.35	

5	Thumpalapatti	58.3	1.46	59.76	
6	Vilvathampatti	54.6	1.17	55.77	
Table 4.3c Cluster Concentrations of PM10 after Project Implementation					
SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Project site	70.8	3.08	73.88	100
2	Puliyampatti	57.8	2.74	60.54	
3	Melakottai	65.9	2.40	68.3	
4	Amarapoondi	57.6	2.05	59.65	
5	Thumpalapatti	58.3	1.71	60.01	
6	Vilvathampatti	54.6	1.37	55.97	

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 55.77 $\mu\text{g}/\text{m}^3$ to 73.42 $\mu\text{g}/\text{m}^3$ and for PM2.5 are in the range of 26.0 $\mu\text{g}/\text{m}^3$ to 33.92 $\mu\text{g}/\text{m}^3$ and PM10 are surrounding area range of 55.97 $\mu\text{g}/\text{m}^3$ to 73.88 $\mu\text{g}/\text{m}^3$ and for PM2.5 are in the range of 26.00 $\mu\text{g}/\text{m}^3$ to 34.22 $\mu\text{g}/\text{m}^3$ which are within the statutory limits in each case. The mitigation measures undertaken in the mine for control of air pollution are given below.

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

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

4.4.1 NOISE ENVIRONMENT

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

4.4.2 Likely Noise Levels in Lease Area due to mining activity

S.No.	Source Name	Noise Level in dB (A)
1	Diesel generator	90
2	Excavator Operation	86
3	Trucks movement	82
4	Drilling	96
5	Blasting	102

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

Noise levels were measured in the lease area and in the nearby villages Puliampatty Village, Melakottai Village, Amarapoondi Village, Thumpalapatti Village and Vilvathampatti Village, the values are given below.

TABLE 4.4 Noise Levels in Monitoring Locations				
S. No.	Location	Distance and direction from Mine lease area	Day Equivalent (in dBA)	Night Equivalent (dBA)
1	Project site core zone	-	51.2	44.2
2	Puliampatty	1.00 km S	51.2	40.8
3	Melakottai	1.56 km NE	49.9	40.2
4	Amarapoondi	1.36 km N	47.6	39.6
5	Thumpalapatti	2.30 km NW	48.7	41.1
6	Vilvathampatti	2.60 km SW	47.4	39.8

The noise levels are within the MoEF & CC limits of 70 dB(A) in the working area and in the buffer areas, the values are below the limit of 75 dB(A). Since, the residential area norm has been considered for all six locations mentioned above, during mining operation mine lease area will be considered as industrial area/quarry area for which DGMS norms 85 dB(A)/CPCB guidelines 75 dB(A).

4.4.3 Impact of Noise due to mining

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

4.5 MITIGATION MEASURES

4.5.1 Noise level control.

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

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

4.5.2 IMPACTS DUE TO VIBRATION

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

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

Impacts

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

Mitigation measures

- ✚ The DG set will be kept within the acoustic enclosure made by the stone blocks.
- ✚ Drills will be equipped with sharp bits and wet drilling will be adopted.
- ✚ A well-planned green belt is proposed for the mining to reduce noise level.
- ✚ Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.
- ✚ Regular maintenance of the machineries and vehicles to reduce the noise level.
- ✚ Use of ear muffs by the workers with occupational exposure to noise.
- ✚ Carrying out blasting on limited scale, only from 12:00 PM to 2:00 PM
- ✚ Control of fly rock and vibration by maintaining peak particle velocity within the standard as prescribed by the DGMS and MOEF & CC.
- ✚ Shallow depth jackhammer drilling and blasting is proposed to be carried out with minimum use of explosive.
- ✚ Supervising blasting by competent and statutory Foreman/ Mines Manager.

4.5.3 SOCIO ECONOMIC IMPACT

The lease area is patta land. The proponent has planned to spend INR 5,00,000 for CER activities.

4.5.4 OCCUPATIONAL HEALTH

Impacts on humans due to various mining activities

The occupational risk due to proposed mining may be due to drilling, blasting, excavation and transportation. A total of 24 workers will be engaged in the mining activity. Mining activity may cause various health problems to the mines workers as follows:

- Dust generated during excavation, drilling, stone cutting, sizing and transportation may cause health problems like Silicosis, Asthma, Tuberculosis and other respiratory lungs disorders.
- Heavy weight lifting by the workers may cause injuries to arms, legs and back.
- Noise generated during the mining activity may cause Noise Induced Hearing Loss (NIHL).

Table 4.5 Impacts on humans due to various mining activities		
S.No.	Type of activity	Impact
1	Dust generation due to drilling and blasting	Continuous exposure to dust causes Pneumonia, Tuberculosis, Rhematic arthritis and Segmental Vibration
2	Noise generation due to drilling and blasting	Short term impact will be lack of sleep, high blood pressure and heart ailments. Long term exposure may lead to partial or permanent deafness
3	Unexpected accidents	Risks include fly rocks, cracks or fissures due to improper mining methods

Mitigation measures

- The mines worker will be provided with dust mask to minimize the inhalation of the dust.
- Water sprinkling twice in a day is in practice on the haul roads, near excavation and roads to reduce the fugitive dust emission.
- Wet drilling and drilling with dust extractor will be practiced.
- Ear muffs will be supplied to the workers working in the noise prone area
- The mining site will be supplied with first aid facilities and the entire mines worker will have access to that.

- The mines workers will be well trained about the safety practices in the mining activities.
- As per Mines Rules, 1955, medical examination of employees at the initial stage and periodically, shall be done by a team of qualified medical officers provided by the project proponent.
- Regular medical checkup camps shall also be arranged for detection of occupational diseases and minor disease in the nearby rural population.
- Free checkup and medicine for treatment for their acute and chronic illness shall be provided by the lessee. Conducting periodical Medical Examination as per DGMS.
- Making all first aid kits available in mines office
- Keeping fire extinguisher in place
- Educating the employees about how to handle unexpected happenings
- Posting information containing emergency contact numbers in mines office
- By adopting all these measures, the safety of the employees working in the quarry will be ensured.

4.5.5 WASTE MANAGEMENT

Solid Waste

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

Liquid Waste

There is no process effluent generation from this mine. Hence no liquid waste is generated. Domestic wastewater i.e 0.5 KLD will be discharged in soak pit via septic tank.

Hazardous Waste Management

In this project the following management practices will be followed:

In the quarrying operation, the source of hazardous waste is from machinery maintenance activities that are waste oil/ Waste lubricants / Used filters / Used Hydraulic 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 of as per the Hazardous waste (Trans-boundary Movement) Management Rules, 2016.

Plastic Waste

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

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 930.54mm. Taking into consideration of 0.35 as runoff co-efficient for mining area

CHAPTER 5

ANALYSIS OF ALTERNATIVES

5.1 DESCRIPTION OF EACH ALTERNATIVE

Analysis of alternative site helps in selection of best possible site for the project. On one hand it helps to closeness to the existing infrastructure and on other hand it also helps to minimize the impact of project on environment.

5.2 SUMMARY OF ADVERSE IMPACTS OF EACH ALTERNATIVE

The project proponent has prepared mining plan under rule 19(1) 41 & 42 of Tamil Nadu Minor Mineral Concession Rules, 1959 and the same has been approved by the Assistant Director, Department of Geology and Mining, Dindigul, vide Roc.No.535/2025/Mines dated 07.07.2025.

- There is no forest land or other Eco-sensitive places.
- Proposed mine site is selected on the basis of occurrence of mineral for suitable end use.

Hence seeking alternative site is not required.

5.3 MITIGATION MEASURES PROPOSED FOR EACH ALTERNATIVE

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

5.4 SELECTION OF ALTERNATIVE

In case of Mining projects alternate site selection is not necessary as the mining is site specific and the area in which mining will be carried out has been adequately proved for presence of mineral. The deposit is also having good infrastructural facilities for access and development.

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

CHAPTER 6

ENVIRONMENTAL MONITORING PROGRAMME

6.1 TECHNICAL ASPECTS OF THE MONITORING THE EFFECTIVENESS OF MITIGATION MEASURES (INCL MEASUREMENTS, METHODOLOGIES, FREQUENCY LOCATION DATA ANALYSIS, REPORTING SCHEDULES EMERGENCY PROCEDURES DETAILED BUDGET AND PROCUREMENT SCHEDULES)

6.1.1 ENVIRONMENTAL MONITORING

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

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

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

6.1.2 OBJECTIVES OF ENVIRONMENTAL MONITORING

The objectives of Environmental Monitoring are as follows.

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

- ✚ Coordinating the environment related activities within the project as well as with outside agencies. Collecting statistics of health of workers and population of the surrounding villages. Green belt development etc.
- ✚ Monitoring the progress of implementation of Environmental Management Programme.
- ✚ Monitoring the noise generation in and around the project areas.
- ✚ Monitoring of wastewater treatment and disposal of solid waste.
- ✚ The laboratory will be suitably equipped for sampling/testing for various environmental pollutants.

6.1.3 ENVIRONMENTAL MONITORING SCHEDULE

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

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

6.1.4 LOCATION

Monitoring of the above-mentioned environmental parameters would be done at appropriate and sensitive areas. The exact location of monitoring is given as Figure – 3.5, 3.12, 3.13 & 3.14.

6.1.5 MEASUREMENT METHODOLOGY

(a) 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.

(b) Water Quality

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

(c) Noise Monitoring

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

(d) Green Belt and Afforested Areas

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

(e) Socio-Economics

Socio-economic of the core and buffer zone details elaborated in Chapter-3.

6.1.6 TECHNICAL ASPECTS OF MONITORING THE EFFECTIVENESS OF MITIGATION MEASURES

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

6.1.7 EMERGENCY PROCEDURES

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

6.1.8 REPORTS TO BE GENERATED

The Project Proponent will maintain records of each test and its interpretation so as to formulate an adequate Environmental Management Plan. The set of records planned to be maintained by Project Proponent are given in below table 6.2.

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

6.1.9 DETAILED BUDGET AND PROCUREMENT SCHEDULES

The budget planned for environmental monitoring is given below.

Table 6.3 - Environmental Management Plan Budget

Activities	Mitigation Measure	Capital cost	Recurring Cost per Annum
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	0.09	0.29
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	5.00	0.25
	Muffle blasting – To control fly rocks during blasting	0.00	0.05
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	0.20	0.04
	No overloading of trucks/tippers/tractors	0.00	0.05
	Stone carrying trucks will be covered by tarpaulin	0.00	0.10
	Enforcing speed limits of 20 km/hr within ML area	0.06	0.01
	Regular monitoring of exhaust fumes as per RTO norms	0.00	0.05
	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	0.00	0.37
	Installing wheel wash system near gate of quarry	2.00	0.05
Sub-Total (A)		7.35	1.06

Noise Environment	Provision for Portable blaster shed	0.30	0.02
Sub-Total (B)		0.30	0.02
Waste Management	Provision for domestic waste collection and disposal through authorized agency	0.20	0.10
	Installation of dust bins	0.05	0.02
Sub-Total (C)		0.25	0.12
Mine Closure	Plantation inside ML area (355 Nos.)	0.36	0.07

Sub-Total (D)		0.36	0.07
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	0.05	0.01
	Air, Water, Noise and Soil Quality Sampling every 6 Months for Compliance Report of EC Conditions	0.00	0.50
	Workers will be provided with Personal Protective Equipment's	0.24	0.02
	Health checkup for workers will be provisioned	0.00	0.12
	First Aid facility Provision	0.00	0.02
	Signage & boards for safety precautions	0.05	0.01
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles / HEMMs. Flaggers will be deployed for traffic management	0.19	0.01
	Installation of CCTV cameras in the mines and mine entrance	0.15	0.02
Sub-Total (E)		0.68	0.71
Grant Total (A+B+C+D+E)		8.94	1.98
Total EMP Cost for 5 years is 19.88 lakhs i.e., Rs.8.94 Lakhs of Capital Cost + Rs.10.94 Lakhs of Recurring Cost			

The proposal for Corporate Environment Responsibility (CER) activities is given as follows;

S. No.	PROPOSED CER ACTIVITIES	COST IN LAKHS.
1	• Plantations inside and outside the school premises, • Fencing around the School for safety of the students • Bore well facility with an electric motor and tank • Construction of overhead water storage tank • Repair of Toilet facility • Installation of Paver Block in the required area • Painting the School building	5.0

	• Drinking water facility for "Sathunavu Koodam"	
		5.0

The above proposed CER activities for the proposed cost will be implemented in Saraswathi High School (Department of School Education, Govt. of TN), Amarapoondi

The total project cost is as given below:

Fixed Cost		
Land cost	:	Rs.11.16 Lakhs
First Aid Room	:	Rs.1.000 Lakh
Rest Shelter	:	Rs.1.000 Lakh
Sanitary Facility	:	Rs.1.000 Lakh
Total (A)– Rs. 14.16 akhs		
Operational Cost		
Machineries	:	Rs.50.000 Lakhs
Fencing cost	:	Rs.1.500 Lakhs
Total (B) – Rs. 51.500 Lakhs		
EMP Cost		
Air Environment, Noise Environment, Mine Closure, Implementation of EC, Mining Plan & DGMS Condition	:	Total(C)–Rs.19.88 Lakhs
CER Cost		
Plantations inside and outside the school premises, Fencing around the School for safety of the students, Bore well facility with tank arrangements, Construction of Over headed water storage tank, Repair of Toilet facility, Installation of Paver Block in the required area, Painting the School building, Drinking water facility for "Sathunavu Koodam"	:	Total (F)– Rs.5.00 Lakhs
Grand Total (A+B+C+D+E+F)	:	R. 90.54 Lakhs

CHAPTER 7

ADDITIONAL STUDIES

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

- Public consultation
- Risk Assessment
- Social Impact Assessment, R&R Action Plans
- Cumulative Environmental Impact Assessment Study
- A detailed Hydrogeological Study
- Slope Stability 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 potentially 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.

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 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.

7.3.1 CUMULATIVE ENVIRONMENTAL IMPACT ASSESSMENT STUDY

The details of other quarries located within the 500m radius of this project are provided below:

Table 7.2 DETAILS OF QUARRIES WITHIN 500M RADIUS (AS PER 500M CERTIFICATE)				
S.No	Name of the Quarry Owner	S.F. Nos	Lease Period	Area
a. Existing Quarry				
1.	KNR Construction, Puliampatti, Palani	S.F.Nos. 131/1A, 1B, 2A, 2B, 1C1, 132/1, 2A Puliampatti Village Palani Taluk, Dindigul District	File No – 7721/2020 Lease Period - 3.09.2022 to 12.09.2027	4.83.5 Ha
b. Abandoned quarries				
2	V.Soundarapandian	S.F.No. 160/6 (P) Puliampatti Village Palani Taluk, Dindigul District	26.10.2015 to 25.10.2020	0.62.5 Ha
c. Proposed Quarry				
3.	S.Ayyappan, S/o. Singaram Chettiyar, No. 193, Lakshmipuram, Palani Taluk, Dindigul	S.F.Nos. 160/4, 159/1, 132/2B & 131/1C2(P) Puliampatti Village Palani Taluk, Dindigul District	-	1.86.0 Ha
Total Area Under Cluster				6.69.5 Ha

A cumulative impact of these two proposed quarries has been studied and the details are given in Chapter IV.

Cluster Details

Description		P1	P2
Name of the Quarry		Thiru.S.Ayyappan	KNR Construction
Geological Resources in m3	Rough stone	4,53,035	21,21,795
	Weathered Formation	-	70,727
	Gravel	16,816.25	94,302

Mineable Reserves in m3	Rough stone	1,01,880	10,51,260
	Weathered Formation	-	60,708
	Gravel	11,170	80,944
Five years plan period as in the approved mining plan	Rough stone	1,01,880	9,20,670
	Weathered Formation	-	60,708
	Gravel	11,170	80,944
Production in m ³	Peak Production	21,700	-
	Gravel	6290	-
Total Production in tons per day	-	240	1795
Lorry Loads per day in Nos		24	179
Employment in Nos		24	48
Proposed Depth in meters		32 m	38.5 m
Status of the quarry		Proposed	Existing

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 four leases are provided below:

Table 7. 3 – Impact on Traffic

Quarry	Total Mineral Production	Number of Lorry load per day
P1 (Proposed)	240	24
P2 (Existing)	1795	179
Grand Total	2035	203

As the existing quarry is part current traffic flow, the proposed projects will bring 24 trips per day including cluster quarries. The existing road can absorb this additional traffic due to this project. Various measures like proper maintenance of road, covering of the loaded truck with tarpaulin, water sprinkling will be carried out to ensure no adverse impact on the logistical front.

7.3.2 HYDROGEOLOGICAL STUDY

There is no seasonal or 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.

There is the Sambai Kulam- 3.53 km (E),Thattan Kulam - 3.95 km (S), Chinna Kulam – 4.29 km (SW), Pudhu Kulam – 4.52 km (SW), Shanmukha Nadi – 5.24 km (W), Nallatungal Odai – 6.82 km (W) ,Varattar River – 8.01 km (SW),Selvar Odai – 8.39 km (W)

Water table is found at a depth of 72m.

Due to the presence of these water bodies nearby, a detailed hydrogeological study has been done. As suggested in the Precise Area Communication letter, safety distances of 7.5m,10m to adjacent patta land.

7.3.3 SLOPE STABILITY STUDY

The proposed quarry is a very small quarry and the production is also less. Opencast mechanized mining with a bench height of 5m and bench width of 5m and 45° Slope is proposed. The depth of mining is proposed as 32m below ground level 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

7.3.4 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 mine's office.

7.3.5 MINE CLOSURE PLAN

The quarrying operation is proposed up to a depth of 32m below ground level only, which will be achieved in 5 years. The ultimate pit dimension will be length 150 m x Width 99 m x Depth 32m. After completion of quarrying operation, the mined-out pit will be left as rain water harvesting pond. The quarry will be properly fenced with barbed wire.

CHAPTER 8

PROJECT BENEFITS

INTRODUCTION

Thiru.S.Ayyappan at S.F.Nos. 160/4, 159/1, 132/2B and 131/1C2(P) over an extent of 1.86.0 Ha., in Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State.

PROJECT BENEFITS

Project benefits are attributed in various ways as under:

- Environment Benefits
- Employment Potential: Skilled, Semi-skilled & Un-skilled
- Economic Benefits
- Social Benefits

8.1 IMPROVEMENTS IN THE PHYSICAL INFRASTRUCTURE

The project area is located on 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.

8.2 IMPROVEMENTS IN THE SOCIAL INFRASTRUCTURE

The proposed project will help in improving the socio-economic status of the near-by villages by generating direct or indirect employment opportunities. Substantial amount of indirect revenue will be generated by transportation activities along with employment e.g. labour, helper etc.

ECONOMIC BENEFITS:

The execution of proposed mine will boost the economy of the area by creating direct & indirect jobs for locals. There will be a positive cumulative impact of the project on the economy.

8.3 EMPLOYMENT POTENTIAL: SKILLED, SEMI-SKILLED & UN-SKILLED

The mining Thiru.S.Ayyappan, will create direct employment opportunity for 24 local people. As per MOEF & CC Notification CER cost is arrived for an amount of 5 Lakhs, it will be utilized as per the CER letter received from the competent authority, enclosed as annexure no 9.

8.4 OTHER TANGIBLE BENEFITS

The mine management will recruit semi-skilled & unskilled eligible workers from the nearby villages depending upon requirement in the mines and the eligibility, qualification and experience of local persons.

The overall effect will result in higher standard of living viz. better education, improved health and sanitation facilities, housing and acquisition of consumer durables. Housing, transport, medical, educational and other civic amenities will get improved in the future. This is envisaged as a major positive benefit.

CHAPTER 9

ENVIRONMENTAL COST BENEFIT ANALYSIS

As per EIA Notification dated 14th Sept., 2006, as amended from time to time, 'Environmental Cost Benefit Analysis' is applicable only if the same is recommended at the Scoping stage.

As per the ToR points issued by SEIAA-TN vide ToR Identification No. TO25B0108TN5875086N, dated 04.09.2025 for the proposed project, the 'Environmental Cost Benefit Analysis' is not prescribed.

CHAPTER 10

ENVIRONMENTAL MANAGEMENT PLAN

10.1 DESCRIPTION OF THE ADMINISTRATIVE ASPECTS OF ENSURING OF ENSURING THAT MITIGATIVE MEASURES ARE IMPLEMENTED AND THEIR EFFECTIVENESS MONITORED AFTER APPROVAL OF THE EIA.

10.1.1 OBJECTIVES

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

10.1.2 BASIC OF EMP

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

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

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

Table 10.1 Environmental Management Plan	
Environmental Parameter	Mitigation Measures
Air	Wet drilling to suppress the dust emission from drill machine
	Regular water sprinkling on haulage road through fixed water sprinkler.
	1.0 KLD of water will be used for dust suppression.
	Avoiding blasting during high wind period, night times and temperature inversion periods.
	Regular grading of haul road to clear accumulation of loose material.
	It will be ensured that vehicles are properly maintained to comply with exhaust emission requirements
	Maintenance as per operator manual of the equipment and machinery in the mines to minimizing air pollution
	Ambient Air Quality Monitoring carried out in the project area and in surrounding villages to access the impact due to the mining activities and the efficacy of the adopted air pollution control measures.
	Afforestation for control of dust.
Surface water	There is Shanmukha River – 5.46 km (W) direction. Adequate safety distance is left. No dumping of material or discharge will be done in or near the river or water body.
	Surface runoff management structures like garland drain of required length which is connected to a settling pond will be constructed around the quarry to collect the rain water.
	Monthly or after rainfall, inspection will do to ensure performance of water management structures and systems. There is no discharge of any effluent into nearby water bodies.

Ground Water	The quarrying operation is proposed upto a depth of 32 m below ground level, Water table is found at a depth of 72 m, hence the project will not intersect the Ground water table during entire quarry period.
Water Consumption and Wastewater generation	Water required for this project will be sourced from vendors.
	Domestic wastewater generation of 1.0 KLD will be treated in septic tank with soak pit.
	Conduct ground water and surface water monitoring for parameters specified by CPCB
Noise	The workers employed are provided with protection equipment, earmuffs and ear- plugs for the protection from high noise level generated at the mine site wherever required.
	Noise levels are controlled by using optimum explosive charge, proper delay detonators and proper stemming to prevent blow out of holes.
	Development of thick greenbelt all along the safety Zone (7.5 m) of the project area to attenuate the noise and the same will be maintained.
	Preventive maintenance of mining machinery and replacement of worn-out accessories to control noise generation.
	Annual ambient noise level monitoring is carried out in the project area and in surrounding villages to 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.

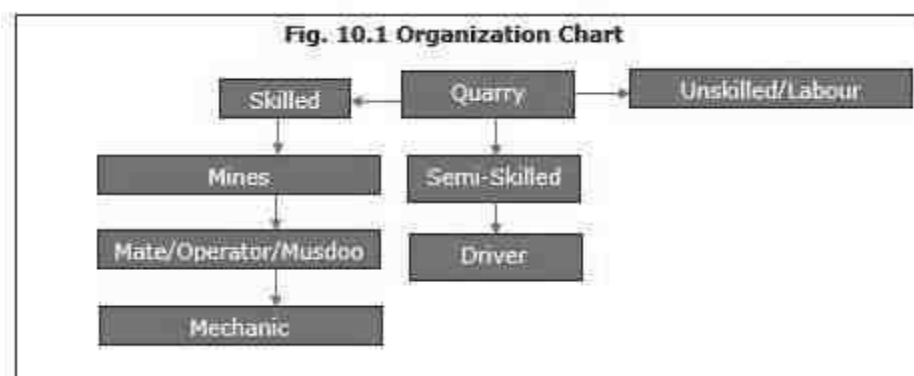
	No external dumping i.e., outside the project area. The entire material will be sold.
	Garland drains with catch pits / settlement traps to be provided all around the project area to prevent run off affecting the surrounding lands.
	The periphery of Project area will be planted with thick plantation 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 III will be monitored.

10.1.3 ADMINISTRATION AND TECHNICAL SETUP

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

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

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



1	Skilled	Mines Manager(II Class)	1 No
		Foreman/Mine Mate	2Nos
		Operator	4 Nos
		Mechanic	1 No
2	Semi-Skilled	Diver	3 Nos
3	Un-skilled	Labours	13 Nos
Total			24 Nos

10.1.4 ENVIRONMENTAL POLICY

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

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

10.1.5 OCCUPATIONAL SAFETY & HEALTH MANAGEMENT

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

10.1.6 COST OF ENVIRONMENTAL CONTROL MEASURES

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

Table 10.2 - Environmental Management Plan Budget

Activities	Mitigation Measure	Capital cost	Recurring Cost per Annum
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	0.09	0.29
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	5.00	0.25
	Muffle blasting – To control fly rocks during blasting	0.00	0.05
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	0.20	0.04
	No overloading of trucks/tippers/tractors	0.00	0.05
	Stone carrying trucks will be covered by tarpaulin	0.00	0.10
	Enforcing speed limits of 20 km/hr within ML area	0.06	0.01
	Regular monitoring of exhaust fumes as per RTO norms	0.00	0.05
	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	0.00	0.37
	Installing wheel wash system near gate of quarry	2.00	0.05
Sub-Total (A)		7.35	1.06
Noise Environment	Provision for Portable blaster shed	0.30	0.02
	Sub-Total (B)	0.30	0.02
Waste Management	Provision for domestic waste collection and disposal through authorized agency	0.20	0.10
	Installation of dust bins	0.05	0.02
Sub-Total (C)		0.25	0.12

Mine Closure	Plantation inside ML area (355 Nos.)	0.36	0.07
Sub-Total (D)		0.36	0.07
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	0.05	0.01
	Air, Water, Noise and Soil Quality Sampling every 6 Months for Compliance Report of EC Conditions	0.00	0.50
	Workers will be provided with Personal Protective Equipment's	0.24	0.02
	Health checkup for workers will be provisioned	0.00	0.12
	First Aid facility Provision	0.00	0.02
	Signage & boards for safety precautions	0.05	0.01
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles / HEMMs. Flaggers will be deployed for traffic management	0.19	0.01
	Installation of CCTV cameras in the mines and mine entrance	0.15	0.02
Sub-Total (E)		0.68	0.71
Grant Total (A+B+C+D+E)		8.94	1.98
Total EMP Cost for 5 years is 19.88 lakhs i.e., Rs.8.94 Lakhs of Capital Cost + Rs.10.94 Lakhs of Recurring Cost			

The proposal for Corporate Environment Responsibility (CER) activities is given as follows;

S. No.	PROPOSED CER ACTIVITIES	COST IN LAKHS.
1	- Plantations inside and outside the school premises, - Fencing around the School for safety of the students - Bore well facility with an electric motor and tank - Construction of overhead water storage tank	5.0

	• Repair of Toilet facility • Installation of Paver Block in the required area • Painting the School building • Drinking water facility for "Sathunavu Koodam"	
		5.0

The above proposed CER activities for the proposed cost will be implemented in Saraswathi High School (Department of School Education, Govt. of TN), Amarapoondi

The total project cost is as given below:

Fixed Cost		
Land cost	:	Rs.11.16 Lakhs
First Aid Room	:	Rs.1.000 Lakh
Rest Shelter	:	Rs.1.000 Lakh
Sanitary Facility	:	Rs.1.000 Lakh
Total (A)– Rs. 14.16 akhs		
Operational Cost		
Machineries	:	Rs.50.000 Lakhs
Fencing cost	:	Rs.1.500 Lakhs
Total (B) – Rs. 51.500 Lakhs		
EMP Cost		
Air Environment, Noise Environment, Mine Closure, Implementation of EC, Mining Plan & DGMS Condition	:	Total(C)–Rs.19.88 Lakhs
CER Cost		
Plantations inside and outside the school premises, Fencing around the School for safety of the students, Bore well facility with tank arrangements, Construction of Over headed water storage tank, Repair of Toilet facility, Installation of Paver Block in the required area, Painting the School building, Drinking water facility for "Sathunavu Koodam"	:	Total (F)– Rs.5.00 Lakhs
Grand Total (A+B+C+D+E+F)	:	R. 90.54 Lakhs

10.1.7 CONCLUSION

Various aspects of mining activities were considered, and related impacts were evaluated. Considering all the possible ways to mitigate the Environmental concerns, an Environmental Management Plan was prepared, and INR 19.88 lakhs has been allocated for the same. The EMP is dynamic, flexible, and subjected to periodic review. For projects where major environmental impacts are associated, EMP will be under regular review. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP, and the project will have a positive impact on the study area.

CHAPTER 11

SUMMARY& CONCLUSION

11.1 OVER ALL JUSTIFICATION FOR IMPLEMENTATION OF THE PROJECT

INTRODUCTION

Thiru.S.Ayyappan Lessee, has obtained Precise Area communication letter from the Assistant Director, Department of Geology and Mining, Dindigul to quarry out Mineable reserves of 1,01,880 m³ of Rough Stone and 11,170 m³ of Gravel of Gravel up to 32 BGL The proposed ML is old lease was operated by the present applicant Thiru.S.Ayyappan from 30.05.2020 to 29.05.2025 period with Environmental Clearance. The EC was issued by SEIAA-Dindigul vide Lr. No. SEIAA-TN/F.No.7010/1(a)/EC.No: 4168/2020 dated 13.03.2020 **over an area of 1.90.5Ha at S.F.Nos. 160/3, 160/4, 160/5, 159/1, 132/2B and 131/1C2(P)** in Puliyaampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State

As per EIA notification, 2006 and its subsequent amendments the proposed "Rough Stone and Gravel quarry of Thiru.S.Ayyappan mines cluster falls under Schedule 1(a) of EIA Notification and its subsequent amendments the project comes under Category B1. The ToR for preparation of EIA/EMP report of the project was approved vide ToR Identification No. TO25B0108TN5875086N, dated 04/09/2025 This report has been prepared in line with the approved TOR for production of maximum excavation of 1,01,880 m³ of Rough Stone and 11,170 m³ of Gravel formation upto a depth of 32m (below ground level).

Sl. No.	Description	Status/Remarks
1.	Sector	Non-coal mining
2.	Category of the project	B1
3.	Proposed mineral	Rough stone quarry
4.	Type of Lease	Existing Quarry
5.	Extent of the lease	1.86.0 Ha
6.	Proposed depth of mining	32m BGL
7.	Method of mining	Opencast Semi-mechanized.
8.	Proposed lease period	5 Years

9.	Proposed Environmental Clearance	5 Years
10.	Mineable reserves (upto 32m BGL) (Quantity in m3)	1,01,880 m3 of Rough Stone, 11.170 m3 of gravel

The Lessee Thiru.S.Ayyappan is an individual with sound experience in the identification, quarrying and marketing of Rough Stone and Gravel. The proposed land is a patta land and attached as **Annexure 6**.

1.1.1 LOCATION

The proposed project site is located in Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State, Tamil Nadu State and its Latitude: 10°30'41.32"N to 10°30'49.66"N and Longitude: 77°32'11.56"E to 77°32'17.75"E. with Survey of India Topo Sheet No. 58- F/10. To conduct the study, the proposed mine lease area (core zone) and an impact zone of 10 km radius (called buffer zone) around the proposed mine site were considered. The EIA report is based on three months baseline data (i.e. March 2025 to May 2025)

11.1.2 GEOLOGY

The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Charnockite is part of peninsular Gneisses, a high-grade metamorphic rock. The strike of the Charnockite formation is N45°E –S45°W with dipping towards SE80°.

11.1.3 PROJECT DESCRIPTION

This is a proposed Rough Stone and Gravel quarry by Opencast Mechanized mining method with drilling and blasting. The quarrying is restricted up to a depth of 32m below ground level. The geological reserves are estimated to be 4,53,035 m3 of Rough Stone and 16,816.25 m3 of gravel. The mineable reserve calculated by deducting 7.5m,10m safety distance and bench loss. The mineable reserves are 1,01,880 m3 of Rough Stone and 11,170 m3 Gravel which will be recovered at the rate of 100% recovery upto a depth of 32 m Below ground level for the period of ten years.

- It is proposed to quarry out rough stone with 5m bench height, 5m width with 45° slope using conventional Open cast Mechanized method. The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, Loading and transportation of Rough Stone.
- There is no overburden anticipated during entire rough stone & Gravel quarrying operation.

S.No.	Type of Detail	Description
1	Sector	1(a) Non coal mining
2	Fresh/Existing project	Already operated by same lessee
3	Category	B1
4	Nature of mineral	Rough stone and Gravel
5	Life of the mine	5 years
6	Geological reserves	4,53,035 m3 of Rough Stone and 16,816.25 m3 of Gravel
	Mineable reserves (upto 32m BGL)	1,01,880 m3 of Rough Stone and 11,170 m3 of Gravel
7	Waste generation and management	Nil
8	Bench height and width	Proposed bench height & width is 5.0m respectively and number of proposed benches is 7 Nos.
9	Ultimate pit depth	32 m BGL
10	End use	The excavated Rough stone is used for construction industries for Government & Public sector projects besides catering domestic housing and infrastructure projects in and around the district.

11.1.4 PROJECT REQUIREMENTS

The requirements of the project is given below.7

S.No.	Nature of requirement	Description
1	Water requirement	Total water requirement of 3.0 KLD which will be procured from the outside agencies. Out of 1.0 KLD drinking water requirement, Green belt development is 1.0 KLD and dust suppression is 1.0 KLD.
2	Power requirement	No electricity is needed for mining operations, for office demands, it will be met from the state grid.

		Total Fuel requirement is 83,365 L of HSD for entire life of the project.
3	Manpower requirement	This project will give employment opportunities to 24 people
4	Financial requirement	The total project cost as per PFR will be INR . Rs.90.54 Lakhs including Operational cost, Fixed Asset cost and EMP cost
5	Funds for Socio economic development	INR 5 Lakhs is allocated. In addition, any demand raised by people during public hearing will also be met.

11.1.5 DESCRIPTION OF LEASE AREA

The features in the study area is given below.

Table 11.1 Description of the lease area		
S.No.	Areas	Distance from project site
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Nil within 15km radius
2	Areas which are important or sensitive for ecological reasons	
A	Wetlands, water courses or other water bodies,	1. Sambai Kulam – 3.53 km (E) 2. Thattan Kulam - 3.95 km (S) 3. Chinna Kulam – 4.29 km (SW) 4. Pudhu Kulam – 4.52 km (SW) 5. Shanmukha Nadi – 5.24 km (W) 6. Nallatungal Odai – 6.82 km (W) 7. Varattar River – 8.01 km (SW) 8. Selvar Odai – 8.39 km (W)
B	Coastal zone, biospheres,	Nil within 10km radius
C	Mountains, forests	Nil within 10 km radius Kodaikanal Wildlife Sanctuary – 13.86 km (S)
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, overwintering, migration	Nil within 15km radius

4	Inland, coastal, marine or underground waters	Nil within 15km radius
5	State, National boundaries	Nil within 15km radius
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Nil within 15km radius
7	Defense installations	Nil within 15km radius
8	Densely populated or built-up area	Densely Populated Puliampatti, which is a distance away from 1.2km in the S
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Densely Populated Puliampatti, which is a distance away from 1.2km in the S
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	Nil
11	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	Nil
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earth quakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions) similar effects	No. The area is not prone to earthquakes, floods, etc.

The baseline data collection for meteorology, air, water, noise and soil environments have been carried out during March to May 2025.

Air, water, noise and soil samples are collected and analyzed through NABL accredited lab.

11.2 EXPLANATION OF HOW ADVERSE EFFECTS HAVE BEEN MITIGATED

11.2.1 AIR ENVIRONMENT

The air monitoring have been carried out in 6 locations and the results are given below.

Table 11.2: Details Of Ambient Air Quality Monitoring Locations

S. No.	Station Code	Locations	Distance & Direction	Coordinates
1	AAQ 1	Within Mine Lease area – Project site	-	10°30'44.68"N & 77°32'14.08"E
2	AAQ 2	Puliyampatty	1.00 km S	10°30'8.89"N & 77°32'10.08"E
3	AAQ 3	Melakottai	1.56 km NE	10°31'28.59"N & 77°32'46.03"E
4	AAQ 4	Amarapoondi	1.36 km N	10°30'35.22"N & 77°33'6.03"E
5	AAQ 5	Thumpalapatti	2.30 km NW	10°31'54.38"N & 77°31'35.83"E
6	AAQ6	Vilvathampatti	2.60 km SW	10°29'56.97"N & 77°31'4.10"E

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

Station ID	Min	Max	Avg.
Particulate matter PM-2.5 ($\mu\text{g}/\text{m}^3$)			
AAQ-1	25.9	32.7	29.3
AAQ-2	22.8	27.7	25.25
AAQ-3	25	31	28
AAQ-4	20.1	26.6	23.35
AAQ-5	21.8	27.1	24.45
AAQ-6	18.5	25	21.75
CPCB NAAQS 2009 for PM_{2.5} - 60 $\mu\text{g}/\text{m}^3$			
Particulate matter PM-10 ($\mu\text{g}/\text{m}^3$)			
AAQ-1	56.4	70.8	63.6
AAQ-2	47.6	57.8	52.7
AAQ-3	53.2	65.9	59.55
AAQ-4	43.8	57.6	50.7
AAQ-5	46.7	58.3	52.5
AAQ-6	40.8	54.6	47.7
CPCB NAAQS 2009 for PM₁₀ - 100 $\mu\text{g}/\text{m}^3$			
Sulphur Di-oxide as SO₂ ($\mu\text{g}/\text{m}^3$)			
AAQ-1	5.6	7.1	6.35
AAQ-2	4.6	6.2	5.4
AAQ-3	5.4	9.6	7.5
AAQ-4	4.6	6.8	5.7
AAQ-5	4.7	6.3	5.5
AAQ-6	4.4	6.6	5.5
CPCB NAAQS 2009 for SO₂ - 80 $\mu\text{g}/\text{m}^3$			
Oxide of Nitrogen as NO₂ ($\mu\text{g}/\text{m}^3$)			
AAQ-1	10.7	16.5	13.6
AAQ-2	10.1	12.8	11.45

Station ID	Min	Max	Avg.
AAQ-3	8.5	13.2	10.85
AAQ-4	9.3	11.6	10.45
AAQ-5	10.2	13.4	11.8
AAQ-6	9.2	11.5	10.35
CPCB NAAQS 2009 for NO₂ – 80 µg/m³			

11.2.2 WATER ENVIRONMENT

Table 11.3 Results of Ground Water sampling Analysis in 6 locations							IS:10500: 2012	
	GW1	GW2	GW3	GW4	GW5	GW6	Desira ble	Permis sible
Odour	AGREEAB LE	AGREEAB LE	AGREEAB LE	AGREEAB LE	AGREEAB LE	AGREEAB LE	Agree able	Agreea ble
Turbidity	<1	<1	<1	<1	<1	<1	Agree able	Agreea ble
pH at 25 °C	7.32	7.78	7.29	7.35	7.24	7.96	6.5 - 8.5	No Relaxati on
Electrical Conductivity	1105	1021	847.5	1432	923.5	740.5	--	-
Total Dissolved Solids	664	612	510	860	554	445	500	2000
Total hardness as CaCO ₃	338	172	286	482	391	218	200	600
Calcium as Ca	83.2	44.0	72.8	110	108	50.4	75	200
Magnesium as Mg	31.2	14.9	25.0	49.9	29.0	22.1	30	100
Calcium as CaCO ₃	208	110	182	274	270	126	-	-
Magnesium as CaCO ₃	130	62.0	104	208	121	92.0	-	-
Total alkalinity as CaCO ₃	452	178	234	442	290	205	200	600
Chloride as Cl-	126	378	154	216	152	134	250	1000
Free Residual chlorine as Cl-	BDL (D.L- 0.2)	BDL (D.L- 0.2)	BDL (D.L- 0.2)	BDL (D.L- 0.2)	BDL (D.L- 0.2)	BDL (D.L- 0.2)	0.2	1.0
Sulphates as SO ₄ ²⁻	150	78.9	57.8	152	34.0	54.2	200	400
Iron as Fe	BDL (D.L- 0.01)	BDL (D.L- 0.01)	0.05	BDL (D.L- 0.01)	BDL (D.L- 0.01)	0.05	0.3	No Relaxa tion
Nitrate as NO ₃	3.72	1.76	2.95	2.56	2.96	1.45	45	No Relaxa tion
Fluoride as F	0.36	0.32	0.55	0.38	0.34	0.56	0.1	1.5
Manganese as Mn	BDL (D.L- 0.05)	BDL (D.L- 0.05)	BDL (D.L- 0.05)	BDL (D.L- 0.05)	BDL (D.L- 0.05)	BDL (D.L- 0.05)	0.1	0.3

All the values were found to be within permissible limits

11.2.3 NOISE ENVIRONMENT

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

Table 11.4 Noise monitoring results					
S. No	Location	Day equivalent	Night equivalent	Day equivalent limits by CPCB	Night equivalent limits by CPCB
1	Project site core zone	51.2	44.2	55	45
2	Puliampatty	51.2	40.8		
3	Melakottai	49.9	40.2		
4	Amarapoondi	47.6	39.6		
5	Thumpalapatti	48.7	41.1		
6	Vilvathampatti	47.4	39.8		

11.2.4 SOIL ENVIRONMENT

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

Table 11.5 Results of Soil Sample Analysis								
S. No	Parameter	Unit	S1	S2	S3	S4	S5	S6
1	pH at 25 °C	-	7.89	6.65	6.92	6.78	6.86	6.75
2	Electrical Conductivity	µmhos /cm	106	75.6	154	90.74	165	89.72
3	Dry matter content	%	91.23	94.55	93.54	96.74	94.65	97.03
4	Water Content	%	8.77	5.45	6.46	3.26	5.35	2.97
5	Organic Matter	%	0.68	1.36	1.21	0.98	1.25	0.99
6	Total soluble sulphate	-	BDL(D.L. 0.02)	BDL(D.L. 0.02)	BDL(D.L. 0.02)	BDL(D.L. 0.02)	BDL(D.L. 0.02)	BDL(D.L. 0.02)
7	Phosphorous	%	0.94	1.45	2.32	1.73	1.65	1.29
	Texture	%	SILT LOAM	silty clay	silty clay loam	silt loam	silty clay loam	silt loam
8	Sand	%	26.58	8.95	13.35	24.92	13.55	29.37
9	Silt	%	58.69	47.52	47.56	68.57	48.21	53.56
10	Clay	%	14.73	43.53	39.09	6.51	38.24	17.07
11	Nitrogen & Nitrogenous Compounds	mg/kg	356	268	289	642	320	230
12	Sodium as Na	mg/kg	780	430	1025	598	1090	374
13	Potassium as K	mg/kg	530	664	895	792	876	715

14	Water Holding Capacity	Inches /foot	44	40	42	40	46	45
15	Porosity	%	19.6	18.8	19.7	18.4	19.5	19.8

11.2.5 BIOLOGICAL ENVIRONMENT

FLORA

For measuring the extent of flora present in the study area, the area is divided in to 4 quadrants. The flora population in each quadrant is summed up for the total population in the study area. Field survey is done. Erukku, Aavarai and Nayuruvi are found in lease area. In the buffer zone, common trees like Neem, papaya, mango, teak, etc and shrubs like Avarai, Aloe vera, etc, climbers like Kovai,jasmine etc are found.

FAUNA

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

11.2.6 LAND USE

The land use land cover data is found using the LANDSAT – 9 satellite imagery. The number of bands used are 11. The land use pattern is given below:

Table No. 11.6: Major Land Use Units of the Study Area in Percentage			
Sl.No.	Land Use / Land Cover	Area in Sq.Km	Area in Percentage
1	Built up	13.21	4.11
2	Crop land	213.03	66.38
3	Existing quarry	0.65	0.3
4	Fallow	29.78	9.26
5	Land with scrub	5.3	1.64
6	Land without scrub	1.51	0.48
7	Plantation	44.21	13.73
8	Water bodies	13.16	4.1
	Total Area	320.85	100.00

11.2.7 SOCIO ECONOMIC ENVIRONMENT

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

The following data area collected from secondary data.

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

The expert visited 5 villages in the study area namely Puliayampatti village, Melakottai, Amarapoondi, Thumpalapatti, vilvathampatti village. Discussions were held with the people from nearby locality to study the social and economic conditions prevailing in the area. The expert also visited nearby hospitals, primary health centres and Government Hospital, Palani. The following observations were made

The following observations were made.

Primary schools are available in many villages. For hospital facilities, people in the locality have to go to hospital in Puliayampatti, which is a distance away from 1.2km in the S direction of the proposed site. Major schools with higher secondary and senior secondary schools are located in Amarapoondi . The major Puliayampatti Union located in the area is Palani. Facilities like petrol pump stations, ATM facility are available in Punnam.

11.2.8 HYDROGEOLOGY OF THE LEASE AREA

There is the Sambai Kulam- 3.53 km (E),Thattan Kulam - 3.95 km (S), Chinna Kulam – 4.29 km (SW), Pudhu Kulam – 4.52 km (SW), Shanmukha Nadi – 5.24 km (W), Nallatungal Odai – 6.82 km (W) ,Varattar River – 8.01 km (SW),Selvar Odai – 8.39 km (W)

There are many tanks located in the study area, which are mostly dry throughout the year. These tanks get water only during monsoons. The factors may be monsoon

failure, insufficient rainfall, poor rain water management and water consuming patterns.

11.2.9 GROUND WATER STUDY

For Ground water study, satellite imagery is used. Water levels from monitoring levels are collected through imaging. The pre-monsoon and post-monsoon data are collected and the results are analyzed.

During field visit, it is observed that water is available in wells only after monsoon. The yield is obtained at deep levels only.

As far as the mining lease area is considered, the area is rocky and no major seepage is envisaged. The production quantity is very less and the depth proposed is 31 m BGL. Hence, there will not be any major impact due to mining on water levels or ground water levels in the area.

ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental impacts on the following environments are identified.

- Land environment
- Water environment
- Vegetation
- Fauna
- Air environment
- Noise environment
- Socio-economic impacts

11.2.10 LAND ENVIRONMENT: IMPACT AND MITIGATION MEASURES

The major impact due to this project on land environment is the change in land use. Since this quarry is a small one and the production is less, mining activity will be carried out upto 32 m BGL. Other than quarrying of minerals, no other change will be done since there is no dumping. To prevent soil erosion during monsoon season, garland drain will be constructed with silt traps. At the mine closure stage, 1.48.5 Ha

of lease area will be left as rain water harvesting pond. 0.35.5 Ha will be developed with green belt. For this, plants like Pongamia pinnata, Syzigium cumini, Albizia lebbeck, Thespesia populnea, Bauhinia racemose, Cassia siamea, Azadirachta indica are selected. A total of 355 trees are planned to be planted. Spacing will be 3m x 3m.

11.2.11 WATER ENVIRONMENT: IMPACT AND MITIGATION MEASURES

There is no water body present inside the lease area. The entire water requirement for the project is 3.0 KLD which will be sourced from outside agencies. Negligible sewage will be generated, for which a septic tank with soak pit will be set up.

During monsoon season, the excess rain water, if any, will be led through garland drain of 0.6m width and 0.3 m depth to the collection pond with silt traps.

Since the mining operation will be limited upto depth of 32m (BGL), there will not be any seepage. However, the rain water percolation and collection of water from seepage shall be less than 300lpm and it shall be pumped out periodically by a stand by diesel powered Centrifugal pump motivated with 7.5H.P.Motor. The quality of water is expected to be potable. Hence, water stored in the quarry pit will be pumped into the adjacent agricultural fields. Further the water can also be used for plantation purposes

The major water bodies found in the buffer zone are.

Water bodies	Distance	Direction
Sambai Kulam	3.53 km	E
Thattan Kulam	3.95 Km	S
Chinna Kulam	4.29 km	SW
Pudhu Kulam	4.52 km	SW
Shanmukha Nadi	5.24 Km	W
Nallatangal Odai	6.82 km	W
Varattar River	8.01 km	SW
Selvar Odai	8.39 km	W

Since these water bodies are located outside the lease area and there is no discharge of effluent or any untreated water from the mines will be made in to these water bodies, there is no major impact. For the canal, adequate safety distance is left. The proponent will restrict the mining operation only within the lease and no other work will be carried out near the canal or any area outside the lease.

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

- Rain water falling in the quarry will be collected efficiently through garland drains.
- Water thus collected will be passed through collection tank with silt traps. This water can be used by the proponent for water sprinkling and for green belt purposes.
- Excess water after desiltation will be provided to downstream users, if any

11.2.12 BIOLOGICAL ENVIRONMENT: IMPACT AND MITIGATION MEASURES

Impacts

- Fauna is affected due to noise and vibration.
- Dust generation due to mining activities
- Change in land use of the lease area
- Accidental falling of animals

Mitigation measures

- Sirens will be blown before blasting in the mines. To reduce noise levels, plantation will be done. Blasting will be carried out only in the allotted time.
- To reduce dust generation, mist sprayers will be used. During transportation, the material will be covered with tarpaulin. Water sprinkling will be done to reduce generation of pollutants

- After the mine closure stage, the mine pit will be left as rain water collecting tank, which can attract bird population in the nearby areas.
- To prevent entry of animals, the mining area will be properly fenced.

11.2.13 AIR ENVIRONMENT: IMPACT AND MITIGATION MEASURES

The major air pollutants due to mining operations are fugitive emissions like PM₁₀, PM_{2.5}. Other than these pollutants, gaseous emissions of sulfur dioxide (SO₂) and oxides of nitrogen (NO_x) due to excavation/loading equipment and vehicles plying on haul roads are the cause of air pollution in the project area.

The major impacts are Dust emission due to drilling, blasting and transportation. The major mitigation measures include Using Wet drilling methods, Allowing drilling only with PPE, Carrying out blasting only during specified times, Avoiding blasting during unfavourable weather conditions, Using explosives of good quality, Using mist sprayers Regular wetting of transport, Covering the materials carried in tippers with tarpaulin, Proper maintenance of vehicles used for transportation, Conducting regular emission tests for vehicles used for transport Development of greenbelt is proposed in the safety zone 7.5m,10m barriers in the lease area.

The anticipated data is calculated using AERMOD software and the projected values are found to be within limits.

11.2.14 NOISE ENVIRONMENT: IMPACT AND MITIGATION MEASURES

Impacts

- ✚ Noise generation in mining is due to operation like drilling, blasting and transportation of minerals within and outside the lease area.
- ✚ As per DGMS (Directorate General of Mines Safety) and OSHA (Occupational Safety and Health Administration) limits, the acceptable noise level is 85 dB(A) for an exposure period of 8 hours.
- ✚ Exposure to loud noise can also cause high blood pressure, heart disease, sleep disturbances, and stress. Noise pollution also impacts the health and well-

being of wildlife.

- ✚ Noise exceeding prescribed limits may cause impairment like abnormal loudness perception, tinnitus, which causes a persistent high-pitched ringing in the ears, paracusis or distorted hearing

Mitigation measures

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

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

11.2.15 VIBRATION: IMPACT AND MITIGATION MEASURES

Impacts

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

Mitigation measures

- ✚ Carrying out blasting on limited scale, only from 12:00 PM to 2:00 PM
- ✚ Control of fly rock and vibration by maintaining peak particle velocity with in standard as prescribed by the DGMS and MOEF & CC.
- ✚ Shallow depths jackhammer drilling and blasting is proposed to be carried

out with minimum use of explosive

✚ Supervising blasting by competent and statutory foreman/ mines manager

11.2.16 SOCIO ECONOMIC ENVIRONMENT

Impact and Mitigation measures

No land is acquired from anyone. No rehabilitation is needed. Hence, there is no negative impact. The proponent has planned to spend INR 5,00,000 for CER activities. This amount will be subjected to change after public hearing.

11.2.17 OCCUPATIONAL HEALTH

Impacts

Dust generation due to drilling and blasting, Noise generation due to drilling and blasting, unexpected accidents. Continuous exposure to dust causes Pneumonia, Tuberculosis, Rheumatic arthritis and Segmental Vibration, Short term impact will be lack of sleep, high blood pressure and heart ailments. Long term exposure may lead to partial or permanent deafness, Risks include fly rocks, cracks or fissures due to improper mining methods

Mitigation measures

- Using dust suppression measures like water spraying on roads to reduce rise of air pollutants
- Providing green belt for air pollutant and noise attenuation
- Ensuring slope stability
- Employing only trained professionals for blasting
- Conducting Pre-Medical Examination for employees before inducting
- Conducting periodical Medical Examination once in 6 months.
- Making all first aid kits available in mines office
- Keeping fire extinguisher in place
- Educating the employees about how to handle unexpected happenings
- Posting information containing emergency contact numbers in mines office

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

11.2.18 ENVIRONMENTAL MONITORING PROGRAMME

Monitoring is done to measure the efficiency of control measures implemented. Regular monitoring of various environmental parameters like air, water, noise and soil environments is needed to assess the status of environment during the project operation. A schedule is framed with timeline to monitor various parameters during the operation of the project. To evaluate the effectiveness of environmental management programme, regular monitoring of the important environmental parameters will be taken up. Air monitoring will be carried out once in 3 months, water sample will be collected once in a season, noise will be monitored once in 3 months, soil samples will be analyzed once per season. For EMP, a budget of INR 19.88 Lakhs is allocated.

11.2.19 PROJECT BENEFITS

Financial benefits

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

Social benefits

- This project provides employment to 24 people directly. Local people will be hired for unskilled labour.
- Through CSR, nearby schools, hospitals will be benefitted.
- For CSR, INR 5, 00,000 is allocated.
- Based on the demand of the people during public hearing, further funds will

be allocated, if necessary.

Various aspects of mining activities were considered and related impacts were evaluated. Considering all the possible ways to mitigate the environmental concerns Environmental Management Plan was prepared an 19.88 lakhs for the 5 years has been allocated as EMP cost. The EMP is dynamic, flexible and subjected to periodic review. For project where the major environmental impacts are associated, EMP will be under regular review. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will bring the positive impact in the study area.

CHAPTER 12

DISCLOSURE OF CONSULTANTS

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

Declaration by Experts contributing to the proposed Rough Stone and Gravel quarry over an extent 1.86.00 Ha, while total cluster area of 6.69.5 Ha at Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State.

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

EIA Coordinator Name: M. Manikandan



Signature & Date

Period of involvement: March 2025 to May 2025.

Contact information:

M/s Global Mining Solutions

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

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: March 2025 to May 2025.</u>	R. Dhanal
2	WP	Abirami Kaliaperumal	Assessment of existing water quality, impact of the project on surface and ground water quality, suggested mitigation measures for minimizing the impact. <u>Period: March 2025 to May 2025</u>	K. Abirami
3	SHW	Ramados N	Assessment of waste generated from the project, suggested waste management practices. <u>Period: March 2025 to May 2025</u>	C. Ramados
4	SE	Sarasvathy K	Baseline SE studies. Data compilation and assessment. Impact of the project on SE status of the area. Formulation of CER plan. <u>Period: March 2025 to May 2025</u>	K. Sarasvathy
5	EB	Saravanan S	Baseline data collection of related to ecology of the area. <u>Period: March 2025 to May 2025</u>	S. Saravanan
6	HG	Ravinthiran N	Hydrogeological feature of the area. Ground water depth and impact of project on ground water of the area. <u>Period: March 2025 to May 2025</u>	N. Ravinthiran
7	AQ	Srilatha Thiruveedhula	Air quality modeling utilizing the area source model.	T. Srilatha

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

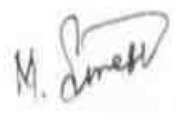
TM- EC

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

TM- FAE:

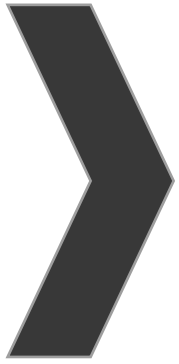
S. No	Name of TM (FAE)	Functional Area	Approved FAE (to work under)	Period of involvement	Type of work	Signature
1	Kamaraj S	HG	Ashok Kumar Rajagopal	Period: March to May 2025.	Associated with Experts in studying hydrogeological pattern of study area, Studying ground water and the impact of the project on ground water	
2	B.J.Sampatkumar	SE	Saraswathy K	Period: March to May 2025.	Assisted by the Expert in preparation of socio-economic report.	
		SC	Shishupal Singh	Period: March to May 2025.	Assisted by the Expert in interpretation of soil sampling and their quality	

					involved in the project.	
3	Mownica Balaji	NV	Dhanala kshmi Ramanathan	<i>Period: March to May 2025.</i>	Associated with the expert team in suggesting control measures for noise and Ground Vibration.	Mownica.B
		AP	Dhanala kshmi Ramanathan		Associated with expert team in assessing existing air quality, impact of the project on ambient air and suggesting mitigation measures for air pollution	
4	Balasubramani G	NV	Dhanala kshmi Ramanathan	<i>Period: March to May 2025.</i>	Associated with the expert in selection of base line monitoring stations, Review of Noise quality results, Review of emission sources – drilling, blasting, excavation and transportation, Identification of impacts on environment,	

					identification of remedial measures and input to EIA preparation	
		Geo	Valliappa n Meyyappa n		Associated with the expert in preparing Geological map.	
5	Suresh Mani	LU	Srilatha Thiruvee dhula	<i>Period: March to May 2025.</i>	Associated with Experts in preparing Land use map based on satellite imagery, Land use classification and analysis, Impact prediction on surrounding land environment.	
		HG	Ashok Kumar Rajagopal		Associated with Experts in studying hydro-geology pattern of study area, studying water and the impact of the project on ground water.	
6	Asan Ali S	NV	Srilatha Thiruvee dhula	<i>Period: March to May 2025.</i>	Associated with the expert in monitoring and analysis of blast induced ground vibration in order to	

					develop the site-specific equation for its prediction, monitoring of fly rocks & air blast (noise), preparation of SOP's for the safety blasting practice in the mines.	
		Geo	Valliappa n Meyyapp an		Associated with the Qualified Person & Experts in preparing Geological map, assessing stability of quarry slope faces and dump, management plan for mine stability and after use of mining quarry and geological features of the area during mine plan preparation.	S. Acan ali
7	Prabu M	Geo	Valliappa n Meyyapp an	Period: March to May 2025.	Associated with Experts and involved in Field Investigations, Mapping /Geo-referencing	H. Prab
8	Abirami Kaliyaperum al	RH	S V Prashant	Period: March	Associated with experts and involved in the	K. Arinij

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



ANNEXURE-1



File No: 12472
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA),
TAMIL NADU)



Dated **04/09/2025**



To,

Thiru.S.Ayyappan
S/o. Singaram Chettiyar, No.93, Lakshmipuram, Palani Taluk, Dindigul District, TAMIL NADU-
624601
kundavi29kundavi05@gmail.com

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

Sir/Madam,

Sub: SEIAA, Tamil Nadu – Existing Rough Stone & Gravel quarry lease over an extent of 1.86.0 Ha at S.F.Nos. 160/4, 159/1, 132/2B and 131/1C2(P) in Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu by Thiru.S.Ayyappan- under project category – “B1” and Schedule S.No. 1(a) – “Mining of Minerals”– ToR issued along with Public Hearing- preparation of EIA report – Regarding.

Ref: 1. Earlier, EC issued by SEIAA-TN vide Lr.No.SEIAA-TN/F.No.7010/1(a)/EC.No.4168/2020 dated:13.03.2020.

2. Online proposal No. SIA/TN/MIN/545246/2025, Dated: 19/07/2025.

3. Minutes of the 602nd Meeting of SEAC-II held on 07.08.2025.

4. Minutes of the 876th SEIAA meeting held on 25.08.2025.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO25B0108TN5875086N
(ii) File No.	12472
(iii) Clearance Type	TOR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vii) Name of Project	Rough Stone & Gravel Quarry of Thiru.S.Ayyappan
(viii) Name of Company/Organization	SINGARAM AYYAPPAN
(ix) Location of Project (District, State)	DINDIGUL, TAMIL NADU
(x) Issuing Authority	SEIAA
(xi) Applicability of General Conditions	no
(xii) Applicability of Specific Conditions	no

1. In view of the particulars given in the Para 1 above, the project proposal inter alia including Form-1 (Part A and B) were submitted to the SEIAA for an appraisal by the SEAC under the provision of EIA notification 2006 and its subsequent amendments.
2. The above-mentioned proposal has been considered by SEIAA in the meeting held on 25.08.2025. The minutes of the meeting and all the Application and documents submitted [(viz. Form-1 Part A, Part B,)] are available on PARIVESH portal which can be accessed by scanning the QR Code above.
3. The State Expert Appraisal Committee (SEAC), based on the information & clarifications provided by the project proponent and after detailed deliberations on all technical aspects recommended the proposal for grant of Terms of Reference with public hearing under the provision of EIA Notification, 2006 and as amended thereof subject to the stipulation of specific and general conditions as detailed in Annexure (2).
4. The SEIAA has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the SEAC hereby decided to issue the following Terms of Reference with public hearing for instant proposal **Thiru.S.Ayyappan** under the provisions of EIA Notification, 2006 and as amended thereof.
5. The Ministry/SEIAA-TN reserves the right to stipulate additional conditions, if found necessary.
6. The Terms of Reference with public hearing to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/Regulations or Statutes, as applicable, to the project.
7. This issues with the approval of the Competent Authority.
8. The TORs with public hearing prescribed shall be valid for a period of three years from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.

Copy To

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. The Additional chief Secretary to Government, Environment and Forests Department, Tamil Nadu.
3. The Additional Chief Secretary to Government, Natural Resources Department, Tamil Nadu.
4. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
5. The Chair Person, TNPC Board, 76, Mount Salai, Guindy, Chennai-32
6. The District Collector, Dindigul District
7. The Commissioner of Geology and Mines, Guindy, Chennai-32
8. The Assistant Director, Department of Geology & Mining, Dindigul District
9. EI Division, Ministry of Environment & Forests, Paryavaran Bhawan, New Delhi.
10. Integrated Regional office of MoEF&CC, Shastri Bhawan, Nungambakkam, Chennai
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-II and decided to grant Terms of Reference (ToR) along with Public Hearing for the quantity of 101880m³ of Rough Stone & 11170m³ of Gravel upto the depth of 32m BGL (including existing depth of 17m BGL) as per the approved mining plan, under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC-II & normal conditions & the conditions

S. No	Terms of Reference
	mentioned in Annexure of this minutes.

2. Seac Conditions - Site Specific

S. No	Terms of Reference
2.1	Major Condition: 1. The PP shall obtain Certified Compliance Report (CCR) from Integrated Regional Office, MoEF&CC, Chennai for the earlier Environmental Clearance. General Condition: 1. A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of statutory personnel, appropriate environmental monitoring, good maintenance of haul roads and village/panchayat roads, authorized blasting operation etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal: (i) Copy of the agreement forming CMC. (ii) The Organisation chart of the Committee with defining the role of the members (iii) The 'Standard Operating Procedures' (SoP) executing the planned activities. 2. The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report. 3. Since waterbodies are situated nearby, the PP shall carry out the hydrological study including the details of waterflow pattern to determine the impacts of the mining operation in the waterbodies. 4. The details of enumeration of structures including schools, colleges, primary health centers should be submitted along with the EIA report. 5. The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m & up to 1km shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc. and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations. 6. The proponent shall furnish photographs of adequate fencing; garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan. 7. The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report. 8. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine. 9. The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding village and structures. 10. The PP shall prepare a conceptual action plan accommodating the inclusion of haul road accessibility keeping the benches intact, by ensuring the slope stability of the working benches to be constructed and existing quarry wall. 11. The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic/videographic evidence along with the EIA report.

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. (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

S. No	Terms of Reference
	issued by the AD/DD mines? 14. Quantity of minerals mined out. · Highest production achieved in any one year · Detail of approved depth of mining. · Actual depth of the mining achieved earlier. · Name of the person already mined in that leases area. · If EC and CTO already obtained, the copy of the same shall be submitted. · Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches. 15. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone). 16. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc., 17. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan. 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,

S. No	Terms of Reference
	clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered. 27. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided. 28. Impact on local transport infrastructure due to the Project should be indicated. 29. A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity. 30. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific. 31. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible. 32. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix-I in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner. 33. Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The 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

S. No	Terms of Reference
	comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.

Standard Terms of Reference for (Mining of minerals)

1.

S. No	Terms of Reference
1.1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994
1.2	A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given
1.3	All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee
1.4	All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the 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)
1.5	Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics
1.6	Details about the land proposed for mining activities should be 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
1.7	It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report
1.8	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided
1.9	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period

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

S. No	Terms of Reference
	State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered
1.20	Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority)
1.21	R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report
1.22	One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given
1.23	Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map
1.24	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated
1.25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided
1.26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided
1.27	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided
1.28	Based on actual monitored data, it may clearly be shown whether working will intersect 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

S. No	Terms of Reference
	of mining activities on these aquifers. Necessary permission from State Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished
1.29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out
1.30	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same
1.31	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution
1.32	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines
1.33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report
1.34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report
1.35	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed
1.36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations
1.37	Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation
1.38	Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project
1.39	Public Hearing points raised and commitment of the Project Proponent on the same along with time

S. No	Terms of Reference
	bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project
1.40	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given
1.41	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out
1.42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report
1.43	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc
1.44	Besides the above, the below mentioned general points are also to be followed:- a) All documents to be properly referenced with index and continuous page numbering. b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated. c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project. d) Where the documents provided are in a language other than English, an English translation should be provided. e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted. f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed. g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation. h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable. i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area

SEIAA STANDARD CONDITIONS:

Cluster Management Committee

1. Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.
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.

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:
 - a) Hydrothermal/Geothermal effect due to destruction in the Environment.
 - b) Bio-geochemical processes and its foot prints including environmental stress.
 - c) Sediment geochemistry in the surface streams.

Energy

28. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished.

Climate Change

29. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.

30. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and physical, chemical & biological soil features.
31. Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood.

Mine Closure Plan

32. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.

EMP

33. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued and the scope for achieving SDGs.
34. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.

Risk Assessment

35. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.

Disaster Management Plan

36. To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.

Others

37. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.

38. As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.
39. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

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.

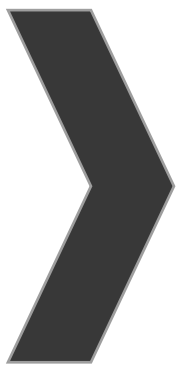
e. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other 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 OMNo.J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.

Signature Not Verified

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

Date: 04/09/2025 ☐



ANNEXURE-2

புவியியல் மற்றும் சுரங்கத்துறை

ந.க.எண்: 535/2025 (கனிமம்)

உதவி இயக்குநர் அலுவலகம்,
மாவட்ட ஆட்சியர் அலுவலக வளாகம்,
திண்டுக்கல்.

நாள்: 21.06.2025

குறிப்பாணை

பொருள்: கனிமங்களும் சுரங்கங்களும் - திண்டுக்கல் மாவட்டம் - திண்டுக்கல் மாவட்டம், பழனி வட்டம், புளியம்பட்டி கிராமம், புல எண்கள் 160/4 (0.19.0 ஹெக்டேர்), 159/1 (0.61.0 ஹெக்டேர்), 132/2பி (0.16.0 ஹெக்டேர்) மற்றும் 131/1சி2 (0.90.0 ஹெக்டேர்) ஆகியவற்றில் 1.86.0 ஹெக்டேர் - ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் வழங்கல் - உகந்த பரப்பு (Precise Area) தேர்வு செய்யப்பட்டது - சுரங்கத்திட்டம் மற்றும் மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்க கோருவது - தொடர்பாக.

- பார்வை:**
1. திரு.சி.அய்யப்பன், த/பெ.சிங்காரம், 193, லக்ஷ்மீபுரம், பழனி வட்டம், திண்டுக்கல் என்பவரது மின்னனு விண்ணப்பம் நாள்: 13.05.2025
 2. இவ்வலுவலக கடிதம் ந.க. எண்: 535/2025 (கனிமம்), நாள்:19.05.2025 பழனி வருவாய் கோட்டாட்சியருக்கு முகவரியிட்டது.
 3. பழனி, வருவாய் கோட்டாட்சியர் கடிதம் எண்: 5054/2025/அ7, நாள்: 20.06.2025
 4. உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை அவர்களின் புலத்தணிக்கை அறிக்கை நாள்: 21.06.2025.
 5. 1959 -ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 41 மற்றும் 42.
 6. அரசாணை எண்.169 தொழில் (எம்.எம்.சி.1) துறை, நாள்: 04.08.2020.
 7. அரசாணை எண்.208, தொழில் (எம்.எம்.சி.1) துறை, நாள்: 21.09.2020.
 8. தொடர்புடைய ஆவணங்கள்.

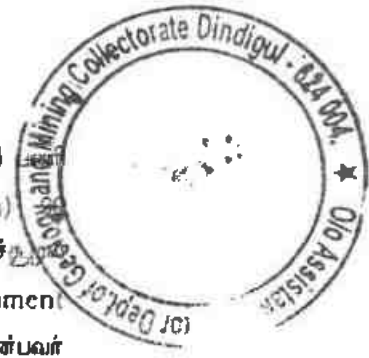
திண்டுக்கல் மாவட்டம், பழனி வட்டம், புளியம்பட்டி கிராமம், புல எண்கள் 160/4 (0.19.0 ஹெக்டேர்), 159/1 (0.61.0 ஹெக்டேர்), 132/2பி (0.16.0 ஹெக்டேர்) மற்றும் 131/1சி2 (0.90.0 ஹெக்டேர்) ஆகியவற்றில் 1.86.0 ஹெக்டேர் பரப்பில் உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் வழங்கக்கோரி திண்டுக்கல் மாவட்டம், பழனி வட்டம், லக்ஷ்மீபுரம், கதவு எண். 193-ல் வசித்து வரும் சிங்காரம் மகன் அய்யப்பன் என்பவர் பார்வை 1-ல் காணும் விண்ணப்பத்தினை சமர்ப்பித்துள்ளார்.



பழனி, வருவாய் கோட்டாட்சியர் மற்றும் புலியியல் மற்றும் சுரங்கத்துறை, உதவி இயக்குநர் ஆகியோரின் அறிக்கையில் 300 மீட்டர் சுற்றளவில் குடியிருப்புகள், 50 மீட்டர் சுற்றளவில் ஓடைகள், ஆறுகள், உயர் அழுத்த மின்கம்பங்கள், உயர் வகை மரங்கள் ஆகியவை இல்லை என தெரிவித்துள்ளார். மேலும், வனத்துறையால் பாதுகாக்கப்பட்ட பகுதியாக அறிவிக்கப்பட்ட சரணாலயங்கள், தேசிய பூங்காக்கள் சுற்றுச்சூழல் உணர் திறன் மிக்க பகுதிகள் (ECO-SENSITIVE ZONE), 10 கி.மீ சுற்றளவிற்குள் இல்லை. 1 கி.மீட்டர் சுற்றளவில் காப்புக்காடுகள், 500 மீட்டர் சுற்றளவில் அருங்காட்சியக துறையின் மூலம் பாதுகாக்கப்பட்ட பகுதிகளாக அறிவிக்கப்பட்ட இடங்கள் மற்றும் வரலாற்று சின்னங்கள் எதும் இல்லை எனவும், புலங்களில் முதல் முறையாக குவாரி உரிமம் கோரப்பட்டுள்ளது என தெரிவித்து கீழ்க்காணும் நிபந்தனைகளுக்குட்பட்டு மேற்கண்ட புலங்களில் உடைகல் குவாரி குத்தகை உரிமம் ஐந்து (5) ஆண்டுகளுக்கு வழங்க பரிந்துரை செய்துள்ளனர்.

- 1) அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீ மற்றும் அரசு புறம்போக்கு நிலங்களுக்கு 10 மீ பாதுகாப்பு இடைவெளி விடுத்து குவாரி செய்தல் வேண்டும்.
- 2) பொதுமக்கள் / விவசாய நிலங்களுக்கு பாதிப்பு ஏற்படாத வகையில் தகுதி வாய்ந்த அங்கீகரிக்கப்பட்ட நபர்கள் மூலம் வெடிமருந்துகள் சேமிக்கப்பட்டு குவாரியில் வெடித்தல் வேண்டும். குவாரியில் குறைந்த சக்தி கொண்ட வெடி மருந்துகளை பயன்படுத்தல் வேண்டும்.
- 3) சுரங்கத்திட்டம் மற்றும் சுற்றுச்சூழல் தடையில்லாச் சான்று குத்தகை உரிமம் வழங்குவதற்கு முன் சமர்ப்பிக்க வேண்டும்.
- 4) குவாரியில் வேலை செய்யும் தொழிலாளர்கள் தொழிலாளர் நலவாரியம் மற்றும் காப்பீடு திட்டத்தில் பதிவு செய்து தொழிலாளர் நலன் பேண்பட வேண்டும்.
- 5) குழந்தை தொழிலாளர்களை குவாரி பணியில் அமர்த்தக் கூடாது.
- 6) கனிமங்களை வாகனங்களில் கொண்டு செல்லும் போது பாதுகாப்பிகள், பொது மக்கள் மற்றும் பிற வாகனங்கள் பாதிக்காதவண்ணம் தார்பாய்கள் கொண்டு மூடி எடுத்துச் செல்ல வேண்டும்.

எனவே, துறை அலுவலர்களின் பரிந்துரையினை ஏற்றும் நிபந்தனைகளுக்கு உட்பட்டும், திண்டுக்கல் மாவட்டம், பழனி வட்டம், புளியம்பட்டி கிராமம், புல எண்கள் 160/4 (0.19.0 ஹெக்டேர்), 159/1 (0.61.0 ஹெக்டேர்), 132/2பி (0.16.0 ஹெக்டேர்) மற்றும் 131/1சி2 (0.90.0 ஹெக்டேர்) ஆகியவற்றில் 1.86.0 ஹெக்டேர் பரப்பில் உடைகல் குவாரி குத்தகை உரிமம் 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதி எண்: 19 (1) மற்றும் 20 -ன் படி ஐந்து (5) வருட காலத்திற்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்க தகுதி வாய்ந்த நிலப்பரப்பாக (Precise Area) கருதப்படுகிறது.

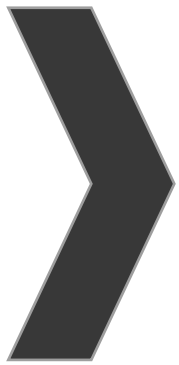


தமிழ்நாடு சிறுகனிம சலுகை விதிகள்-1959 விதி எண்: 41 -ன்படி குவாரி
மேற்கொள்வது தொடர்பாக வரைவு சுரங்கத் திட்டத்தினை (Mining Plan)
தினங்களுக்குள் சமர்ப்பிக்குமாறும், விதி எண்: 42-ன்படி மாநில அளவிலான சுற்றுச்
தாக்க மதிப்பீட்டு ஆணையத்தின் (State Level Environmental Impact Assessment
Authority) இசைவினைப் பெற்று சமர்ப்பிக்குமாறும் மனுதாரர் திரு.S.அய்யப்பன் என்பவர்
கேட்டுக்கொள்ளப்படுகிறார்.


உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
திண்டுக்கல்.

பெறுநர்
திரு.S.அய்யப்பன்,
த/பெச்சிங்காஞ்செட்டியார்,
எண்.93, லக்ஷ்மிபுரம்,
பழனி வட்டம்,
திண்டுக்கல் மாவட்டம்

நகல்
உறுப்பினர் செயலர்,
மாநில சுற்றுசூழல் தாக்க மதிப்பீட்டு ஆணையம் (SEIAA),
சென்னை.



ANNEXURE-3

From

Thiru.T.Selvasekar, M.Sc.,
Assistant Director,
Geology and Mining,
Dindigul.

To

Thiru.S.Ayyappan,
S/o.Singaram Chettiyar,
No.93, Lakshmipuram,
Palani Taluk,
Dindigul

Roc.No:535/2025/Mines, Dated: 7.07.2025.

Sir,

Sub: Mines and Minerals - Minor Mineral - Dindigul District -Palani Taluk - Puliampatti Village - Patta Land - S.F.No.160/4, 159/1, 132/2B & 131/1C2(P) over an extent of 1.86.0 hecets- Quarry lease application preferred by Thiru.S.Ayyappan for quarrying Rough Stone and Gravel - Approval of Mining Plan - Regarding.

Ref: 1. Application from Thiru.S.Ayyappan, S/o.Singaram Chettiyar, Dindigul dated.13.05.2025
2. Precise Area Communication Notice Rc.No.535/2025 (Mines), dated 27.06.2025
3. Mining Plan submitted by Thiru.S.Ayyappan, S/o.Singaram Chettiyar, Dindigul dated.04.07.2025

Thiru.S.Ayyappan has preferred an application for the grant of quarrying lease to quarry Rough Stone and Gravel over an extent of 1.86.0 Hectares of Patta Land in S.F.No.160/4, 159/1, 132/2B & 131/1C2(P) of Puliampatti Village, Palani Taluk, Dindigul District for a period of 5(Five) Years Under Rule 19 of Tamil Nadu Minor Mineral Concession Rules 1959.

2) The application was examined and consented to grant lease to quarrying Rough Stone and Gravel over an extent of 1.86.0 Hectares of Patta Land in S.F.No.160/4, 159/1, 132/2B & 131/1C2(P) for a period of 5 (Five) years subject to produce Mining Plan for approval and to obtain Environment Clearance from SEIAA in the reference 2nd cited.

3) The applicant has submitted the Mining Plan, prepared as per guidelines issued by the Commissioner of Geology and Mining and as per Rules and Acts. The Geological and Mineable reserves are discussed in Part -A of the Mining Plan. The applicant can quarry the mineral in the following measurements:-

Geological Resources (As per Mining Plan)

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in Ts	Geological Resources of Rough stone in Ts
XY-AB	I	115	37	1	4255	-	2	8510	-
		115	65	1	7475	-	2	14950	-
	II	115	65	5	-	37375	2.75	-	102781.25
	III	115	75	5	-	43125	2.75	-	118593.75
	IV	115	75	5	-	43125	2.75	-	118593.75
	V	115	75	5	-	43125	2.75	-	118593.75
	VI	115	75	5	-	43125	2.75	-	118593.75
	VII	115	75	5	-	43125	2.75	-	118593.75
Total					11730	253000	-	23460	695750
X1Y1- CD	I	10	7.5	2	150	-	2	300	-
	II	10	7.5	5	-	375	2.75	-	1031.25
	III	10	7.5	5	-	375	2.75	-	1031.25
	IV	10	53	5	-	2650	2.75	-	7287.5
	V	52	87	5	-	22620	2.75	-	62205
	VI	52	87	5	-	22620	2.75	-	62205
	VII	52	87	5	-	22620	2.75	-	62205
Total					150	71260	-	300	195965
X1Y1- EF	I	28	70	2	3920	-	-	7840	-
	II	28	70	5	-	9800	2.75	-	26950
	III	28	70	5	-	9800	2.75	-	26950
	IV	28	70	5	-	9800	2.75	-	26950
	V	28	70	5	-	9800	2.75	-	26950
	VI	28	70	5	-	9800	2.75	-	26950
	VII	28	70	5	-	9800	2.75	-	26950
Total					3920	58800	-	7840	161700
X2Y2- EF	I	7.5	7.5	1	56.25	-	2	112.50	-
		20	48	1	960	-	2	1920	-
	II	20	48	5	-	4800	2.75	-	13200
	III	20	48	5	-	4800	2.75	-	13200
	IV	20	48	5	-	4800	2.75	-	13200
	V	39	95	5	-	18525	2.75	-	50943.75
	VI	39	95	5	-	18525	2.75	-	50943.75
	VII	39	95	5	-	18525	2.75	-	50943.75
Total					1016.25	69975	-	2032.50	192431.25
Grand Total					16816.25	453035	-	33632.50	1245846.25

Mineable Reserves (As per Mining Plan)

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m³	Rough stone in. m³	Bulk Density	Gravel formation in Ts	Mineable Reserves of Rough stone in Ts
XY-AB	I	98	29	1	2842	-	2	5684	-
	I	98	56	1	5488	-	2	10976	-
	II	92	54	5	-	24840	2.75	-	68310.00
	III	82	44	5	-	18040	2.75	-	49610.00
	IV	72	34	5	-	12240	2.75	-	33660.00
	V	62	24	5	-	7440	2.75	-	20460.00
	Total				8330	62560	-	16660	172040.00
X1Y1- CD	V	42	36	5	-	7560	2.75	-	20790.00
	VI	32	44	5	-	7040	2.75	-	19360.00
	VII	22	34	5	-	3740	2.75	-	10285.00
	Total				-	18340	-	-	50435.00
X1Y1- EF	I	20	62	2	2480	-	2	4960	-
	II	17	59	5	-	5015	2.75	-	13791.25
	III	12	54	5	-	3240	2.75	-	8910.00
	IV	7	49	5	-	1715	2.75	-	4716.25
	Total				2480	9970	-	4960	27417.50
X2Y2- EF	I	12	30	1	360	-	2	720	-
	II	12	30	5	-	1800	2.75	-	4950.00
	III	12	25	5	-	1500	2.75	-	4125.00
	IV	12	20	5	-	1200	2.75	-	3300.00
	V	21	62	5	-	6510	2.75	-	17902.50
	Total				360	11010	-	720	30277.50
Grand Total					11170	101880	-	22340	280170.00

Yearwise Development and Production (As per Mining Plan)

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m³	Rough stone in m³	Bulk Density	Gravel in Ts	Mineable Reserves of Rough stone in Ts
I	XY-AB	I	74	29	1	2146	-	2	4292	-
		I	74	56	1	4144	-	2	8288	-
		II	71	54	5		19170	2.75	-	52717.50
Total						6290	19170	-	12580	52717.50
II	XY-AB	I	24	29	1	696	-	2	1392	-
		I	24	56	1	1344	-	2	2688	-
		II	21	54	5	-	5670	2.75	-	15592.50
		III	15	44	5	-	3300	2.75	-	9075.00
	X1Y1- EF	I	20	62	2	2480	-	2	4960	-
		II	17	59	5	-	5015	2.75	-	13791.25
		III	12	54	5	-	3240	2.75	-	8910.00
	X2Y2- EF	I	12	30	1	360		2	720	-
		II	12	30	5	-	1800	2.75	-	4950.00
		III	12	25	5	-	1500	2.75	-	4125.00
Total						4880	20525	-	9760	56443.75

III	XY-AB	III	67	44	5	-	14740	2.75	-	40535.00
		IV	32	34	5	-	5440	2.75	-	14960.00
Total						-	20180	-	-	55495.00
IV	XY-AB	IV	40	34	5	-	6800	2.75	-	18700.00
		V	34	24	5	-	4080	2.75	-	11220.00
	X1Y1-EF	IV	7	49	5	-	1715	2.75	-	4716.25
		X2Y2-EF	IV	12	20	5	-	1200	2.75	-
	V		21	62	5	-	6510	2.75	-	17902.50
	Total						-	20305	-	-
V	XY-AB	V	28	24	5	-	3360	2.75	-	9240.00
		X1Y1-CD	V	42	36	5	-	7560	2.75	-
	VI		32	44	5	-	7040	2.75	-	19360.00
	VII		22	34	5	-	3740	2.75	-	10285.00
Total						-	21700	-	-	59675.00
Grand Total						11170	101880	-	22340	280170.00

The available mineable reserves have been computed as **1,01,880 m³** (**2,80,170 MTs**) as Rough Stone, **11170³** (**22340 MTs**) as Gravel up to the depth of **32m** from the ground level.

The Environmental Management Plan and Mine Closure plan are discussed in Part -11& 12 and all conditions have been incorporated in the Mining Plan as laid down by the authorities.

4) In view of the above, in exercise of the powers delegated under Rule 41 of Tamil Nadu Minor Mineral Concession Rules, 1959, I hereby approve the Mining Plan submitted by Thiru.R.S.Ayyappan for quarrying Rough Stone and Gravel over an extent of 1.86.0 Hectares of Patta Land in S.F.No.160/4, 159/1, 132/2B & 131/1C2(P) of Puliampatti Village, Palani Taluk, Dindigul District for a period of 5 (Five) to obtain Environment Clearance from SEIAA, Chennai subject to the following conditions:

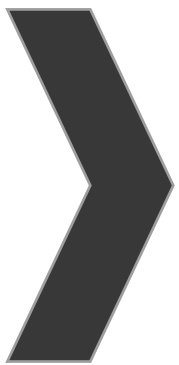
1. The Mining Plan is approved without prejudice to any other law applicable to the quarry permission from time to time where such Laws are made by the State Government or any other authority.
2. This approval of the Mining Plan does not in any way imply the approval of the Government in terms of any other provisions of the Tamil Nadu Minor Mineral Concession Rules, 1959.
3. The Mining Plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.

4. The approval of the Mining Plan does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development and Regulation) Amendment Act, 2015 or any other connected Laws including, Environment Protection Act, 1986, and the Rules made there under in Tamil Nadu Minor Mineral Concession Rules, 1959.

Encl: Two copies of Mining Plan.


Assistant Director,
Geology and Mining,
Dindigul.

Copy to:
The Member Secretary,
State Level Environmental Impact
Assessment Authority,
PanagalMaligai,
No. 1 Jeenis Road,
Saidapet, Chennai-15.



APPROVAL MINING PLAN

MINING PLAN FOR PULIYAMPATTI 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 : DINDIGUL
TALUK : PALANI
VILLAGE : PULIYAMPATTI
S.F.NOS : 160/4, 159/1, 132/2B AND
131/1C2(P)
EXTENT : 1.86.0Ha

FOR

APPLICANT

Thiru.S.Ayyappan,
S/o. Singaram Chettiyar,
No.93, Lakshmipuram,
Palani Taluk,
Dindigul District.

ECO-FRIENDLY



SUSTAINABILITY



SAFETY



(PPE)

PREPARED BY

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

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

PLOT NO. 6, SF NO. 13/2, A2, VS CITY, RC CHETTYPATTY,
KOTTAMETTUPATTY,

OMALUR, SALEM, TAMIL NADU – 636 455

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

CONTACT: 97502 23535, 94446 54520

Email: infoglobalmining@gmail.com, globalminingsolutionssalem@gmail.com



S.Ayyappan,
S/o. Singaram Chettiyar,
No.93, Lakshmipuram,
Palani Taluk,
Dindigul District.



CONSENT LETTER FROM THE APPLICANT

The Mining Plan in respect of **Rough Stone and Gravel** quarry over an extent of 1.86.0hectares of Patta lands in S.F.Nos.160/4, 159/1, 132/2B and 131/1C2(P) of Puliyampatti Village, Palani Taluk, Dindigul 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, Dindigul District to make further correspondence regarding modifications of the Mining Plan with the said Qualified Person on this following address.

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

Qualified Person

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

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

Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455

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

CONTACT: 97502 23535, 94446 54520

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

Signature of the Applicant

S.Ayyappan

Place: Dindigul

Date: 28.06.2025

S.Ayyappan,
S/o. Singaram Chettiyar,
No.93, Lakshmipuram,
Palani Taluk,
Dindigul District.



DECLARATION

The Mining Plan in respect of **Rough Stone and Gravel** quarry over an extent of 1.86.0hectares of Patta lands in S.F.Nos.160/4, 159/1, 132/2B and 131/1C2(P) of Puliampatti Village, Palani Taluk, Dindigul 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


S.Ayyappan,

Place: Dindigul

Date: 28.06.2025

This Mining is approved based on guidelines & Instructions Issued in the CGM, Letter No : 3808/LC/2012 dated 19-11-2012 and Incorporation of the particulars specified in the letter No. 110
Dated _____ of the Assistant Director of Geology and Mining, Dindigul and subject to further Fulfillment of the conditions laid down under rule 41,42 of Tamil Nadu Minor Mineral Concession Rules 1953

Assistant Director of Geology & Mining
Dindigul

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

Qualified Person

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

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

Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455

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

CONTACT: 97502 23535, 94446 54520



CERTIFICATE

This is to certify that, the provisions of 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 1.86.0hectares of Patta lands in S.F.Nos.160/4, 159/1, 132/2B and 131/1C2(P) of Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State applied by Thiru.S.Ayyappan, 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: 30.06.2025

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

Qualified Person

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

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

Kottamettupatty, Omalur, Salem, Tamil Nadu - 636 455

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

CONTACT: 97502 23535, 94446 54520



CERTIFICATE

Certified that, in preparation of Mining Plan for **Rough Stone and Gravel** quarry over an extent of 1.86.0hectares of Patta lands in S.F.Nos.160/4, 159/1, 132/2B and 131/1C2(P) of Puliampatti Village, Palani Taluk, Dindigul District, Tamil Nadu State for Thiru.S.Ayyappan, 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

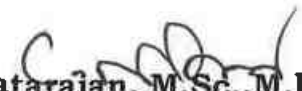
Date : 30.06.2025

CERTIFICATE

Certified that I, C.Natarajan, M/s. GLOBAL MINING SOLUTIONS (NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT) Plot No. 6, SF No. 13/2, A2, Vs City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455 NABET ACCREDITATION NO – NABET/EIA/2326/IA 0110. I am a Post graduate in Geology (M.Sc., Geology) from Annamalai university and more than five years of experience in mining Field.

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

Accordingly I prepared this Mining Plan in respect of Rough Stone and Gravel quarry lease applied for an extent of 1.86.0hectares of Patta land in S.F.Nos.160/4, 159/1, 132/2B and 131/1C2(P) of Puliampatti Village, Palani Taluk, Dindigul District by Thiru.S.Ayyappan, for a period of Five Years. Since the Mining Plan is prepared as per the provisions contained in Rule 15(1) (a) and (b) of Minerals (Other than Atomic, Hydro Carbons Energy Minerals) concession Rules 2016, the same may be approved by the Competent Authority.


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

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

Place : Salem

Date : 30.06.2025

CONTENTS

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Annexure

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LIST OF PLATES

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4.0	Topo sketch of Quarry lease applied area for 10Km Radius	I-C
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6.0	Quarry lease & Surface plan	II
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8.0	Mineable Plan & Sections	IV
9.0	Yearwise Development & Production Plan & Sections	V
10.0	Conceptual Plan & Sections	VI



MINING PLAN FOR MINOR MINERALS

ROUGH STONE AND GRAVEL

Over an extent of 1.86.0hectares of Patta land in S.F.Nos.160/4, 159/1, 132/2B and 131/1C2(P) of Puliampatti Village, Palani Taluk,

Dindigul 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.S.Ayyappan, S/o. Singaram Chettiyar, residing at No.93, Lakshmipuram, Palani Taluk, Dindigul District.
2. The application was processed by the Assistant Director, Department of Geology and Mining, Dindigul, and passed an order vide Rc.No.535/2025 (Kanimam) dated 27.06.2025 directing the applicant to produce approved Mining Plan under Rule 41(5) of the Tamil Nadu Minor Mineral Concession Rules, 1959 and Environmental Clearance Certificate under Rule 42 from the State Level Environmental Impact Assessment Authority (SEIAA) for the grant of quarry lease to quarry Rough Stone and Gravel over an extent of 1.86.0 hectares of Patta lands in S.F.Nos. 160/4, 159/1, 132/2B and 131/1C2(P) of Puliampatti Village, Palani Taluk, Dindigul District of Tamil Nadu State for a period of five years.
3. Accordingly, Mining Plan is prepared under the provisions of rule 19(1), 41 and 42 as per the amendments under Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating following the conditions imposed in the precise area communication letter.
 - a) A 7.5 meters of safety distance should be left out for the adjacent patta lands and 10 meters of safety distance should be provided to the adjoining government poramboke land while quarrying operation.
 - b) Explosives will be stored, and blasting will be carried out by recognized person (approved blaster) to avoid hindrance to the public and adjacent agricultural land. By using low power explosives, avoid damage to thatched and thatched houses situated near by area.



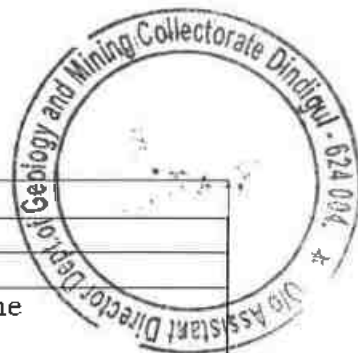
- c) The Draft Mining Plan and Environmental clearance should submit before the grant of lease.
 - d) All the labours should be registered with the labour welfare Board of Government of Tamil Nadu and to be enrolled in the Group insurance Scheme.
 - e) The applicant should not engage Child labour during quarry work.
 - f) The minerals should be covered with Tarpaulin during transportation without any hindrance to Transpellers and public people.
4. Geological Resources is estimated at 12,45,846.25Ts of Rough stone, 33,632.5Ts of gravel and Mineable Reserves is estimated at 2,80,170Ts of Rough Stone, 22,340Ts of gravel 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 2,80,170Ts of Rough Stone and 22,340Ts of gravel for the period of five years.
 6. The applicant ensured that, child labours under 18 years of age will not be engaged for quarrying operation.
 7. The applicant ensure that will appoint should have valid certified persons (Mines Manager, Foreman, Mate) during quarrying operation.
 8. Environmental parameters,
 - i) The area does not attract the Forest Conservation Act, 1980 as there is no forest around 10kms radius.
 - ii) There is no interstate boundary around 10Kms radius.
 - iii) There is no wild life animal sanctuary within 10kms radius from the project site area under the Wildlife (Protection) Act, 1972.

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



9. Environmental measures to be adopted shall be,

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



EXECUTIVE SUMMARY:

a.	Name of the Village Panchayat	:	Puliyampatti	
b.	Name of the Panchayat Union	:	Palani	
c.	The proposed total Movable Reserves	:	2,80,170Ts of Rough Stone 22,340Ts of gravel	
d.	The proposed quantity of reserves (level of production) for Five years to be mined is(Recoverable reserves)	:	2,80,170Ts of Rough Stone 22,340Ts of gravel	
e.	Total extent of the area	:	1.86.0Ha	
f.	Proposed Period of mining	:	Five Years	
g.	Existing depth	:	17m (Maximum) below ground level	
h.	Proposed Depth of mining	:	32m (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. 14,16,000/- Rs. 51,50,000/- Rs. 5,00,000/- Total Project cost(A+B+C)= Rs.70,66,000/-	
1.	The area applied for lease is bounded by twelve corners and the coordinates are clearly marked in plate no II.			
	Corners	Co- ordinates	Distance between the corners	
		Latitude	Longitude	
	1	10° 30' 46.18N	77° 32' 11.56E	1-2 = 110.0m
	2	10° 30' 49.66N	77° 32' 12.40E	2-3 = 76.0m
	3	10° 30' 48.92N	77° 32' 14.79E	3-4 = 97.0m
	4	10° 30' 45.85N	77° 32' 14.02E	4-5 = 52.8m
	5	10° 30' 45.32N	77° 32' 15.69E	5-6 = 39.8m
	6	10° 30' 44.03N	77° 32' 15.51E	6-7 = 15.6m
	7	10° 30' 43.53N	77° 32' 15.47E	7-8 = 72.0m
	8	10° 30' 42.88N	77° 32' 17.75E	8-9 = 50.2m
	9	10° 30' 41.32N	77° 32' 17.26E	9-10 = 130.0m
	10	10° 30' 43.25N	77° 32' 13.45E	10-11 = 37.2m
	11	10° 30' 43.82N	77° 32' 12.37E	11-12 = 50.2m
	12	10° 30' 45.37N	77° 32' 12.90E	12-1 = 47.8m

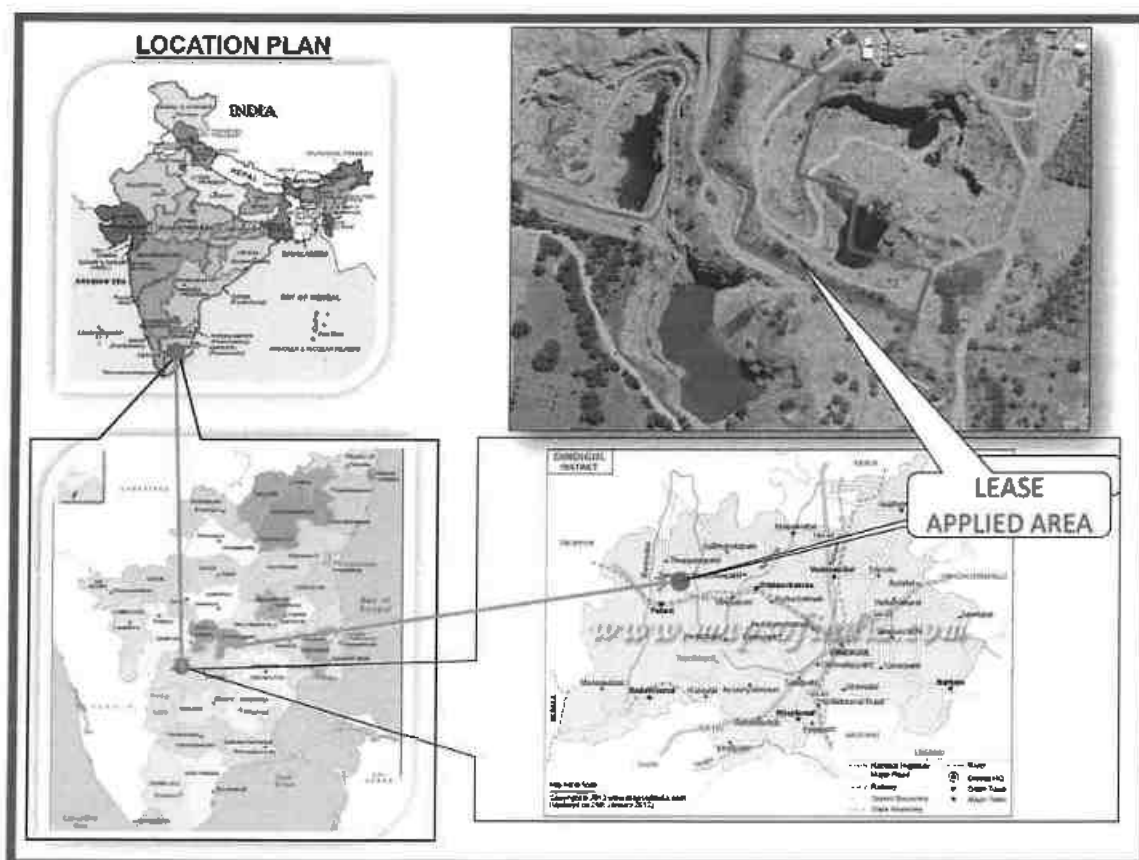


2.0 General Information:

2.1	a.	Name of the Applicant	:	Thiru.S.Ayyappan,
	b.	Address of the Applicant with phone No and e-mail id if any	:	S/o. Singaram Chettiyar, No.93, Lakshmipuram, Palani Taluk, Dindigul District. Pin code - 624 601. Cell No.:9443236006
	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, Dindigul, vide Rc.No.535/2025 (Kanimam) dated 27.06.2025.
	c.	Period of permission / lease granted	:	The Assistant Director, Department of Geology and Mining, Dindigul, has grant of lease period for five years .
	d.	Name and Address of the QP preparing Mining Plan	:	C.Natarajan, M.Sc.,M.Phil., Qualified Person M/s. GLOBAL MINING SOLUTIONS (NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT) PLOT No. 6, SF No. 13/2, A2, Vs City, RC Chettyapatty, Kottamettupatty, Omalur, Salem, Tamil Nadu - 636 455 NABET ACCREDITATION NO -NABET / EIA / 2326 /IA 0110 Contact: 97502 23535, 94446 54520.

3.0 Location:

S.No	Details of the Area:	
1	Corner Coordinates	Latitude : 10°30'41.32"N to 10°30'49.66"N Longitude : 77°32'11.56"E to 77°32'17.75"E
2	Toposheet Number	58- F/10
3	The altitude of the area	353m (MSL)
4	Extent	1.86.0Ha
5	Survey Nos	160/4, 159/1, 132/2B and 131/1C2 (P)
6	Village	Puliyampatti
7	Taluk	Palani
8	District	Dindigul
9	State	Tamil Nadu





a.	Classification of the Area (Ryotwari / poramboke / others)	:	Patta land
b.	Ownership / Occupancy of the Applied area (Surface rights)	:	It is patta land registered in the name of Thiru.Palanisamy, and Thiru.Ayyappan (applicant) patta nos.466 and 36, the applicant has obtained consent from the pattadar, Please refer Annexure No: IV & VII.
c.	Toposheet No. with Latitude and Longitude	:	Topo Sheet No: 58-F/ 10 Latitude : 10°30'41.32"N to 10°30'49.66"N Longitude : 77°32'11.56"E to 77°32'17.75"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 Puliampatti- Melakottai village road on east side of the area. The Nearest Railway line is Dindigul to Palani line which is about 6.1Km on southeast side of the area.

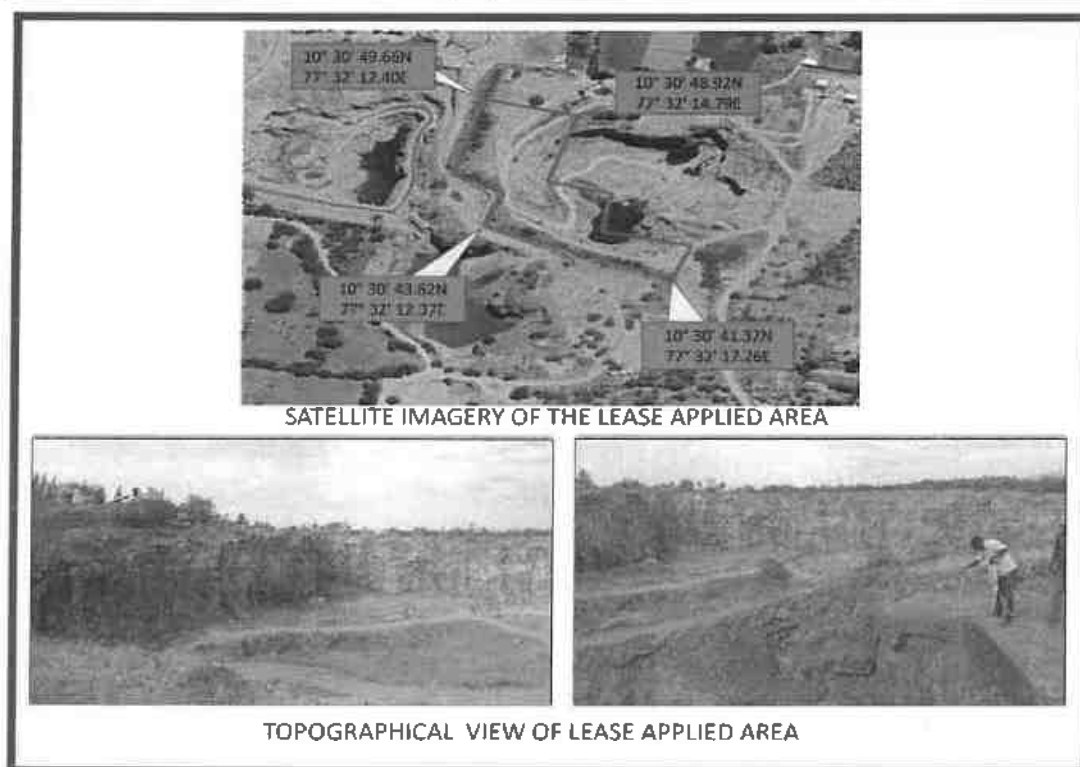


Fig. Location of the lease applied area



PART - A

4.0 Geology and Mineral Reserves:

4.1	a. Topography	: ➤ The area applied for quarry lease is exhibits almost plain covered by Gravel formation. The massive Charnockite formation is noticed below 2m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 353m (maximum) from MSL. ➤ No major river is found nearby the lease applied area. ➤ Water table is found at a depth of 72m in summer and 69m in rainy seasons. ➤ Temperature of the area is reported to be 18°C to a maximum of 42°C during summer. ➤ Rainfall of this area is about 800mm to 900 mm during the both NE & SW monsoons.
	b. General Geology of the Area	: The area is underlain by the wide range of metamorphic rocks of peninsular gneissic complex. These rocks are extensively weathered and overlain by the recent valley fills and alluvium at places. The geological formations found in the district are Archaean rocks like Gneisses, Granites, Charnockites basic granulites and calc-gneisses. The younger formations are Quartz veins and pegmatite. The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Charnockite is part of peninsular Gneisses, a high grade metamorphic rock. The strike of the Charnockite formation is N45°E -S45°W with dipping towards SE60°.



			The general geological succession of the area is given as under. <table><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								
4.2		Details of Exploration already carried out if any	: No exploration was carried out, as the Rough stone formations are clearly visible from existing quarry pit.						
4.3	a.	Estimation of Reserves	: The Geological and Recoverable reserves are estimated by cross sectional method. Totally six sections have been drawn, three sections drawn length wise as (X-Y), (X1-Y1), (X2-Y2) and another three sections drawn width wise as (A-B), (C-D), (E-F) to cover maximum area considered for lease. The Plans and Sections have been drawn with a scale of 1:1000 and 1:500 respectively. Please refer plate No.III.						

a. Geological Resources

The quarrying is restricted up to a depth of 32m (below ground level) only, availability of resources is given below.

Table No-1

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in Ts	Geological Resources of Rough stone in Ts
XY-AB	I	115	37	1	4255	-	2	8510	-
	II	115	65	1	7475	-	2	14950	-
	III	115	65	5	-	37375	2.75	-	102781.25
	IV	115	75	5	-	43125	2.75	-	118593.75
	V	115	75	5	-	43125	2.75	-	118593.75
	VI	115	75	5	-	43125	2.75	-	118593.75
	VII	115	75	5	-	43125	2.75	-	118593.75
Total					11730	253000	-	23460	695750
X1Y1- CD	I	10	7.5	2	150	-	2	300	-
	II	10	7.5	5	-	375	2.75	-	1031.25
	III	10	7.5	5	-	375	2.75	-	1031.25
	IV	10	53	5	-	2650	2.75	-	7287.5
	V	52	87	5	-	22620	2.75	-	62205
	VI	52	87	5	-	22620	2.75	-	62205
	VII	52	87	5	-	22620	2.75	-	62205
Total					150	71260	-	300	195965
X1Y1- EF	I	28	70	2	3920	-	-	7840	-
	II	28	70	5	-	9800	2.75	-	26950
	III	28	70	5	-	9800	2.75	-	26950
	IV	28	70	5	-	9800	2.75	-	26950
	V	28	70	5	-	9800	2.75	-	26950
	VI	28	70	5	-	9800	2.75	-	26950
	VII	28	70	5	-	9800	2.75	-	26950
Total					3920	58800	-	7840	161700



X2Y2- EF	I	7.5	7.5	1	56.25	-	2	112.50	-
	II	20	48	1	960	-	2	1920	-
	III	20	48	5	-	4800	2.75	-	13200
	IV	20	48	5	-	4800	2.75	-	13200
	V	39	95	5	-	4800	2.75	-	13200
	VI	39	95	5	-	18525	2.75	-	50943.75
	VII	39	95	5	-	18525	2.75	-	50943.75
	Total				1016.25	69975	-	2032.50	192431.25
	Grand Total				16816.25	453035	-	33632.50	1245846.25

Gravel

: 33,632.50Ts

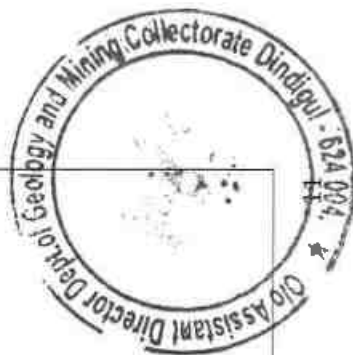
The Geological Resources of Rough stone : 12,45,846.25Ts

b. Already excavated

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

Table No-2

Pit No	length (Max) in(m)	Width (Max) in (m)	Depth (Max) in (m)
I	78	20	1
II	59	33	12
III	68	32	17
IV	55	12	1



c. Available Mineable Reserve

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

Table No-3

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in Ts	Mineable Reserves of Rough stone in Ts
XY-AB	I	98	29	1	2842	-	2	5684	-
	I	98	56	1	5488	-	2	10976	-
	II	92	54	5	-	24840	2.75	-	68310.00
	III	82	44	5	-	18040	2.75	-	49610.00
	IV	72	34	5	-	12240	2.75	-	33660.00
	V	62	24	5	-	7440	2.75	-	20460.00
	Total				8330	62560	-	16660	172040.00
X1Y1- CD	V	42	36	5	-	7560	2.75	-	20790.00
	VI	32	44	5	-	7040	2.75	-	19360.00
	VII	22	34	5	-	3740	2.75	-	10285.00
	Total				-	18340	-	-	50435.00
X1Y1- EF	I	20	62	2	2480	-	2	4960	-
	II	17	59	5	-	5015	2.75	-	13791.25
	III	12	54	5	-	3240	2.75	-	8910.00
	IV	7	49	5	-	1715	2.75	-	4716.25
Total				2480	9970	-	4960	27417.50	
X2Y2- EF	I	12	30	1	360	-	2	720	-
	II	12	30	5	-	1800	2.75	-	4950.00
	III	12	25	5	-	1500	2.75	-	4125.00
	IV	12	20	5	-	1200	2.75	-	3300.00
	V	21	62	5	-	6510	2.75	-	17902.50
Total				360	11010	-	720	30277.50	
Grand Total				11170	101880	-	22340	280170.00	

The available mineable reserve is computed as 2,80,170Ts of Rough stone and 22,340Ts of Gravel formation upto a depth 32m (below ground level) only.





5.0 Mining:

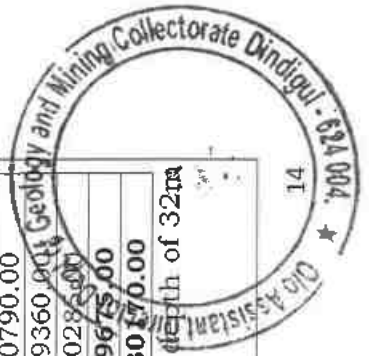
5.1	Method of Mining	:	1. Opencast method of semi mechanized mining with 5.0m height 5m width of the bench. 2. However, as far as the quarrying of Rough stone is concerned, observance of the provisions of Regulation 106(2) (b) as above is seldom possible due to various inherent petrogenetic factors coupled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

The Yearwise Production and Development Table

Table No -4

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel in Ts	Mineable Reserves of Rough stone in Ts
I	XY-AB	I	74	29	1	2146	-	2	4292	-
		I	74	56	1	4144	-	2	8288	-
		II	71	54	5	-	19170	2.75	-	52717.50
Total						6290	19170	-	12580	52717.50
II	XY-AB	I	24	29	1	696	-	2	1392	-
		I	24	56	1	1344	-	2	2688	-
		II	21	54	5	-	5670	2.75	-	15592.50
	X1Y1-EF	III	15	44	5	-	3300	2.75	-	9075.00
		I	20	62	2	2480	-	2	4960	-
		II	17	59	5	-	5015	2.75	-	13791.25
	X2Y2-EF	III	12	54	5	-	3240	2.75	-	8910.00
		I	12	30	1	360	-	2	720	-
		II	12	30	5	-	1800	2.75	-	4950.00
		III	12	25	5	-	1500	2.75	-	4125.00
Total						4880	20525	-	9760	56443.75
III	XY-AB	III	67	44	5	-	14740	2.75	-	40535.00
		IV	32	34	5	-	5440	2.75	-	14960.00
Total						-	20180	-	-	55495.00
IV	XY-AB	IV	40	34	5	-	6800	2.75	-	18700.00
		V	34	24	5	-	4080	2.75	-	11220.00
	X1Y1-EF	IV	7	49	5	-	1715	2.75	-	4716.25
		IV	12	20	5	-	1200	2.75	-	3300.00
	X2Y2-EF	V	21	62	5	-	6510	2.75	-	17902.50
Total						-	20305	-	-	55838.75
V	XY-AB	V	28	24	5	-	3360	2.75	-	9240.00
		V	42	36	5	-	7560	2.75	-	20790.00
	X1Y1-CD	VI	32	44	5	-	7040	2.75	-	19360.00
		VII	22	34	5	-	3740	2.75	-	10285.00
	Total						-	21700	-	-
Grand Total						11170	101880	-	22340	280170.00

The applicant has proposed to carry out 2,80,170Ts of Rough Stone and 22,340Ts of gravel upto a depth of 32m (below ground level) for the period of five years.





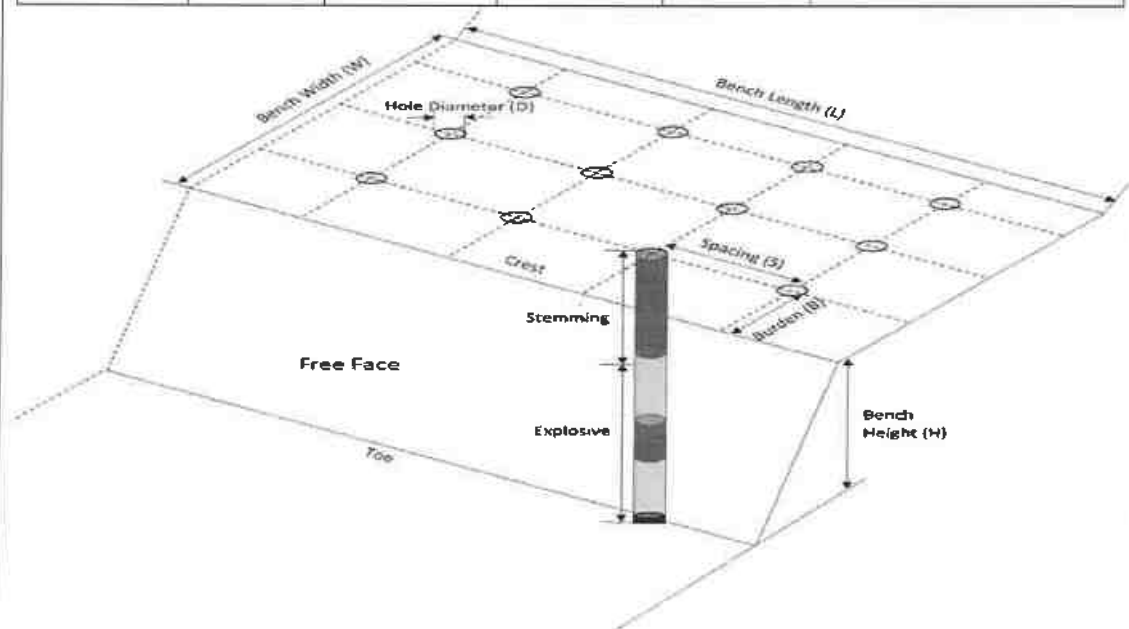
5.5	Machineries to be used																	
a.	Drilling	:	It is proposed to use following machineries for quarrying rough stone															
	S.No	Type	Nos	Dia Hole mm	Make	Motive power												
	1	Jack hammer	2	32	Atlas Copco	Compressed air												
	2	Compressor	1	-	Atlas Copco	Diesel Drive												
b.	Loading	:	Excavator of 0.90m ³ bucket capacity (with Rock breaker attachment) (1No).															
c.	Transportation	:	Tipper 3Nos (10/20Ts) capacity.															
5.6	Disposal of Overburden	:	The overburden in the form of Gravel, after the excavation gravel will be directly loaded into tipper to the needy buyers for road project and construction works for filling and leveling of low lying areas.															
5.7	Brief Note on Conceptual Mining Plan for the entire lease period	:	Conceptual Mining Plan is prepared with an object of five years of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructures etc. Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc. Ultimate Pit dimension is given as under, <table><tr><th colspan="4">Ultimate Pit dimension (M) end of Mining plan Period</th></tr><tr><th>Pit No</th><th>Length (max) in (m)</th><th>Width (Avg) in (m)</th><th>Depth(max) in(m)</th></tr><tr><td>I</td><td>150</td><td>99</td><td>32</td></tr></table> Afforestation has been proposed on all along the boundary barrier by planting trees. All the baseline information studies like Air Quality monitoring, Noise and Vibration monitoring, Water Analysis studies will be carried out every year as per the MOEF norms.				Ultimate Pit dimension (M) end of Mining plan Period				Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in(m)	I	150	99	32
Ultimate Pit dimension (M) end of Mining plan Period																		
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I	150	99	32															

6.0 Blasting:

6.1 Blasting Pattern

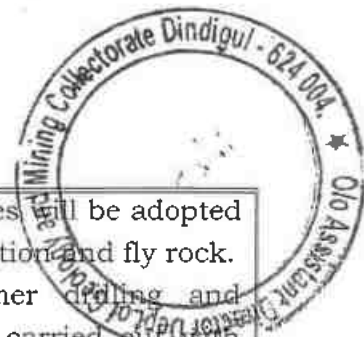
The massive formation shall be broken into pieces of portable size by drilling and blasting using jack hammers and shot hole blasting. Powder factor of explosives for breaking such hard rock shall be in the order of 6 to 7 Tonnes per Kg of explosives. Blasting parameters are as follows.

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>: 62</td> </tr> <tr> <td>Powder factor</td> <td>: 6Ts/Kg of explosives</td> </tr> <tr> <td>Total explosive required</td> <td>: 31Kg 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	: 62	Powder factor	: 6Ts/Kg of explosives	Total explosive required	: 31Kg slurry explosives	Charge / hole	: 0.5Kg	Blasting time	: 12-2 Pm
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Charge / hole	: 0.5Kg											
Blasting time	: 12-2 Pm											
6.4	Storage of Explosives and safety measures to be taken while blasting.	➤ The applicant will engage an authorized explosive agency to carry out the small amount of blasting and it will be supervised by competent and statutory foreman/ mines manager. ➤ <i>The applicant ensure that will appoint the Mate (Should have Valid Blaster Certificate) during Blasting Operation.</i>										
7.0 Mine Drainage:												
7.1	Depth of Water table	: The ground water table is reported as 72m below ground level. In the proposed mining plan only 32m (below ground level) depth has been envisaged as workable depth for safe & economic quarrying for the entire lease period. Hence the quarrying operation may not affect the ground water.										
7.2	Arrangement and Places where the mine water is finally proposed to be discharged	: The ground water may not rise immediately in this type of mining. However, the rain water percolation and collection of water from the seepage shall be less than 300lpm and it shall be pumped about periodically by a stand by diesel powered Centrifugal pump motivated with 7.5H.P.Motor. The quality of water is potable and it is not contaminated with any hazardous things. Hence, water stored in the quarry pit will be pumped into the adjacent agricultural fields. Further the water stored in the old pit will also be used for plantation purposes										



8.0 Other Permanent Structures:

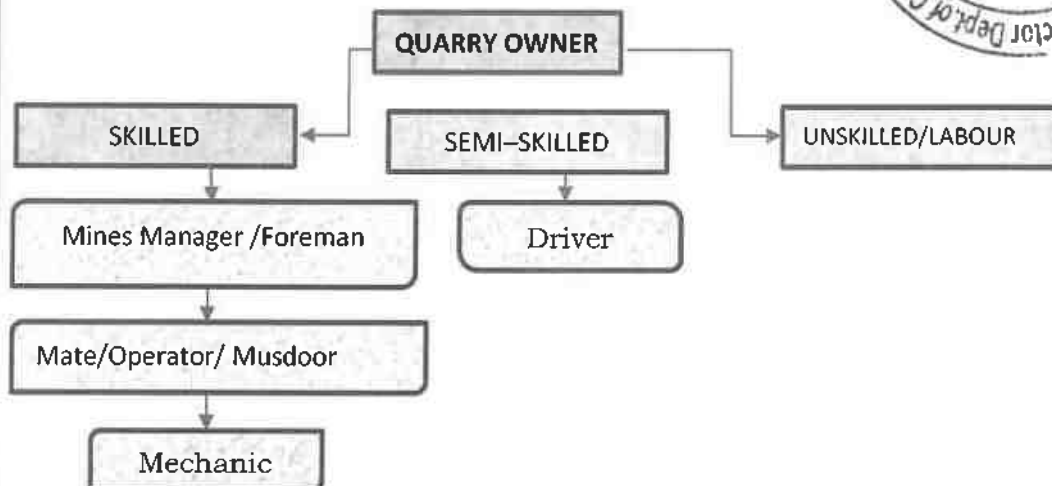
8.1	Habitations / Village	:	There is no habitation situated within a radius of 300m.
8.2	Power lines (HT/LT)	:	There is no Power line (HT/LT) passing within a radius of 50m.
8.3	Water bodies (River, Pond, Lake, Odai, Channel etc)	:	There is no Water bodies (River, Pond, Lake, Odai, Channel etc.) passing within a radius of 500m.
8.4	Archeological / Historical Monuments	:	There are no Archaeological / Historical Monuments within a radius of 300m.
8.5	Road (NH, SH, Village Road etc)	:	The National Highway (NH-83) Dindigul - Coimbatore is about 3.1km on south side of the area. The State Highway (SH-83) Palani - Dharapuram is about 6Km on north 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 Reserve Forest / Wild Life Sanctuary within a radius of 1Km.
8.8	Any Interstate Border, Protected areas under the Wild Life (Protection) Act, 1972, Critically Polluted Areas as Identified by Central Pollution Control Board and Notified Eco sensitive areas	:	There are No inter State border within a radius of 10Kms.
8.9	Any Other Structures	:	Nil



9.0 Employment Potential & Welfare Measures:

9.1 Employment Potential (Management & Supervisory personnel)

The proposed organization chart



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

Allowing 10% absentee, the no. of men of roll will be around 21.

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 Puliampatti village which is about 1.2Km on south side of the area.

b.	Sanitary facilities	:	Semi-permanent latrines & urinals shall be maintained at convenient places for use of labourers as per the provisions of Rule (33) of the Mines Rules, 1955 separately for males and females. Washing facilities shall also be arranged as per rule (36) of the Mines Rules, 1955.
c.	First Aid Facility	:	First aid kits are kept in Mines office room, in case of such eventualities the victim will be given first aid immediately at the site and injured person will be taken to the hospital. Hospital is available at distance of 6.5Km (South) in Palani the competent and Statutory foreman/ permit manager will be in charge of first aid.
d.	Labour Health	:	As per Mines Rule, Periodic medical examination related to occupational health safety will be conducted to all the workers in applicant's own cost.
e.	Precautionary safety measures to the Labourers:		
	Safety provisions like helmet, goggles, safety shoes, Dust mask, Ear muffs etc., have to be provided as per the circulars and amendments made for Mine labours under the guidance of DGMS being a mechanized operation. Necessary training will be conducted once in a year to all the employees with the help of qualified and experienced officers to train about the safe and systematic quarrying operation.		



PART - B

10.0 Environmental Management Plan:

10.1	Existing Land Use Pattern	:	1. The area is exhibits almost plain topography covered by Gravel formation. 2. Quarrying operation is proposed up to a depth of 32m (below ground level) for the proposed mining plan period. 3. Fluctuation of Water table in this area is in between 72m and 69m during a year. 4. This region receives the average annual rainfall of 800mm to 900mm. The surrounding area is practiced by the seasonal cultivation.

The existing land use pattern is given as under.

Table No-5

Sl. No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1.	Quarrying Pit	0.63.5	1.48.5
2.	Infrastructure	Nil	0.01.0
3.	Roads	0.01.0	0.01.0
4.	Green Belt	0.02.0	0.35.5
5.	Unutilized	1.19.5	Nil
Total =		1.86.0	1.86.0

10.2	Water Regime	:	Water table in this area is noticed at a depth of 72m and presently, in the proposed mining plan only 32m (below ground level) depth has been envisaged as workable depth for safe & economic quarrying for the entire lease period. hence, it will not affect the ground water depletion of this area.
10.3	Flora and Fauna	:	Except acacia bushes, no other valuable trees are noticed in the applied area. Further, neither flora of botanical interest nor fauna of zoological interest is noticed in this area.



10.4	Climatic conditions	: Generally subtropical climatic conditions prevail 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>Melakottai</td><td>1.5Km - NE</td><td>500</td></tr><tr><td>2.</td><td>Thumpalapatti,</td><td>2.3km - NW</td><td>700</td></tr><tr><td>3.</td><td>Puliyampatti</td><td>1.2km - S</td><td>1200</td></tr><tr><td>4.</td><td>Vilvathampatti</td><td>2.8km - SW</td><td>800</td></tr></table>	Table No-6				S. No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population	1.	Melakottai	1.5Km - NE	500	2.	Thumpalapatti,	2.3km - NW	700	3.	Puliyampatti	1.2km - S	1200	4.	Vilvathampatti	2.8km - SW	800
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4.	Vilvathampatti	2.8km - SW	800																							
10.6	Plan for Air, Dust Suppression	: Air or dust expected to be generated from drilling process, hauling roads, places of excavation etc., will be suppressed by periodical wetting of land by water spraying. Wet drilling and dust extractor arrangements will be provided to drilling units so as to control raise of dust from the site of drilling. Operators, those exposed directly to such conditions will be provide such protective equipment like mask, ear plug, helmet, gloze etc., as per the Mines Act.																								
10.7	Plan for Noise Control	: Quarrying of Rough Stone will be carried out by drilling and blasting by using low power explosives, and hence, noise will be very minimum. However, periodical noise level monitoring will be carried out to check the noise level in and around the quarry site. Nowhere the noise level should exceed the permissible limit of 80db during the quarry working hours.																								



10.8	Environmental Impact Assessment Statement Describing Impact on mining on the next Five years	:	The mining plan proposed is for 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 32m (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 32m 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 3550Sqm area is proposed to use under afforestation by planting 426nos of Neem/Pungan trees during first year with an anticipated survival rate of 80%. The Quarry landuse, layout and afforestation plan is shown in Plate No.III.
10.12	Proposed Financial Estimate / Budget for (EMP) Environment Management		
	A. Fixed Asset Cost:		
	1. Land Cost (600000/1Ha)=		Rs. 11,16,000
	2. First aid room and accessories		Rs.1,00,000
	3. Labour Shed		Rs.1,00,000
	4. Sanitary Facility		Rs.1,00,000
	Total=		Rs. 14,16,000/-



B. Operational Cost:		
1. Machineries	:	Rs.50,00,000/-
2. Fencing cost	:	Rs. 1,50,000/-
Total	:	Rs.51,50,000/-
C.EMP Cost:		Budget Provision for the entire quarrying period.
	:	Air Quality Sampling = Rs. 40,000/-
	:	Water Quality Sampling = Rs. 40,000/-
	:	Noise Monitoring = Rs. 20,000/-
	:	Ground vibration test = Rs. 20,000/-
Expenditure		
1. Drinking water facility		Rs.1,00,000/-
2. Sanitary Arrangements		Rs. 50,000/-
3. Safety kids		Rs. 50,000/-
4. Water sprinkling		Rs. 1,00,000/-
5. Afforestation		Rs. 80,000/-
Total=		Rs. 5,00,000/-
Total Project Cost (A+B+C)	:	Rs. 70,66,000 /-
CSR Cost(2% of Total Project Cost)	:	Rs. 1,41,320 /-

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.



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

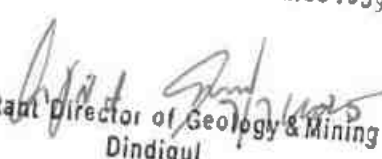

C.Natarajan, M.Sc., M.Phil.,
Qualified Person

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

Place : Salem.

Date : 30.06.2025

This Mining is approved based on guidelines & instructions issued in the CGM, Letter No : 3888/LC/2012 dated 19-11-2012 and Incorporation of the particulars specified in the letter Rec.No 535/2015 (mines) Dated 7/7/2015 of the Assistant Director of Geology and Mining, Dindigul and subject to further Fulfillment of the conditions laid down under rule 41, 42 of Tamil Nadu Miner Mineral Concession Rules 1959


Assistant Director of Geology & Mining
Dindigul

புவியியல் மற்றும் சுரங்கத்துறை

ந.க.எண்: 535/2025 (கனிமம்)

உதவி இயக்குநர் அலுவலகம்,
மாவட்ட ஆட்சியர் அலுவலக வளாகம்,
திண்டுக்கல்.

நாள்: 21.06.2025

குறிப்பாணை

பொருள்: கனிமங்களும் சுரங்கங்களும் - திண்டுக்கல் மாவட்டம் - திண்டுக்கல் மாவட்டம், பழனி வட்டம், புளியம்பட்டி கிராமம், புல எண்கள் 160/4 (0.19.0 ஹெக்டேர்), 159/1 (0.61.0 ஹெக்டேர்), 132/2பி (0.16.0 ஹெக்டேர்) மற்றும் 131/1சி2 (0.90.0 ஹெக்டேர்) ஆகியவற்றில் 1.86.0 ஹெக்டேர் - ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் வழங்கல் - உகந்த பரப்பு (Precise Area) தேர்வு செய்யப்பட்டது - சுரங்கத்திட்டம் மற்றும் மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்க கோருவது - தொடர்பாக.

- பார்வை:**
1. திரு.சி.அய்யப்பன், த/பெ.சிங்காரம், 193, லக்ஷ்மீபுரம், பழனி வட்டம், திண்டுக்கல் என்பவரது மின்னனு விண்ணப்பம் நாள்: 13.05.2025
 2. இவ்வலுவலக கடிதம் ந.க. எண்: 535/2025 (கனிமம்), நாள்:19.05.2025 பழனி வருவாய் கோட்டாட்சியருக்கு முகவரியிட்டது.
 3. பழனி, வருவாய் கோட்டாட்சியர் கடிதம் எண்: 5054/2025/அ7, நாள்: 20.06.2025
 4. உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை அவர்களின் புலத்தணிக்கை அறிக்கை நாள்: 21.06.2025.
 5. 1959 -ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 41 மற்றும் 42.
 6. அரசாணை எண்.169 தொழில் (எம்.எம்.சி.1) துறை, நாள்: 04.08.2020.
 7. அரசாணை எண்.208, தொழில் (எம்.எம்.சி.1) துறை, நாள்: 21.09.2020.
 8. தொடர்புடைய ஆவணங்கள்.

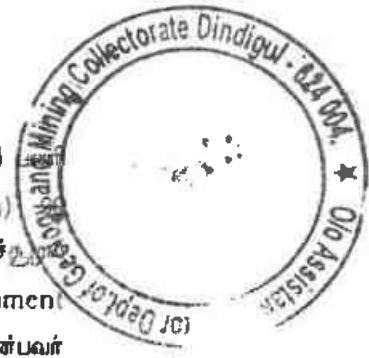
திண்டுக்கல் மாவட்டம், பழனி வட்டம், புளியம்பட்டி கிராமம், புல எண்கள் 160/4 (0.19.0 ஹெக்டேர்), 159/1 (0.61.0 ஹெக்டேர்), 132/2பி (0.16.0 ஹெக்டேர்) மற்றும் 131/1சி2 (0.90.0 ஹெக்டேர்) ஆகியவற்றில் 1.86.0 ஹெக்டேர் பரப்பில் உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் வழங்கக்கோரி திண்டுக்கல் மாவட்டம், பழனி வட்டம், லக்ஷ்மீபுரம், கதவு எண். 193-ல் வசித்து வரும் சிங்காரம் மகன் அய்யப்பன் என்பவர் பார்வை 1-ல் காணும் விண்ணப்பத்தினை சமர்ப்பித்துள்ளார்.



பழனி, வருவாய் கோட்டாட்சியர் மற்றும் புலியியல் மற்றும் சுரங்கத்துறை, உதவி இயக்குநர் ஆகியோரின் அறிக்கையில் 300 மீட்டர் சுற்றளவில் குடியிருப்புகள், 50 மீட்டர் சுற்றளவில் ஓடைகள், ஆறுகள், உயர் அழுத்த மின்கம்பங்கள், உயர் வகை மரங்கள் ஆகியவை இல்லை என தெரிவித்துள்ளார். மேலும், வனத்துறையால் பாதுகாக்கப்பட்ட பகுதியாக அறிவிக்கப்பட்ட சரணாலயங்கள், தேசிய பூங்காக்கள் சுற்றுச்சூழல் உணர் திறன் மிக்க பகுதிகள் (ECO-SENSITIVE ZONE), 10 கி.மீ சுற்றளவிற்குள் இல்லை. 1 கி.மீட்டர் சுற்றளவில் காப்புக்காடுகள், 500 மீட்டர் சுற்றளவில் அருங்காட்சியக துறையின் மூலம் பாதுகாக்கப்பட்ட பகுதிகளாக அறிவிக்கப்பட்ட இடங்கள் மற்றும் வரலாற்று சின்னங்கள் எதும் இல்லை எனவும், புலங்களில் முதல் முறையாக குவாரி உரிமம் கோரப்பட்டுள்ளது என தெரிவித்து கீழ்க்காணும் நிபந்தனைகளுக்குப்பட்டு மேற்கண்ட புலங்களில் உடைகல் குவாரி குத்தகை உரிமம் ஐந்து (5) ஆண்டுகளுக்கு வழங்க பரிந்துரை செய்துள்ளனர்.

- 1) அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீ மற்றும் அரசு புறம்போக்கு நிலங்களுக்கு 10 மீ பாதுகாப்பு இடைவெளி விடுத்து குவாரி செய்தல் வேண்டும்.
- 2) பொதுமக்கள் / விவசாய நிலங்களுக்கு பாதிப்பு ஏற்படாத வகையில் தகுதி வாய்ந்த அங்கீகரிக்கப்பட்ட நபர்கள் மூலம் வெடிமருந்துகள் சேமிக்கப்பட்டு குவாரியில் வெடித்தல் வேண்டும். குவாரியில் குறைந்த சக்தி கொண்ட வெடி மருந்துகளை பயன்படுத்தல் வேண்டும்.
- 3) சுரங்கத்திட்டம் மற்றும் சுற்றுச்சூழல் தடையில்லாச் சான்று குத்தகை உரிமம் வழங்குவதற்கு முன் சமர்ப்பிக்க வேண்டும்.
- 4) குவாரியில் வேலை செய்யும் தொழிலாளர்கள் தொழிலாளர் நலவாரியம் மற்றும் காப்பீடு திட்டத்தில் பதிவு செய்து தொழிலாளர் நலன் பேண்பட வேண்டும்.
- 5) குழந்தை தொழிலாளர்களை குவாரி பணியில் அமர்த்தக் கூடாது.
- 6) கனிமங்களை வாகனங்களில் கொண்டு செல்லும் போது பாதுகாப்பிகள், பொது மக்கள் மற்றும் பிற வாகனங்கள் பாதிக்காதவண்ணம் தார்பாய்கள் கொண்டு மூடி எடுத்துச் செல்ல வேண்டும்.

எனவே, துறை அலுவலர்களின் பரிந்துரையினை ஏற்றும் நிபந்தனைகளுக்கு உட்பட்டும், திண்டுக்கல் மாவட்டம், பழனி வட்டம், புளியம்பட்டி கிராமம், புல எண்கள் 160/4 (0.19.0 ஹெக்டேர்), 159/1 (0.61.0 ஹெக்டேர்), 132/2பி (0.16.0 ஹெக்டேர்) மற்றும் 131/1சி2 (0.90.0 ஹெக்டேர்) ஆகியவற்றில் 1.86.0 ஹெக்டேர் பரப்பில் உடைகல் குவாரி குத்தகை உரிமம் 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதி எண்: 19 (1) மற்றும் 20 -ன் படி ஐந்து (5) வருட காலத்திற்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்க தகுதி வாய்ந்த நிலப்பரப்பாக (Precise Area) கருதப்படுகிறது.



தமிழ்நாடு சிறுகனிம சலுகை விதிகள்-1959 விதி எண்: 41 -ன்படி குவாரி
மேற்கொள்வது தொடர்பாக வரைவு சுரங்கத் திட்டத்தினை (Mining Plan)
தினங்களுக்குள் சமர்ப்பிக்குமாறும், விதி எண்: 42-ன்படி மாநில அளவிலான சுற்றுச்
தாக்க மதிப்பீட்டு ஆணையத்தின் (State Level Environmental Impact Assessment
Authority) இசைவினைப் பெற்று சமர்ப்பிக்குமாறும் மனுதாரர் திரு.S.அய்யப்பன் என்பவர்
கேட்டுக்கொள்ளப்படுகிறார்.


உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
திண்டுக்கல்.

பெறுநர்
திரு.S.அய்யப்பன்,
த/பெச்சிங்காஞ்செட்டியார்,
எண்.93, லக்ஷ்மிபுரம்,
பழனி வட்டம்,
திண்டுக்கல் மாவட்டம்

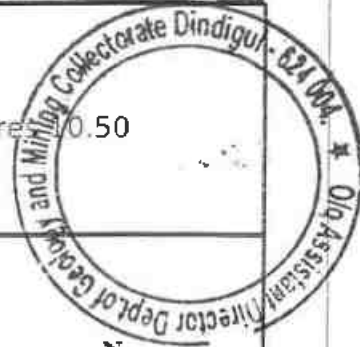
நகல்
உறுப்பினர் செயலர்,
மாநில சுற்றுசூழல் தாக்க மதிப்பீட்டு ஆணையம் (SEIAA),
சென்னை.



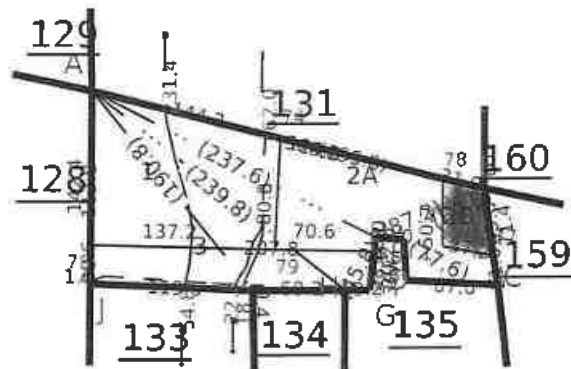
Survey No : 132

Area : Hect 03 Area 10.50

Scale : 1 : 5049



155.8



Signed By Tahsildar
Name of approver : thpln
Date of Approval : 25-12-2017



District : Dindigul

Taluk : Palani

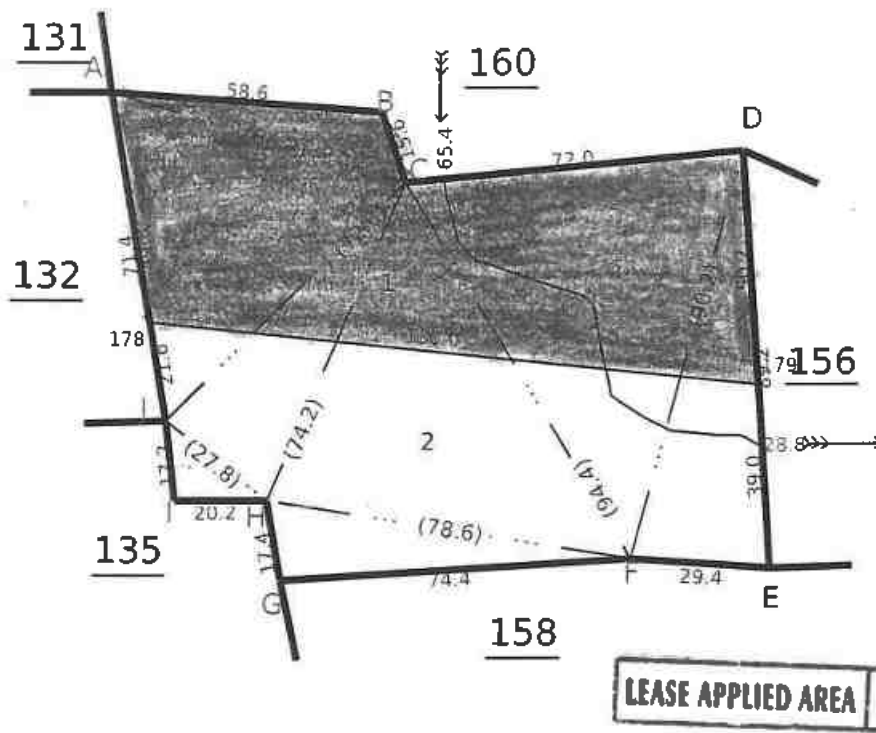
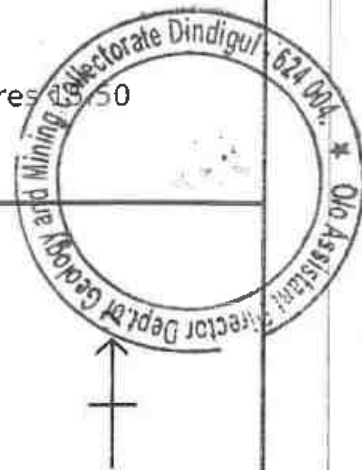
Village : Puliampatty [41]



Survey No : 159

Area : Hect 01 Ares 350

Scale : 1 : 1464



Signed By Tahsildar

Name of approver : thpln

Date of Approval : 20-12-2017



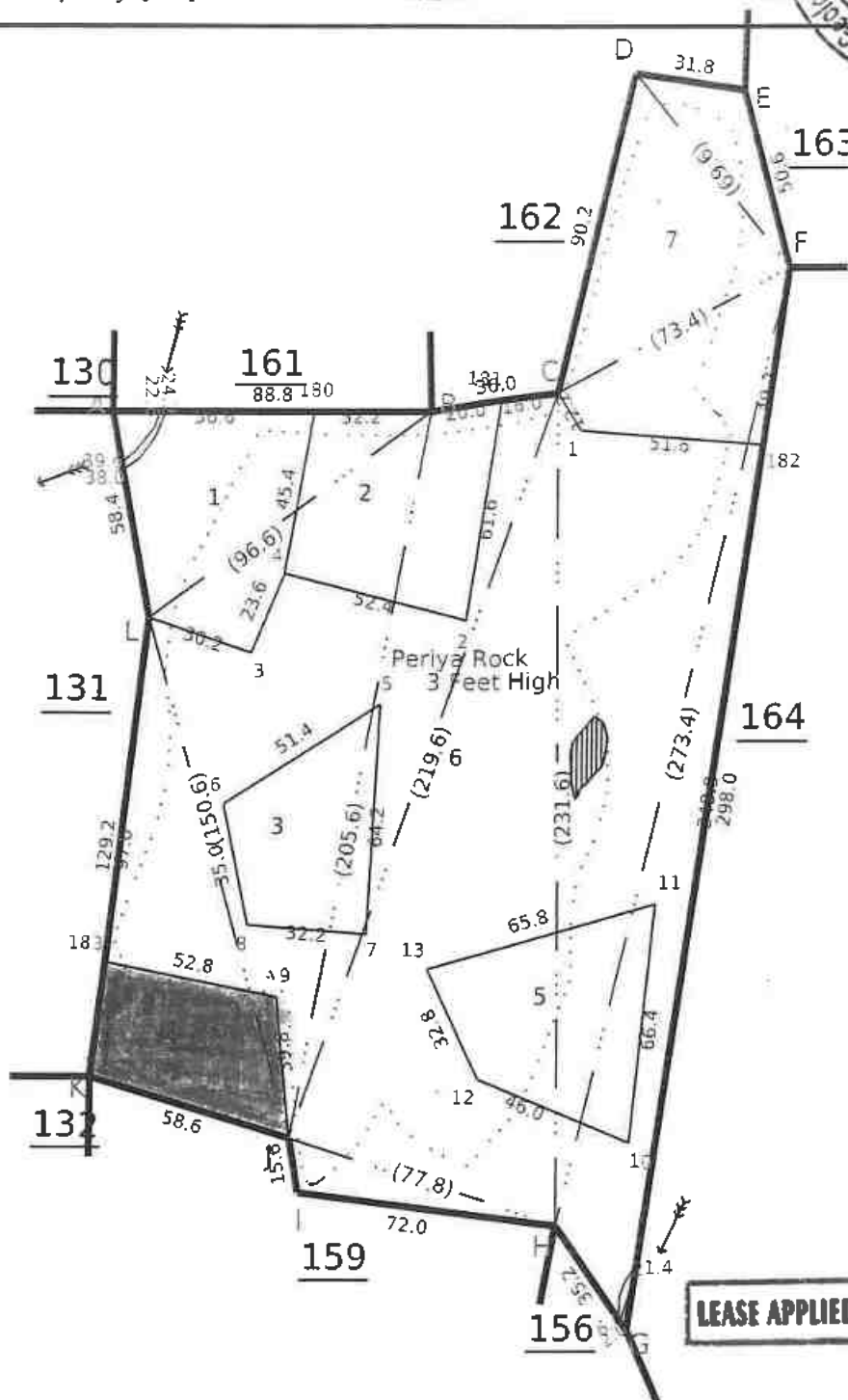
Date of Issue: 30-06-2025 13:26:48



Survey No : 18

Area : Hect 03 Ares 98 20

Scale : 1 : 184



Name of approver : thpln

Date of Approval : 20-12-2017

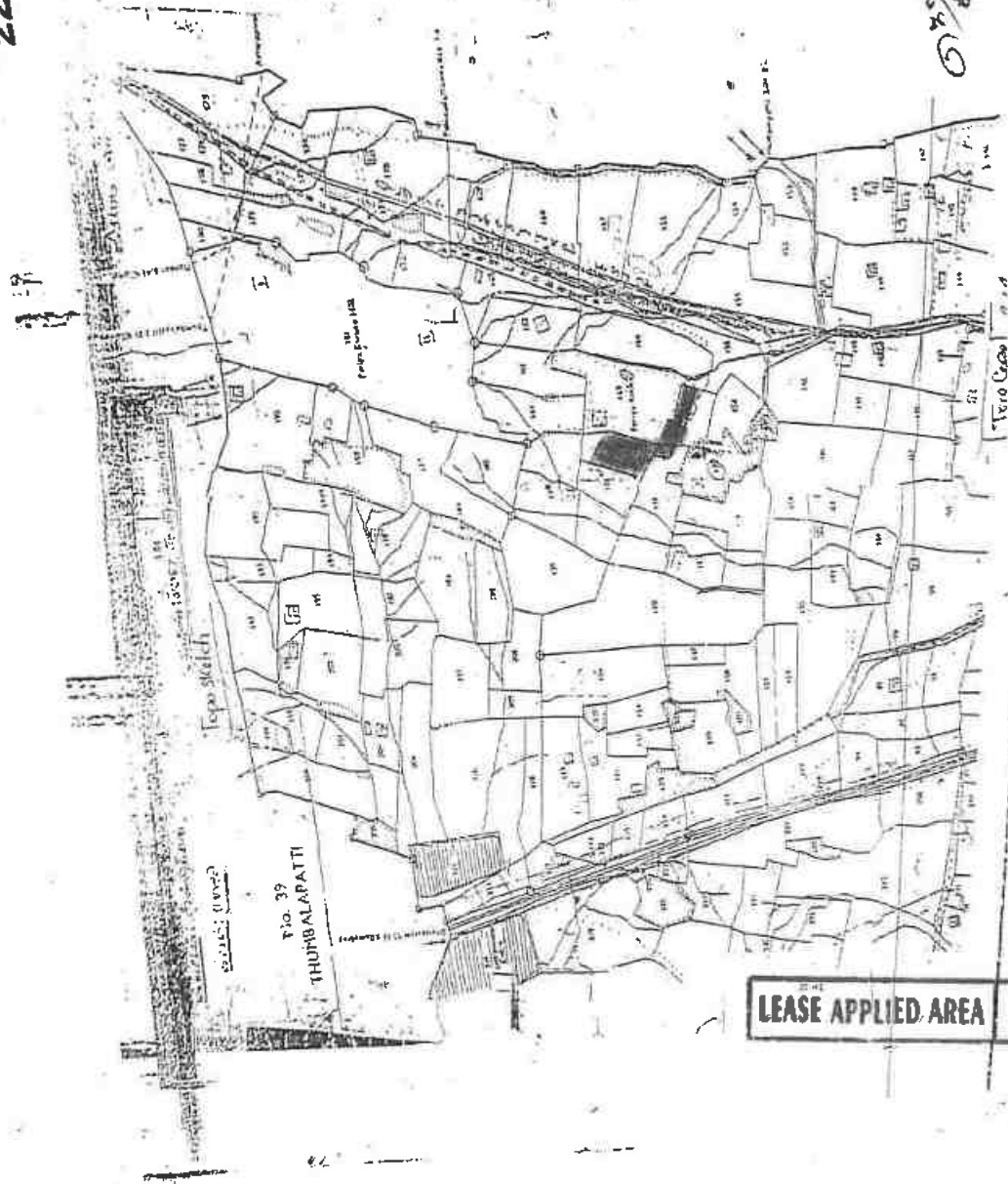
Date of Issue: 30-06-2025 13:25:56

Survey and Settlement Department, Government of TamilNadu

240 fv.1

22. புளியம்பட்டி

Scanned with CamScanner

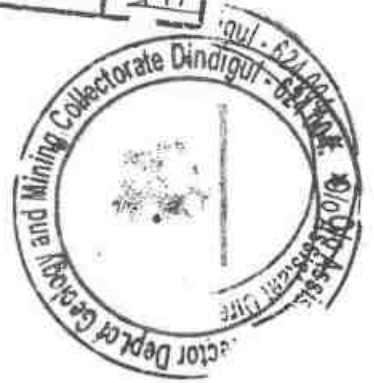


S.No 160/a, 159/a, 131/a, 132/2B

PATTU QUARRY } APPLIED
LEASE

கிராம நிர்வாக அலுவலர்
புளியம்பட்டி குடும்ப
புள்ளி வட்டம்.

ANNEXURE 211



LEASE APPLIED AREA



ANNEXURE

2V



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

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

மாவட்டம் : திண்டுக்கல்

வட்டம் : பழனி

வருவாய் கிராமம் : புளியம்பட்டி

பட்டா எண் : 466

உரிமையாளர்கள் பெயர்

1. வேலுச்சாமி கவுண்டர்

மகன்

பழனிச்சாமி

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
131	1C2	1 - 25.50	1.55	--	--	--	--	D1413/0024-- d1413/0003 ----- Digitally signed: Mariyappan T Tahsildar 26/01/2016 02:55:49:PM
132	2B	0 - 16.00	0.20	--	--	--	--	D1413/0024-- d1413/0009 ----- Digitally signed: Mariyappan T Tahsildar 26/01/2016 02:55:49:PM
159	1	0 - 61.00	0.76	--	--	--	--	D1413/0025-- d1413/0010 ----- Digitally signed: Mariyappan T Tahsildar 26/01/2016 03:01:51:PM
		2 - 2.50	2.51					

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் P/13/21/041/00466/170176 என்ற குறிப்பு எண்ணை உள்ளிட்டு செய்து உறுதி செய்துகொள்ளவும்.
- இத தகவல்கள் 09-05-2025 அன்று 10:13:43 AM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

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

வட்டம் : பழனி

பட்டா எண் : 36

உரிமையாளர்கள் பெயர்

மாவட்டம் : திண்டுக்கல்

வருவாய் கிராமம் : புளியம்பட்டி

1. கிங்காரத் தொட்டியார்

மகன்

அய்யப்பன்

புல எண்	உட்பிரிவு	புன்செய்		நுன்செய்		மற்றவை		குறிப்புணர்வுகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
160	4	0 - 19.00	0.24	--	--	--	--	Digitally Signed: Maniyappa Tahsildar 25/01/2016 03:01:51 PM
		0 - 19.00	0.24					

குறிப்பு :



1. மேற்கண்ட தகவல் / சான்றிதழ் தகவல் விவரங்கள் பின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் S/13/21/041/00036/160179 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.

2. இத் தகவல்கள் 09-05-2025 அன்று 10:09:10 AM நேரத்தில் அச்சடிக்கப்பட்டது.

3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்





आधार

இந்திய அரசாங்கம்

Unique Identification Authority of India

பதிவேட்டு எண்/Enrollment No.: 3000/80115/00287

To
அய்யப்பன் சிங்காரம்
Ayyappan Singaram
S/O: Singaram Chettiyar
193A
KUMARAN NAGAR
LAKSHMIPURAM
Palani
Dindigul Palani
Tamil Nadu - 624601
9443236006

Download Date: 08/08/2017
Generation Date: 08/08/2017

Signature valid



உங்கள் ஆதார் எண் / Your Aadhaar No. :

9649 6413 5718

எனது ஆதார். எனது அடையாளம்



இந்திய அரசாங்கம்
Unique Identification Authority of India



அய்யப்பன் சிங்காரம்
Ayyappan Singaram
பிறந்த நாள் DOB: 10/05/1973
ஆண் / MALE

9649 6413 5718

எனது ஆதார். எனது அடையாளம்



- நகல்
- ஆதார் அடையாளத்திற்கான சான்று. துடிபுரிமைக்கு அல்ல.
 - அடையாள சான்றை ஆன்லைன் ஆதார்டிகேஷன் மூலமாகப் பெறவும்.
 - இது எலக்ட்ரானிக் செயல்முறை மூலம் தயாரிக்கப்பட்ட கடிதமாகும்.

INFORMATION

- Aadhaar is a proof of identity, not of citizenship.
- To establish identity, authenticate online.
- This is electronically generated letter.

- ஆதார் நாடு முழுவதிலும் செல்லுபடியாகும்.
- வருங்காலத்தில் அரசு மற்றும் அரசு சார்பு சேவைகளை பயன்படுத்திக் கொள்ள ஆதார் உதவிகரமாக இருக்கும்.
- Aadhaar is valid throughout the country.
- Aadhaar will be helpful in availing Government and Non-Government services in future



இந்திய அரசாங்கம்
Unique Identification Authority of India

முகவரி:
S/O: சிங்காரம் செட்டியார்,
193ஏ, குமாரன் நகர்,
லட்சுமிபுரம், பழனி,
திண்டுக்கல்,
தமிழ்நாடு - 624601

Address:
S/O: Singaram Chettiyar, 193A,
KUMARAN NAGAR,
LAKSHMIPURAM, Palani,
Dindigul,
Tamil Nadu - 624601

9649 6413 5718



1947



help@uidai.gov.in

WWW

www.uidai.gov.in

12

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

21 September, 1944

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

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.

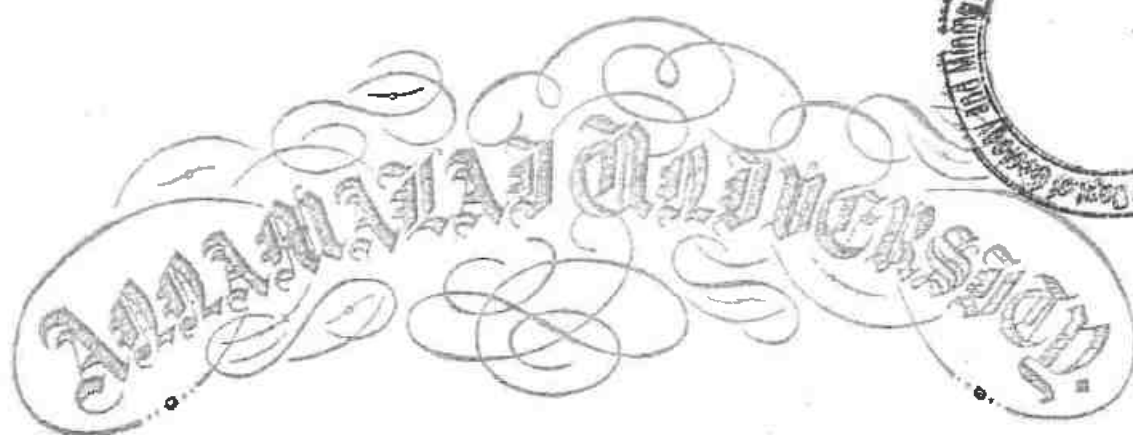
<u>Name of the Pit.</u>	<u>Average Raising/day.</u>
1. Alambadi Pit.	- 1,700 T.
2. Mallapuram Pit.	- 900 T.
3. Karikkali Pit.	- 150 T.

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 Zoology, he having been certified by duly appointed Examiners at the examination held in April, 1976, to be qualified to receive the same and that he was placed in the First Class.

Given under the seal of the University.

Annamalai Nagar
24th December, 1976.

A. Chandrasekha
Vice-Chancellor.

10°30'49.66"N

77°32'11.56"E



10°30'41.32"N

PLATE NO-I

DATE OF SURVEY : 28.06.2025

APPLICANT:

THIRU.SAYYAPPAN,
S/O SINGARAM CHETTIYAR,
NO:93, LAKSHMIPURAM,
PALANI TALUK,
DINDIGUL DISTRICT.

LOCATION OF QUARRY

LEASE APPLIED AREA:

S.F.NOs : 160/4,159/1, 132/2B&131/1C2(P)
EXTENT : 1.86.00Ha
VILLAGE : PULIYAMPATTI,
TALUK : PALANI,
DISTRICT : DINDIGUL.

INDEX

Q. L. APPLIED AREA : ●

TOPO SHEET No. : 58 F/10

LATITUDE : 10°30'41.32"N to 10°30'49.66"N

LONGITUDE : 77°32'11.56"E to 77°32'17.75"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 AUTHENTICATED STATE
GOVERNMENT

C.N. JAYARAJ, Sc.M.A.,
QUALIFIED PERSON

PLATE NO-IA

DATE OF SURVEY : 28.06.2025

APPLICANT:

THIRU.S.AYYAPPAN,
S/o.SINGARAM CHETTIYAR,
NO:93, LAKSHMIPURAM,
PALANI TALUK,
DINDIGUL DISTRICT.

LOCATION OF QUARRY

LEASE APPLIED AREA

S.F.NOs : 160/4,159/1, 132/28, 31/1C2(P)

EXTENT : 1.86.00Ha

VILLAGE : PULIYAMPATTI,

TALUK : PALANI,

DISTRICT : DINDIGUL.

INDEX

TOPO SHEET No. : 58 F/10

LATITUDE : 10°30'41.32"N to 10°30'49.66"N

LONGITUDE : 77°32'11.56"E to 77°32'17.75"E

Q.LEASE APPLIED AREA

7.5m&10m SAFETY

300M RADIUS

500M RADIUS

1KM RADIUS

APPROACH ROAD

PANCHAYAT ROAD

STATE HIGHWAY

BARREN LAND

TREES

SEASONAL AGRICULTURE LAND

HABITATIONS

CRUSHER

SHED

QUARRY PIT

LAND USE PATTERN

DESCRIPTION	AREA IN (%)
ROAD	04
TREES	15
BARREN LAND	61
HABITATIONS	05
AGRICUTURE LAND	15

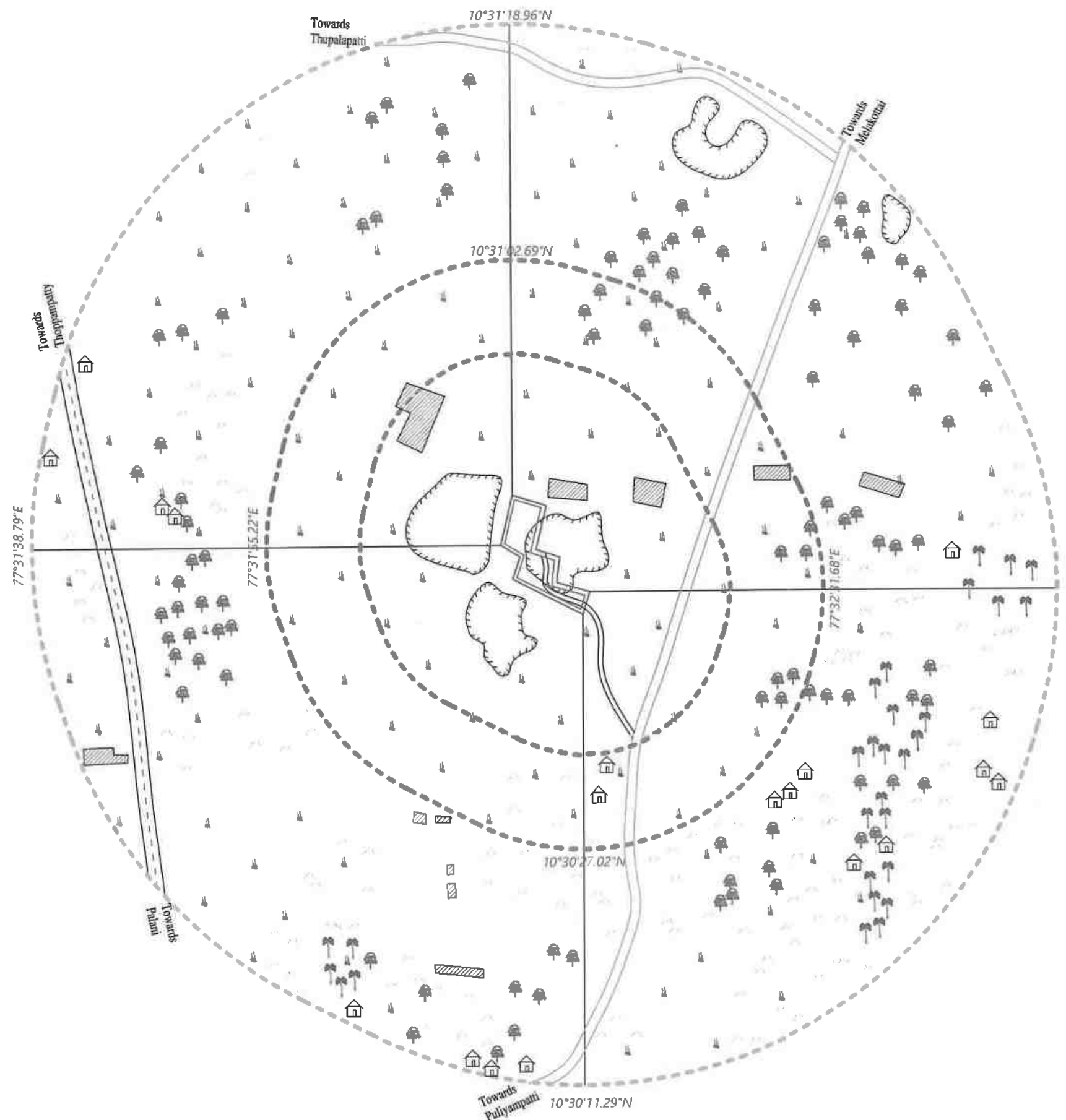
ENVIRONMENTAL PLAN

SCALE 1: 10,000

PREPARED BY :

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

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



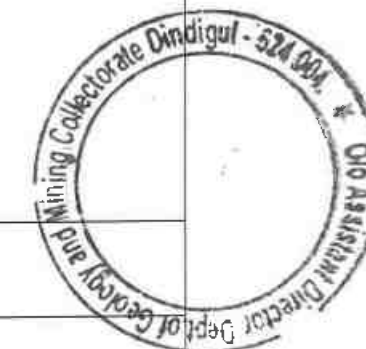


PLATE NO-IB

DATE OF SURVEY : 28.06.2025

APPLICANT:

THIRU.S. AYYAPPAN,
S/O SINGARAM CHETTIYAR,
NO:93, LAKSHMIPURAM,
PALANI TALUK,
DINDIGUL DISTRICT.

LOCATION OF QUARRY

LEASE APPLIED AREA:

S.F.NOs : 160/4,159/1, 132/2B&131/1C2(P)
EXTENT : 1.86.00Ha
VILLAGE : PULIYAMPATTI,
TALUK : PALANI,
DISTRICT : DINDIGUL.

INDEX

TOPO SHEET No. : 58 F/10

LATITUDE : 10°30'41.32"N to 10°30'49.66"N

LONGITUDE : 77°32'11.56"E to 77°32'17.75"E

Q.LEASE APPLIED AREA



7.5m&10m SAFETY



300M RADIUS



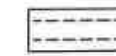
500M RADIUS



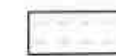
1KM RADIUS



APPROACH ROAD



PANCHAYAT ROAD



STATE HIGHWAY



SATELLITE IMAGERY MAP

SCALE 1 : 10,000

Prepared By:

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


C.N.ATARADAN, M.Sc., M.Phil.,
QUALIFIED PERSON

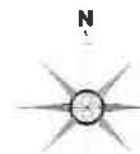
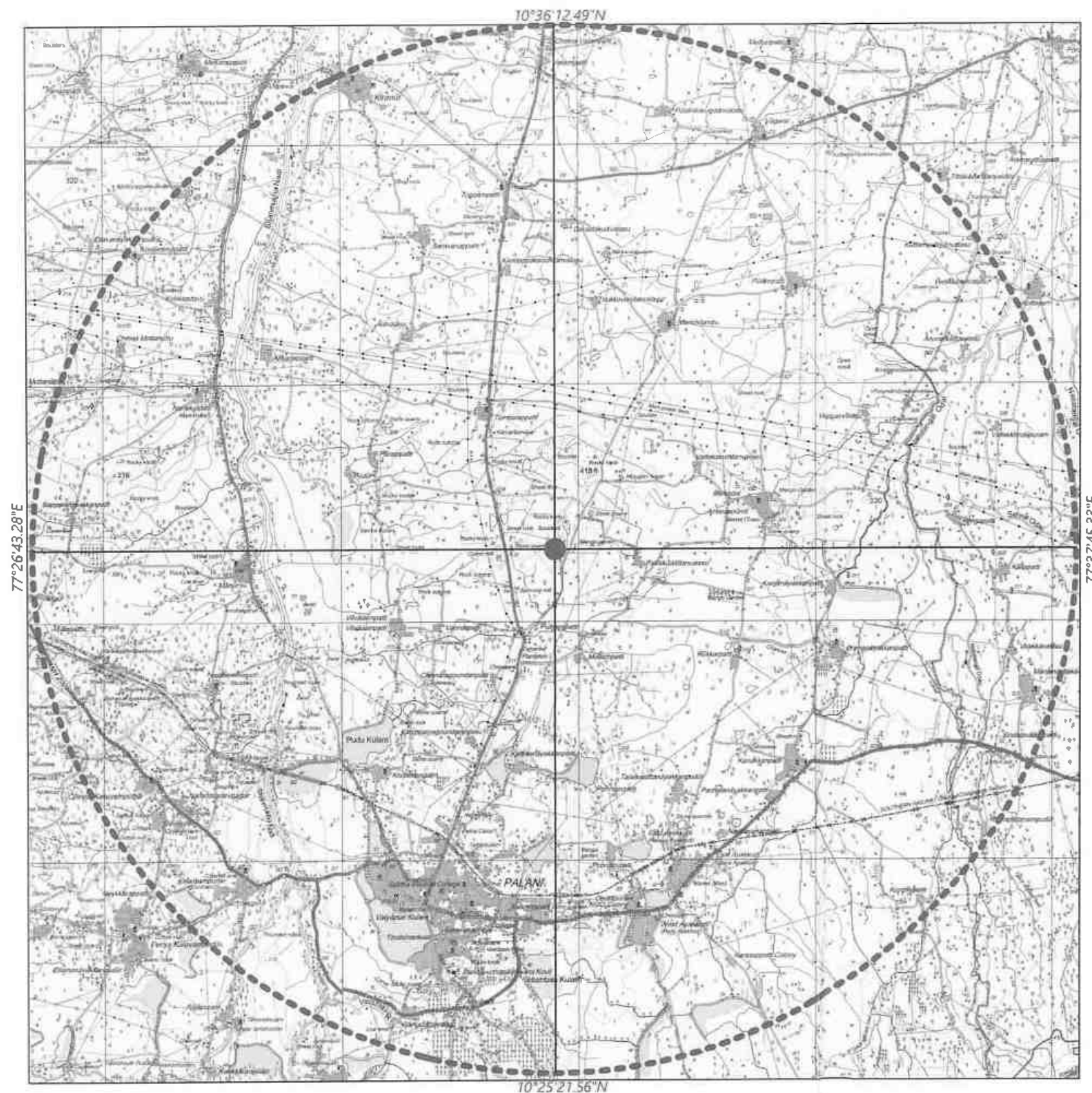


PLATE NO-IC

DATE OF SURVEY :28.06.2025

APPLICANT:

THIRU.S.AYYAPPAN,
S/o.SINGARAM CHETTIYAR,
NO:93, LAKSHMIPURAM,
PALANI TALUK,
DINDIGUL DISTRICT.

LOCATION OF QUARRY

LEASE APPLIED AREA:

S.F.NOs : 160/4,159/1, 132/2B&131/1C2(P)

EXTENT : 1.86.00Ha

VILLAGE : PULIYAMPATTI,

TALUK : PALANI,

DISTRICT : DINDIGUL.

INDEX

TOPO SHEET No. : 58 F/10

LATITUDE : 10°30'41.32"N to 10°30'49.66"N

LONGITUDE : 77°32'11.56"E to 77°32'17.75"E

Q.L.APPLIED AREA



10KM RADIUS

[illegible]

TOPO SKETCH OF QUARRY

LEASE APPLIED AREA FOR

10Km RADIUS

SCALE— 1:100000

Prepared By:

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

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

KEY PLAN

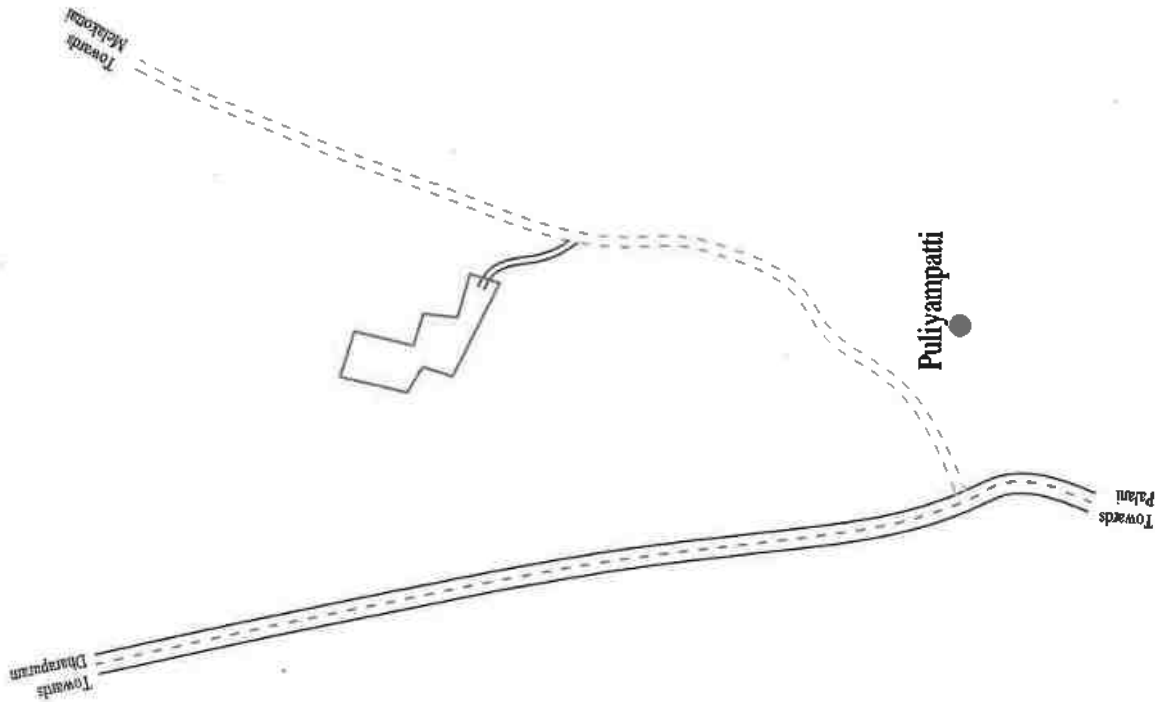
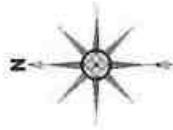
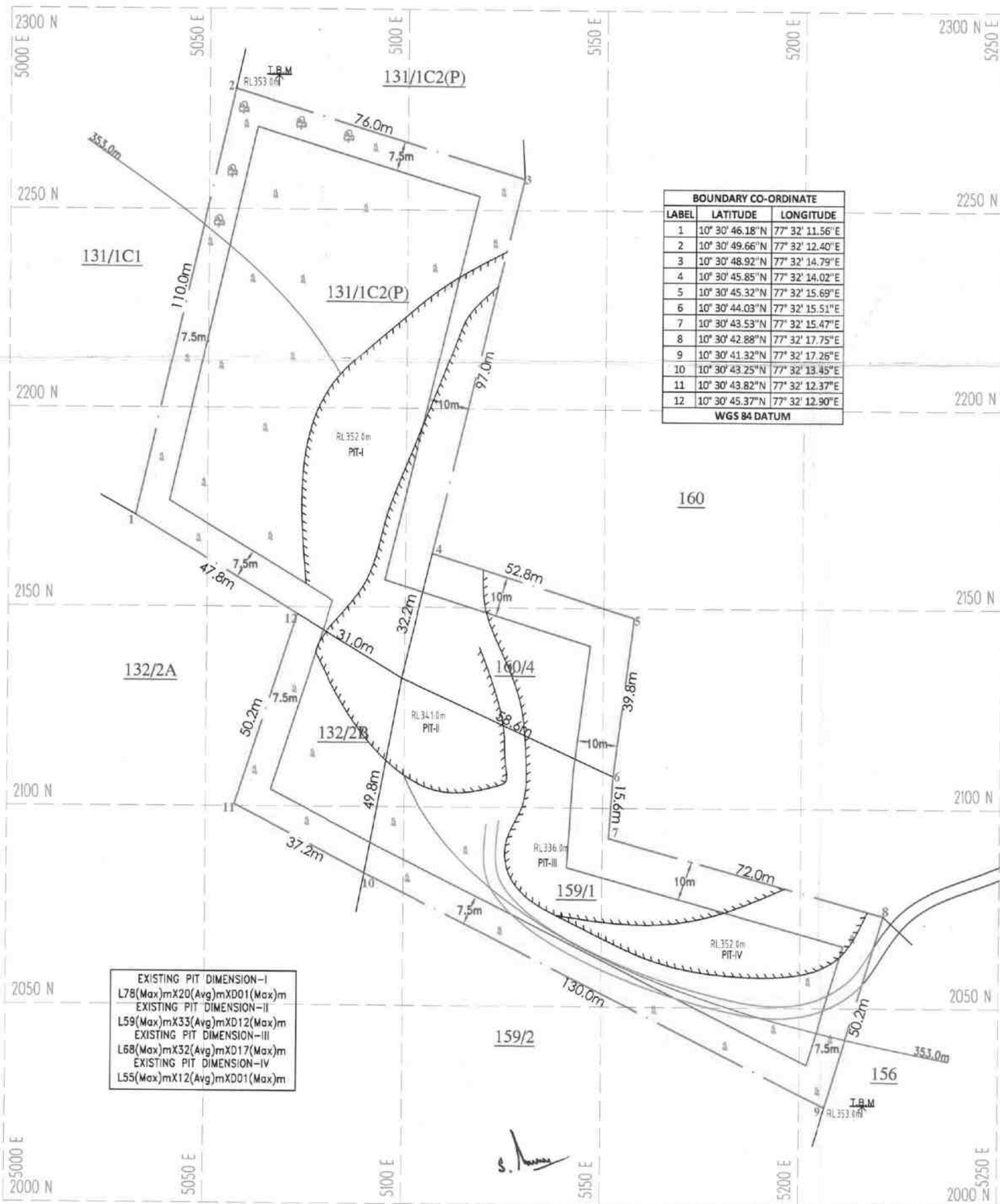


PLATE NO-ID DATE OF SURVEY : 28.06.2025
APPLICANT: THIRU S. AYYAPPAN, S/o SINGARAM CHETTIYAR, NO:93, LAKSHMIPURAM, PALANI TALUK, DINDIGUL DISTRICT.
LOCATION OF QUARRY LEASE APPLIED AREA: S.F.NO.s : 160/4,159/1, 132/2B&131/1C2(P) EXTENT : 1.86.00Ha VILLAGE : PULIYAMPATTI, TALUK : PALANI, DISTRICT : DINDIGUL.
INDEX Q.LEASE APPLIED AREA  STATE HIGHWAY  PANCHAYAT ROAD  APPROACH ROAD  HABITATIONS 
KEY PLAN
PREPARED BY:  THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLAN IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE BASED UPON THE MAP AUTHENTICATED BY THE GOVERNMENT.  C. NATARAJAN, M.Sc., M.Phil., QUALIFIED PERSON



BOUNDARY CO-ORDINATE		
LABEL	LATITUDE	LONGITUDE
1	10° 30' 46.18"N	77° 32' 11.56"E
2	10° 30' 49.66"N	77° 32' 12.40"E
3	10° 30' 48.92"N	77° 32' 14.79"E
4	10° 30' 45.85"N	77° 32' 14.02"E
5	10° 30' 45.32"N	77° 32' 15.69"E
6	10° 30' 44.03"N	77° 32' 15.51"E
7	10° 30' 43.53"N	77° 32' 15.47"E
8	10° 30' 42.88"N	77° 32' 17.75"E
9	10° 30' 41.32"N	77° 32' 17.26"E
10	10° 30' 43.25"N	77° 32' 13.45"E
11	10° 30' 43.82"N	77° 32' 12.37"E
12	10° 30' 45.37"N	77° 32' 12.90"E
WGS 84 DATUM		

EXISTING PIT DIMENSION-I
L78(Max)mX20(Avg)mXD01(Max)m
EXISTING PIT DIMENSION-II
L59(Max)mX33(Avg)mXD12(Max)m
EXISTING PIT DIMENSION-III
L68(Max)mX32(Avg)mXD17(Max)m
EXISTING PIT DIMENSION-IV
L55(Max)mX12(Avg)mXD01(Max)m

PLATE NO-II

DATE OF SURVEY : 28.06.2025

APPLICANT:

THIRU.S. AYYAPPAN
S/o SINGARAM CHETTIYAR,
NO:93, LAKSHMI RAM,
PALANI TALUK,
DINDIGUL DISTRICT

LOCATION OF QUARRY LEASE APPLIED AREA:

S.F.NOs : 160/4, 159/1, 132/2B & 131/1C2(P)
EXTENT : 1.86.00Ha
VILLAGE : PULIYAMPATTI,
TALUK : PALANI,
DISTRICT : DINDIGUL.

INDEX

Q.L. APPLIED BOUNDARY

7.5m & 10m SAFETY DISTANCE

TEMPORARY BENCH MARK

APPROACH ROAD

QUARRY ROAD

CONTOUR

SCRUB

QUARRY PIT

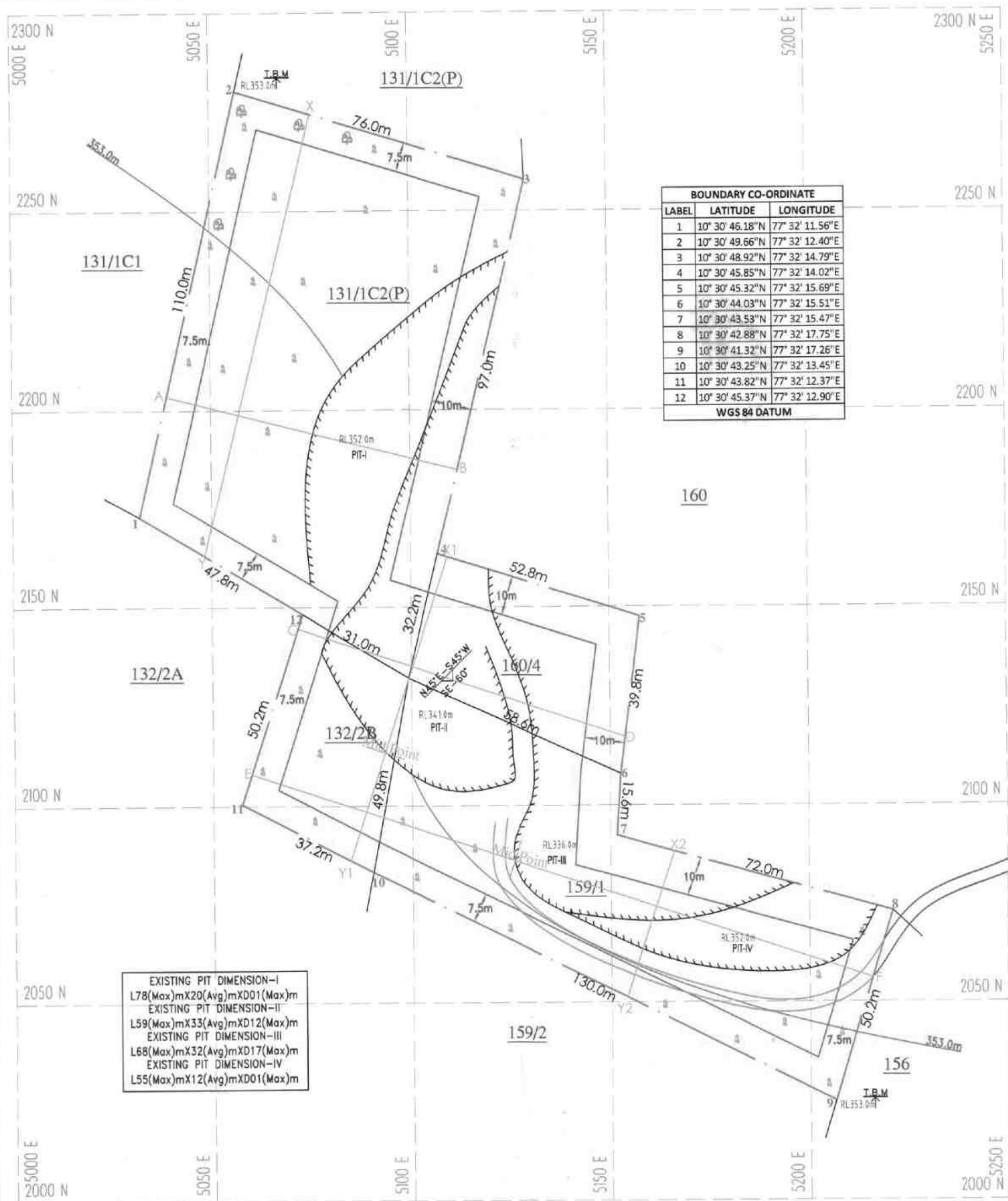
QUARRY LEASE & SURFACE PLAN

SCALE 1 : 1000

PREPARED BY:

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

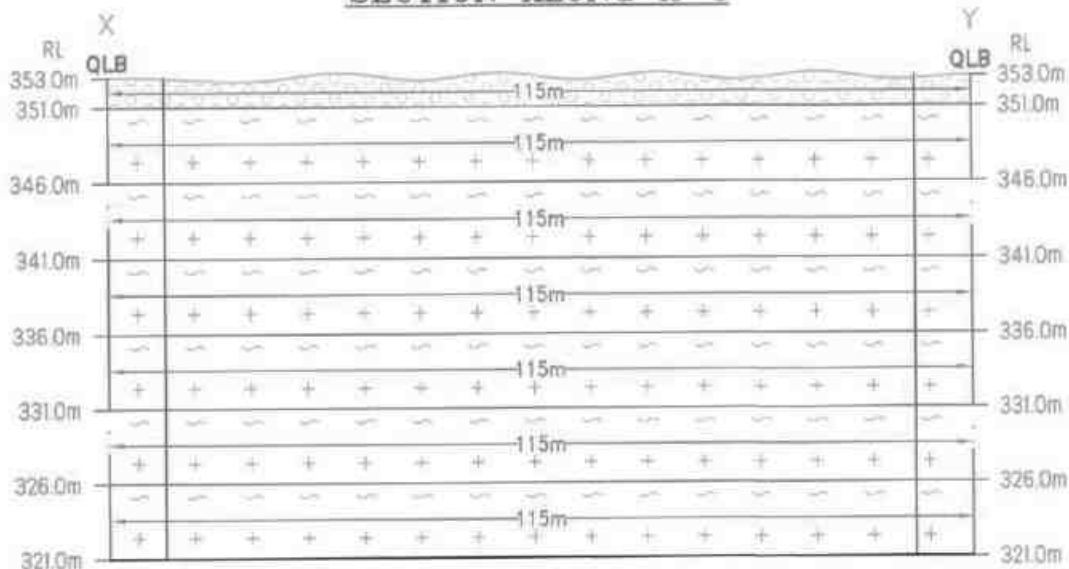
C. NATARAJAN, M.Sc., M.Phil.,
QUALIFIED PERSON



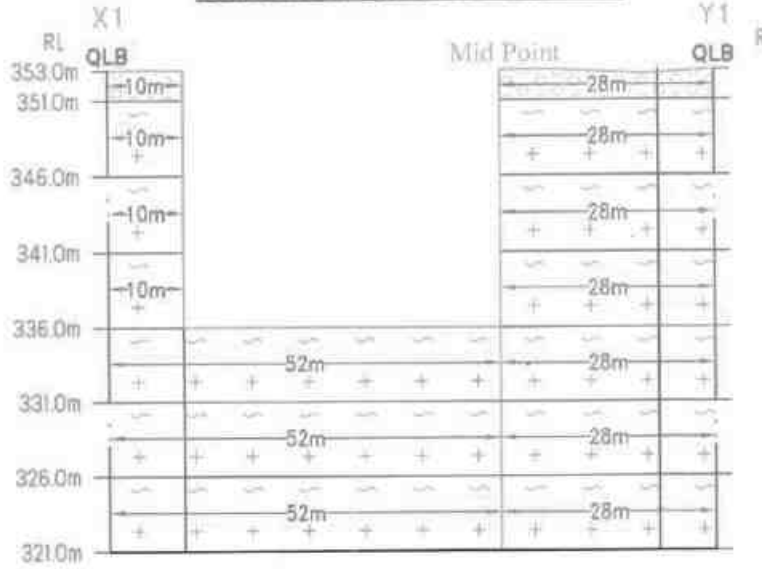
BOUNDARY CO-ORDINATE		
LABEL	LATITUDE	LONGITUDE
1	10° 30' 46.18"N	77° 32' 11.56"E
2	10° 30' 49.66"N	77° 32' 12.40"E
3	10° 30' 48.92"N	77° 32' 14.79"E
4	10° 30' 45.85"N	77° 32' 14.02"E
5	10° 30' 45.32"N	77° 32' 15.69"E
6	10° 30' 44.03"N	77° 32' 15.51"E
7	10° 30' 43.53"N	77° 32' 15.47"E
8	10° 30' 42.88"N	77° 32' 17.75"E
9	10° 30' 41.32"N	77° 32' 17.26"E
10	10° 30' 43.25"N	77° 32' 13.45"E
11	10° 30' 43.82"N	77° 32' 12.37"E
12	10° 30' 45.37"N	77° 32' 12.90"E
WGS 84 DATUM		

EXISTING PIT DIMENSION-I
L78(Max)mX20(Avg)mXD01(Max)m
EXISTING PIT DIMENSION-II
L59(Max)mX33(Avg)mXD12(Max)m
EXISTING PIT DIMENSION-III
L68(Max)mX32(Avg)mXD17(Max)m
EXISTING PIT DIMENSION-IV
L55(Max)mX12(Avg)mXD01(Max)m

SECTION ALONG X-Y



SECTION ALONG X1-Y1



SECTION ALONG X2-Y2



PLATE NO-III
DATE OF SURVEY : 28.05.2024
APPLICANT:
THIRU.S.AYYAPPAN
S/o.SINGARAM SETHIYAR,
NO.93, LAKSHMI PURAM,
PALANI TALUK,
DINDIGUL DISTRICT.
LOCATION OF QUARRY
LEASE APPLIED AREA:
S.F.Nos : 160/4,159/1, 132/2B&131/1C2(P)
EXTENT : 1.86.00Ha
VILLAGE : PULIYAMPATTI,
TALUK : PALANI,
DISTRICT : DINDIGUL.

INDEX

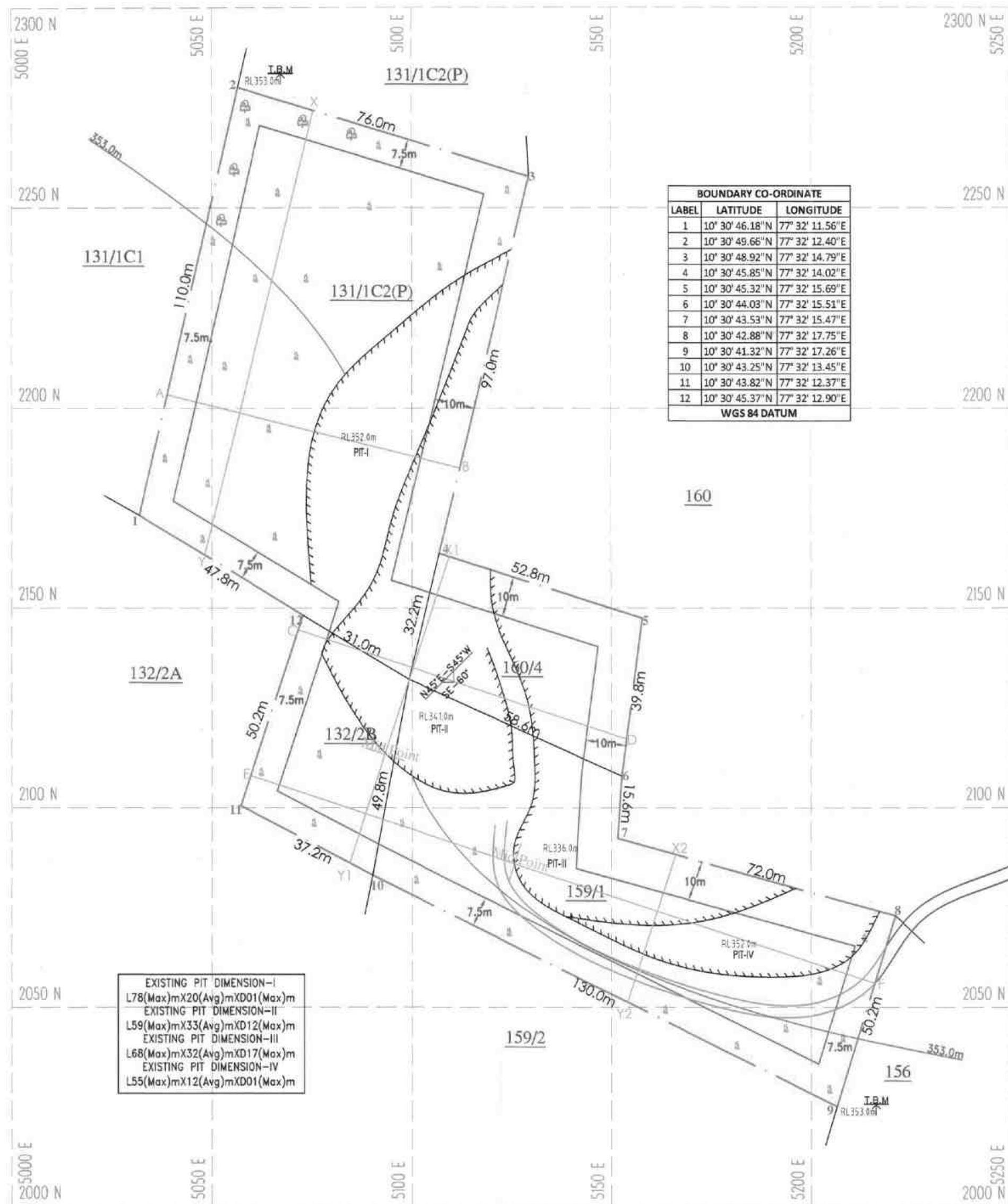
Q.L. APPLIED BOUNDARY	---
7.5m&10m SAFETY DISTANCE	---
TEMPORARY BENCH MARK	T.B.M.
APPROACH ROAD	---
QUARRY ROAD	---
CONTOUR	---
SCRUB	---
GRAVEL	---
ROUGH STONE	---
STRIKE & DIP	---
QUARRY PIT	---

TOPOGRAPHY, GEOLOGICAL
PLAN & SECTIONS

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

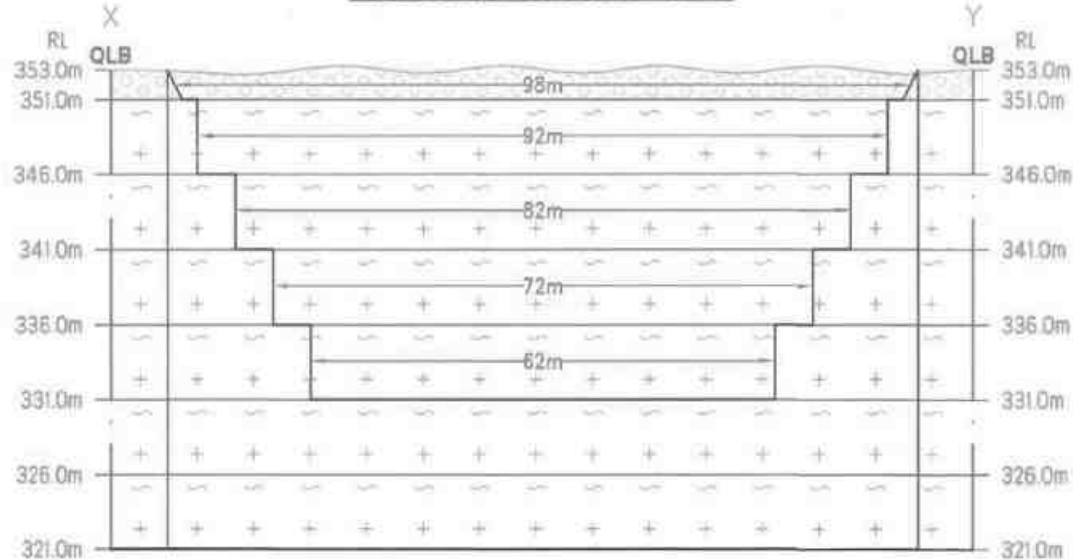
PREPARED BY:
THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

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

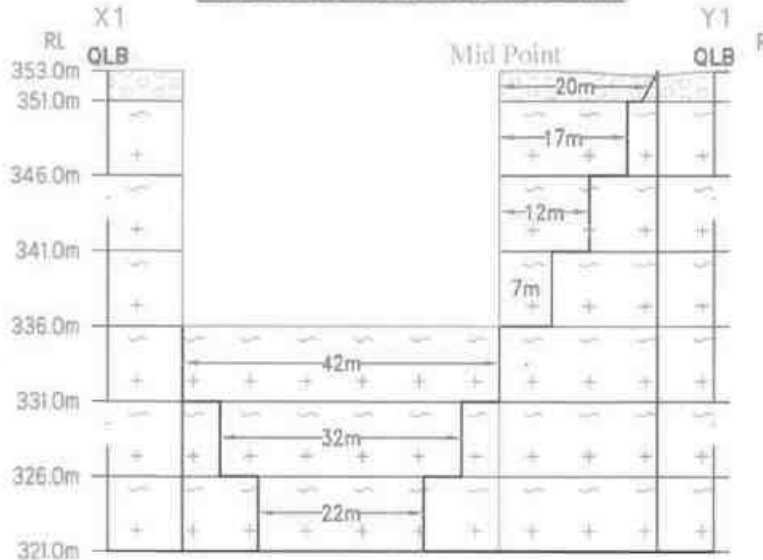


EXISTING PIT DIMENSION-I
L78(Max)mX20(Avg)mXD01(Max)m
EXISTING PIT DIMENSION-II
L59(Max)mX33(Avg)mXD12(Max)m
EXISTING PIT DIMENSION-III
L68(Max)mX32(Avg)mXD17(Max)m
EXISTING PIT DIMENSION-IV
L55(Max)mX12(Avg)mXD01(Max)m

SECTION ALONG X-Y



SECTION ALONG X1-Y1



SECTION ALONG X2-Y2



PLATE NO-IV
DATE OF SURVEY : 28.06.2025
APPLICANT:
THIRU.S.AYYAPPA,
S/o.SINGARAPPAHETTYAR,
NO.93, LAKSHIPURAM,
PALANI TALUK,
DINDIGUL DISTRICT.
LOCATION OF QUARRY
LEASE APPLIED AREA
S.F.NO.s : 160/4,159/1, 152/2B&131/1C2(P)
EXTENT : 1.86.00Ha
VILLAGE : PULIYAMPATTI,
TALUK : PALANI,
DISTRICT : DINDIGUL.

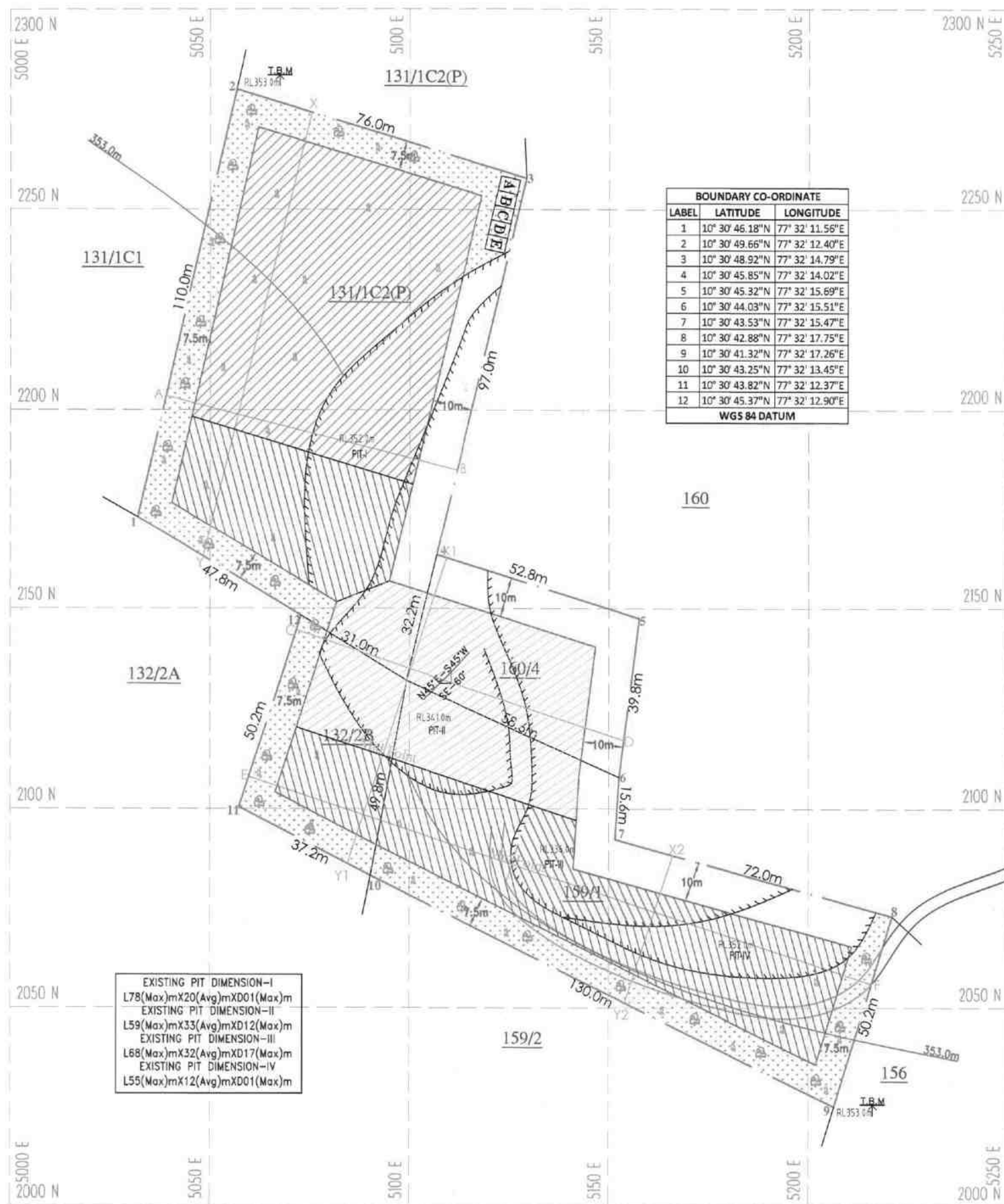
INDEX

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

MINEABLE PLAN & SECTIONS
SCALE 1 : 1000
SECTIONS HOR 1:1000, VER 1:500

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

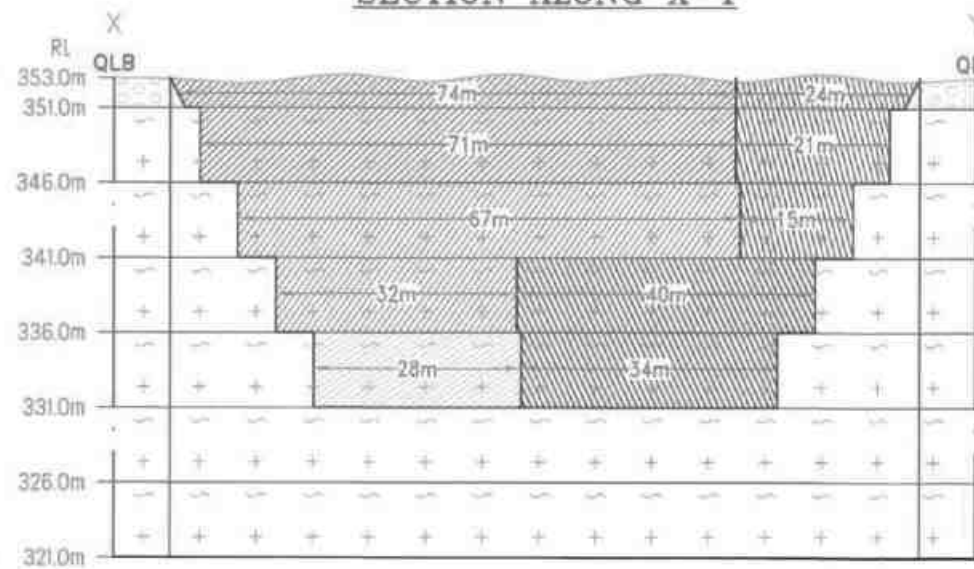
C.NATARAJAN S.M.Phil.,
QUALIFIED PERSON



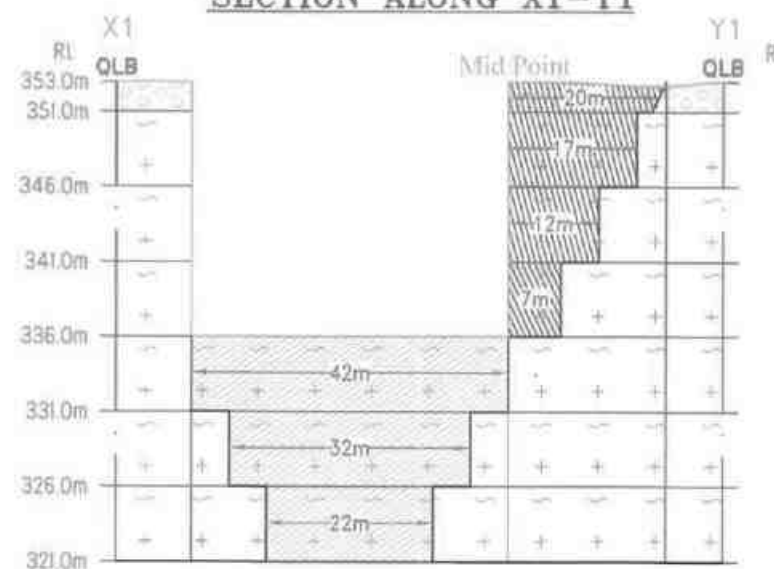
BOUNDARY CO-ORDINATE		
LABEL	LATITUDE	LONGITUDE
1	10° 30' 46.18"N	77° 32' 11.56"E
2	10° 30' 49.66"N	77° 32' 12.40"E
3	10° 30' 48.92"N	77° 32' 14.79"E
4	10° 30' 45.85"N	77° 32' 14.02"E
5	10° 30' 45.32"N	77° 32' 15.69"E
6	10° 30' 44.03"N	77° 32' 15.51"E
7	10° 30' 43.53"N	77° 32' 15.47"E
8	10° 30' 42.88"N	77° 32' 17.75"E
9	10° 30' 41.32"N	77° 32' 17.26"E
10	10° 30' 43.25"N	77° 32' 13.45"E
11	10° 30' 43.82"N	77° 32' 12.37"E
12	10° 30' 45.37"N	77° 32' 12.90"E
WGS 84 DATUM		

EXISTING PIT DIMENSION-I
L78(Max)mX20(Avg)mXD01(Max)m
EXISTING PIT DIMENSION-II
L59(Max)mX33(Avg)mXD12(Max)m
EXISTING PIT DIMENSION-III
L68(Max)mX32(Avg)mXD17(Max)m
EXISTING PIT DIMENSION-IV
L55(Max)mX12(Avg)mXD01(Max)m

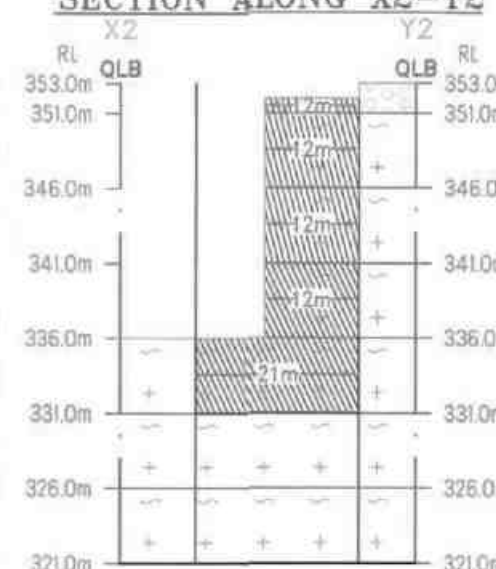
SECTION ALONG X-Y



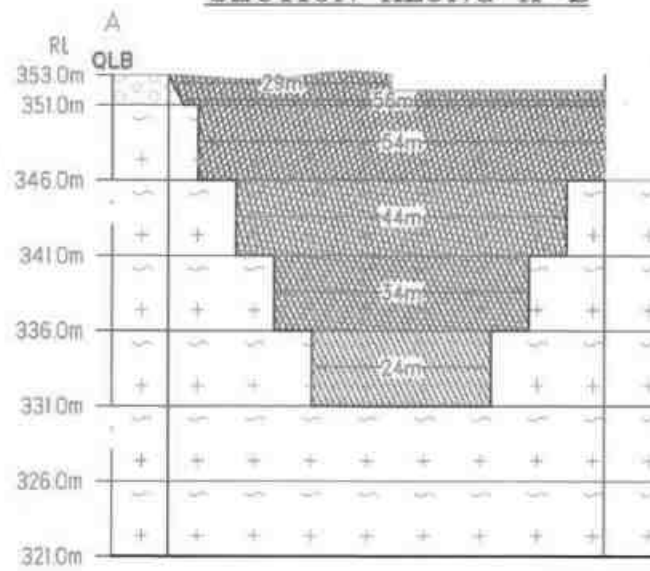
SECTION ALONG X1-Y1



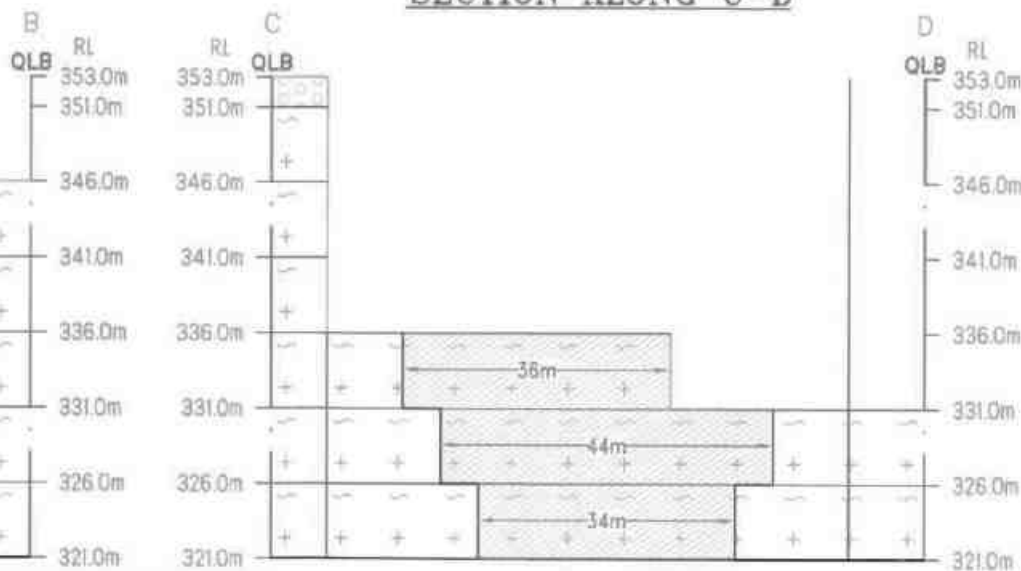
SECTION ALONG X2-Y2



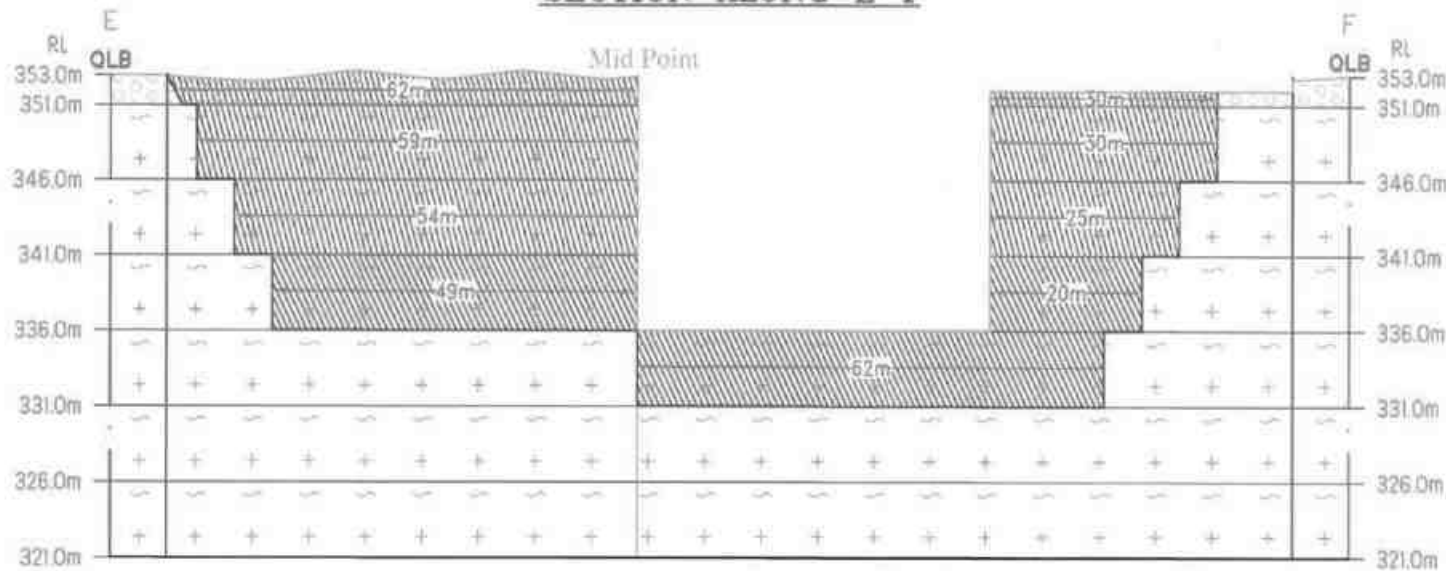
SECTION ALONG A-B



SECTION ALONG C-D



SECTION ALONG E-F



Proposed area to be Planted

PROPOSED SITE SERVICES

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

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

PRESENT & POST LAND USE PATTERN

DESCRIPTION	PRESENT AREA (Ha)	AREA AT THE END OF THIS QUARRYING PERIOD (Ha)
AREA UNDER QUARRYING	0.63.5	1.48.5
INFRASTRUCTURE	0.00.0	0.01.0
ROADS	0.01.0	0.01.0
GREEN BELT	0.02.0	0.35.5
UN-UTILIZED AREA	1.19.5	NII
GRAND TOTAL	1.86.0	1.86.0

PLATE NO-V
DATE OF SURVEY :28.06.2022
APPLICANT:
THIRU.S.AYYAPPAN,
S/o.SINGARAM CHETTIYAR,
NO:93, LAKSHMIPURAM,
PALANI TALUK,
DINDIGUL DISTRICT.
LOCATION OF QUARRY
LEASE APPLIED AREA:
S.F.Nos : 160/4,159/1, 132/2B&131/1C2(P)
EXTENT : 1.86.00Ha
VILLAGE : PULIYAMPATTI,
TALUK : PALANI,
DISTRICT : DINDIGUL.

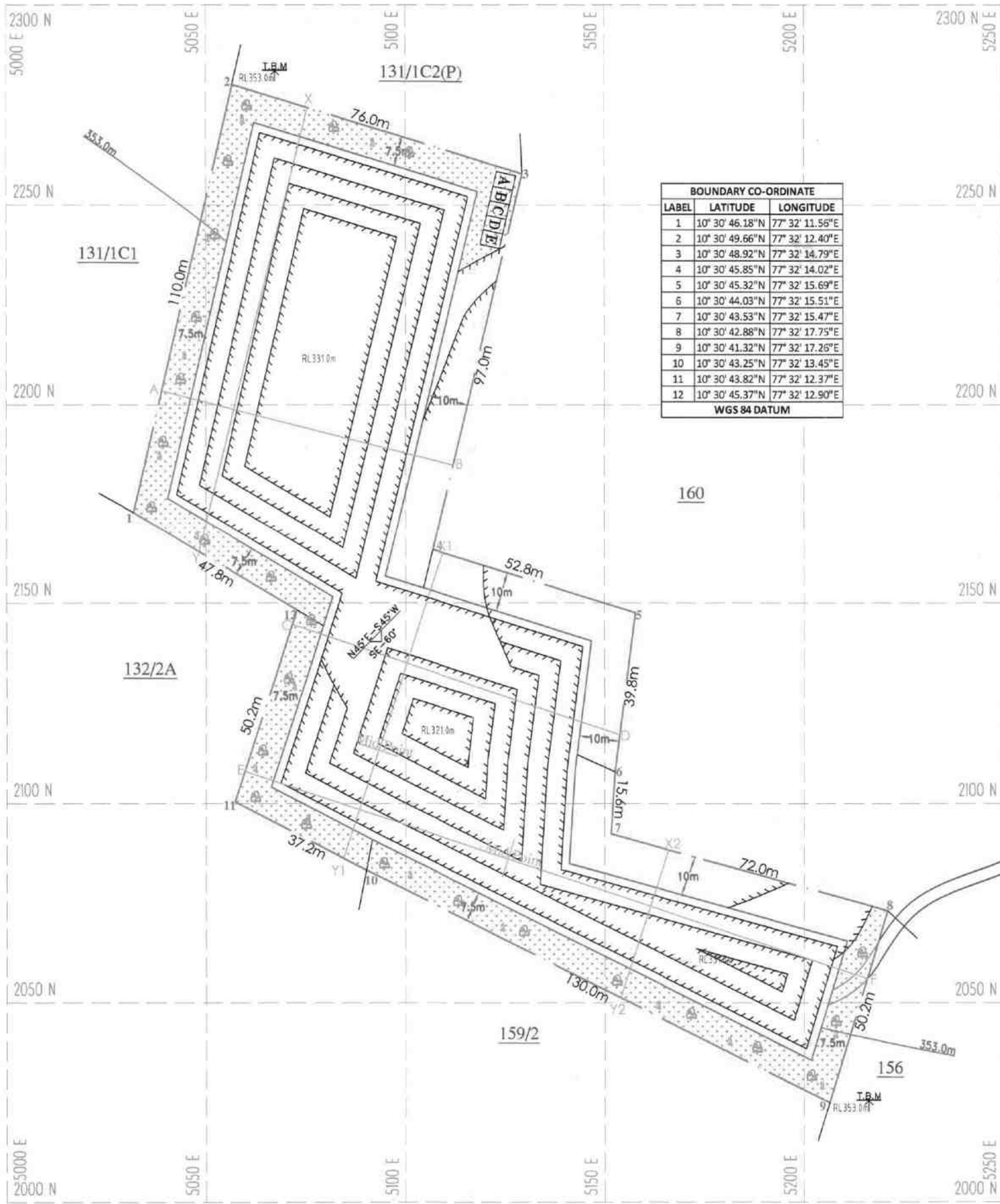
INDEX

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

YEARWISE DEVELOPMENT & PRODUCTION PLAN & SECTIONS
SCALE 1:1000
SECTIONS HOR 1:1000, VER 1:500

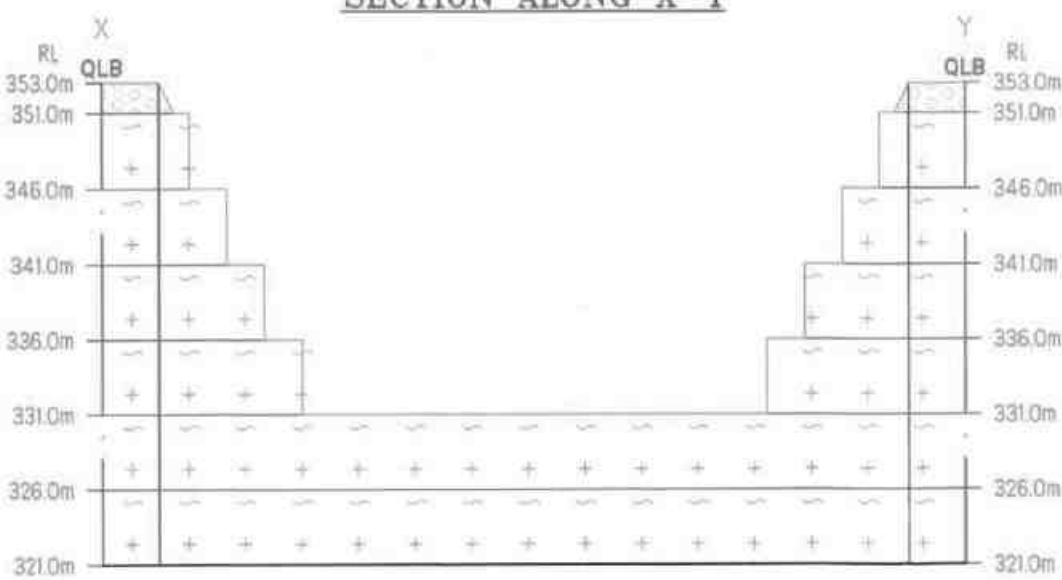
PREPARED BY:
THIS IS TO CERTIFY THAT THE INFORMATION IN THIS PLATE IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE BASED UPON THE LEASE MAP AUTHENTICATED BY STATE GOVERNMENT

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

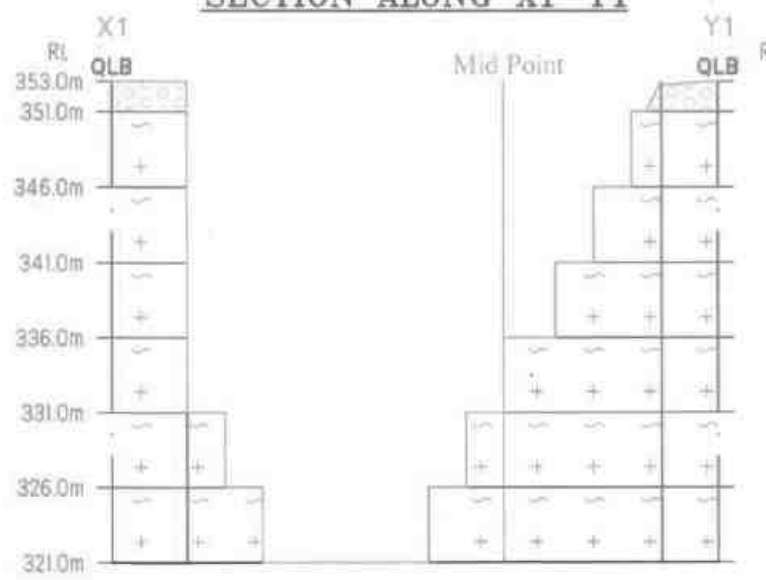


BOUNDARY CO-ORDINATE		
LABEL	LATITUDE	LONGITUDE
1	10° 30' 46.18"N	77° 32' 11.56"E
2	10° 30' 49.66"N	77° 32' 12.40"E
3	10° 30' 48.92"N	77° 32' 14.79"E
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5	10° 30' 45.32"N	77° 32' 15.69"E
6	10° 30' 44.03"N	77° 32' 15.51"E
7	10° 30' 43.53"N	77° 32' 15.47"E
8	10° 30' 42.88"N	77° 32' 17.75"E
9	10° 30' 41.32"N	77° 32' 17.26"E
10	10° 30' 43.25"N	77° 32' 13.45"E
11	10° 30' 43.82"N	77° 32' 12.37"E
12	10° 30' 45.37"N	77° 32' 12.90"E
WGS 84 DATUM		

SECTION ALONG X-Y



SECTION ALONG X1-Y1



SECTION ALONG X2-Y2

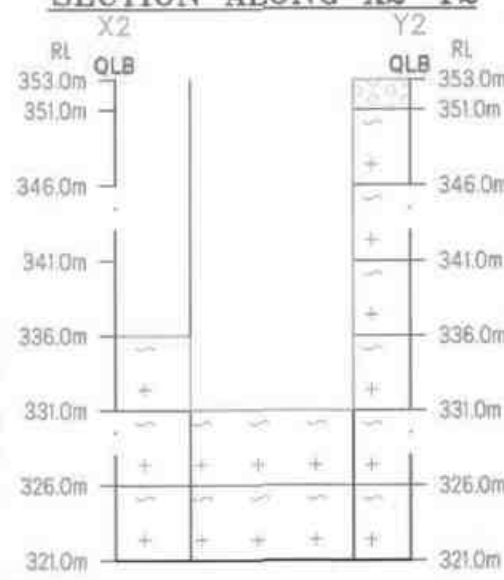


PLATE NO-VI
DATE OF SURVEY : 28.06.2023
APPLICANT:
THIRU.SAYYAPPAN
S/o.SINGARAM CHETTIYAR,
NO.93, LAKSHMIPURAM,
PALANI TALUK,
DINDIGUL DISTRICT.

LOCATION OF QUARRY
LEASE APPLIED AREA:
S.F.NOs : 160/4,159/1, 132/2B&131/1C2(P)
EXTENT : 1.86.00Ha
VILLAGE : PULIYAMPATTI,
TALUK : PALANI,
DISTRICT : DINDIGUL.

INDEX

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

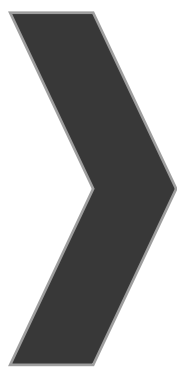
CONCEPTUAL PLAN & SECTIONS
SCALE 1:1000
SECTIONS HOR 1:1000, VER 1:500

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

C.NATARAJAN, M.Sc.,
QUALIFIED PERSON

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

Ultimate Pit Dimension
L-150mXW-99(Avg)mXD32m(Max)



ANNEXURE-4

From

Thiru.T.Selvasekar, M.Sc.,
Assistant Director,
Geology and Mining,
Dindigul

To

Thiru.S.Ayyappan,
S/o.Singaram Chettiyar,
No.193, Lakshmipuram,
Palani Taluk,
Dindigul

Rc.No.535/2025(Mines) dated: 7.07.2025

Sir,

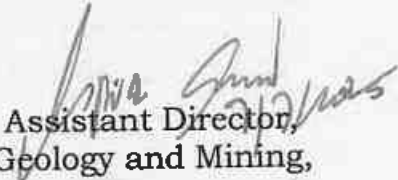
Sub: Mines and Minerals - Minor Mineral - Rough stone - Dindigul District - Palani Taluk - Puliampatti Village - Patta Land - S.F.No.160/4, 159/1, 132/2B & 131/1C2(P) over an extent of 1.86.0 hecets - preferred by Thiru.S.Ayyappan - Precise area communicated - Submission of Mining Plan for approval - Existing features within 500mts radius requested - reg.

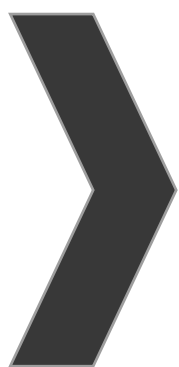
- Ref:**
1. Application from Thiru.S.Ayyappan, S/o.Singaram Chettiyar, Dindigul dated.13.05.2025
 2. Precise Area Communication Notice Rc.No.535/2025 (Mines), dated 27.06.2025
 3. Mining Plan submitted by Thiru.S.Ayyappan, S/o.Singaram Chettiyar, Dindigul dated.04.07.2025

With reference to your letter 3rd cited, the details of existing and lease expired quarries located within 500m radius from the proposed Rough stone & gravel quarry, over an extent of 1.86.0 Hectares of Patta Land in S.F.No.160/4, 159/1, 132/2B & 131/1C2(P) of Puliampatti Village, Palani Taluk, Dindigul District are as follows:

Sl. No	Name of the quarry Owner	Name of the Village & Survey Number	Extent (in Hects)	Remarks
a. Existing Quarries				
1.	KNR Construction Puliampatti Palani	131/1A, 1B, 2A, 2B, 1C1, 132/1, 2A	4.83.5	13.09.2022 to 12.09.2027

b. Abandoned Quarries				
1.	V.Soundara pandian,	160/6 (P)	0.62.5	26.10.2015 to 25.10.2020
c. Present proposed Quarries				
1.	S.Ayyappan, S/o.Singaram Chettiyar, No.193, Lakshmipuram, Palani Taluk, Dindigul	160/4, 159/1, 132/2B & 131/1C2(P)	1.86.0	Applied area (Rough stone)


Assistant Director,
Geology and Mining,
Dindigul



ANNEXURE-5

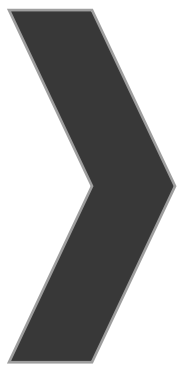
சான்றிதழ்

திண்டுக்கல் மாவட்டம், பழனி வட்டம், புளியம்பட்டி கிராமம், பட்டா எண். 466-ல் கண்ட 159/1 (0.61), 132/2B (0.16) மற்றும் 131/1C2 (1.12.5)-இல் மொத்தம் 1.89.5 ஹெக்டேர் நிலம் வேலுச்சாமி மகன் பழனிச்சாமி பெயரிலும் பட்டா எண். 36-இல் 160/4 (0.19) ஹெக்டேர் நிலம் சிங்காரம் மகன் S.அய்யப்பன் பெயரிலும் கிராம கணக்கில் தூக்கல் ஆகி உள்ளது.

மேற்படி நிலத்தை சுற்றி 300 (முன்னூறு) மீட்டர் சுற்றளவில் பொதுமக்கள் வசிக்கக் குடியிருப்புகளோ, அங்கீகரிக்கப்பட்ட வீட்டு மனையிடங்களோ ஏதுமில்லை. மேலும் புராதான சின்னங்கள் விலை உயர்ந்த மரங்கள், கோயில், பள்ளி, கல்லூரிகள், பறவைகள் விலங்குகள் சரணாலயங்கள் ஏதுமில்லை என்ற விபரத்திற்கு சான்று வழங்கப்படுகிறது.


கிராம நிர்வாக அலுவலர்
புளியம்பட்டி குழுப்
பழனி வட்டம்.





ANNEXURE-6

District : Dindigul

Taluk : Palani

Village : Puliampatty [41]



Survey No : 132

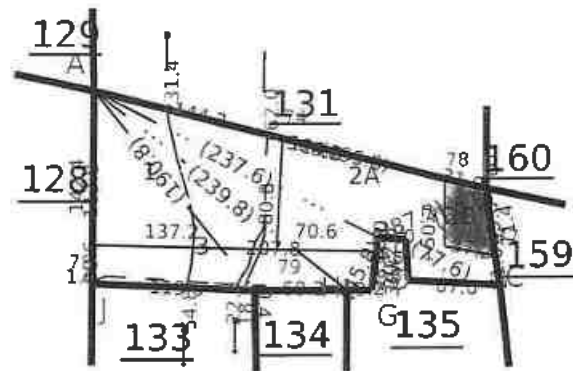
Area : Hect 03 Are 00.50

Scale : 1 : 5049



155.8

6



LEASE APPLIED AREA



Signed By Tahsildar

Name of approver : thpln

Date of Approval : 25-12-2017



Date of Issue: 30-06-2025 13:27:37

District : Dindigul

Taluk : Palani

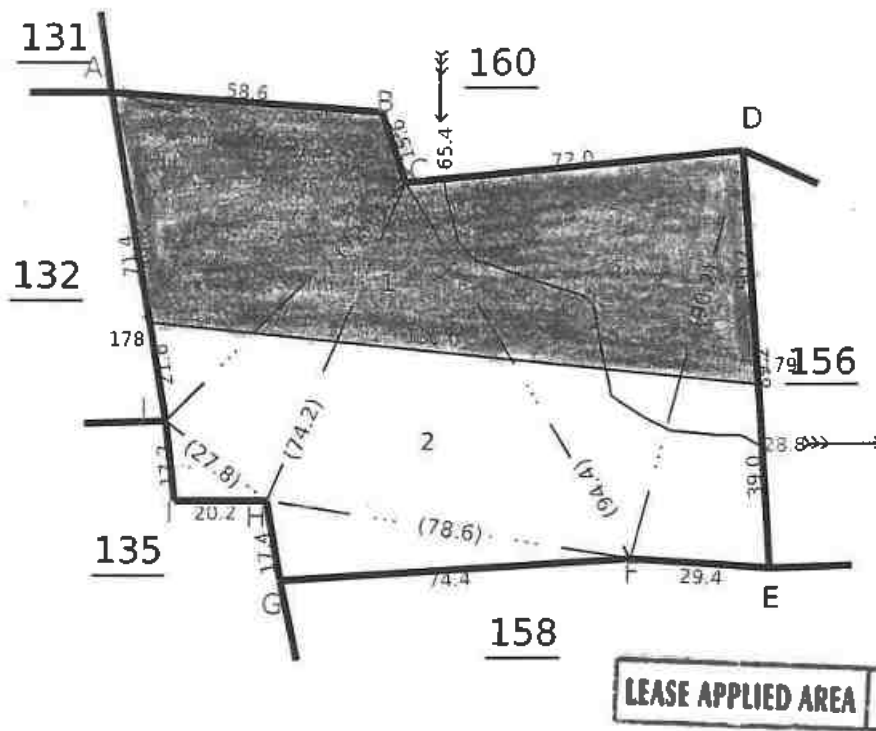
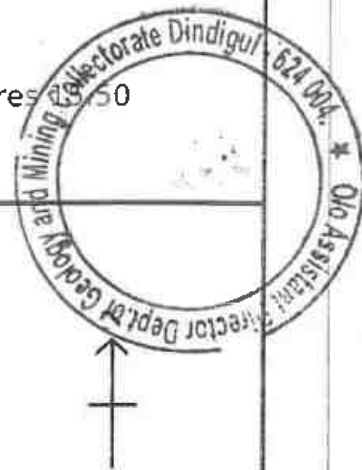
Village : Puliampatty [41]



Survey No : 159

Area : Hect 01 Ares 350

Scale : 1 : 1464



Signed By Tahsildar

Name of approver : thpln

Date of Approval : 20-12-2017



Date of Issue: 30-06-2025 13:26:48

District : Dindigul

Taluk : Palani

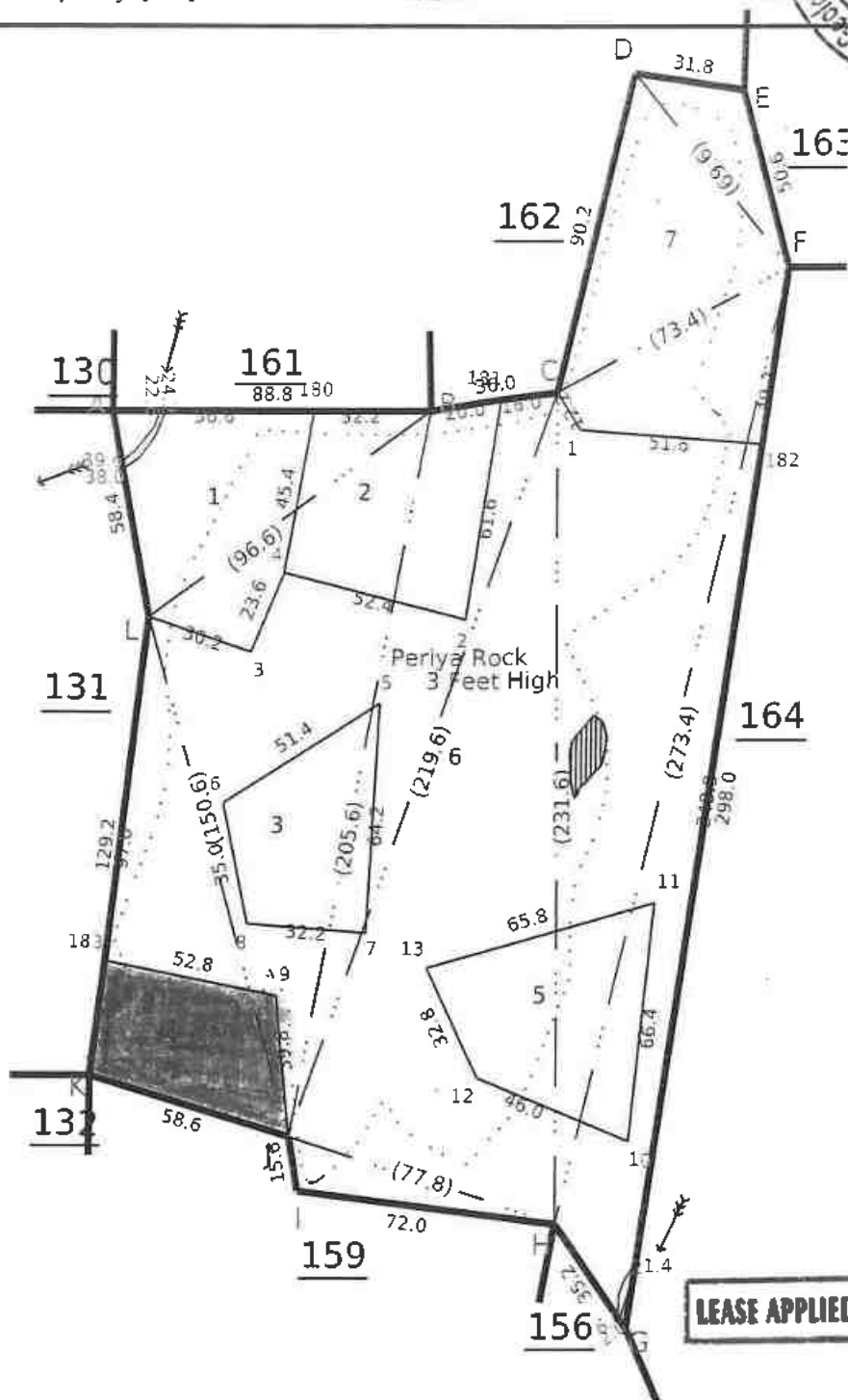
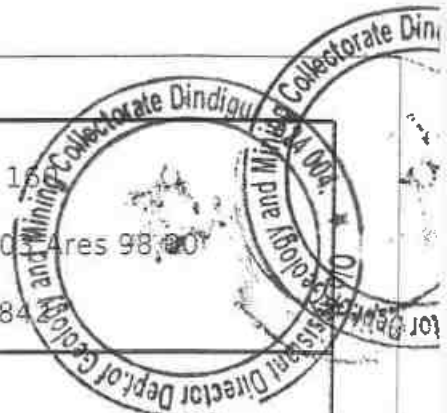
Village : Puliampatty [41]



Survey No : 15

Area : Hect 0 Ares 98 00

Scale : 1 : 184



Signed By Tahsildar

Name of approver : thpln

Date of Approval : 20-12-2017



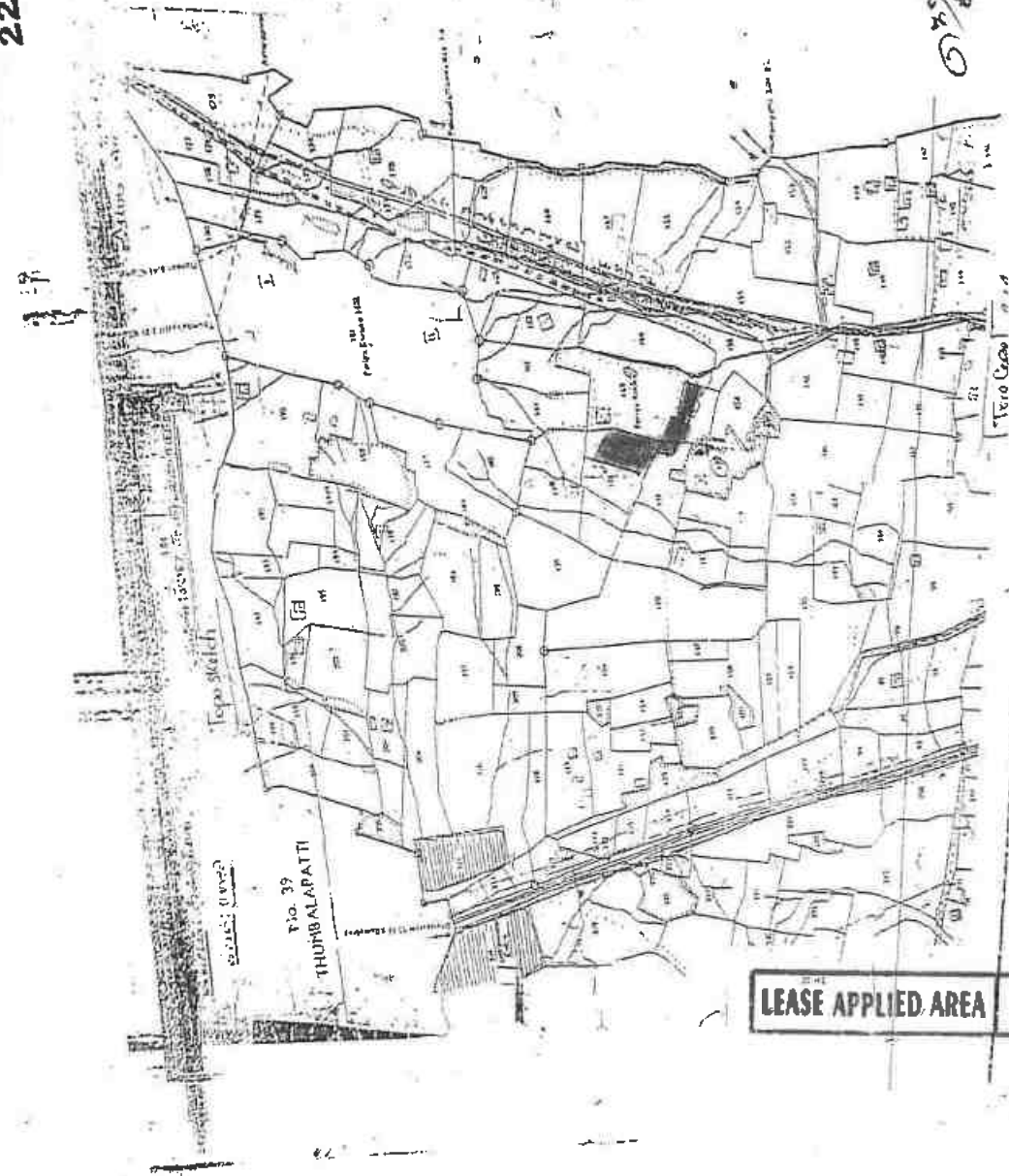
Date of Issue: 30-06-2025 13:25:56

Survey and Settlement Department, Government of TamilNadu

240 fv.1

22. புளியம்பட்டி

Scanned with CamScanner

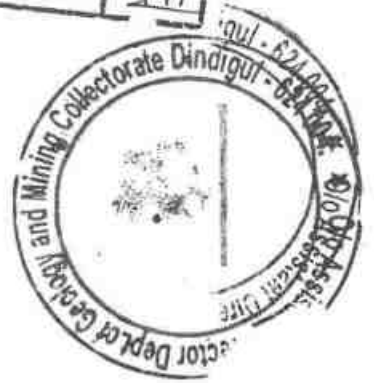


S.No 160/a, 159/a, 131/a, 132/2B

PATTU QUARRY } APPLIED
LEASE

கிராம நிர்வாக அலுவலர்
புளியம்பட்டி குடும்ப
புள்ளி வட்டம்.

ANNEXURE 211



LEASE APPLIED AREA



ANNEXURE

2V



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

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

மாவட்டம் : திண்டுக்கல்

வட்டம் : பழனி

வருவாய் கிராமம் : புளியம்பட்டி

பட்டா எண் : 466

உரிமையாளர்கள் பெயர்

1. வேலுச்சாமி கவுண்டர்

மகன்

பழனிச்சாமி

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
131	1C2	1 - 25.50	1.55	--	--	--	--	D1413/0024-- d1413/0003 ----- Digitally signed: Mariyappan T Tahsildar 26/01/2016 02:55:49:PM
132	2B	0 - 16.00	0.20	--	--	--	--	D1413/0024-- d1413/0009 ----- Digitally signed: Mariyappan T Tahsildar 26/01/2016 02:55:49:PM
159	1	0 - 61.00	0.76	--	--	--	--	D1413/0025-- d1413/0010 ----- Digitally signed: Mariyappan T Tahsildar 26/01/2016 03:01:51:PM
		2 - 2.50	2.51					

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் P/13/21/041/00466/170176 என்ற குறிப்பு எண்ணை உள்ளிட்டு செய்து உறுதி செய்துகொள்ளவும்.
- இத தகவல்கள் 09-05-2025 அன்று 10:13:43 AM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

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

வட்டம் : பழனி

பட்டா எண் : 36

உரிமையாளர்கள் பெயர்

மாவட்டம் : திண்டுக்கல்

வருவாய் கிராமம் : புளியம்பட்டி

1. கிங்காரத் தொட்டியார்

மகன்

அய்யப்பன்

புல எண்	உட்பிரிவு	புன்செய்		நுன்செய்		மற்றவை		குறிப்புணர்வுகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
160	4	0 - 19.00	0.24	--	--	--	--	Digitally Signed: Maniyappa Tahsildar 25/01/2016 03:01:51 PM
		0 - 19.00	0.24					

குறிப்பு :



1. மேற்கண்ட தகவல் / சான்றிதழ் தகவல் விவரங்கள் பின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் S/13/21/041/00036/160179 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.

2. இத் தகவல்கள் 09-05-2025 அன்று 10:09:10 AM நேரத்தில் அச்சடிக்கப்பட்டது.

3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



1563/2025



தமிழ்நாடு தமிழ்நாடு TAMILNADU

31000%

BF 085412



S. சதீஸ் B.Sc.,

முத்தியத்தூர் வித்யையாள்
உரிமம் எண்: 03/2021
C1, ஸ்ரீ விஷ்ணு காம்ப்ளக்ஸ்
புது தாராபுரம் ரோடு
பழனி - 624 601
நாள்: 02.05.2025

V. பழனிச்சாமி
புளியம்பட்டி

முன் அட்வான்ஸ் இல்லாத குத்தகை காலக் கெடு நீட்டிப்பு

ஒப்பந்த பத்திரம்

2025- ஆம் ஆண்டு மே மாதம் 02 ஆம் தேதி

திண்டுக்கல் மாவட்டம், பழனி தாலுகா, புளியம்பட்டி
கிராமம் என்ற முகவரியில் வசிக்கும் வேலுச்சாமிக்கவுண்டர்
அவர்கள் மகன் V.பழனிச்சாமி (ஆதார் எண் 9430 7265 9978: செல்
நம்பர் 98421 73736)- 1 சொத்தின் உரிமையாளர்



1. V. பழனிச்சாமி

2. S. சதீஸ்

புத்தகம் 2025ம் வருடத்திய 1563 ம்
ஆவணம் 17 தாள்களைக் கொண்டது
1 வது தாள்
பதிவு அலுவலர்

திண்டுக்கல் மாவட்டம், பழனி தாலுகா, பழனிநகர், கதவு எண் 193ல் லட்சுமிபுரம் என்ற முகவரியில் வசிக்கும் K.R. சிங்காரம் அவர்கள் மகன் S. அய்யப்பன் (ஆதார் எண் 9649 6413 5718: செல் நம்பர் 94432 36006)-2 குத்தகைதாரர் ஆகிய நாம் இரண்டு பேர்களும் சேர்ந்து சம்மதித்து எழுதிக் கொண்ட குத்தகை காலக் கெடு நீட்டிப்பு ஒப்பந்தம்.

நம்மில் 1லக்கமிட்டவருக்கு சென்ற 10.07.2001ந் தேதிய பழனி 2 நீர் இணைசார்பதிவாளர் அலுவலகம் 1புத்தகம் 1206/2001 ஆம் எண்ணாகப் பதிவாகியுள்ள சுத்தக் கிரையப் பத்திரப்படி பாத்தியப்பட்டதும் சென்ற 10.03.2003ந் தேதிய மேற்படி அலுவலகம் 1புத்தகம் 371/2003 ஆம் எண்ணாகப் பதிவாகியுள்ள சுத்தக் கிரையப் பத்திரப்படி பாத்தியப்பட்ட கீழ்க்கண்ட சொத்தினை சென்ற 14.01.2019ந் தேதிய பழனி 2 நீர் இணைசார்பதிவாளர் அலுவலகம் 1புத்தகம் 3028/2019 ஆம் எண்ணாகப் பதிவாகியுள்ள குத்தகை ஒப்பந்தப்படி எதிர்வரும் 25.10.2025ந் தேதி வரை கெடு இருக்க மேற்படி தேதியிலிருந்து குத்தகை காலத்தை மேலும் 11 ஆண்டுகள் நீட்டித்தும் ஒரு வருடக் குத்தகை ரூபாய் 61,000/- என்றும் நமக்குள் பேசி ஒப்புக் கொண்டு அதன்படி நாளது தேதியில் மொத்தக் குத்தகை தொகையான ரூபாய் 6,71,000/-த்தை

I. V. பழனிச்சாமி

2. 3. 4.

1 புத்தகம் 2025ம் வருடத்திய 1563 ம்
ஆவணம் 17 தாள்களைக் கொண்டது
2 வது தாள்
பதிவு அலுவலர்



நம்மில் 1லக்கமிட்டவர் 2லக்கமிட்டவரிடம் ஐசிஐசிஐ வங்கி காசோலை எண் 541577 மூலம் 1லக்கமிட்டவர் பெற்றுக் கொண்டது ரூபாய் 6,71,000/- இந்த ரூபாய் ஆறு லட்சத்து எழுபத்து ஒன்று ஆயிரமும் 1லக்கமிட்டவருக்கு செல்லாகி விட்டபடியால் எதிர்வரும் 25.10.2025ந் தேதி முதல் 24.10.2036ந் தேதிவரை கீழ்க்கண்ட சொத்தினை 2லக்கமிட்டவர் குத்தகையாக அடைந்து அதிலுள்ள பலன்களை அனுபவித்துக் கொள்ள வேண்டியதென்றும், இந்தப்படிக்கு நாம் இரண்டு பேர்களும் சேர்ந்து சம்மதித்து எழுதிக் கொண்ட குத்தகை காலக் கெடு நீட்டிப்பு பத்திரம்.

சொத்து விவரம்

1. பழனி பதிவு மாவட்டம், பழனி 2 நீர் இணைசார்பதிவாளர் அலுவலகம் பழனி தாலுகா புளியம்பட்டி கிராமம், சர்வே எண் 160/5 நிர் புன்செய் முழுப்பரப்பு ஹெக்டேர் 0.26.00க்கு ஏக்கர் 0 செ 64 உள்ள புன்செய் நிலமும் மேற்படி நிலத்திற்கு ஏற்பட்ட சகல மாமூல் வழிநடைபாதைப் பாத்தியங்களும் மற்றும்முள்ள அனுபவப் பாத்தியங்கள் யாவும் சேர்ந்து. மேற்படி சொத்து புளியம்பட்டி ஊராட்சி எல்லைக்குட்பட்டது.

1. V. பழனிச்சாமி

2. S. [Signature]

1 புத்தகம் 2025 ம் வருடத்திய 1563 ம்
ஆவணம் 17 தாள்களைக் கொண்டது
3 வது தாள்
பதிவு அலுவலர்



- 4 -

2. பழனி பதிவு மாவட்டம், பழனி 2 நீர் இணைசார்பதிவாளர் அலுவலகம் திண்டுக்கல் மாவட்டம், பழனி தாலுகா, புளியம்பட்டி கிராமம் புலத்தில்

சர்வே எண் 131/1 புஞ்சை ஹெக்டேர் 3.67.50க்கு ஏக்கர் 9 செ 8க்கு தற்போதைய சர்வேப்படி சர்வே எண் 131/1C புஞ்சை ஹெக்டேர் 2.32.50க்கு ஏக்கர் 5 செ 74ல் ஏக்கர் 3 செ 10க்கு மால்:

வடக்கு- பட்டா எண் 233 மு. வேலாத்தாள் பூமி

கிழக்கு- பட்டா எண் 36 மு.கருப்பன்மாதாரி,

பட்டா எண் 206 வே.பழனிச்சாமி ஆகியோர்கள் பூமி

தெற்கு- பட்டா எண் 135 நா. பழனிச்சாமி பூமி

மேற்கு- பட்டா எண் 135 நா. பழனிச்சாமி பூமி

மேற்கண்ட மாலுக்குள் ஹெக்டேர் 1.25.50க்கு ஏக்கர் 3 செ 10 உள்ள புஞ்சை நிலமும் தற்போதைய சர்வே எண் 131/1C2

1. V. பழனிச்சாமி

2. S. Manu

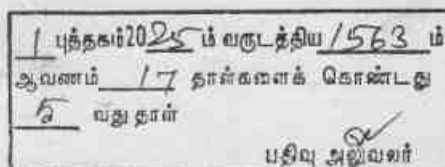


புத்தகம் 2025 ம் வருடத்திய 1563 ம்
ஆவணம் 17 தாள்களைக் கொண்டது
4 வது தாள்
பதிவு அலுவலர்

மேற்கண்ட மாலுக்குள் புஞ்சை ஹெக்டேர் 0.16.00க்கு ஏக்கர் 0 செ 40 உள்ள புஞ்சை நிலமும் தற்போதைய சர்வே எண் 132/2B.

1. ਅੰਮ੍ਰਿਤਸਰ

2. S. ~~manus~~



6.

4. பின்னும் மேற்படி கிராமம், சர்வே எண் 159 புன்செய் ஹெக்டேர் 1.15.50க்கு ஏக்கர் 2 செ 85ல் ஏக்கர் 1 செ 50க்கு மால்:

வடக்கு- வே. பழனிச்சாமி வகையார் நிலமும், பட்டா எண் 36 கருப்பன் மாதாரி வகையார் நிலமும்

கிழக்கு- பட்டா எண் 201 கு. வேலன் மாதாரி பூமி

தெற்கு- பட்டா எண் 279 நாச்சிமுத்துக்கவுண்டர், பழனியம்மாள் பூமி

மேற்கு- பட்டா எண் 135 நா. பழனிச்சாமி பூமி

மேற்கண்ட மாலுக்குள் புஞ்சை ஹெக்டேர் 0.60.00க்கு ஏக்கர் 1 செ 50 உள்ள புஞ்சை நிலங்களும் மேற்படி நிலங்களுக்கேற்பட்ட பாதை பாத்தியங்களும் மற்றும் அனுபவ பாத்தியங்களும் மாமூல் பாத்தியங்களும் யாவும் சேர்ந்து தற்போதைய சர்வே எண் 159/1.

1. V. பழனிச்சாமி

2. S. [Signature]

புத்தகம் 2025 ம் வருடத்திய 1563 ம்
ஆவணம் 17 தாள்களைக் கொண்டது
6 வது தாள்
பதிவு அலுவலர்



11வருட கெடுவுக்கு ஆண்டு 1க்கு குத்தகை ரூபாய் 61,000/-வீதம்
மொத்த மதிப்பு ரூபாய் 6,71,000/-

1. V. பழனிச்சாமி
2. S. Anna

சாட்சிகள்:

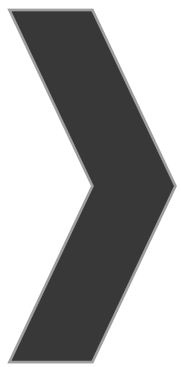
1. R. Rane (பாண்டியராஜ்) த/பெ.பெரியசாமி 251
எம்.ஆர்.டி.நகர், சிவகிரிப்பட்டி கிராமம் பழனி தாலுகா (ஆதார்
எண் 2835 0169 9619: செல் நம்பர் 80727 29769)
2. (ராமசாமி) த/பெ. சுப்பிரமணி, 222/1 புஷ்பத்தூர்
கிராமம், பழனி தாலுகா (ஆதார் எண் 6411 2451 7852: செல்
நம்பர் 86759 19995)
எழுதியது:



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1 புத்தகம் 2025 ம் வருடத்திய 1563 ம்
ஆவணம் 17 தாள்களைக் கொண்டது
7 வது தாள்
பதிவு அலுவலர்





ANNEXURE-7



Shrient Analytical and Research Labs Pvt. Ltd

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

TEST REPORT

Report No.	SARL/25/2987	Report Date.	17.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2987	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	04.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	62.8	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	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	15.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@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/25/2988	Report Date.	17.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2988	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	04.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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

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

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TEST REPORT

Report No.	SARL/25/2989	Report Date.	17.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2989	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	05.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	61.4	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	6.1	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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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/2990	Report Date.	17.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

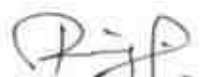
Sample Location	A2-Puliampatty
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2990	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	05.03.2025	Test Completed on	17.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/2991	Report Date.	17.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2991	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	06.03.2025	Test Completed on	17.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/2992	Report Date.	17.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

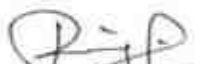
Sample Location	A4-Amarapoondi
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2992	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	06.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

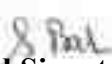
S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/2993	Report Date.	17.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2993	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	07.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/2994	Report Date.	17.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2994	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	07.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	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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TEST REPORT

Report No.	SARL/25/2995	Report Date.	17.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2995	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	08.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.2	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	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/2996	Report Date.	17.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2996	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	08.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/2997	Report Date.	17.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

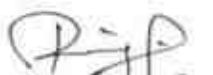
Sample Location	A5-Thumpalapatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2997	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	09.03.2025	Test Completed on	17.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	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

For Shrient Analytical and Research Labs Pvt. Ltd


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END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/2998	Report Date.	17.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-2998	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	09.03.2025	Test Completed on	17.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	41.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	18.7	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	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3027	Report Date.	24.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3027	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	11.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.8	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	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3028	Report Date.	24.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3028	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	11.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/3029	Report Date.	24.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3029	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	12.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3030	Report Date.	24.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3030	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	12.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.2	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	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3031	Report Date.	24.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3031	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	13.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.1	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	7.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3032	Report Date.	24.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3032	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	13.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3033	Report Date.	24.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3033	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	14.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3034	Report Date.	24.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3034	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	14.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3035	Report Date.	24.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3035	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	15.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3036	Report Date.	24.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3036	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	15.03.2025	Test Completed on	24.03.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.8	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	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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

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

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TEST REPORT

Report No.	SARL/25/3037	Report Date.	24.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3037	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	16.03.2025	Test Completed on	24.03.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	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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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3038	Report Date.	24.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3038	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	16.03.2025	Test Completed on	24.03.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.0	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	5.9	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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TEST REPORT

Report No.	SARL/25/3067	Report Date.	31.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3067	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	18.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.6	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	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3068	Report Date.	31.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3068	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	18.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	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

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TEST REPORT

Report No.	SARL/25/3069	Report Date.	31.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3069	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	19.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	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	6.3	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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TEST REPORT

Report No.	SARL/25/3070	Report Date.	31.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3070	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	19.03.2025	Test Completed on	31.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	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

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TEST REPORT

Report No.	SARL/25/3071	Report Date.	31.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3071	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	20.03.2025	Test Completed on	31.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3072	Report Date.	31.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

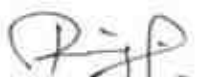
Sample Location	A4-Amarapoondi
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3072	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	20.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	43.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3073	Report Date.	31.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

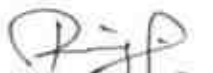
Sample Location	A3-Melakottai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3073	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	21.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3074	Report Date.	31.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3074	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	21.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3075	Report Date.	31.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3075	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	22.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.2	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	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/25/3076	Report Date.	31.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3076	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	22.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	40.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	18.5	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	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/3077	Report Date.	31.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3077	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	23.03.2025	Test Completed on	31.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.6	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	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3078	Report Date.	31.03.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3078	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	23.03.2025	Test Completed on	31.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3107	Report Date.	07.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3107	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	25.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3108	Report Date.	07.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3108	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	25.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	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
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3109	Report Date.	07.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3109	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	26.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.0	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	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/3110	Report Date.	07.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3110	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	26.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	42.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.1	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	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3111	Report Date.	07.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3111	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	27.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.0	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	7.6	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

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



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TEST REPORT

Report No.	SARL/25/3112	Report Date.	07.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3112	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	27.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3113	Report Date.	07.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3113	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	28.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3114	Report Date.	07.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3114	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	28.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/25/3115	Report Date.	07.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3115	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	29.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	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	6.9	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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TEST REPORT

Report No.	SARL/25/3116	Report Date.	07.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3116	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	29.03.2025	Test Completed on	07.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	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

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TEST REPORT

Report No.	SARL/25/3117	Report Date.	07.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3117	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	30.03.2025	Test Completed on	07.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	63.3	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	6.8	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

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3118	Report Date.	07.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3118	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	30.03.2025	Test Completed on	07.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	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

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
Asst. Technical Manager

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xTEST REPORT

Report No.	SARL/25/3147	Report Date.	14.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3147	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	01.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	66.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.0	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

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TEST REPORT

Report No.	SARL/25/3148	Report Date.	14.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3148	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	01.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.2	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	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3149	Report Date.	14.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3149	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	02.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	70.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	32.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

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TEST REPORT

Report No.	SARL/25/3150	Report Date.	14.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3150	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	02.04.2025	Test Completed on	14.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.8	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	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3151	Report Date.	14.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3151	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	03.04.2025	Test Completed on	14.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.3	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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TEST REPORT

Report No.	SARL/25/3152	Report Date.	14.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3152	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	03.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3153	Report Date.	14.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3153	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	04.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	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/25/3154	Report Date.	14.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3154	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	04.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.5	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	5.8	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


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3155	Report Date.	14.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3155	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	05.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.0	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	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/3156	Report Date.	14.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3156	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	05.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.2	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	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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TEST REPORT

Report No.	SARL/25/3157	Report Date.	14.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

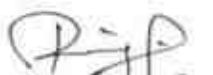
Sample Location	A5-Thumpalapatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3157	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	06.04.2025	Test Completed on	14.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3158	Report Date.	14.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3158	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	06.04.2025	Test Completed on	14.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3187	Report Date.	21.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3187	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	08.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.5	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	5.9	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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TEST REPORT

Report No.	SARL/25/3188	Report Date.	21.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3188	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	08.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	42.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/3189	Report Date.	21.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3189	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	09.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.8	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	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3190	Report Date.	21.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3190	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	09.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.2	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	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3191	Report Date.	21.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3191	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	10.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.4	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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END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

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

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



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TEST REPORT

Report No.	SARL/25/3192	Report Date.	21.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3192	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	10.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/3193	Report Date.	21.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3193	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	11.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3194	Report Date.	21.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3194	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	11.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/3195	Report Date.	21.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3195	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	12.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	67.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	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

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TEST REPORT

Report No.	SARL/25/3196	Report Date.	21.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3196	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	12.04.2025	Test Completed on	21.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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

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

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TEST REPORT

Report No.	SARL/25/3197	Report Date.	21.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3197	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	13.04.2025	Test Completed on	21.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	65.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3198	Report Date.	21.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3198	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	13.04.2025	Test Completed on	21.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	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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TEST REPORT

Report No.	SARL/25/3227	Report Date.	28.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3227	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	15.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3228	Report Date.	28.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3228	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	15.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.6	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	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3229	Report Date.	28.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3229	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	16.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	61.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	15.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3230	Report Date.	28.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3230	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	16.04.2025	Test Completed on	28.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3231	Report Date.	28.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3231	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	17.04.2025	Test Completed on	28.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	9.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3232	Report Date.	28.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3232	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	17.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3233	Report Date.	28.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3233	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	18.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.8	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	8.0	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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TEST REPORT

Report No.	SARL/25/3234	Report Date.	28.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3234	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	18.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3235	Report Date.	28.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3235	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	19.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.6	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	5.1	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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TEST REPORT

Report No.	SARL/25/3236	Report Date.	28.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3236	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	19.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3237	Report Date.	28.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3237	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	20.04.2025	Test Completed on	28.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.2	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	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3238	Report Date.	28.04.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3238	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	20.04.2025	Test Completed on	28.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	43.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.6	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	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3267	Report Date.	05.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3267	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	22.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.8	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	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

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TEST REPORT

Report No.	SARL/25/3268	Report Date.	05.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3268	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	22.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3269	Report Date.	05.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3269	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	23.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.4	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	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3270	Report Date.	05.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3270	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	23.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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/25/3271	Report Date.	05.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3271	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	24.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.2	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	9.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3272	Report Date.	05.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3272	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	24.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	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

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TEST REPORT

Report No.	SARL/25/3273	Report Date.	05.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3273	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	25.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3274	Report Date.	05.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3274	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	25.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.8	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	6.0	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

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TEST REPORT

Report No.	SARL/25/3275	Report Date.	05.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

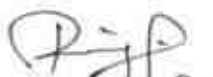
Sample Location	A1-Within Mine Lease area – Project site
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3275	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	26.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	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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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3276	Report Date.	05.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3276	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	26.04.2025	Test Completed on	05.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3277	Report Date.	05.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3277	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	27.04.2025	Test Completed on	05.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3278	Report Date.	05.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3278	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	27.04.2025	Test Completed on	05.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	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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TEST REPORT

Report No.	SARL/25/3307	Report Date.	12.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3307	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	29.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3308	Report Date.	12.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3308	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	29.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3309	Report Date.	12.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3309	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	30.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3310	Report Date.	12.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

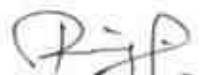
Sample Location	A2-Puliampatty
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3310	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	30.04.2025	Test Completed on	12.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.4	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	5.6	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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TEST REPORT

Report No.	SARL/25/3311	Report Date.	12.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3311	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	01.05.2025	Test Completed on	12.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.8	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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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3312	Report Date.	12.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3312	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	01.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3313	Report Date.	12.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3313	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	02.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.8	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

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TEST REPORT

Report No.	SARL/25/3314	Report Date.	12.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3314	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	02.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3315	Report Date.	12.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3315	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	03.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.6	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	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3316	Report Date.	12.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3316	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	03.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	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

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TEST REPORT

Report No.	SARL/25/3317	Report Date.	12.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3317	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	04.05.2025	Test Completed on	12.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3318	Report Date.	12.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

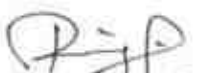
Sample Location	A6-Vilvathampatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3318	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	04.05.2025	Test Completed on	12.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3347	Report Date.	19.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3347	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	06.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3348	Report Date.	19.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3348	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	06.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.0	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	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3349	Report Date.	19.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

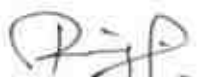
Sample Location	A5-Thumpalapatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3349	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	07.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3350	Report Date.	19.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3350	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	07.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3351	Report Date.	19.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3351	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	08.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.9	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	9.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3352	Report Date.	19.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3352	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	08.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3353	Report Date.	19.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3353	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	09.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3354	Report Date.	19.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

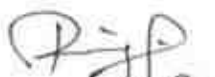
Sample Location	A4-Amarapoondi
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3354	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	09.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	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/25/3355	Report Date.	19.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3355	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	10.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3356	Report Date.	19.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3356	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	10.05.2025	Test Completed on	19.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.6	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	5.4	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

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TEST REPORT

Report No.	SARL/25/3357	Report Date.	19.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3357	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	11.05.2025	Test Completed on	19.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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S. BALAMURUGAN
Asst. Technical Manager

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

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

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Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/3358	Report Date.	19.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3358	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	11.05.2025	Test Completed on	19.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/3387	Report Date.	26.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3387	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	13.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.0	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	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3388	Report Date.	26.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3388	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	13.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3389	Report Date.	26.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3389	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	14.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3390	Report Date.	26.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3390	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	14.05.2025	Test Completed on	26.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/33911	Report Date.	26.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3391	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	15.05.2025	Test Completed on	26.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	62.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3392	Report Date.	26.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3392	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	15.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	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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TEST REPORT

Report No.	SARL/25/3393	Report Date.	26.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3393	Sample Received on	19.05.2025
Sample Collected by	02.05.2025	Test Commenced on	19.05.2025
Sample Collected on	16.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	63.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	9.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3394	Report Date.	26.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3394	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	16.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3395	Report Date.	26.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3395	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	17.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.6	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	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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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3396	Report Date.	26.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3396	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	17.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.1	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	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/3397	Report Date.	26.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3397	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	18.05.2025	Test Completed on	26.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.2	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	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3398	Report Date.	26.05.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3398	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	18.05.2025	Test Completed on	26.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

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TEST REPORT

Report No.	SARL/25/3462	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3462	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	20.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3463	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3463	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	20.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3464	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3464	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	21.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.5	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	12.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3465	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3465	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	21.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.3	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	6.5	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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TEST REPORT

Report No.	SARL/25/3466	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3466	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	22.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	65.9	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	8.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3467	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3467	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	22.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	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

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Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3468	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3468	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	23.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.3	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	8.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3469	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3469	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	23.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	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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TEST REPORT

Report No.	SARL/25/3470	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3470	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	24.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.5	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	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3471	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3471	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	24.05.2025	Test Completed on	02.06.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.4	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	6.2	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

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

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TEST REPORT

Report No.	SARL/25/3472	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3472	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/25/3473	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-3473	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	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

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TEST REPORT

Report No.	SARL/25/3474	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	WATER
Sample Mark	GW1-Within Mine Lease area – Project site

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-3474	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	AGREEABLE	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.32	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1105	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	664	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	338	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	83.2	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	31.2	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	208	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	130	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	452	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	126	1000



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TEST REPORT

Report No.	SARL/25/3474

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	150	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(D.L - 0.01)	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	3.72	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.36	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/25/3475	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	WATER
Sample Mark	GW2-Puliampatty

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-3475	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	AGREEABLE	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.78	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1021	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	612	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	172	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	44.0	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	14.9	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	110	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	62.0	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	178	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	378	1000



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TEST REPORT

Report No.	SARL/25/3475

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	78.9	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(D.L - 0.01)	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	1.76	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.32	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/25/3476	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	WATER
Sample Mark	GW3-Melakottai

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-3476	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	AGREEABLE	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H ⁺ B: 2023	-	7.29	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	847.5	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	510	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	286	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	72.8	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	25.0	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	182	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	104	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	234	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	154	1000



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TEST REPORT

Report No.	SARL/25/3476

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ 2-)	APHA 24th Edition 4500 SO ₄ 2- E: 2023	mg/L	BDL (D.L - 0.2)	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	57.8	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	0.05	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	2.95	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS - 10500:2012. BDL - Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
S. BALAMURUGAN
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TEST REPORT

Report No.	SARL/25/3477	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	WATER
Sample Mark	GW4-Amarapoondi

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-3477	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	AGREEABLE	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.35	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1432	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	860	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	482	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	110	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	49.9	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	274	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	208	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	442	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	216	1000



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TEST REPORT

Report No.	SARL/25/3477

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	152	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(D.L - 0.01)	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	2.56	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.38	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
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TEST REPORT

Report No.	SARL/25/3478	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	WATER
Sample Mark	GW5-Thumpalapatti

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-3478	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	AGREEABLE	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.24	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	923.5	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	554	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	391	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	108	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	29.0	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	270	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	121	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	290	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	152	1000



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TEST REPORT

Report No.	SARL/25/3478

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	34.0	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(D.L - 0.01)	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	2.96	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.34	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

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TEST REPORT

Report No.	SARL/25/3479	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	WATER
Sample Mark	GW6-Vilvathampatti

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-3479	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	AGREEABLE	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.96	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	740.5	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	445	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	218	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	50.4	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	22.1	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	126	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	92.0	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	205	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	134	1000



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TEST REPORT

Report No.	SARL/25/3479

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	54.2	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	1.45	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.56	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS - 10500:2012. BDL - Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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TEST REPORT

Report No.	SARL/25/3480	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	WATER
Sample Mark	SW 1-Shanmukha River – up stream

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-3480	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.06.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result
A.	Physical parameters			
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.86
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	236
B.	Chemical parameters			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	286
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	93.4
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	22.6
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	8.9
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	56.6
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	36.8
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	34.9
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	140



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TEST REPORT

Report No.	SARL/25/3480

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	15.5
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(D.L - 0.01)
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	BDL(DL-1.0)
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.26
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(D.L-0.05)
19	Chemical Oxygen Demand	APHA 24th Edition 5220 B: 2023	mg/L	BDL (D.L – 4.0)
20	Bio Chemical Oxygen Demand 3 Days at 27°C	IS 3025 (Part 44): 1993	mg/L	BDL (D.L – 2.0)
21	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	BDL (D.L – 2.0)
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	6.3

Remarks: BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

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

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TEST REPORT

Report No.	SARL/25/3481	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	WATER
Sample Mark	SW 2-Shanmukha River – down stream

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-3481	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.06.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result
A.	Physical parameters			
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.81
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	202
B.	Chemical parameters			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	124
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	76.5
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	15.5
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	9.1
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	38.7
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	37.8
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	39.7
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	38.9



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TEST REPORT

Report No.	SARL/25/3481

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	16.2
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(D.L - 0.01)
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	1.65
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.22
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(D.L-0.05)
19	Chemical Oxygen Demand	APHA 24th Edition 5220 B: 2023	mg/L	BDL (D.L – 4.0)
20	Bio Chemical Oxygen Demand 3 Days at 27°C	IS 3025 (Part 44): 1993	mg/L	BDL (D.L – 2.0)
21	Total Suspended Solids	APHA 24th Edition 2540 D: 2023	mg/L	BDL (D.L – 2.0)
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	6.2

Remarks: BDL – Below Detectable limit (DL - Detectable limit).

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

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TEST REPORT

Report No.	SARL/25/3482	Report Date.	02.06.2025

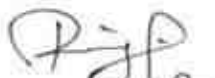
Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	SOIL
Sample Mark	S1-Within Mine Lease area – Project site

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-3482	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	7.89
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	106
3	Dry matter content	IS 15106: 2002	%	91.23
4	Water Content	IS 15106: 2002	%	8.77
5	Organic Matter	IS 2720: Part 22: 1972	%	0.68
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	356
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Sity loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	26.58
	i. Sand			
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	58.69
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	14.73
9	Phosphorus as P	IS 10158: 1982	mg/kg	0.94
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	780
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	530
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	19.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	44

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TEST REPORT

Report No.	SARL/25/3483	Report Date.	02.06.2025

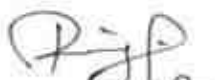
Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	SOIL
Sample Mark	S2-Puliampatty

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-3483	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.65
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	75.6
3	Dry matter content	IS 15106: 2002	%	94.55
4	Water Content	IS 15106: 2002	%	5.45
5	Organic Matter	IS 2720: Part 22: 1972	%	1.36
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	268
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Sity clay
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	8.95
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	47.52
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	43.53
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.45
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	430
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	664
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	18.8
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	40

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3484	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	SOIL
Sample Mark	S3-Melakottai

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-3484	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.92
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	154
3	Dry matter content	IS 15106: 2002	%	93.54
4	Water Content	IS 15106: 2002	%	6.46
5	Organic Matter	IS 2720: Part 22: 1972	%	1.21
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	298
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty clay loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	13.35
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	47.56
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	39.09
	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	2.32
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	1025
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	895
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	19.7
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	42

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

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S. BALAMURUGAN
Asst. Technical Manager

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TEST REPORT

Report No.	SARL/25/3485

Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	SOIL
Sample Mark	S4-Amarapoondi

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-3485	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.78
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	90.74
3	Dry matter content	IS 15106: 2002	%	96.74
4	Water Content	IS 15106: 2002	%	3.26
5	Organic Matter	IS 2720: Part 22: 1972	%	0.98
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	642
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silt loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	24.92
	i. Sand			
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	68.57
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	6.51
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.73
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	598
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	792
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	18.4
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	40

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/25/3486	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	SOIL
Sample Mark	S5-Thumpalapatti

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-3486	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.86
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	165
3	Dry matter content	IS 15106: 2002	%	94.65
4	Water Content	IS 15106: 2002	%	5.35
5	Organic Matter	IS 2720: Part 22: 1972	%	1.25
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	320
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty clay loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	13.55
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	48.21
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	38.24
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.65
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	1090
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	876
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	19.5
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	46

BDL – Below Detectable limit (DL - Detectable limit).

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Asst. Technical Manager

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

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TEST REPORT

Report No.	SARL/25/3487	Report Date.	02.06.2025

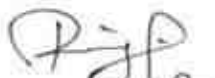
Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	SOIL
Sample Mark	S6-Vilvathampatti

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-3487	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.75
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	89.72
3	Dry matter content	IS 15106: 2002	%	97.03
4	Water Content	IS 15106: 2002	%	2.97
5	Organic Matter	IS 2720: Part 22: 1972	%	0.99
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	230
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silt loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	29.37
	i. Sand			
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	53.56
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	17.07
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.29
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	374
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	715
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	19.8
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	45

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

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

Terms and conditions:

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

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

Page 1 of 1



Shrient Analytical and Research Labs Pvt. Ltd

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TEST REPORT

Report No.	SARL/25/3488	Report Date.	02.06.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry At Mr.Ayyappan S.F. Nos. 160/4, 159/1, 132/2b And 131/1c2(P) Over An Extent Of 1.86.0 Ha Of Puliyampatti Village, Palani Taluk, Dindigul District
Sample Description	NOISE LEVEL DATA

Customer Reference	As per work order	Sampling Method	SARL/IOP/023
Sample Reference No	SARL/NO/CHE-3488	Date of Monitoring	24.03.2025/ 25.03.2025
Sample Collected by	LABORATORY		

Time in hrs	N1	N2	N3	N4	N5	N6
06.00	44.1	40.8	40.5	43.1	42.6	44.3
07.00	41.8	43.2	48.0	51.1	45.3	46.5
08.00	45.1	49.5	52.1	50.0	48.3	48.8
09.00	45.9	53.2	53.6	51.7	50.3	50.4
10.00	53.5	55.1	51.0	44.1	51.4	51.8
11.00	52.6	52.5	54.1	47.5	50.6	48.2
12.00	49.4	51.6	48.4	48.7	51.6	50.2
13.00	50.2	51.1	49.3	47.0	52.3	48.8
14.00	55.8	54.6	52.4	50.0	50.5	49.1
15.00	55.6	55.0	51.6	46.3	47.9	47.6
16.00	54.5	53.4	50.5	47.6	50.1	48.1
17.00	54.2	52.3	45.6	49.1	46.3	45.7
18.00	52.1	49.8	43.5	48.0	46.7	44.4
19.00	48.7	48.3	42.8	45.6	48.1	42.2
20.00	47.9	46.1	41.6	43.1	43.8	41.1
21.00	46.2	45.1	43.5	41.1	44.9	42.7
22.00	47.7	41.6	39.7	39.2	43.0	41.9
23.00	45.7	41.0	38.3	39.7	42.1	42.3
24.00	43.5	40.1	40.5	40.4	40.6	38.9
01.00	45.1	39.3	38.9	39.3	41.0	39.4
02.00	44.0	41.1	39.7	40.7	40.4	38.1
03.00	43.1	41.5	41.0	39.8	41.1	38.7
04.00	42.3	42.2	38.9	40.0	41.9	39.4
05.00	41.8	41.7	42.6	40.8	40.9	41.2



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TEST REPORT

Report No.	SARL/25/3488

Report Date.	02.06.2025

	N1	N2	N3	N4	N5	N6
DAY EQUIVALENT	51.2	51.2	49.9	47.6	48.7	47.4
NIGHT EQUIVALENT	44.2	40.8	40.2	39.6	41.1	39.8
DAY & NIGHT EQUIVALENT	49.9	49.7	48.3	46.2	47.3	46.0

Remarks:

LOCATIONS:

N1 - Within Mine Lease area – Project site

N2-Puliampatty

N3-Melakottai

N4-Amarapoondi

N5-Thumpalapatti

N6-Vilvathampatti

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

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

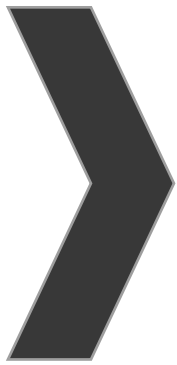
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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

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

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ANNEXURE-8



National Accreditation Board for
Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

**SHRIENT ANALYTICAL & RESEARCH LABS PRIVATE
LIMITED**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

416/15, DHARGAS ROAD, PERUNGALATHUR, WEST TAMBARAM, CHENNAI, KANCHIPURAM, TAMIL
NADU, INDIA

in the field of

TESTING

Certificate Number: TC-12339

Issue Date: 30/09/2023

Valid Until: 29/09/2025

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued
satisfactory compliance to the above standard & the relevant requirements of NABL.

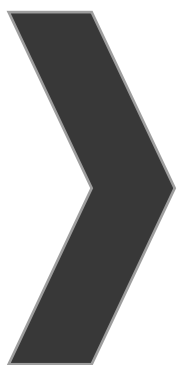
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: SHRIENT ANALYTICAL AND RESEARCH LABS PRIVATE LIMITED

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer



ANNEXURE-9



அறிவுக்கு இரத்தம் உடையது என்பதை உணர்வது
எழுத்துக்களின் மூலம் மனம் வளம்

செல் : 9488008003

சரசுவதி உயர்நிலைப் பள்ளி

(Recognised by the Department of School Education, Government of Tamil Nadu)

நி.மு.எண்.48848/ஜி/இ/08 - 18.07.08

நி.மு.எண்.13147/ஜி/இ/00 - 04.03.00



அமரபுண்டி (அஞ்சல்), பழனி வட்டம்-624813. திண்டுக்கல் மாவட்டம்.

க.சந்திரசேகரன்
செயலாளர்
உதவியை ஆசிரியர்

ந.ந. ராஜ்: 20/2020

நாள் : 20.02.2020

தயவுசெய்து: உயர்நிலைப் பள்ளி அறியுமாறு,
சரசுவதி பள்ளிக்குள்ளே,
140 அமரபுண்டி வீதி,
புளியம்பட்டி,
புளியம்பட்டி தாலுகா.

தயவுசெய்து சரசுவதி உயர்நிலைப் பள்ளிக்கு
உதவி கோருவது சார்ந்து.

உணர்ச்சி: சரசுவதி அங்கு உதவிபெறும்
உயர்நிலைப் பள்ளி நகரம் முன்னிலையில் தற்போது
பள்ளியில் படிக்கும் மாணவர்கள் கற்றல் ஆர்வம்
உள்ளவர்களாக இருக்கும் நிலையில் இப்பள்ளியை
மேம்படுத்த தவிரும் ததாழி நிர்வாகத்தின் சார்பாக
கீழ்க்கண்ட பணிகள் ஒன்றுக்கு ஒன்று தான்
மாணவர்கள் கல்வி உயர்ச்சிக்காக உதவிபெறும் இருக்க
பண அன்போடு மேலும் ததாழிக்குமாறு.

1. பள்ளியை பாதுகாப்பதற்காக கனிகள் அமைத்தல்
முன்னிலையில் அமைத்தல் தருதல்.

2. மாணவர்களைக் குறித்து உதவிக்காக பேரறிவுரை
அமைத்தல் மீது மேலதிகம் ததாழிக்கு ஒதாது
கடத்தல் தருதல்.



தருமபுரம் துணைப்பகுதிப் பள்ளி துணை
சாலை கல்வியின் துணை மணி வளம்

செல் : 9468008003



சரசுவதி உயர்நிலைப் பள்ளி

(Recognised by the Department of School Education, Government of Tamil Nadu)

நி.பா.எண்.48848/ஜி/இ/08 - 18.07.08

நி.பா.எண்.13147/ஜி/இ/00 - 04.03.08

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க.சந்திரசேகரன்

செயலர்

தலைமை ஆசிரியர்

நாள் : 2.07.2020

3. மாணவர்களுக்கும் குறிப்பிட்டு, கடிதமாகப் பிள்ளைமாற்றி
மேலிருந்துதான் தொடர கடித தண்ணீர் மசந் குறிப்பிட்டுத்
தருதல்.

4. மாணவர்கள், மாணவிகள் முறைசெய் கடிதமாக
கடிதமாக, இதுபற்றி பகுதிபார்த்தியை உதவி
தான் கொடுதல்.

5. பள்ளியில் தேவையான உதவிகள் 'பேசுர் பள்ளி'
அமைத்திட்டு தருதல்.

6. பள்ளிக் கடிதத்திற்கு உரிமைக் குறிப்பிட்டு.

7. சந்திரசேகரன் உதவிகளைத் தண்ணீர் மசந் குறிப்பிட்டுத்
தருதல்.

பேசுர் பள்ளியைத் தண்ணீர் மசந் தான்
கடிதமாக புண்ணியம் மயமாடுவான் பள்ளிக் கடிதமாக,
மாணவர்கள் தண்ணீர் கடிதமாக மேலிருந்து பண்ணியம்
தண்ணீர் மசந் பேசுர் பள்ளி கடிதமாக கொண்டுதருதல்.

உயர்ப்பகுதி,


செயலர்
தலைமை ஆசிரியர்
சரசுவதி உயர்நிலைப்பள்ளி,
அமரபுண்டி,
பழனி - 624 613,
திண்டுக்கல் மாவட்டம்.

S. [Signature]