

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

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

ToR Identification No. T025B0108TN5214172N (F. No. 13076), Dated: 16.02.2026

PROPOSED QUARRY LEASE DETAILS	
SURVEY NO.	80(P)
VILLAGE	KEEZHSEVUR
TALUK	TINDIVANAM
DISTRICT	VILUPPURAM
EXTENT	4.50.0 HA
CLUSTER EXTENT	8.50.0 Ha
PROPOSED PRODUCTION QUANTITY	1045900m³/2876225Ts of Rough Stone and 270655m³/5,41,310Ts of Gravel for Ten Years 524460m³/1442265Ts of Rough Stone and 270655 m³/541310Ts of Gravel for first five Years 521440m³/14,33,960Ts of Rough Stone for Second Five Years
LAND	PATTA LAND

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

Category of the Project: B1 Cluster Mining, Total Cluster Area – 8.50.0 Ha

Baseline Monitoring Period – December 2025 to February 2026

APPLICANT

THIRU. P. JAGADEESAN,

S/O.PACHAIYAPPAN,

**NO.85/2, KANAKKU PILLAI STREET, ANNAMPAKKAM VILLAGE,
TINDIVANAM TALUK, VILUPPURAM DISTRICT - 604 101.**

ENVIRONMENTAL CONSULTANT	LABORATORY
M/s. GLOBAL MINING SOLUTIONS <i>(NABET Accredited & ISO 9001 Certified Consultant)</i> Plot No. 6, S.F.No. 13/2, A2, VS City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455. NABET Accreditation No: NABET/EIA/26-29/RA 0478, Valid Until - January 3 rd , 2029 Contact: 97502 23535 & 94446 54520 Email: infoglobalmining@gmail.com, globalminingsolutionssalem@gmail.com	M/s. SHRIENT ANALYTICAL & RESEARCH LABS PRIVATE LIMITED <i>(NABL Accredited Testing Laboratory)</i> #416/15, Dhargas Road, Perungalathur, West Tambaram, Chennai, Tamil Nadu, India.

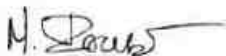
AMENDMENT PAGE

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

ACKNOWLEDGEMENT

M/s. Global Mining Solutions, Salem is very much thankful to Thiru. Thiru.P.Jagadeesan, 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 4.50.0 Ha., & Cluster extent of 8.50.0 Ha., located at Keezhsevir Village, Tindivanam Taluk, Viluppuram 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 Keezhsevir 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 MoEFCC OM No. J – 11013/41/2006-IA. II (I) dated 5th October 2011, we hereby give our undertaking for owning the content and information in the EIA/EMP report submitted for EC of the proposed Rough Stone and Gravel quarry over a lease extent of 4.50.0 Ha., & Cluster extent of 8.50.0 Ha located at Keezhsevr Village, Tindivanam Taluk, Viluppuram District, Tamil Nadu State.

For: M/s. Global Mining Solutions

M. MANIKANDAN

EIA CO-ORDINATOR
GLOBAL MINING SOLUTIONS
SALEM

Name: M.Manikandan

EIA Coordinator – Mining of Minerals

UNDERTAKING

In Line with OM no. J-11013/41/2006-IA.II (1) dated 4th Aug 2009 and its 4.50.00 Ha., & Cluster extent of 8.50.0 Ha., located at Keezhsevur Village, Tindivanam Taluk, Viluppuram District, Tamil Nadu State for the production of 5,24,460 m³ / 14,42,265 Ts of Rough Stone and 2,70,655 m³ / 5,41,310 Ts of Gravel for first 5 years and production of 5,21,440 m³ / 14,33,960 Ts of Rough Stone for second five years 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/26-29/RA 0478, valid till 03.01.2029.

For: M/s. Global Mining Solutions

M. MANIKANDAN

EIA CO-ORDINATOR
GLOBAL MINING SOLUTIONS
SALEM

Name: M.Manikandan

EIA Coordinator – Mining of Minerals




**भारतीय गुणवत्ता परिषद्
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Certificate of Accreditation

Global Mining Solutions, Salem

Plot No. 6, S.F.No. 13/2, A2, VS City, RC Chettyapatty, Kottamettupatty, Omalur, Salem, Tamil Nadu – 636455

Global Mining Solutions, Salem is Re-Accredited (RA2) as **Category-A organization** under the QCI-NABET Scheme for Accreditation of EIA Consultant Organizations (Version 3), for the preparation of EIA/EMP reports in the sectors listed below, as per the specified categories

S.No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1.	Mining of minerals including opencast / underground mining	1	1 (a) (b)	A
2.	Thermal power plants	4	1 (d)	B
3.	Metallurgical industries (ferrous only)	8	3 (a)	A
4.	Metallurgical industries (non-ferrous only)	8		B
5.	Cement plants	9	3 (b)	A
6.	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	21	5 (f)	A
7.	Distilleries	22	5 (g)	A
8.	Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes	31	7 (i)	B
9.	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	32	7 (d)	B
10.	Common Effluent Treatment Plants (CETPs)	36	7 (h)	B
11.	Common Municipal Solid Waste Management Facility (CMSWMF)	37	7 (j)	B
12.	Building and construction projects	38	8 (a)	B
13.	Townships and Area development projects	39	8 (b)	B

Note: Names of approved experts and sectors are mentioned in RAAC minutes dated February 05, 2026, posted on QCI-NABET website.

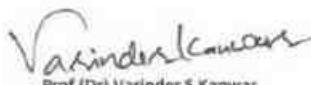
The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no QCI/NABET/ENV/ACO/26/6024 dated February 16, 2026. The accreditation needs to be renewed before the expiry date by Global Mining Solutions, Salem following due process of assessment.

Valid up to
January 03, 2029



Certificate No.
NABET/EIA/26-29/RA 0478

Issue Date
February 16, 2026



Prof (Dr) Varinder S Kanwar
(CEO – NABET)

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

Declaration by Expert

Declaration by Experts contributing to the proposed Rough Stone and Gravel Quarry over a lease extent of 4.50.0 Ha. & Cluster extent of 8.50.0 Ha located at Keezhsevur Village, Tindivanam Taluk, Viluppuram 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

M. MANIKANDAN

EIA CO-ORDINATOR
GLOBAL MINING SOLUTIONS
SALEM

Signature & Date

Period of involvement December 2025 to February 2026.

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: December 2025 to February 2026.</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: December 2025 to February 2026.</u>	K. Abirami
3	SHW	Ramadoss N	Assessment of waste generated from the project, suggested waste management practices. <u>Period: December 2025 to February 2026.</u>	C. Ramadoss
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: December 2025 to February 2026.</u>	K. Sarasvathy
5	EB	Saravanan S	Baseline data collection of related to ecology of the area. <u>Period: December 2025 to February 2026.</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: December 2025 to February 2026.</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.	T. Srilatha

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. P. JAGADEESAN, OVER AN EXTENT OF 4.50.0 HA LOCATED AT THE S.F.NO.80(P) OF KEEZHSEVUR VILLAGE, TINDIVANAM TALUK, VILUPPURAM DISTRICT, TAMIL NADU STATE.

			<u>Period: December 2025 to February 2026.</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: December 2025 to February 2026.</u>	R. Dhanu
9	LU	Srilatha Thiruveedhula	Preparation of land use map based on satellite imagery. Land use classification and analysis. Impact prediction of the project on the surrounding land environment. <u>Period: December 2025 to February 2026.</u>	T. Srilatha
10	RH	S.V. Prashant	Identification of the Risk related to the mining activities. Preparation of emergency disaster management plan. Plan for supply of safety equipment for the worker. <u>Period: December 2025 to February 2026.</u>	S. Prashanth
11	SC	Shisupal Sing	Soil monitoring, secondary data collection on soil type, soil management practices, utilization of topsoil. <u>Period: December 2025 to February 2026.</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: December 2025 to February 2026.</u>	V. Meyyappan

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COMPLIANCE TO **TERMS OF REFERENCE**

S.No	TOR Points	Reply	Page No
SEAC Conditions - Site Specific			
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 Organization chart of the Committee with defining the role of the members (iii) The 'Standard Operating Procedures' (SoP) executing the planned activities.	A cluster management committee including all the proponents of the rough stone and gravel quarrying projects within the cluster of 500 m radius will be constituted for the effective implementation of appropriate environmental management plan. Affidavit in this regard will be submitted during final EIA/EMP Report.	-
2	The PP shall ensure the installation of CCTV at the proposed quarry site and ensure its inclusion during the EIA presentation	Agreed, we will install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic / videographic evidence along with the Final EIA report.	-
SEAC Conditions - Standard			
1	In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the	Not Applicable This is a proposed new project. No mining has been carried out in this lease area so far.	-

	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.	VAO certificate regarding the location of habitations within 300 m radius from the periphery of the site is attached as Annexure. There are no approved Structures within 300 m Radius.	-
3	The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the	A Site survey will be conducted to identify and list structures located within a 500 m radius from the Proposed Quarry and structures located within 500 m radius are given in the EIA Report.	-

	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 located within 1 km of the proposed quarry.	A detailed hydro-geological report of the proposed project will be incorporated in the Final EIA/EMP Report.	-
5	The Proponent shall carry out Bio diversity study through Department of Ecology and Environmental Sciences. Pondicherry University and the same shall be included in EIA Report.	The bio diversity study will be carried out by our FAE is given in section 3.10 of Chapter 3. Study report through reputed institute will be incorporated in the final EIA / EMP report.	117
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.	There is Sevrur Reserved Forest on west side and is 280m away from the area. There is no Wild Life Sanctuary etc., within a radius of 1Km.	-
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,	Not Applicable It is fresh quarry lease applied area.	-

	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.	Slope stability study through reputed institute will be conducted once the depth reaches 25 m.	-
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.	Affidavit for blasting operation will be incorporated in the Final EIA/EMP report.	-
10	The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.	Controlled blasting techniques using delay detonators and optimum charge per delay will be implemented in this quarry. The details on blasting parameters are given in section 2.9.2 of Chapter 2.	-
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	Prior to this project, the PP had not carried out any quarrying operations.	-

	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.	Not Applicable It is fresh quarry lease applied area.	-
13	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?		
14	Quantity of minerals mined out. · Highest production achieved in any one year · Detail of approved depth of mining. · Actual depth of the mining achieved earlier. · Name of the person already mined in that leases area. · If EC and CTO already obtained, the copy of the same shall be submitted. · Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.		
15	All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).	Project coordinates superimposed in satellite imagery and topo map given as Figure No – 3.2. Geology and Geomorphology map are provided in Figure No – 3.26 and Figure No – 3.27, Chapter 3.	94 136 & 137

16	The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,	It will be complied after commencement of the mining operation.	-
17	The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	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 0.61.0 Ha will be under greenbelt and plantation.	-
18	The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same.	Geological reserves – 2688000 m ³ / 739200 Ts of Rough Stone and 313600 m ³ / 627200 Ts of Gravel and Mineable Reserves is estimated at 1045900 m ³ / 2876225 Ts of Rough Stone and 270655 m ³ / 541310 of Gravel. The proposed production of rough stone is estimated as 524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel for 5 years and as 521440 m ³ / 14,33960 Ts of Rough Stone for second five years. Methodology and Justification are presented in chapter 2. The anticipated impact and its mitigation measures are detailed in Chapter 4.	76 & 141
19	The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons	Complied. Please refer figure 10.1 of Chapter 10.	191

	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.	Hydro-geological study report will be incorporated in the Final EIA / EMP report.	-
21	The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.	The baseline data were collected (December 2025 to February 2026) for the environmental components including land, soil, water, air, noise, biology, socio-economy, and the results have been discussed in Chapter 3.	100
22	The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the	Detailed cumulative impact study has been carried and the same is incorporated in the Chapter 7.	177

	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.	Accordingly, a detailed Environment Management Plan is prepared considering air, water, noise and soil environment and the details are given in Chapter 10.	191
23	Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	Runoff water during rainy season will be collected in the bottom quarry through proper drainage pattern and the collected water will be used for plantation and dust suppression during dry season. Rain water harvesting Plan is given in section 4.3.2 of chapter 4. The water balance is given in chapter 4.	146
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 of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features has been discussed in Section 3.10 of Chapter 3. The land use plan of the project area showing per-operational, operational and post-operational phases are discussed in section 3.5.6 of Chapter 3.	119
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	As per the mining plan, there is no overburden anticipated during the entire Rough Stone quarrying operation. The excavated rough stone	-

	mine lease, its land use, R&R issues, if any, should be provided.	will be directly loaded into a tipper to the needy crusher/other buyers.	
26	Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.	Not applicable. The project is not located in any of the said areas mentioned in the condition.	-
27	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	Rain water falling in the quarry will be harvested in the sump at the lowest level of the quarry. This sump will act as a settling pond to prevent solids escaping along with discharge, before outlet. etc. Towards surface runoff management, a garland drain will be constructed around the quarry and will be connected to a settling pond with silt traps. The supernatant clear water from the settling pond will be flow to the downstream users. Rain water harvesting plan is given in section 4.3.2 of Chapter 4.	146
28	Impact on local transport infrastructure due to the Project should be indicated.	There is no significant impact on the local traffic due to the proposed project. The traffic density study is given in Chapter 7.	185

29	A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity.	Flora species within 300 m radius is given in section 3.10.	117
30	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.	Detailed Mine Closure plan is given in Chapter 2, sec 2.8.	86
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.	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. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.	The Greenbelt plan is detailed in Chapter 3.	117

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.	Accepted. Green belt development work is in progress. Proof photographs on green belt will be incorporated in the 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 details are given in Chapter 7, Sec 7.3.	174
35	A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.	A Risk Assessment and management Plan is prepared and given in Chapter 7, Sec 7.2.	174
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 is given detailed in Chapter 4. Sec 4.6.5.	165

37	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	No major impact on public health will be there since the villages are located more than 1km from the lease area. Details of CER are discussed under Chapter No. 8	-
38	The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	Detailed Socio-Economic study is carried out and it is given in Chapter 3, Sec 3.5.7.	127
39	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.	There is no litigation pending against the project.	-
40	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.	The project benefits are given in Chapter 8.	188
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	Not Applicable It is fresh quarry lease applied area	-

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. P. JAGADEESAN, OVER AN EXTENT OF 4.50.0 HA LOCATED AT THE S.F.NO.80(P) OF KEEZHSEVUR VILLAGE, TINDIVANAM TALUK, VILUPPURAM DISTRICT, TAMIL NADU STATE.

	certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCCB.		
42	The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	Affidavit for considering EMP for the entire life will be incorporated in the Final EIA/ EMP Report.	-
43	Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.	Noted and agreed.	-
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 quarry and one proposed quarry including this proposal, within a 500-metre radius. The proponent will take the initiative to form a cluster management committee once environmental clearance is obtained for this quarry.	-
2	The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, water sprinkling, tree plantation, blasting etc.,	Agreed and will be complied.	-
3	The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease	Agreed. The list of members of the committee formed will be submitted to	-

	and the same shall be updated every year to the AD/Mines.	ad/mines after obtaining Environmental Clearance.	
4	Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.	Agreed. Details of the Operation plan for cluster mining operations will be submitted once we get environmental clearance for all three quarries proposed in the cluster area.	-
5	The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.	Risk management plan for the individual quarry is given in this report. As far as cluster working condition is concerned, once the committee is formed, risk management as a cluster including inundation of clusters and the evacuation plan will be elaborated.	-
6	The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.	Environmental policy for the cluster will be framed by the cluster management committee and the policy will be in accordance with EPA Act, 1986 and its amendments, guidelines by MoEFCC/SEIAA and other regulatory bodies. This policy will be displayed in the quarry.	-
7	The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.	Agreed. It will be complied as mentioned in the Point No.4	-
8	The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public in the vicinity.	Agreed. It will be complied as mentioned in the Point No.4	-

Agriculture & Agrobiodiversity			
9	Impacts on surrounding agricultural fields around the proposed mining Area.	There are no Agriculture, forest area and traditional practices within the project area. However, there are some agricultural 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 suppression as such wet drilling, controlled blasting and water sprinkling on the project roads and project surrounding roads. As per Air Quality Modelling, the impact of the air quality limited to 400m radius. So, there is no impact for the Agriculture, Forestry & Traditional practices located within 10km radius.	-
10	impacts on soil flora & vegetation around the project site.	The chemical and physical characteristics of the soil is given in Chapter 3. The anticipated impact and its mitigation measures for soil environment and biological environment are detailed in section 4.4 of Chapter 4 respectively.	89 141
11	Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.	The details on flora have been provided in Section 3.10 under Chapter 3. There is no schedule I species of animals observed within study area as per Wildlife Protection Act, 1972 and no species falls in vulnerable, endangered or threatened category as per IUCN.	117

		There is no endangered red list species found in the study area	
12	The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.	The ecological details have been provided in Section 3.10 under Chapter 3 and measures have been provided in Section 4.4 under Chapter 4.	117 & 149
13	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	All the essential environmental protective measures will be followed by the proponent to manage the surrounding environment and restore the ecosystem, as discussed in Chapter 4.	141
14	The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.	The impact of project on the land environment has been discussed in Section 4.2 under Chapter 4.	142
Forests			
15	The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife	Sevur Reserve Forest is located at a distance of 280 m towards the west and Kumalampattu Reserve Forest is situated at 8.5 km towards the south-east of the proposed quarry site. No wildlife sanctuary, wildlife corridor, or significant free-ranging wildlife is reported within a 10 km radius of the project area. The proposed mining activity is confined to the lease area and, with the implementation of suitable environmental safeguards, no	-

		significant impact on the nearby Reserve Forests and wildlife is anticipated.	
16	The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.	The impacts of the project on ecology and biodiversity have been discussed in Section 4.4 under Chapter 4.	149
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.	-
18	The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.	Complied. The Environmental Impact Assessment (EIA) has considered the impacts on nearby environmentally sensitive areas. There are no Protected Areas, National Parks, wildlife corridors, or wildlife pathways within a 10 km radius of the project site. The nearest Reserve Forests are Sevrur R.F. (280 m W) and Kumalampattu R.F. (8.5 km SE), and the potential impacts on these areas have been assessed with suitable mitigation measures proposed. Impact and its mitigation measures are detailed in Chapter 4.	141
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	A detailed hydrogeological report will be included in the final EIA/EMP report.	-

	water bodies such as rivers, tanks, canals, ponds etc. within I km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.		
20	Erosion Control measures.	There is no waste generation (OB) in this quarry has been envisaged. However, there may be erosion due the rainy season and that is limited within quarry area. Gravel will be preserved in safety zone and utilized for plantation purpose. The control measures are explained in Chapter 4.	-
21	Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas	Complied. The study details are incorporated in Chapter 3. Anticipated impacts and its mitigation measures are detailed in Chapter 4.	89 & 141
22	The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.	There is no wastewater generation from this Quarry, so this is not applicable.	-
23	The project proponent shall study and furnish the details on potential fragmentation impact on natural environment by the activities.	Fragmentation impact on the environment may be due to drilling. The anticipated impacts and mitigation measures are discussed in Chapter 4.	141

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 3.10 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.	117
25	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	The impact of mining on soil environment has been discussed in Section 4.2 under Chapter 4.	142
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 4.3.2 of Chapter 4.	143
27	The EIA shall include the impact of mining activity on the following: a) Hydrothermal/Geothermal effect due to destruction in the Environment. b) Bio-geochemical processes and its foot prints including Environmental stress. c) Sediment geochemistry in the surface streams.	The proposed quarry operation is Opencast method of semi mechanized mining with 5.0m height 5m width the bench. So, the effect of Hydrothermal/Geothermal is not envisaged.	-
Energy			
28	The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilize the Energy shall be furnished.	The measures taken to control noise, air, water, and dust have been given under Chapter 4.	141
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.	This proposed quarry will adopt Opencast method of semi mechanized of mining with less equipment. However, only the best equipment will be used, and it will be properly and regularly maintained. Regular vehicular emission tests will be conducted on the transport vehicles to ensure minimal carbon emissions. To further reduce carbon emissions, a good greenbelt plan has been planned.	-
30	The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and physical, chemical & biological soil features.		
31	Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood.		
Mine Closure Plan			
32	Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.	Detailed mine closure plan is given in Chapter 2.	62
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.	191
34	The Environmental Impact Assessment should hold detailed study on EMP with budget for Greenbelt	Total EMP Cost for 10 years is Rs. 51.51 Lakhs (Rs. 15.54 Lakhs Capital Cost+ Rs. 35.97 Lakhs of Recurring Cost) have been allocated under the EMP budget.	196

	development and mine closure plan including disaster management plan.	The breakup of the same is given in Table 10.2 of Chapter 10.	
Risk Assessment			
35	To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.	Risk assessment and Management plan are detailed in section 7.2, chapter 7.	174
Disaster Management Plan			
36	To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid,/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.	Disaster Management plan are detailed in section 7.3, Chapter 7.	176
Others			
37	The project Proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.	There are no historical places, schools, cemeteries, temples, bird sanctuaries, and wildlife sanctuaries within 300 meters of the proposed project area. In this regard, the project proponent has received an official letter from the Village Administrative Officer, The letter copy enclosed as Annexure – 4.	-
38	As per the MoEFCC office memorandum F.No.z2-6512017-tA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the	The concerns raised during the public consultation and all the activities proposed will be updated in the final EIA report.	-

	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.	Complied. We have framed detail solid waste management system for the project are and the same will be executed by proper awareness and sign boards. The sign boards will be in two language i.e., Vernacular language (Tamil) and common language (English). The plastic waste generation is very negligible and it will be collected from the source level in specific dustbin and disposed through the municipal bins.	-
C. Standard ToR			
1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force. w.r.t. the highest production achieved prior to 1994.	Not applicable.	-
2	A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.	It is patta land registered in the name of Tmt.Kamatchi, vide Patta No.1243, the applicant has obtained consent from Pattadar.	-
3	All documents including approved mine plan, EIA and public Hearing should be compatible with one another	Noted & agreed. All documents including approved mine plan, EIA and Public Hearing are compatible with one	-

	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.	another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and is in the name of the lessee.	
4	All corner coordinates of the mine lease area, superimposed on a High - Resolution Imagery/ topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).	Project area is superimposed on Satellite imagery is enclosed in Figure No. 3.2. Project area boundary coordinates superimposed on Toposheet & Surface Features around the project area covering 10km radius. Geology map of the project area covering 10km radius. Geomorphology Map of the Study Area covering 10 km radius in Chapter 3.	94 & 135
5	Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.	The following map in 1:50,000 Scale: Geology map of the project area covering 10km radius. Geomorphology Map of the Study Area covering 10 km radius of section 3.13.3 in Chapter 3.	135
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 proposed mining area is Patta land. The Precise Area Communication letter and approved Mining Plan have been obtained from the competent authority and are enclosed as Annexure-2 and Annexure-3 respectively. The proposed mining activity conforms to the prevailing land use regulations and applicable State land use policies.	-

7	It should be clearly stated whether the proponent company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.	The proposed quarry is small scale magnitude operation and controlled by the lessee individually by engaging optimum statutory personals. Based on the magnitude of the operation, the PP has framed Environmental Policy and the same is incorporated in section 10.1.4 of Chapter 10. The Mines Manager will undertake effective monitoring and implementation of various environmental control measures promptly and effectively and to oversee various environmental management schemes for air quality control, water quality status, noise level control, plantation program, social development schemes, etc in the mine. The organizational chart for the same has been provided in Figure No.10.1, Chapter-10.	191
8	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.	Various risks likely to arise due to mining activities are detailed under section 7.2, Chapter-7. This being an opencast mine, subsidence is not applicable. The impact due to ground vibrations due to blasting is given in Chapter-4.	174 & 141
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.	Noted & Agreed The study area considered for this study is 10 km radius and all data contained in the EIA report such as waste	-

	should be for the life of the mine / lease period.	generation etc., is for the Life of the Mine / lease period.	
10	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary. national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	Satellite imagery has been used to study land use and the details of land use in the core and buffer zone is given in figure 3.2 of Chapter 3.	94
11	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.	There is no waste generation anticipated in this quarry operation since the entire excavated material will be utilized. Hence, there is no external overburden dump involved.	-
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	There is no Forest Land involved in the proposed project area. The proposed project area is a Consent Patta land. Approved Mining Plan is enclosed in Annexure – 2.	-

	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.	Not Applicable. The proposed project area does not involve any Forest Land.	-
14	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.	Not Applicable. The project doesn't attract Recognition of Forest Rights Act, 2006.	-
15	The vegetation in the RF / PF areas in the study area, with necessary details, should be given.	Complied. The vegetation in the nearby Reserve Forest areas is predominantly Southern Tropical Dry Deciduous Forest intermixed with Tropical Thorn Scrub vegetation. Details of the floral composition and vegetation characteristics of the study area have been included in the EIA report.	-
16	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.	The mining lease area and the 10 km buffer zone from the periphery of the core zone is devoid of declared ecologically sensitive features like national parks, biospheres, sanctuaries, etc.	-

17	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.	Not Applicable. There are No National Parks, Biosphere Reserves, Wildlife Corridors, and Tiger/Elephant Reserves within 10 km Radius from the periphery of the project area.	-
18	A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present' In case of any scheduled fauna found in the study area. the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and wildlife Department and details furnished. Necessary allocation of funds for implementing the same	Flora and fauna composition in the core and buffer zone of the project has been studied through primary field surveys. The details are furnished in section 3.10 of Chapter 3.	117

	should be made as part of the project cost.		
19	Proximity to Areas declared as 'critically Polluted' or the project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities. such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.	Not Applicable	-
20	Similarly, for coastal projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL. HTL, CRZ area, location of the mine lease with respect to CRZ, Coastal features 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).	Not Applicable	-
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	The mining activities will be carried out within the mine lease area only. The entire mine lease area of 4.50.0 Ha is a Consent Patta Land. There is no population within the ML area. Hence, the question of R& R does not arise.	-

	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	Baseline Data were collected for One Season December 2025 to February 2026 as per CPCB Notification and MoEFCC Guidelines and Detailed in Chapter - 3.	100

	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.	Modelling is done using AERMOD and the projected values are found to be within the norms. Hence, there is no major impact due to this mining project. The cumulative impact of mining is also studied and the same is found to be within norms. The details are given in Chapter 4 and Chapter 7.	149 & 177
24	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.	The entire water requirement for the project is 5 KLD which will be sourced from outside agencies. The water balance diagram is shown in Chapter 4	141
25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.	Not Applicable. The required water will be outsourced from the nearby village.	-
26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of	Details of the water conservation plan are given in chapter 10. Rainwater	191

	rainwater harvesting proposed in the Project, if any, should be provided.	harvesting plan are detailed in section 4.3.2 of Chapter 4.		
27	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.	Impact Studies and Mitigation Measures of Water Environment including Surface Water and Ground Water are discussed in Section 4.3.2		141
28	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.	The quarrying activity will not intersect ground water table as quarrying is proposed upto a depth of 67 m Below Ground Level and water table is found at a depth of 85 m BGL.		-
29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.	Not Applicable No stream passing through the mine lease area.		-
30	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A	Altitude of the area	78 m from MSL	-
		Ultimate Depth	67 m BGL	

	schematic diagram may also be provided for the same.	Ground water	85 m BGL.	
31	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.	Greenbelt Development Plan & Recommended Species proposed for Greenbelt Development are detailed in Section 4.4. 0.61.0 hectares of land are allotted for greenbelt development.		141
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	The Traffic density survey was carried out to analyse the impact of transportation in the study area as per IRC guidelines 1961 and it is inferred that there is no significant impact due to the proposed transportation from the project area.		-

	infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.		
33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.	Temporary Infrastructure & other facilities will be provided to the Mine Workers after the grant of quarry lease and the same has been discussed in Chapter 2.	62
34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.	At the conceptual stage the quarried-out land will be fenced and lower benches will be allowed to collect rain water to act as a temporary reservoir and Greenbelt development will be carried out on the top bench, unutilized areas and haul roads. Mine closure plan is detailed in Section 2.10 of Chapter 2.	84
35	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Details of occupational health and safety aspects are given under the Section 4.7.4 & Section 10.4.	165 & 196

36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	No major impact on public health will be there since the villages are located more than 1km from the lease area.	-
37	Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	This project provides employment to 36 Nos. Local people will be hired for unskilled labour. Through CSR, nearby schools, hospitals will be benefitted. For CSR, INR 5.0 Lakh is allocated. Based on the demand of the people during public hearing, further funds will be allocated, if necessary.	-
38	Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.	Environmental Management plan details are given in Chapter 10.	191
39	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.	During public hearing process, the opinions and demands of the people will be noted. The replies and commitment made by the proponent along with time bound action plan wherever applicable will be provided in Final EIA/EMP report.	-
40	Details of litigation pending against the project, if any, with direction	There is no litigation pending against the project.	-

	/order paced 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.	Project Cost is Rs. 164.08 Lakhs CER Cost is Rs. 5.0 lakhs EMP Cost: Total Rs. 51.51 Lakhs (Rs. 15.54 Lakhs Capital Cost+ Rs. 35.97 Lakhs of Recurring Cost) for 10 Years.	-
42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	Disaster management plan are provided under section 7.3 of Chapter-7.	174
43	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.	Detailed in Chapter 8.	188
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.	Yes, Complied.	-
C	Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.	Yes, Complied.	-
D	Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/ NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.	Yes, Complied.	-

E	Where the documents provided are in a language other than English, an English translation should be provided.	Yes, Complied.	-
F	The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.	Yes, Complied.	-
G	While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O.M. No. J- I 1013/41/2006-IA.11 0) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.	Noted & agreed	-
H	Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the pH again with the revised documentation.	Yes, Complied.	-
I	As per the circular no. J- 11011/1618/2010-IA.II (I) dated 30.5.2012, certified report of the status of compliance of the conditions	Yes, Complied.	-

	stipulated in the Environment Clearance the existing operations of the project, should be obtained from the Regional office of Ministry of Environment, Forest and Climate Change, as may be applicable.		
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.	Yes, Complied.	-

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. P. Jagadeesan, has obtained Precise Area communication letter from the Assistant Director, Department of Geology and Mining, Viluppuram to quarry out total production is 524460 m³ / 14,42,265 Ts of Rough Stone and 270655 m³ / 5,41,310 Ts of Gravel will be mined out in first five years and remaining 5,21,440 m³ / 1433960 Ts rough stone will be mined out in second five year Over an extent of 4.50.00 ha., located at the Survey No. 80(P) of Keezhsevr Village, Tindivanam Taluk, Viluppuram 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

Sl. No	Name of the Lessee	Village & S. F. No.	Extent (Ha)	Lease Status
a. Abandoned Quarries				
1	A.Kamatchi, W/o.Arivoli, No.64. Appasamy Nagar, Tindivnam.	Tindivanam & Keezsevr 79/2	0.87.0	23.4.2007 to 22.4.2012
2	P.Srinivasan, S/o. Pattabi Reddiyar, No.142, Mosque Street, C.Pallaravam, Chennai	Tindivanam & Senalur, 4/1A, 4/2A1, 4/2B1(P)	0.82.0 0.59.5 0.20.0/ 0.20.5 1.61.5/ 1.62.0	13.11.2015 to 12.11.2020

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. P. JAGADEESAN, OVER AN EXTENT OF 4.50.0 HA LOCATED AT THE S.F.NO.80(P) OF KEEZHSEVUR VILLAGE, TINDIVANAM TALUK, VILUPPURAM DISTRICT, TAMIL NADU STATE.

b. Existing Quarries				
1	M/s.Karpaga Vinayagaaa Mines, No.50, NH2, Kambar Street, Maraimalai Nagar, Chenagalpattu - 603 209	Tindivanam & Keezhsevr 75(P), 76/1(P)	0.03.0 0.97.0	26.12.2024 To 25.12.2029
c. Proposed Quarries				
1	Thiru.P.Jagadeesan, S/o.Pachaiyappan, Kanakku Pillai Annampakkam Village, Tindivanam Taluk, Viluppuram District	Tindivanam & Keezhsevr, S.F.NO. 80(P)	4.50.0	-
Total Cluster Area			8.50.0	

As per EIA notification, 2006 and its subsequent amendments the proposed Thiru. P. Jagadeesan, 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 8.50.0 Ha which is >5 Ha. Satellite image of Quarries in Cluster is shown in Fig 1.1.

The ToR for preparation of EIA/EMP was approved vide ToR Identification No. TO25B0108TN5214172N, Dated: 16.02.2026. This report has been prepared in line with the approved TOR for production of maximum excavation of 524460 m³ / 14,42,265 Ts of Rough Stone and 270655 m³ / 5,41,310 Ts of Gravel will be mined out in first five years and remaining 5,21,440 m³ / 1433960 Ts rough stone will be mined out in second five years.

1.2 IDENTIFICATION OF PROJECT AND PROJECT PROPONENT

The proposed project is for mining of Rough Stone and gravel (under cluster) from the S.F.No. 80 (p) over an extent of 4.50.00 Ha., Keezhsevr Village, Tindivanam Taluk, Viluppuram 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 quarry
4.	Type of Lease	New Quarry
5.	Extent of the lease	4.50.00 Ha
6.	Proposed depth of mining	52m BGL (First 5 Years) and 67m BGL (Second 5 years)
7.	Method of mining	Opencast Mechanized Mining with drilling and blasting.
8.	Proposed lease period	10 Years
9.	Proposed Environmental Clearance	10 Years
10.	Proposed production quantity	524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel - first five years and 5,21,440 m ³ / 1433960 Ts rough stone - second five years

(b) Profile of the project proponent

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

(c) Project proponent details

Name of the proponent : Thiru. P. Jagadeesan
Status of the Proponent : Individual
Address THIRU. P. JAGADEESAN,
S/O.PACHAIYAPPAN,
NO.85/2, KANAKKU PILLAI STREET,
ANNAMPAKKAM VILLAGE, TINDIVANAM
TALUK, VILUPPURAM, DISTRICT - 604 101

1.3 BRIEF DESCRIPTION OF NATURE OF THE PROJECT

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

1.3.1 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	4.50.00 Ha
3	Type of lease	New Quarry
4	Geological Resource	268800 m ³ / 7392000 Ts of Rough Stone and 313600 m ³ / 627200 Ts of Gravel
5	Mineable Reserve	1045900 m ³ / 2876225 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel
6	Proposed production quantity	5,24,460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel - first five years and 5,21,440 m ³ / 1433960 Ts rough stone - second five years
7	Proposed depth of mining	52m BGL (First 5 Years) and 67m BGL (Second 5 Years)

(b) Location of the project

The proposed project site is located in Keezhsevur Village, Tindivanam Taluk, Viluppuram District, Tamil Nadu and its Latitude: 12°14'03.59"N to 12°14'11.71"N Longitude: 79°45'05.95"E to 79°45'14.45"E. with Survey of India Topo Sheet No. 57-P/16.

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 WITH DETAILS OF REGULATORY SCOPING

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

For the purpose of preparing EIA/EMP the SEIAA, Tamil Nadu has issued a Terms of Reference ToR Identification No. TO25B0108TN5214172N, Dated: 16.02.2026 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 season (December 2025 to February 2026) 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 December 2025 to February 2026 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 a fresh Rough Stone and Gravel Quarry project. There is no litigation/court case pending against this project.

a. Precise Area Communication:

The Project Proponent has obtained Precise Area Communication from the Assistant Director, Department of Geology and Mining, Viluppuram, vide Rc.No. A/G&M/251/2025 dated 29.09.2025. 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, Viluppuram vide Rc.No. B/G&M/251/2025 dated 30.10.2025. The mining plan 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 the Assistant Director, Dept. of Geology & Mining, Viluppuram vide Rc.No. B/G&M/251/2025 dated 30.10.2025. The letter copy enclosed as **Annexure – 4.**

d. Project Proponent undertaking affidavit:

The project proponent has issued an affidavit under in matter of Common Cause vs Union of India & Ors. The Affidavit copy is enclosed as **Annexure – 12.**

e. Land document of the proposed lease area:

The applied area is fresh and it is a Patta land in the name of Tmt.Kamatchi vide Patta Nos. 1243, the applicant has obtained consent from Pattadars and got it registered are enclosed as **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. No. 80 (p) over an extent of 4.50.00 Ha., in Keezhsevir Village, Tindivanam Taluk, Villupuram District, Tamil Nadu State.

As per EIA notification, 2006 and its subsequent amendments the project comes under Schedule 1 (a) under Category B1 (Lease area >5 to 250 Ha), considering cluster situation and the total cluster area is 8.50.0 Ha. The details of mines located in the cluster area is certified by Assistant Director, Dept. of Geology & Mining, Viluppuram vide Rc.No. B/G&M/251/2025 dated 30.10.2025.

Table 2.1 – Details of Quarries within 500m Radius

Sl. No	Name of the Lessee	Village & S. F. No.	Extent (Ha)	Lease Status
a. Abandoned Quarries				
1	A.Kamatchi, W/o.Arivoli, No.64. Appasamy Nagar, Tindivnam.	Tindivanam & Keezsevir 79/2	0.87.0	23.4.2007 to 22.4.2012
2	P.Srinivasan, S/o. Pattabi Reddiyar, No.142, Mosque Street, C.Pallaravam, Chennai	Tindivanam & Senalur, 4/1A, 4/2A1, 4/2B1(P)	0.82.0 0.59.5 0.20.0/ 0.20.5 1.61.5/ 1.62.0	13.11.2015 to 12.11.2020
b. Existing Quarries				
1	M/s.Karpaga Vinayagaaa Mines, No.50, NH2, Kambar Street, Maraimalai Nagar, Chenagalpattu - 603 209	Tindivanam & Keezsevir 15(P), 76/1(P)	0.03.0 0.97.0	26.12.2024 To 25.12.2029
c. Proposed Quarries				

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. P. JAGADEESAN, OVER AN EXTENT OF 4.50.0 HA LOCATED AT THE S.F.NO.80(P) OF KEEZHSEVUR VILLAGE, TINDIVANAM TALUK, VILUPPURAM DISTRICT, TAMIL NADU STATE.

1	Thiru.P.Jagadeesan, S/o.Pachaiyappan, Kanakku Pillai Annampakkam Tindivanam Taluk, Viluppuram District	No.85/2, Street, S.F.NO. 80(P) Village,	Tindivanam & Keezhsevar, S.F.NO. 80(P)	4.50.0	-
Total Cluster Area				8.50.0	

The proposed total production is 524460 m³ / 14,42,265 Ts of Rough Stone and 270655 m³ / 5,41,310 Ts of Gravel upto a depth of 52 m BGL for the period of first five years and 5,21,440 m³ / 1433960 Ts of Rough stone upto a depth of 67 m BGL for the second five years by open cast mechanized mining method.

2.2 SALIENT FEATURES OF THE PROJECT

The salient features of the proposed Rough Stone and Gravel quarry of Thiru. P. Jagadeesan.

Table 2.2 Salient features of the project

S.No.	Type of Detail	Description
1	Sector	1(a) Non coal mining
2	Fresh/Existing project	New
3	Category	B1
4	Nature of mineral	Minor Mineral
5	Life of the mine	10 years
6	Production Quantity	524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel - first five years and 5,21,440 m ³ / 1433960 Ts rough stone - second five years
7	Waste generation and management	Nil
8	Bench height and width	Quarrying of Rough Stone is proposed bench height of 5m and bench width of 5m.
9	Ultimate pit depth	52 m BGL (for first five years) and 67 m BGL (next second five years)
10	End use	The excavated Rough Stone and Gravel is used for construction industries for Government & Public sector projects besides catering domestic housing and infrastructure projects in and around the district.

2.3 LOCATION (MAPS SHOWING GENERAL LOCATION, SPECIFIC LOCATION, PROJECT BOUNDARY & PROJECT SITE LAYOUT):

This project site is located in Keezhsevir Village, Tindivanam Taluk, Villupuram District, Tamil Nadu State. The Nearest Railway line is Olakur line which is about 8.4 km on Northwest side of the area. The National Highway -179B Viluppuram–Chennai is about 6.8km on Northwestern side of the area. State Highway -134 Marakkanam–Tindivanamis about 3.2Km on Southwestern side of the area. The general location is given in Figure 2.7. The specific location is given in Figure 2.8.

FIGURE 2.1 LOCATION MAP

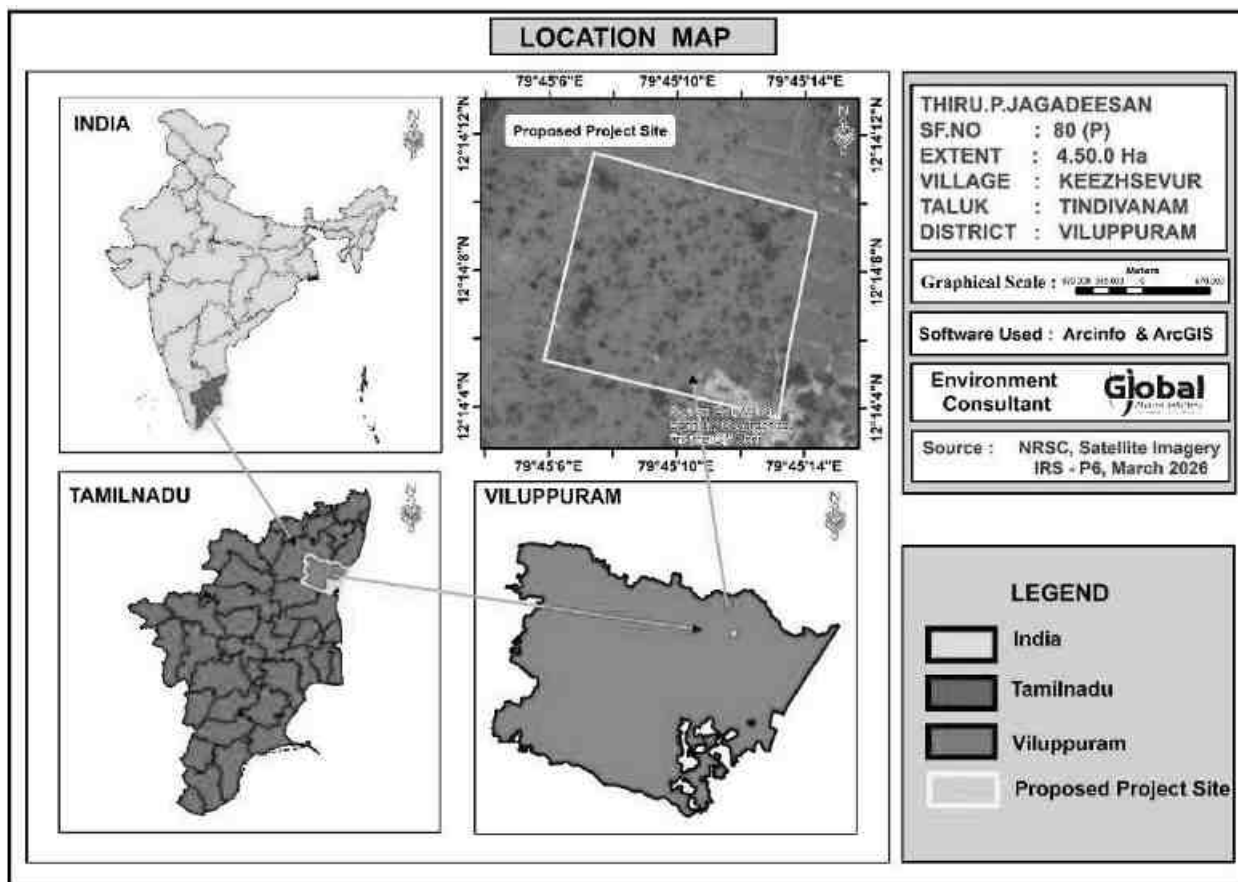


TABLE 2.3 Co-Ordinates Of the Project Site

Corners	Co- ordinates		Distance between the corners
	Latitude	Longitude	
1	12° 14' 05.33"N	79° 45' 05.95"E	1-2 = 201.4m
2	12° 14' 11.71"N	79° 45' 07.49"E	2-3 = 20.0m
3	12° 14' 11.56"N	79° 45' 08.13"E	3-4 = 173.6m
4	12° 14' 10.11"N	79° 45' 13.68"E	4-5 = 24.2m
5	12° 14' 09.90"N	79° 45' 14.45"E	5-6 = 136.2m
6	12° 14' 05.55"N	79° 45' 13.60"E	6-7 = 60.6m
7	12° 14' 03.59"N	79° 45' 13.31"E	7-8 = 59.0m
8	12° 14' 04.05"N	79° 45' 11.41"E	8-1 = 169.8m

FIGURE 2.2 GOOGLE IMAGE SHOWING PROJECT SITE

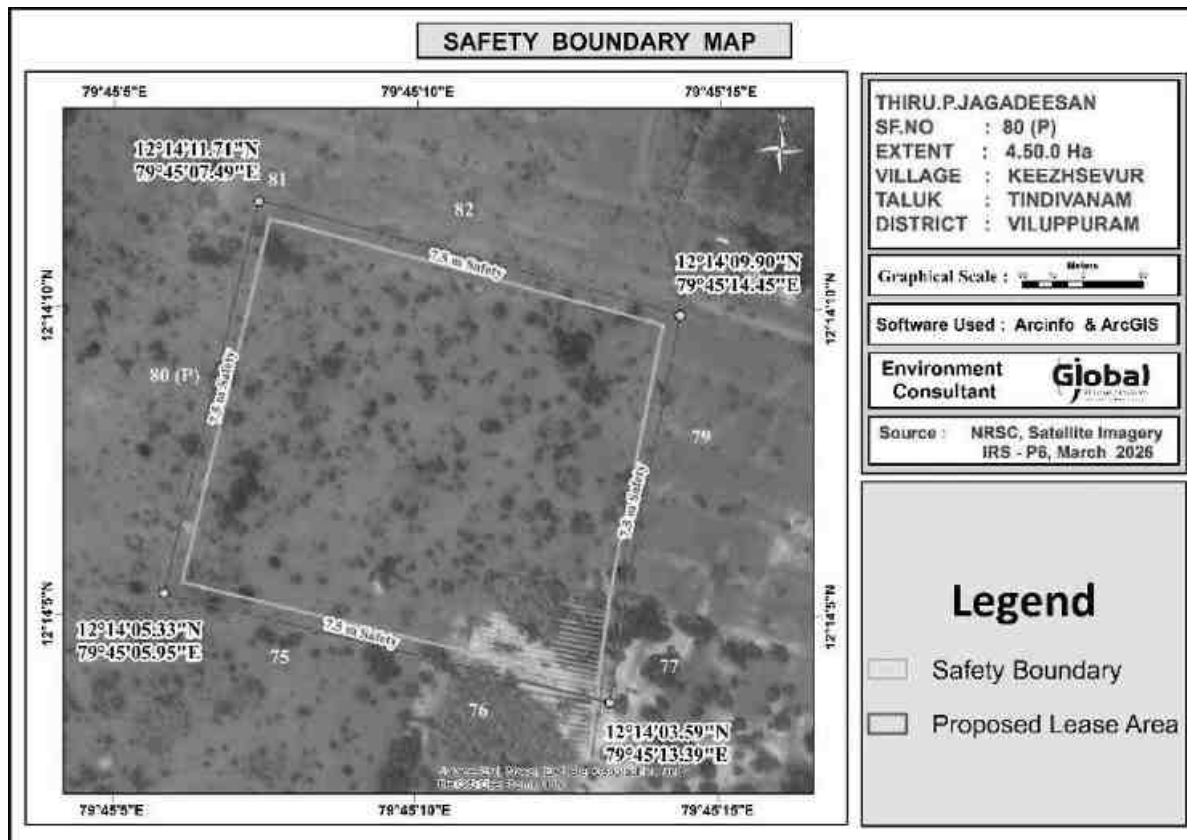
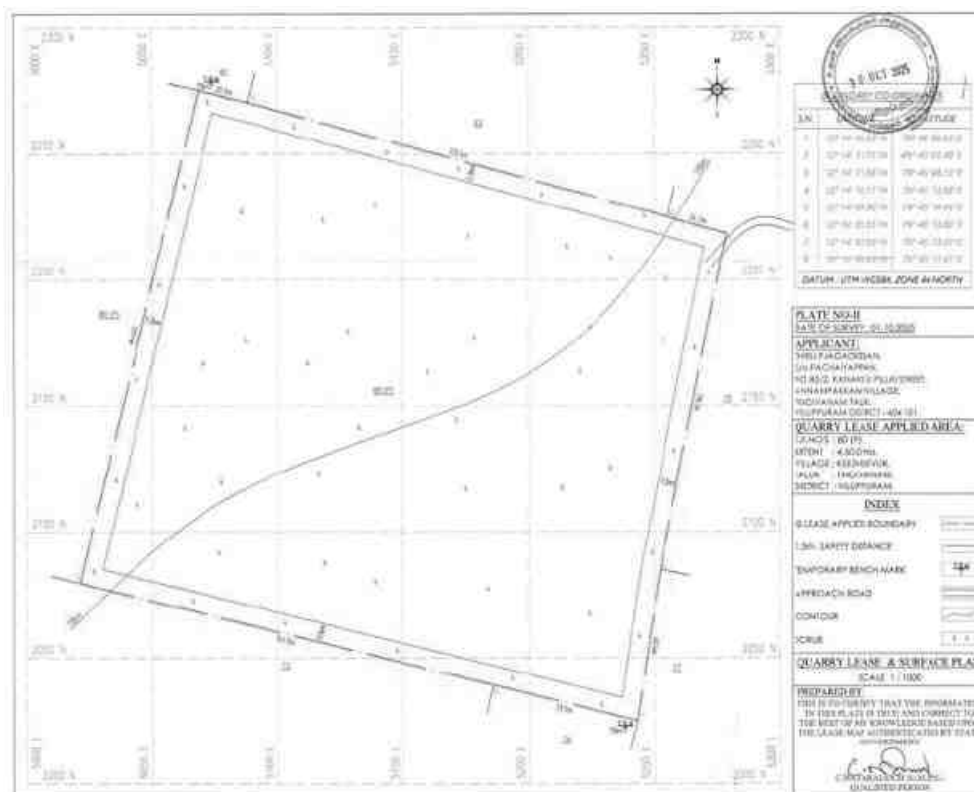


FIGURE 2.3 SURFACE PLAN OF THE PROJECT AREA



2.3.1 PROJECT SITE LAYOUT

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

Table 2.4 Current Land Use Pattern

S. No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1	Quarrying Pit	Nil	3.87.0
2	Infrastructure	Nil	0.01.0
3	Roads	Nil	0.01.0
4	Green Belt	Nil	0.61.0
5	Unutilized	4.50.0	Nil
Total		4.50.0	4.50.0

2.3.2 LAND USE AT MINE CLOSURE STAGE

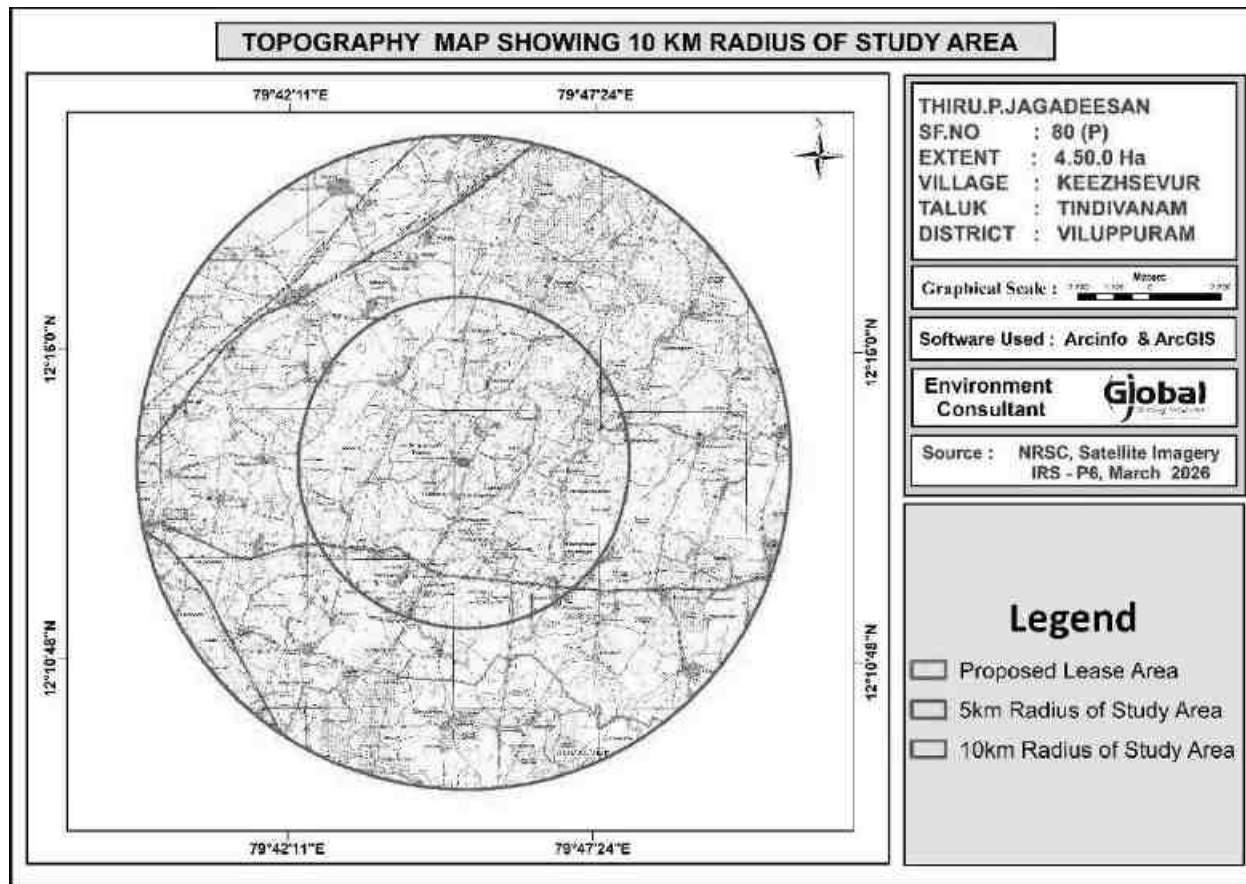
Table 2.5 Land Use at Mine Closure Stage

S. No.	Land Use	Area in use during the quarrying period (Ha)
1	Area left for water body	3.87.0
2	Green Belt	0.61.0
3	Remaining area	0.02.0
Total		4.50.0

2.3.3 SALIENT FEATURES OF THE LEASE AREA

Sr.No	Salient Features	Description
1	Nearest Roadway	(NH-179B) Viluppuram–Chennai is about 6.8km on Northwestern side of the area. (SH-134) Marakkanam–Tindivanamis about 3.2Km on Southwestern side of the area.
2	Nearest Village	Kilsevvur village – 855m (N)
3	Nearest Railway station	Olakur 8.4 km – NW
4	Nearest Airport	Puducherry Airport - 30 km - SE

Figure 2.4 Topo Map showing existing site features



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

The proposed production is 524460 m³ / 14,42,265 Ts of Rough Stone and 270655 m³ / 5,41,310 Ts of Gravel up to the depth of 52 m BGL for the period of first five years and 5,21,440 m³ / 1433960 Ts rough stone up to the depth of 67 m BGL for the period of second five years by Opencast Mechanized mining method.

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 - 2.6 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, Dept. of Geology & Mining, Viluppuram vide Rc.No. B/G&M/251/2025 dated 30.10.2025.
2	Environment Clearance Status	ToR Letter Received vide file no TO25B0108TN5214172N, dated 16/02/2026.
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 - 2.7 Proposed Schedule for Approval

S.N	Activity Description	Jul 2026	Aug 2026	Sep 2026	Nov 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 27.11.2026, ToR was granted on 16.02.2026. Baseline data Collection during Summer Season (December 2025 to February 2026). 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, Dept. of Geology & Mining, Viluppuram vide Rc.No. B/G&M/251/2025 dated 30.10.2025.

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 5.0 KLD which will be sourced from outside agencies. Negligible sewage of 1.5 KLD will be generated, for which a septic tank with soak pit will be set up. The water balance diagram is given below.

FIG 2.6 WATER BALANCE DIAGRAM

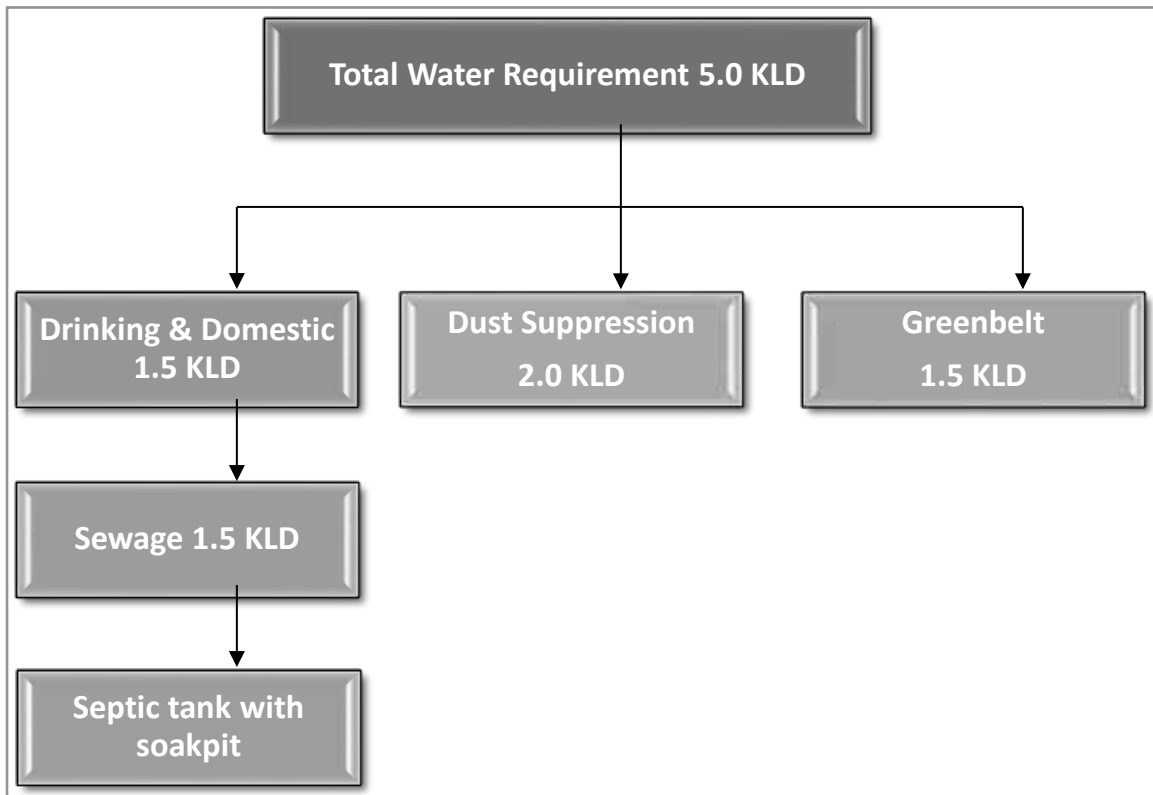


Table - 2.8 Water Requirement

S. No	Particular	Water Requirement (KLD)
1	Dust suppression	2.0
2	Drinking/Domestic	1.5
3	Greenbelt/Plantation	1.5
Total		5.0

2.6.3 POWER REQUIREMENT

No electricity is needed for mining operations.

2.6.4 MAN POWER REQUIREMENT

Total Manpower requirement will be 36 persons which out of 16 persons (Mines manager, Foreman, Mining Mate, etc.,) and other are drivers and workman's categories. Beside this, 20 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 No.
3	Operator	12 No.
4	Mechanic	1 No.
5	Driver	5 No.
6	Labours	15Nos
Total		36 Nos

2.6.5 EXTENT OF MECHANIZATION

Table 2.9 Machineries involved in the project

S.No.	Particulars	capacity	Motive Power	Nos
1.	Jack hammer	32mm dia	Compressed air	5
2.	Compressor	1 psi	Diesel drive	2
3.	Excavator with Bucket and Rock Breaker	0.90 m3	Diesel drive	2
4.	Tippers	10/20 Ts	Diesel drive	5

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 and Gravel quarry in the ML area.

2.6.6 GEOLOGY AND TOPOGRAPHY

Topography

The mine lease area of 4.50.0 Ha is covered in the Survey of India Toposheet 57 P/16 and is bounded by Latitude: 12°14'03.59"N to 12°14'11.71"N Longitude: 79°45'05.95"E to 79°45'14.45"E. No major river is found nearby the lease applied area. Water table is found at a depth of 85m in summer and 82m 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 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 elevation of the proposed quarry is 52 m BGL (for first five years) and 67 m BGL (for second five years). There is no forest land in the mine lease area. The project site is dry land which is not fit for any cropping.

2.6.7 Regional Geology

Keezhsepur Village is situated in **Villupuram District**, which is characterized by a combination of ancient crystalline basement rocks and extensive sedimentary formations belonging to the Cauvery Basin. The district exhibits a diverse geological succession ranging from Archaean crystalline rocks to recent alluvial deposits.

The western part of the district is underlain by hard crystalline rocks such as **granitic gneiss, hornblende gneiss, and charnockite**, intruded by dolerite dykes and pegmatite veins. These rocks are highly metamorphosed and have undergone significant folding, faulting, and fracturing.

The greater part of the district is covered with metamorphic crystalline rocks of Archaean age belonging to the Charnockite – khondalite group.

The basic and ultrabasic intrusive and extrusive rocks are present. Dark looking dolerite dykes form the youngest basic intrusives.

Overlying the Archaeans are the fossiliferous upper cretaceous formations mainly occur. Overlying the cretaceous rocks are the cuddalore formation of mio-pliocene age. These comprises sand stone, often ferruginous, pebble bed, sand and clay with lignite. White to greysilica sand of sub recent age occur as long leaner bands along the north – eastern coast of the district around Marakkanam.

During sub recent to recent times there has been the deposition of alluvium, coastal sands and soils including lateritic soil.

The geological framework of Keezhsepur Village plays an important role in groundwater occurrence, soil formation, and land-use practices. Groundwater is mainly stored within weathered and fractured zones of the crystalline rocks and within permeable sandstone and alluvial formations, making these units important aquifers for domestic and agricultural use.

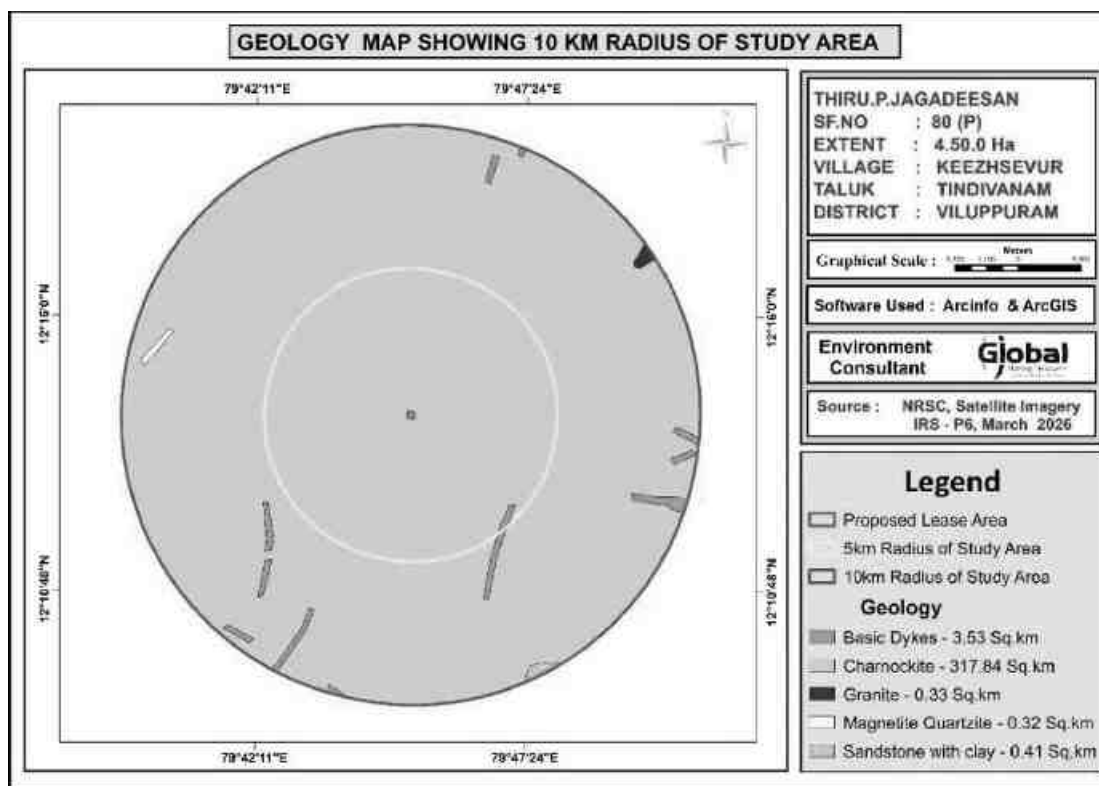


FIGURE 2.7 REGIONAL GEOLOGY MAP - 10 Km RADIUS

2.6.8 Local Geology

Geological Resources

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 SE80°.

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

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

The Geological resources are calculated in area method.

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

2.7.1 PROCESS DESCRIPTION

METHOD OF MINING

Opencast mechanized method with 5.0 m height 5.0m width and overall, 45° slope of the bench. It is proposed to excavate 5,24,460 m³ / 14,42,265 Ts of Rough Stone and 2,70,655 m³ / 5,41,310 Ts of Gravel formation upto a depth of 52m below ground level for the period of first five years and remaining quantity of 5,21,440 m³ / 14,33,960 Ts of rough stone will be proposed for the period of second five years upto a depth of 67m (below ground level). No wastage is envisaged as the entire material available is Rough Stone and Gravel 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 overall slope angle will be at around 75° with the horizontal.

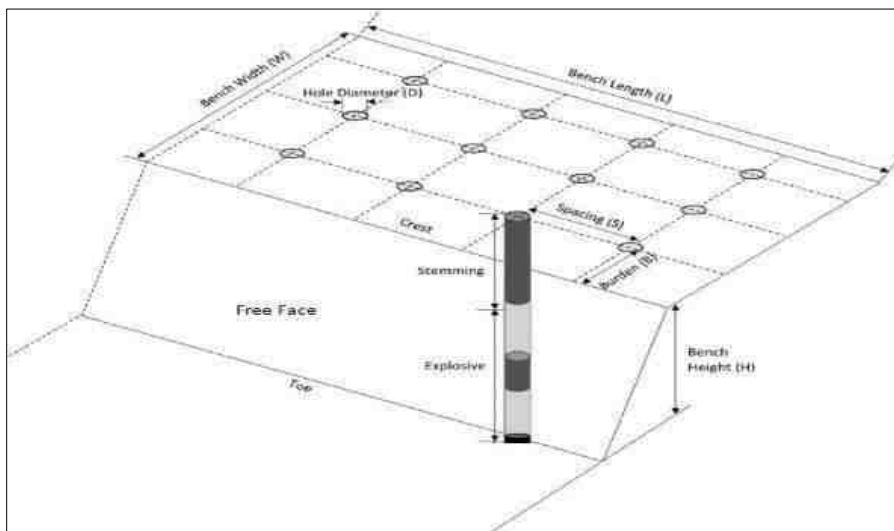
DEVELOPMENT OF MINING FACES

The proposed mining method is Opencast Mechanized mining. Site preparation as such bush cleaning, approach road, office and sanitary facilities will be done after obtaining all the statutory clearances as such Environmental Clearance, Consent to Operate, Lease Deed, etc., Once site is ready will start the quarrying operation and it is anticipated in the month of November 2026.

DRILLING & BLASTING

Drilling will be done up to depth of 52 m BGL for first five years and 67 m BGL for second five years (Drilling diameter will be 32 - 36 mm). Jackhammer will be used for drilling with water spray. Powder factor of explosives for breaking such hard rock shall be in the order of 6 to 7 Tonnes per Kg of explosives. Small dia 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 2.8.

FIGURE 2.8 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 (10/20MT) capacity of 5 nos will be used.

FIGURE 2.9 FLOW CHART OF THE QUARRY OPERATION

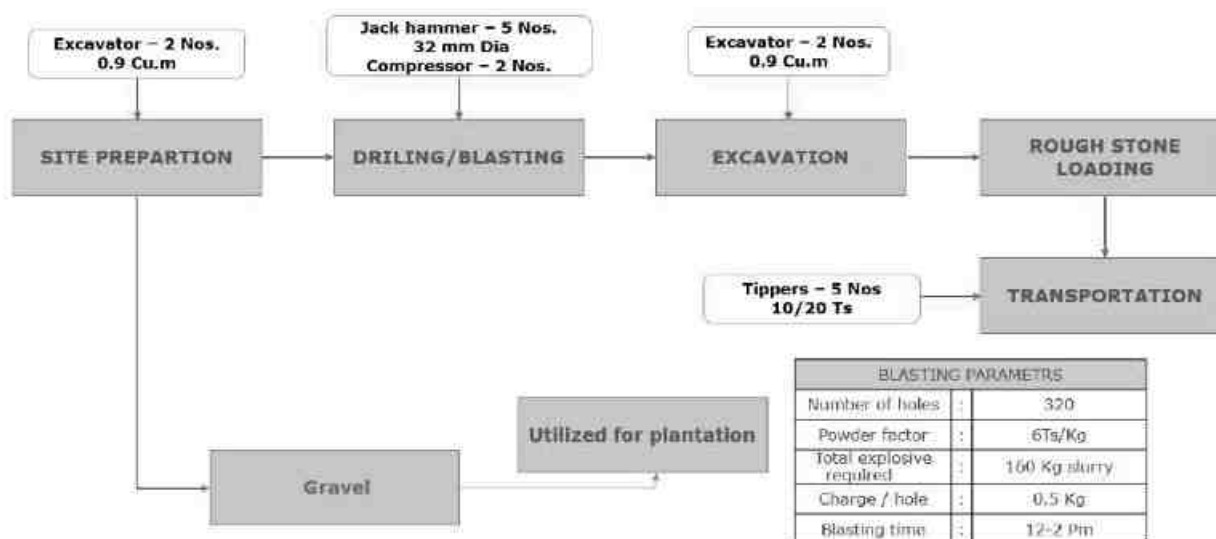


TABLE - 2.10 MINING DETAILS

S.No	Description	Details	Remarks
1.	Method of Mining	Opencast method of 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 10/20T tippers will be used for the Hauling.	Excavator – 2 No Tippers - 5 Nos.
2.	Mineral Use	The excavated Rough Stone and Gravel, will be used for construction industries for Government & Public sector projects besides catering domestic housing and infrastructure projects in and around the district	-
3.	Proposed Depth	52m BGL for first five years and	Water table in the area is around 85m

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. P. JAGADEESAN, OVER AN EXTENT OF 4.50.0 HA LOCATED AT THE S.F.NO.80(P) OF KEEZHSEVUR VILLAGE, TINDIVANAM TALUK, VILUPPURAM DISTRICT, TAMIL NADU STATE.

		67 m BGL for second five years	BGL in Summer and 82m in rainy seasons.		
4.	Proposed Production quantity	5,24,460 m3 / 14,42,265 Ts of Rough Stone and 2,70,655 m3 / 5,41,310 Ts of Gravel - first five years and 5,21,440 m3 / 1433960 Ts rough stone - second five years	Ten years		
5.	Ultimate pit dimension				
		Ultimate pit dimension end of mining plan period			
		PIT NO	Length in (m)	Width in (m)	Depth in (m)
		I	209	185	52
		End of the lease period			
I	209	185	67		
5.	Safety Zone	Out of 4.50.0 Ha, 0.61.0 Ha will be maintained as safety zone during mining operation as well as at the conceptual stage of the project.	Around 610 nos. of saplings will be planted in this safety		
6.	Water requirement	5.0 KLD	Procured from the outside watervendors		
7.	Energy requirement	-	All the equipment will be diesel operated. No electricity is needed for mining operation		
8.	Manpower	36 Nos			
9.	Shift	General Shift		8.00 AM – 5.00 PM	
10.	Project Cost	164.08 Lakhs	(Including Fixed Asset + Operational & EMP cost)		
11.	EMP Cost	Total EMP Cost for 10 years is Rs. 51.51 Lakhs (Rs. 15.54 Lakhs Capital Cost+ Rs. 35.97 Lakhs of Recurring Cost) have been allocated under the EMP budget.	-		
12.	CER Cost	As per MOEFCC Notification CER	The amount will be		

		cost as 5.0 Lakhs.	utilized for the development of nearby Government Schools.

2.7.2 YEAR WISE PRODUCTION & EXCAVATION DETAILS

Year wise Production of Rough stone and Gravel 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 2.11 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	72	185	7	93240	-	2	186480.00	-
		II	65	171	5	-	55575	2.75	-	152831.25
		III	60	161	5	-	48300	2.75	-	132825.00
Total						93240	103875	-	186480.00	285656.25
II	XY-AB	I	63	185	7	81585	-	2	163170.00	-
		II	63	171	5	-	53865	2.75	-	148128.75
		III	63	161	5	-	50715	2.75	-	139466.25
Total						81585	104580	-	163170.00	287595.00
III	XY-AB	I	74	185	7	95830	-	2	191660.00	-
		II	67	171	5	-	57285	2.75	-	157533.75
		III	62	161	5	-	49910	2.75	-	137252.50
Total						95830	107195	-	191660.00	294786.25
IV	XY-AB	IV	76	151	5	-	57380	2.75	-	157795.00
		V	66	141	5	-	46530	2.75	-	127957.50
Total						-	103910	-	-	285752.50
V	XY-AB	VI	56	131	5	-	36680	2.75	-	100870.00
		VII	46	121	5	-	27830	2.75	-	76532.50
		VIII	36	111	5	-	19980	2.75	-	54945.00
		IX	26	101	5	-	13130	2.75	-	36107.50
		X	16	91	5	-	7280	2.75	-	20020.00
Total						-	104900	-	-	288475.00
Grand Total						270655	524460	-	541310.00	1442265.00

The applicant has proposed to carry out 524460 m³ / 14,42,265 Ts of Rough Stone and 270655 m³ / 5,41,310 Ts of Gravel formation up to a depth of 52 m BGL for the period

of first five years and remaining quantity of 5,21,440 m³ / 1433960 Ts of Rough stone will be proposed for the period of second five years up to a depth of 67 m BGL.

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

Year	Section	Bench	Length in(m)	Width in (m)	Depth in (m)	Rough stone in m³	Bulk Density	Mineable Reserves of Rough stone in Ts
VI	XY-AB	IV	99	151	5	74745	2.75	205548.75
		V	42	141	5	29610	2.75	81427.50
Total						104355	-	286976.25
VII	XY-AB	V	57	141	5	40185	2.75	110508.75
		VI	99	131	5	64845	2.75	178323.75
Total						105030	-	288832.50
VIII	XY-AB	VII	99	121	5	59895	2.75	164711.25
		VIII	80	111	5	44400	2.75	122100.00
Total						104295	-	286811.25
IX	XY-AB	VIII	19	111	5	10545	2.75	28998.75
		IX	99	101	5	49995	2.75	137486.25
		X	99	91	5	45045	2.75	123873.75
Total						105585	-	290358.75
X	XY-AB	XI	105	81	5	42525	2.75	116943.75
		XII	95	71	5	33725	2.75	92743.75
		XIII	85	61	5	25925	2.75	71293.75
Total						102175	-	280981.25
Grand Total						521440	-	1433960.00

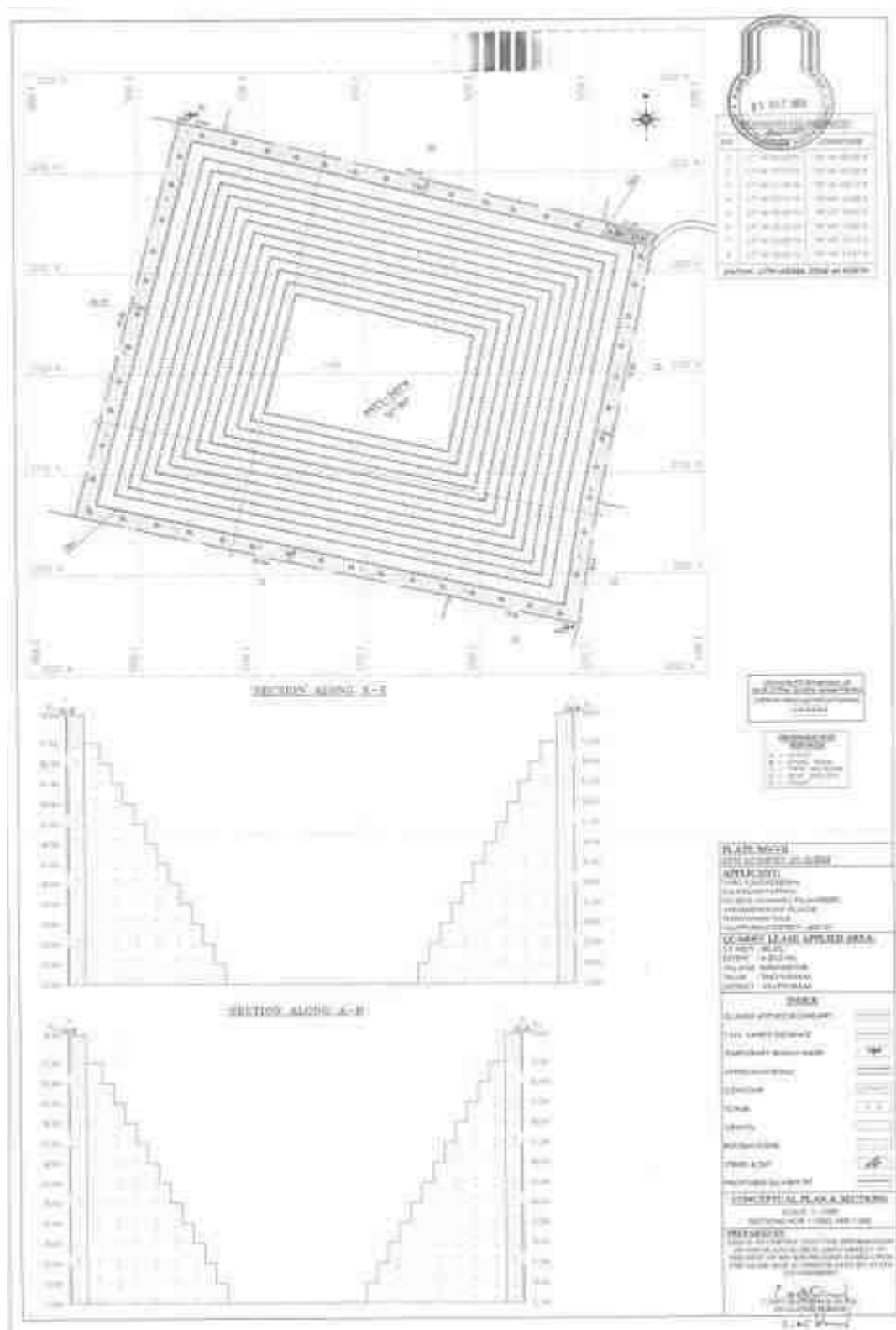
2.7.3 CONCEPTUAL PERIOD

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 2.12. The conceptual plan is given as Figure 2.11.

TABLE 2.12 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	209	185	52m BGL
Ultimate Pit dimension at the end of the lease period			
I	209	185	67m BGL

TABLE 2.13 Land Use at Mine Closure Stage		
S. No.	Land Use	Area in use during the quarrying period (Ha)
1	Area left for water body	3.87.0
2	Green Belt	0.61.0
3	Remaining area	0.02.0
Total		4.50.0

FIGURE 2.10 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 MoEFCC 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 equipment's 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 0.61.0 Ha. Trees like Pungai, Vagai, Vembu, Manjal konrai, Naval, Puvarasu, etc., will be planted around the mine lease area. A total of 610 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. DESCRIPTION OF THE STUDY AREA

The project area is located in in Keezhsevur Village, Tindivanam Taluk, Viluppuram District, Tamil Nadu State over an extent of 4.50.0 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 MOEFCC recognized laboratory for various components of environment, viz. Air, Noise, Water, Land was carried out during Summer Season i.e. December 2025 to February 2026 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.

3.1.1 DESCRIPTION OF ENVIRONMENT IN 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	

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A	Wetlands, water courses or other water bodies,	There is Three Tank situated on west, east, southwest side of the area and is 120m, 360m and 330m away from the area. There is Nilavial Vaikkal passing on south side of the area and is 220m away from the area
B	Coastal zone, biospheres,	Nil within 10km radius
C	Mountains, forests	Nil within a 10Km radius. Sevur-110m(W) Kumalampattu-8.5Km(SE)
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	There are no habitations within a radius of 300m. Kilsevr Village – 855m (N)
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	There are no habitations within a radius of 300m. Kilsevr Village – 855m (N)
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.

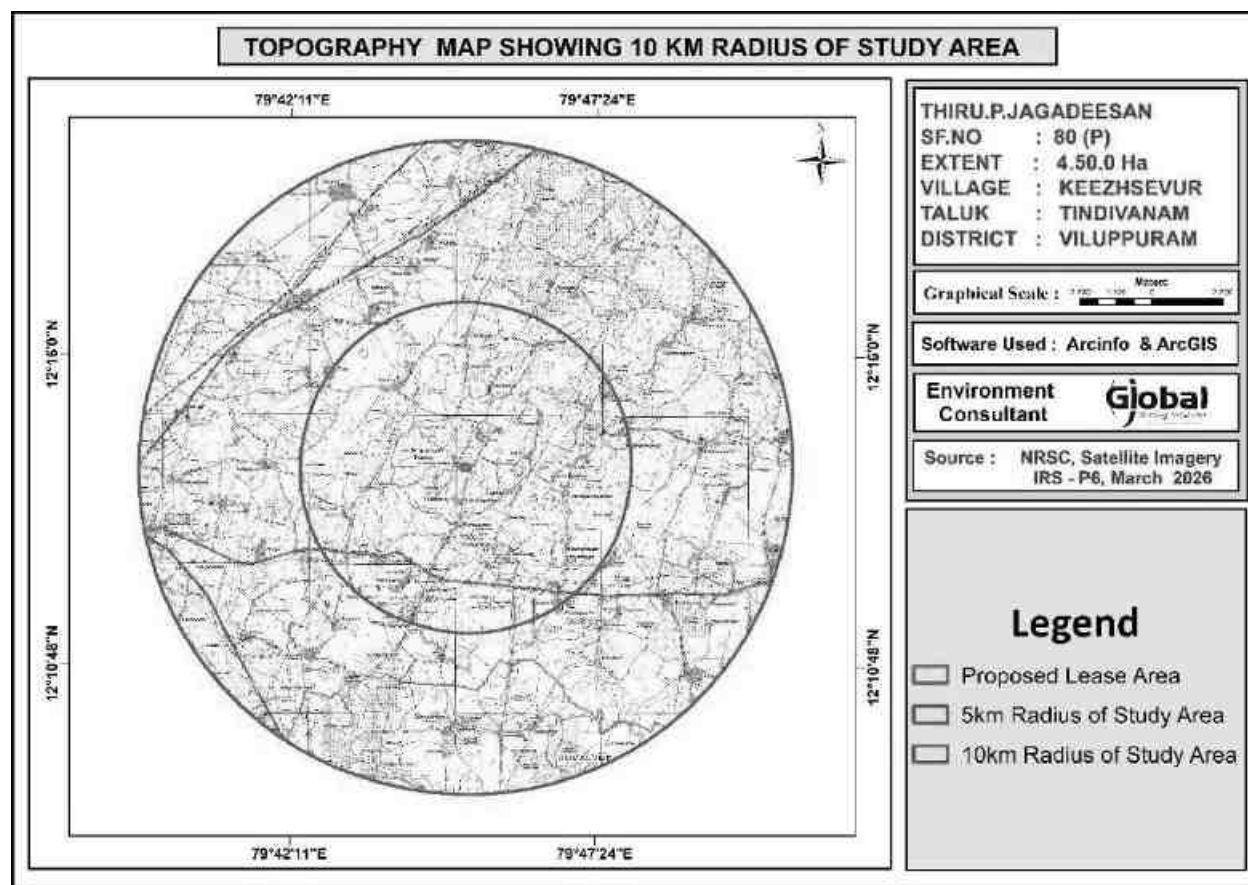


FIG 3.1 ENVIRONMENTAL SETTING OF THE STUDY AREA

3.1.2 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 December 2025 to February 2026 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
- ✚ Socio economic environment
- ✚ Hydrogeology

3.2.1 BASELINE DATA COLLECTION

Baseline environment data on various components of the environment in the study area were collected during December 2025 to February 2026 to assess the present scenario of the area. Details are given in the table given below.

Baseline data collection During Post Monsoon Season (December 2025 to February 2026)

Sr.No	Environmental 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	Surface Water	Parameters as per IS 10500 - 2012	Once in a season	2
B	Ground Water	Parameters As per IS 2720/USDA	Once in a season	6
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

3.2.2 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 500 M RADIUS FROM THE PROPOSED QUARRY SITE

A site survey has been conducted to identify and list structures located within a 500m radius from the proposed Quarry and are detailed below. There are permanent structures within a 500m radius from the project site. The PP has obtained a letter from Village Administrative Office (VAO).

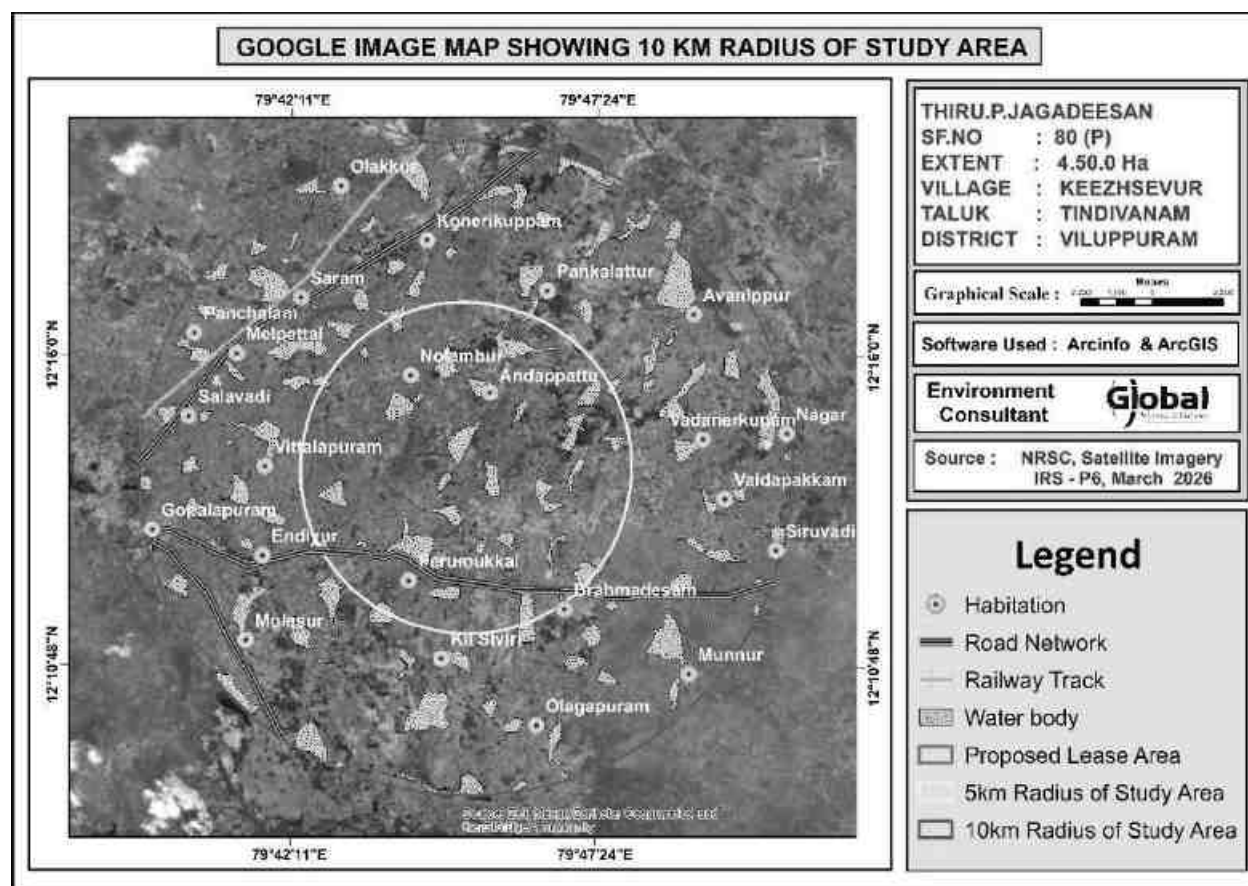


FIGURE - 3.2 SATELLITE MAP OF THE PROJECT AREA (10 KM RADIUS)

3.4 METEOROLOGICAL ENVIRONMENT

Meteorological conditions prevailing in the buffer zone is given below.

3.4.1 Climate and Rainfall data

Keezhsevir Village, located in **Villupuram District, Tamil Nadu**, experiences a **tropical semi-arid to sub-humid climate** characterized by high temperatures throughout the year, seasonal monsoon rainfall, and distinct wet and dry periods. The climate is influenced by both the **Southwest Monsoon** and the **Northeast Monsoon**, with the Northeast Monsoon contributing the major share of annual rainfall.

The soils in and around Keezhsevir Village are predominantly **red loamy soils, red sandy soils, and clayey soils**, with alluvial deposits occurring in low-lying areas. Agriculture forms an important livelihood activity and depends on a combination of rainfall, tanks, ponds, canals, open wells, and borewells.

Temperature

Summer Season (March–June)

- Hot and dry weather conditions prevail.
- Maximum temperatures generally range between **36°C and 41°C**, with April and May being the hottest months.
- High evaporation rates and increased water demand are common during this period.

Winter Season (December–February)

- Comparatively mild and pleasant weather.
- Minimum temperatures generally range between **20°C and 23°C**.
- January is usually the coolest month of the year.

Rainfall

- The average annual rainfall of Villupuram District ranges from approximately **950 to 1,150 mm.**
- Rainfall is received mainly from:
 - **Northeast Monsoon (October–December):** Approximately 50–60% of the annual rainfall.
 - **Southwest Monsoon (June–September):** Approximately 25–35% of the annual rainfall.
 - **Summer and winter showers:** The remaining 10–15%.

Seasonal Characteristics

1. Summer (March–June)

- High temperatures and relatively dry conditions.
- Occasional thunderstorms and localized showers may occur.

2. Southwest Monsoon (June–September)

- Moderate rainfall.
- Supports agricultural operations and contributes to groundwater recharge.

3. Northeast Monsoon (October–December)

- Principal rainy season.
- Provides the majority of annual rainfall and replenishes tanks, ponds, streams, and groundwater resources.

4. Winter (December–February)

- Dry and relatively cool weather.
- Favorable conditions for agricultural activities and crop growth.

Climate of Keezhsepur Village

Keezhsepur Village experiences climatic conditions typical of the eastern part of Villupuram District.

- **Climate Type:** Tropical semi-arid to sub-humid
- **Average Annual Rainfall:** Approximately **950–1,100 mm**
- **Peak Summer Temperature:** **38–41°C**
- **Winter Minimum Temperature:** **20–23°C**
- **Major Rainfall Source:** Northeast Monsoon
- **Agriculture:** Supported by seasonal rainfall, groundwater resources, village tanks, irrigation structures, and agricultural wells.

The climatic regime, together with the predominance of red and alluvial soils, supports cultivation of paddy, groundnut, sugarcane, pulses, millets, and other seasonal crops. However, variations in monsoon rainfall significantly influence groundwater availability and agricultural productivity, making effective water-resource management essential for sustainable development in Keezhsepur Village.

Table 3.2 Rainfall Data

Actual Rainfall in mm					Normal Rainfall in mm
2019	2020	2021	2022	2023	
985.80	973.20	954.10	1001.60	1084.50	999.84

3.4.2 Relative Humidity

The relative humidity, in general around the year is between 33 and 96 % in most parts of the district, except during the north-east monsoon season when it is over 75 %. However, the coastal areas will be comparatively more humid.

3.4.3 Seismic information

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

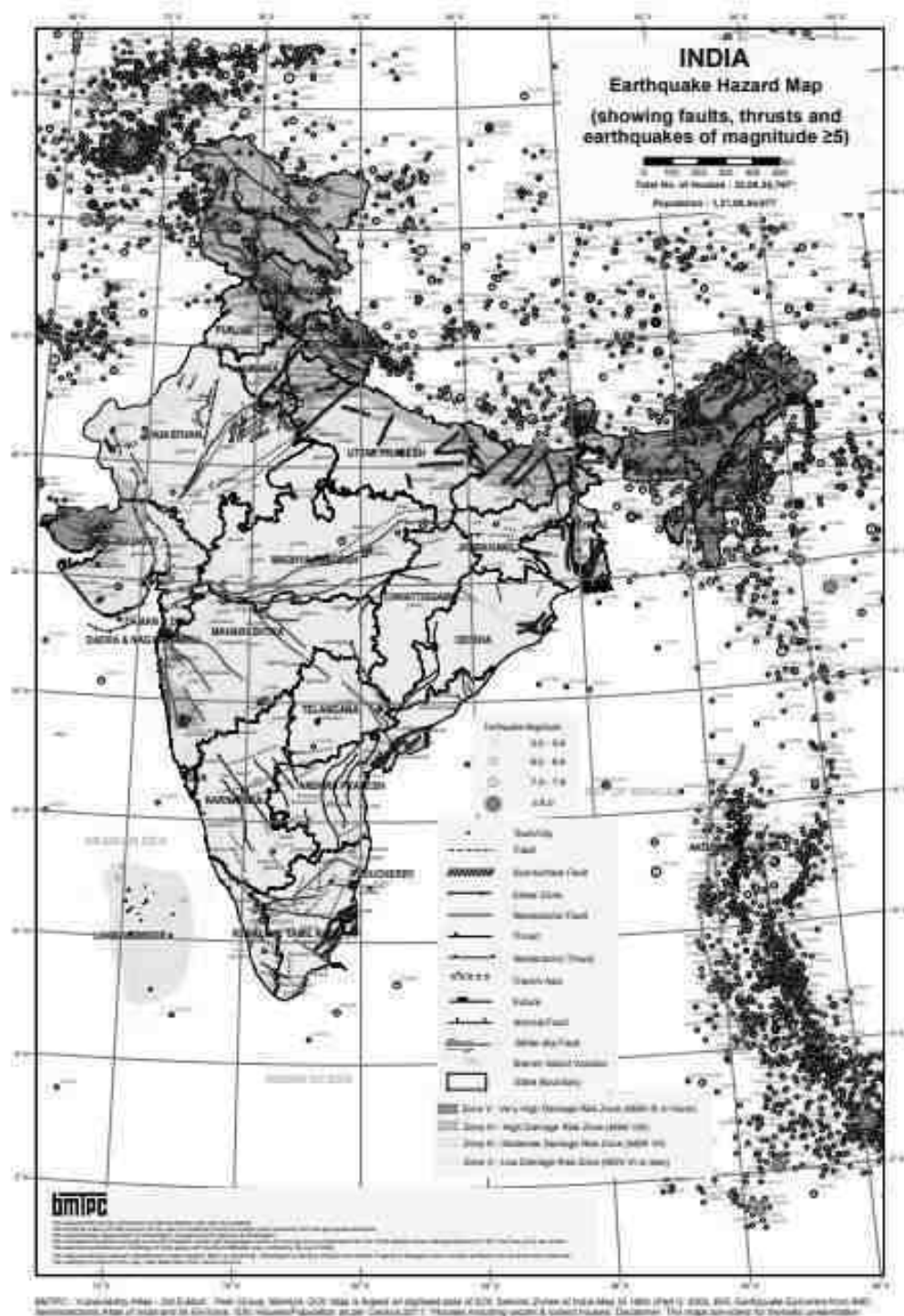


FIG 3.3 SEISMIC MAP OF INDIA

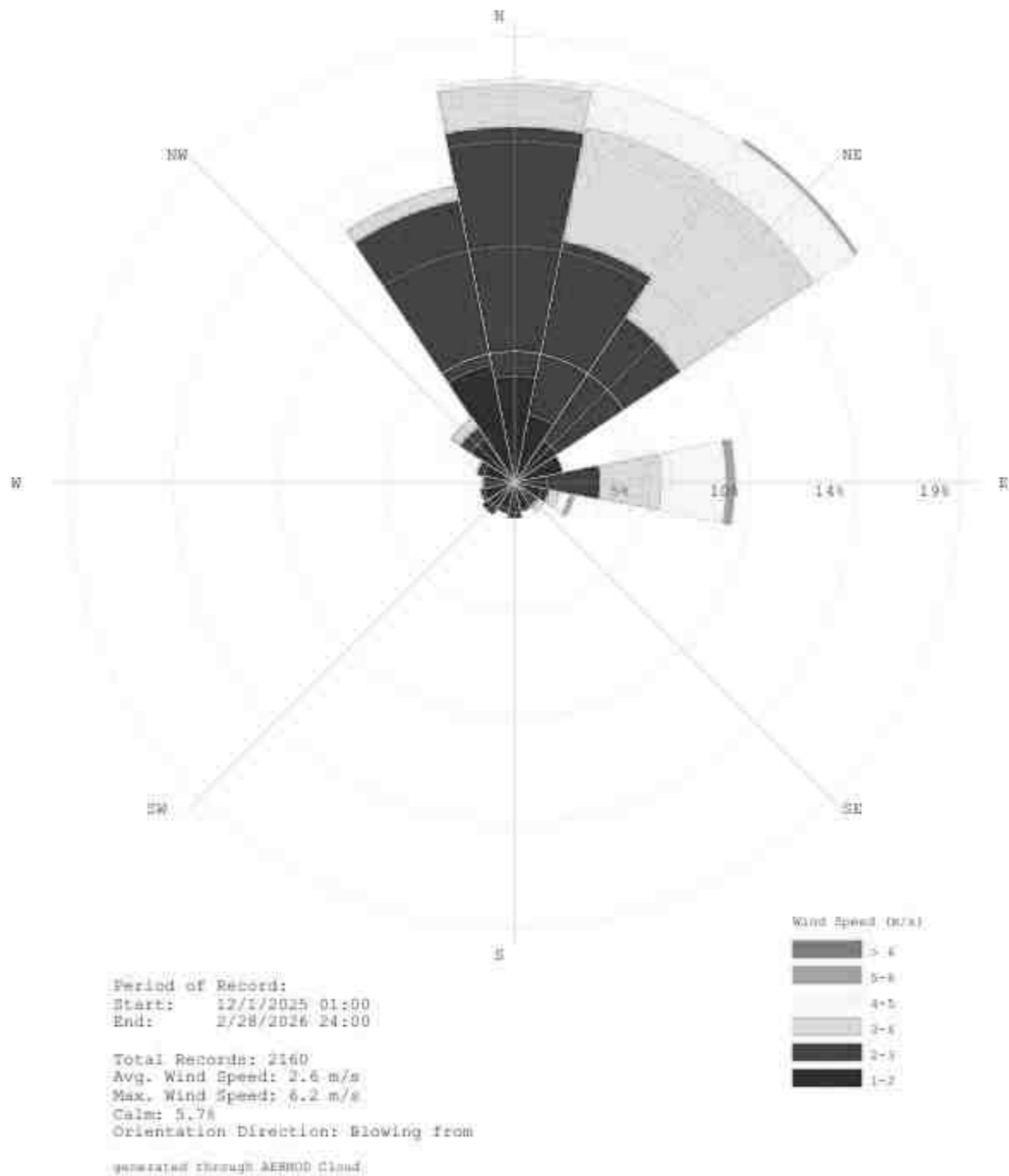


FIG 3.4 WIND ROSE PLOT DURING DECEMBER 2025 TO FEBRUARY 2026

3.4.4 Meteorological data of the project area

The meteorological data collected in the study area from December 2025 to February 2026 which includes Temperature, Wind speed and Wind direction. The predominant wind blows from North East. The temperature of the area is reported to be 19°C and 33°C during summer.

3.5 MONITORING DATA

3.5.1 AIR ENVIRONMENT

Ambient air quality monitoring has been carried out in 7 locations. One in the core zone and remaining six locations in the buffer zone areas. Monitoring locations have been chosen such that the measurement represents the overall air condition prevailing in the area. The study area represents mostly rural environment with stone mining quarries & crushers.

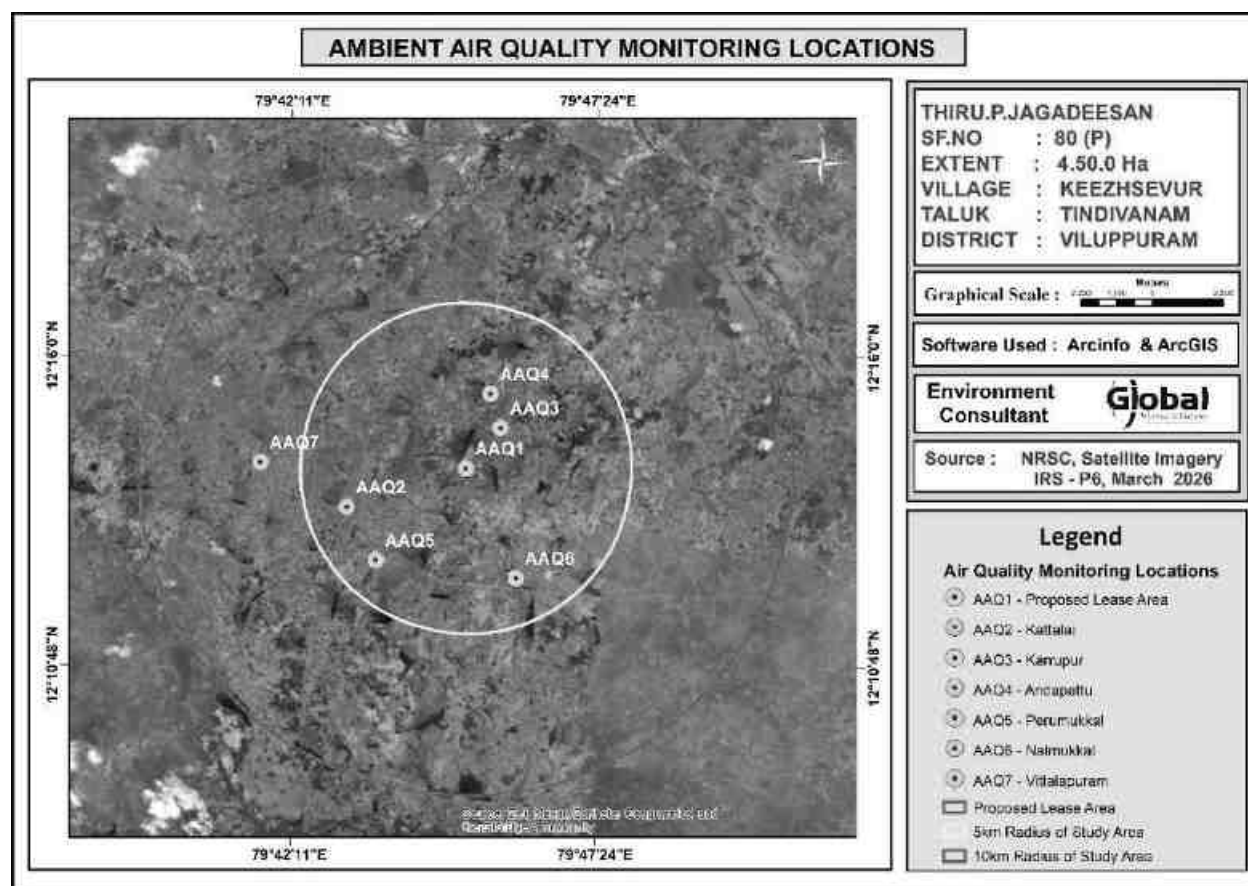
The regional climatologically data, was used as a guideline to know the predominant wind direction during study period. The locations were identified keeping in view predominant wind directions prevailing during study period, sensitive receptors, human settlements, and mining activities around.

The levels of Respirable Particulate Matter (PM₁₀), Fine Particulates (PM_{2.5}), Sulphur Dioxide (SO₂) and Oxides of Nitrogen (NO_x) were monitored for establishing the baseline status. PM₁₀ were sampled with the help of Respirable Dust Samplers on filter papers and SO₂ & NO_x were absorbed in the respective absorption media in the impingers attached to RD samplers and analyzed Spectro-photometrically. PM_{2.5} was monitored with the help of Fine Particulate Samplers. The monitoring locations for ambient air study are given in Table – 3.3 and Figure 3.5 below.

Table 3.3 Details of Ambient Air Quality Monitoring Locations

S. No.	Station Code	Locations	Coordinates
1	AAQ 1	Within Mine Lease area	12°14'6.82"N & 79°45'10.14"E
2	AAQ 2	Kattalai	12°13'25.87"N & 79°43'6.57"E
3	AAQ 3	Karrupur	12°14'43.12"N & 79°45'42.47"E
4	AAQ 4	Andapattu	12°15'16.00"N & 79°45'35.27"E
5	AAQ 5	Perumukkal	12°12'32.60"N & 79°43'43.12"E
6	AAQ6	Nalmukkal	12°12'16.41"N & 79°45'59.99"E
7	AAQ7	Vittallapuram	12°14'9.24"N & 79°41'44.39"E

FIG 3.5 AMBIENT AIR MONITORING LOCATIONS



The concentrations of various air pollutants at the 7 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 7 locations

Station ID	Min	Max	Avg
Particulate matter PM-2.5 ($\mu\text{g}/\text{m}^3$)			
AAQ-1	20.5	32.1	25.7
AAQ-2	20.8	25.7	23.4
AAQ-3	21.4	26.8	24.4
AAQ-4	20.7	26.3	23.3
AAQ-5	22.1	26.8	24.8
AAQ-6	19.9	27.2	23.4
AAQ-7	22.4	26.1	24.1
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	43.7	66.9	53.5
AAQ-2	46.3	57.2	51.9
AAQ-3	47.5	53.6	54.2
AAQ-4	48.4	61.4	54.4
AAQ-5	49.2	59.6	55.2
AAQ-6	42.3	57.8	49.7
AAQ-7	48.6	56.8	52.4
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	4.4	7.9	6.0
AAQ-2	3.6	6.4	5.0
AAQ-3	4.7	7.5	5.8
AAQ-4	4.7	6.6	5.9
AAQ-5	5.4	7.8	6.5
AAQ-6	3.3	6.8	5.1
AAQ-7	5.3	7.8	6.4
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	6.9	9.8	8.3
AAQ-2	10.2	12.8	11.5
AAQ-3	11.3	14.2	12.6
AAQ-4	9.7	12.6	11.3
AAQ-5	11.3	14.2	12.6
AAQ-6	6.7	9.7	8.2
AAQ-7	9.2	11.9	10.4
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 3.6 AMBIENT AIR QUALITY DATA AAQ1

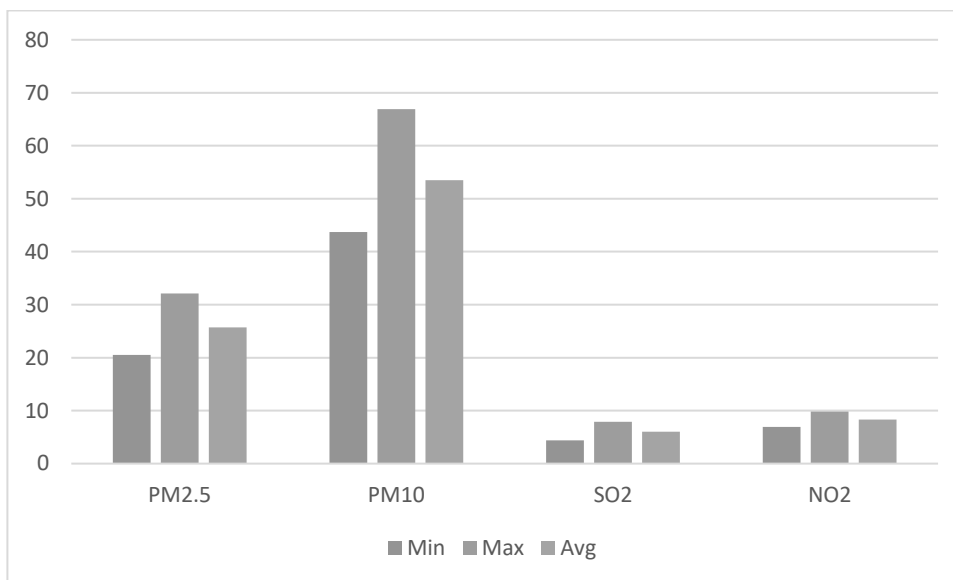


FIG 3.7 AMBIENT AIR QUALITY DATA AAQ2

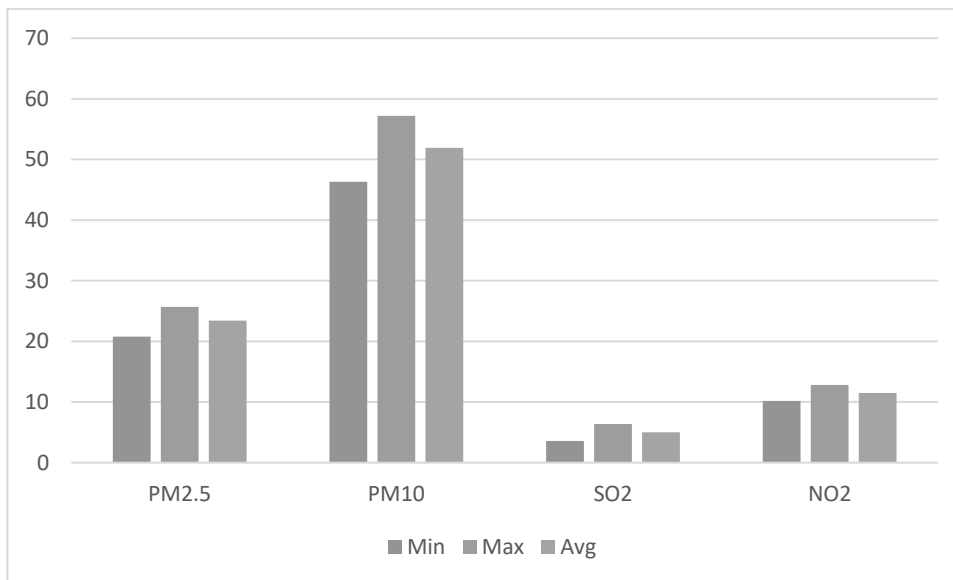


FIG 3.8 AMBIENT AIR QUALITY DATA AAQ3

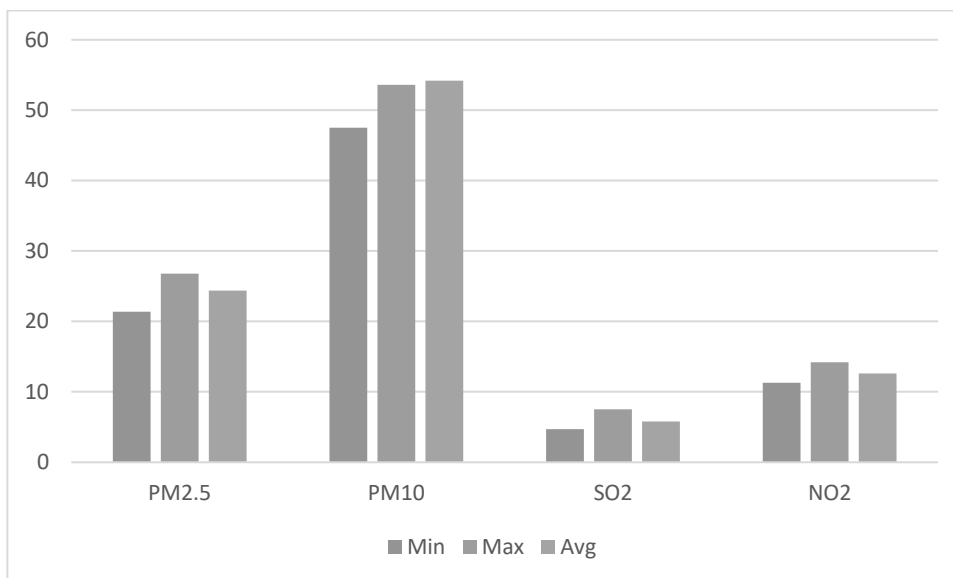


FIG 3.9 Ambient Air Quality DATA AAQ4

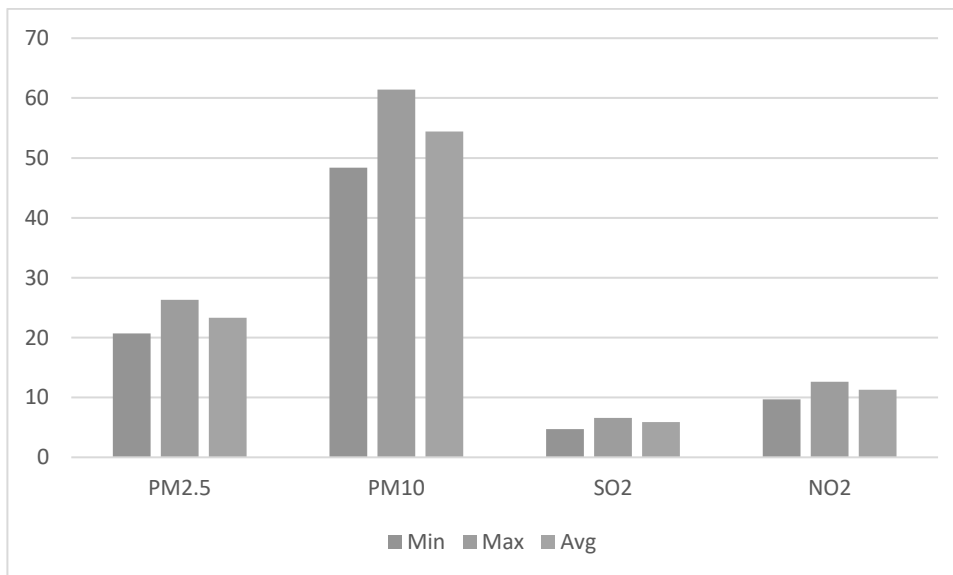


FIG 3.10 AMBIENT AIR QUALITY DATA AAQ5

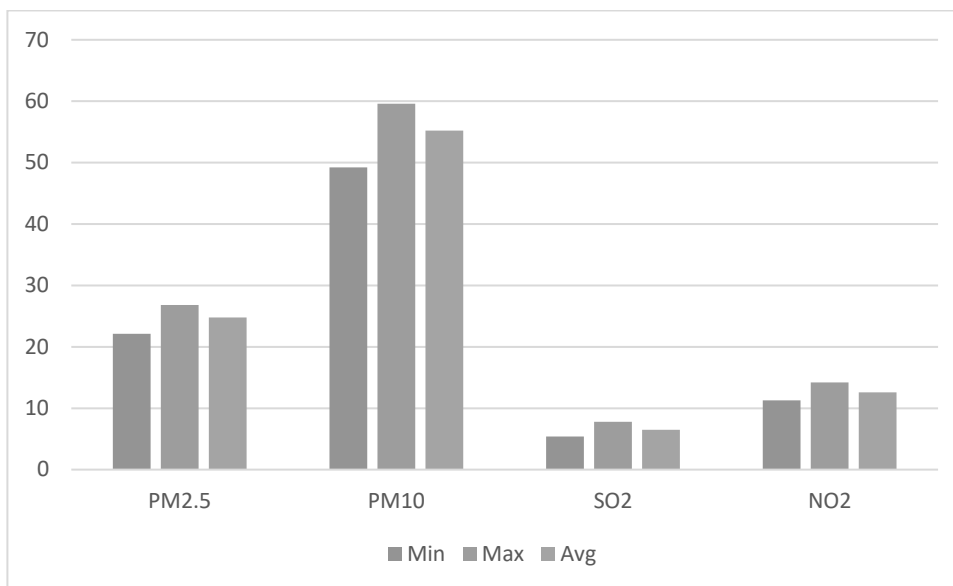


FIG 3.11 AMBIENT AIR QUALITY DATA AAQ6

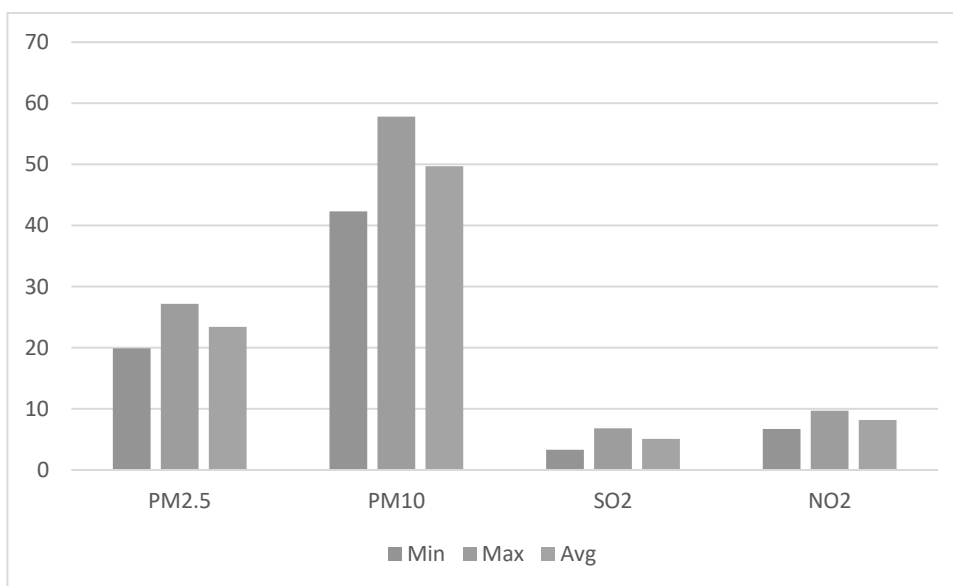
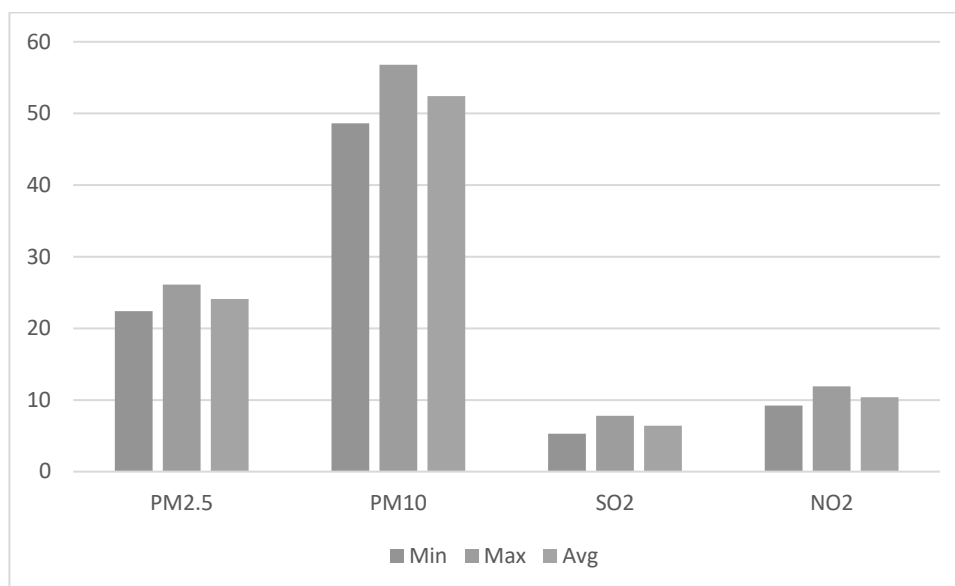


FIG 3.12 AMBIENT AIR QUALITY DATA AAQ7



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.

3.5.2 WATER ENVIRONMENT

Assessment of baseline data on water environment includes:

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

3.5.2.1 Surface Water

No major river is found nearby the lease applied area.

Water bodies in buffer zone are there is Three Tank situated on west, east, southwest side of the area and is 120m, 360m and 330m away from the area and there is Nilavial Vaikkal passing on south side of the area and is 220m away from the area. The area is studded with few tanks that serve as the source for agriculture and also their surplus feeds adjoining tanks. The rainfall over the area is moderate, the

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

3.5.2.2 Ground Water

The rainfall is the main source for the availability of water both in surface and sub-surface. The quantum of rainfall varies every year depending upon the monsoon. However, the extraction of surface and sub-surface water is increasing year by year. It leads to environmental impact on the water sources like depletion of water level, deterioration of water quality. It makes the demand for the quantification of available water and also its quality for various purposes like agriculture, industries, drinking and domestic purposes. Total Seven (7) 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.

3.5.2.3 Sampling Locations

Two surface water samples and Seven (7) ground water samples were collected from the study area and were analyzed for physio-chemical, heavy metals and bacteriological parameters in order to assess the effect of mining and other activities on water bodies. The samples were analyzed 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

Table 3.5 Water Sampling Locations

S.NO	Location Code	Monitoring Locations	Latitude and longitude
Surface Water			
1	SW1	Noyyal River - Upstream	12°14'32.62"N & 79°45'7.23"E
2	SW2	Noyyal River – Downstream	12°12'43.91"N & 79°44'22.38"E
Ground Water			
1	GW1	Within Mine Lease area	12°14'6.82"N & 79°45'10.14"E
2	GW2	Kattalai	12°13'25.87"N & 79°43'6.57"E
3	GW3	Karrupur	12°14'43.12"N & 79°45'42.47"E
4	GW4	Andapattu	12°15'16.00"N & 79°45'35.27"E
5	GW5	Perumukkal	12°12'32.60"N & 79°43'43.12"E
6	GW6	Nalmukkal	12°12'16.41"N & 79°45'59.99"E
7	GW7	Vittallapuram	12°14'9.24"N & 79°41'44.39"E

FIG 3.13 BASE MAP OF GROUND WATER SAMPLING LOCATIONS

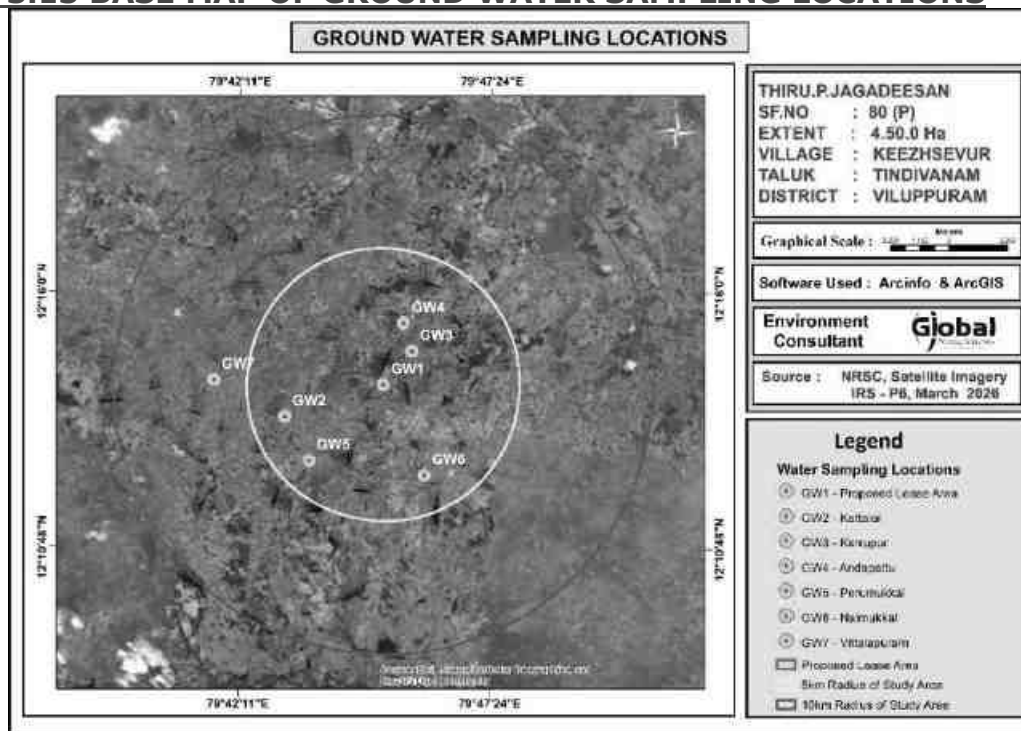


FIG 3.14 BASE MAP OF SURFACE WATER SAMPLING LOCATIONS

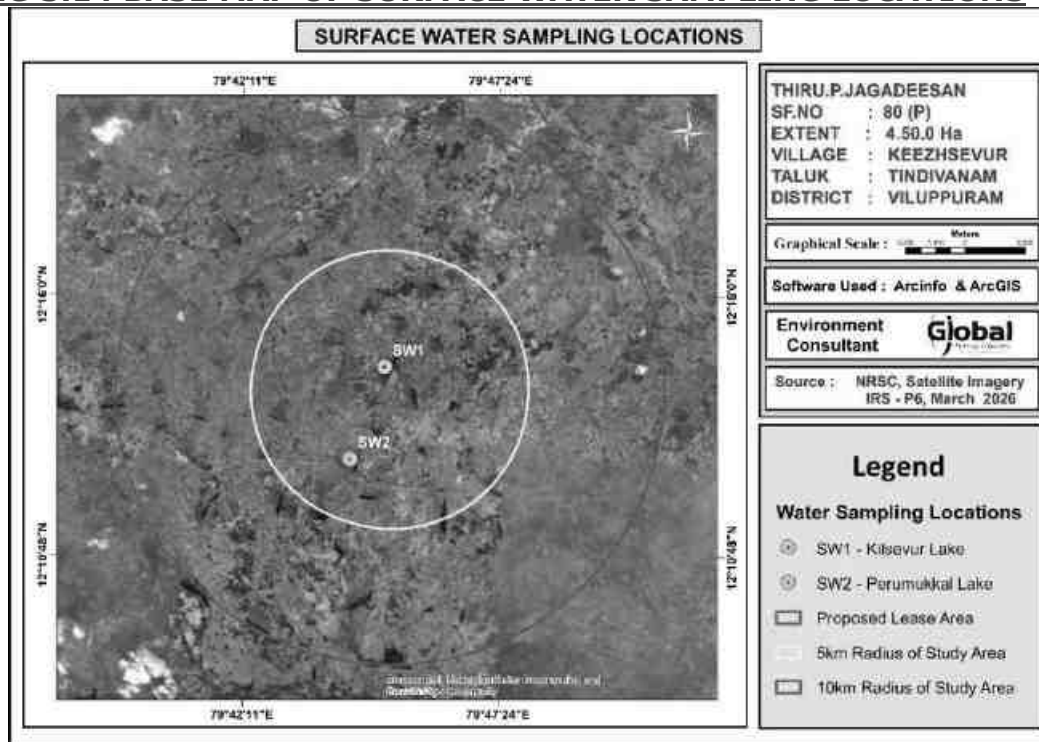


Table 3.6 Surface Water Analysis Results

Parameter	SW1	SW2	CPCB Designated Best Use	
			Acceptable Limits	Permissible Limits
Odour	AGREEABLE	AGREEABLE	Agreeable	Agreeable
Turbidity, NTU	<1	<1	2	5
pH at 25 °C	7.26	7.48	6.5- 8.5	No Relaxation
Electrical Conductivity, $\mu\text{S}/\text{cm}$	317.4	375.7	-	-
Total Dissolved Solids, mg/l	194	228	500	2000
Total hardness as CaCO_3 , mg/l	96.6	76.4	200	600
Calcium as Ca, mg/l	24.2	17.1	75	200
Magnesium as Mg, mg/l	8.80	8.16	30.0	100
Calcium as CaCO_3 , mg/l	60.4	42.8	-	-
Magnesium as CaCO_3 , mg/l	36.2	33.6	-	-
Total alkalinity as CaCO_3 , mg/l	54.8	81.2	200	600
Chloride as Cl^- , mg/l	39.2	51.4	250	1000
Free Residual chlorine as Cl^- , mg/l	BDL (D.L - 0.2)	BDL (D.L - 0.2)	0.2	1
Sulphates as SO_4^{2-} , mg/l	57.3	83.7	200	400
Iron as Fe, mg/l	0.04	0.07	0.3	No Relaxation
Nitrate as NO_3 , mg/l	3.57	5.67	45	No Relaxation
Fluoride as F, mg/l	0.58	0.69	1	1.5
Manganese as Mn, mg/l	BDL (D.L - 0.05)	BDL (D.L - 0.05)	0.1	0.3
TSS, mg/l	14	18		

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. P. JAGADEESAN, OVER AN EXTENT OF 4.50.0 HA LOCATED AT THE S.F.NO.80(P) OF KEEZHSEVUR VILLAGE, TINDIVANAM TALUK, VILUPPURAM DISTRICT, TAMIL NADU STATE.

COD, mg/l	BDL (D.L - 4.0)	BDL (D.L - 4.0)	-	-
BOD, mg/l 3 days @ 27°C as O ₂	BDL (D.L - 2.0)	BDL (D.L - 2.0)	2.0	2.0
DO, mg/l	6.2	6.1	6.0	6.0

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

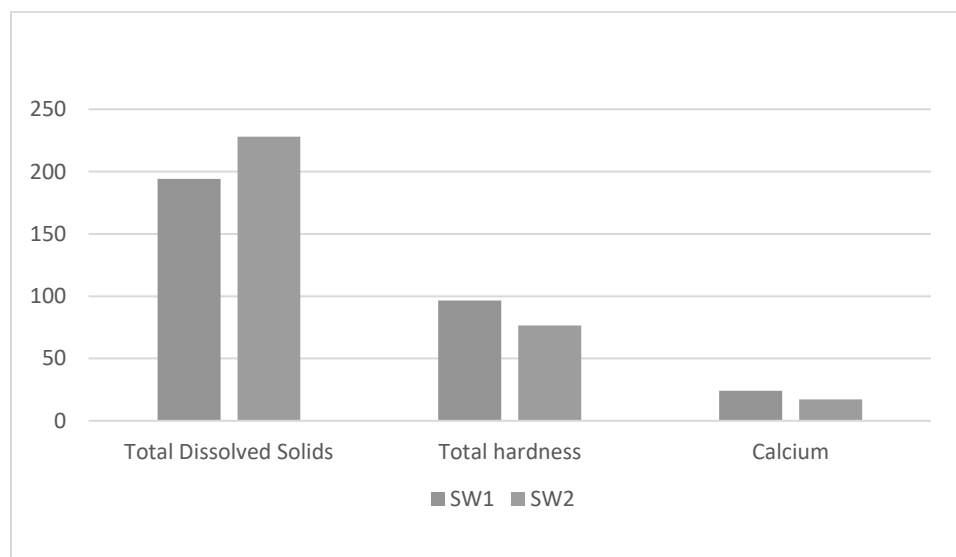
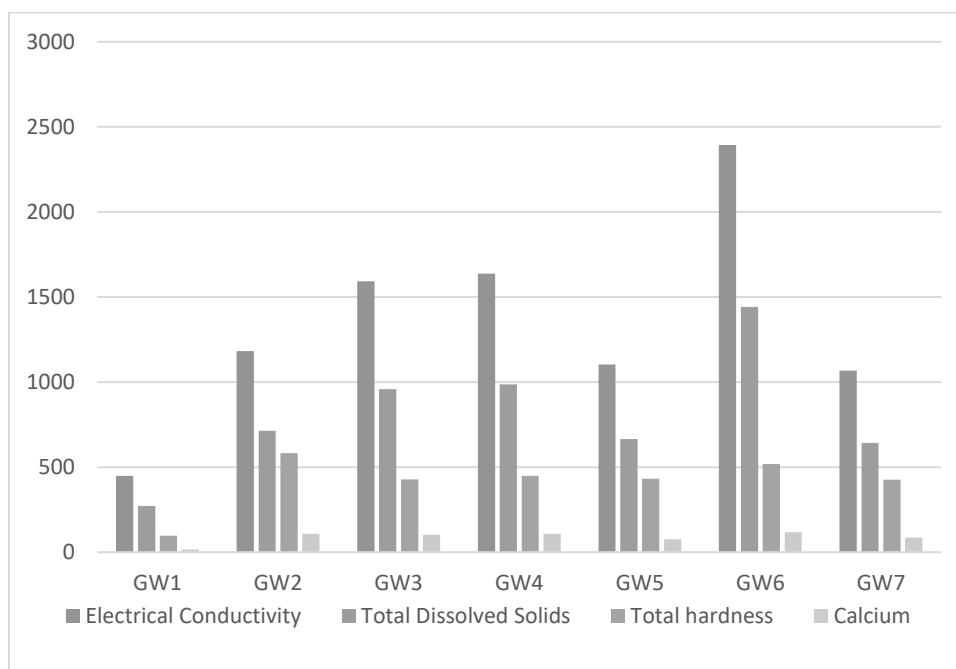
Table 3.7 Results of Ground Water sampling Analysis in 7 locations								Standards as Per IS 10500: 2012	
Parameter	W1	W2	W3	W4	W5	W6	W7	Acceptabl e Limits	Permissib le Limits
Odour	AGREEAB LE	AGREEAB LE	AGREEA BLE	AGREEAB LE	Agreeabl e	AGREEABLE	AGREEABLE	Agreeable	Agreeable
Turbidity	<1	<1	<1	<1	<1	<1	<1	1	5
pH at 25 °C	8.18	6.78	6.92	7.09	7.03	6.81	6.73	6.5- 8.5	No Relaxation
Electrical Conductivity	448.3	1182	1592	1638	1104	2394	1068	-	-
Total Dissolved Solids	272	714	958	986	664	1442	642	500	2000
Total hardness as CaCO ₃	96.0	582	428	448	432	518	426	200	600
Calcium as Ca	16.1	107.2	102.4	108.8	76.8	117.2	85.6	75	200
Magnesium as Mg	13.6	76.3	41.8	42.8	58.3	54.7	51.5	30.0	100
Calcium as CaCO ₃	40.2	268	256	272	192	293	214	-	-
Magnesium as CaCO ₃	55.8	314	172	176	240	225	212	-	-
Total alkalinity as CaCO ₃	132	418	524	510	362	396	296	200	600
Chloride as Cl ⁻	52.4	216	286	308	189	562	192	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)	BDL (D.L - 0.2)	0.2	1
Sulphates as SO ₄ ²⁻	23.4	138	197	212	96.5	363	264	200	400

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. P. JAGADEESAN, OVER AN EXTENT OF 4.50.0 HA LOCATED AT THE S.F.NO.80(P) OF KEEZHSEVUR VILLAGE, TINDIVANAM TALUK, VILUPPURAM DISTRICT, TAMIL NADU STATE.

Iron as Fe	0.03	0.02	0.04	0.06	0.05	0.09	0.06	0.3	No Relaxation
Nitrate as NO ₃	1.47	3.48	3.73	3.14	2.98	4.67	3.29	45	No Relaxation
Fluoride as F	0.29	0.49	0.58	0.61	0.39	0.67	0.31	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)	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 7 locations were plotted and the graph is provided below.

FIG 3.15 VALUES OF FEW COMMON PARAMETERS IN WATER ANALYSIS



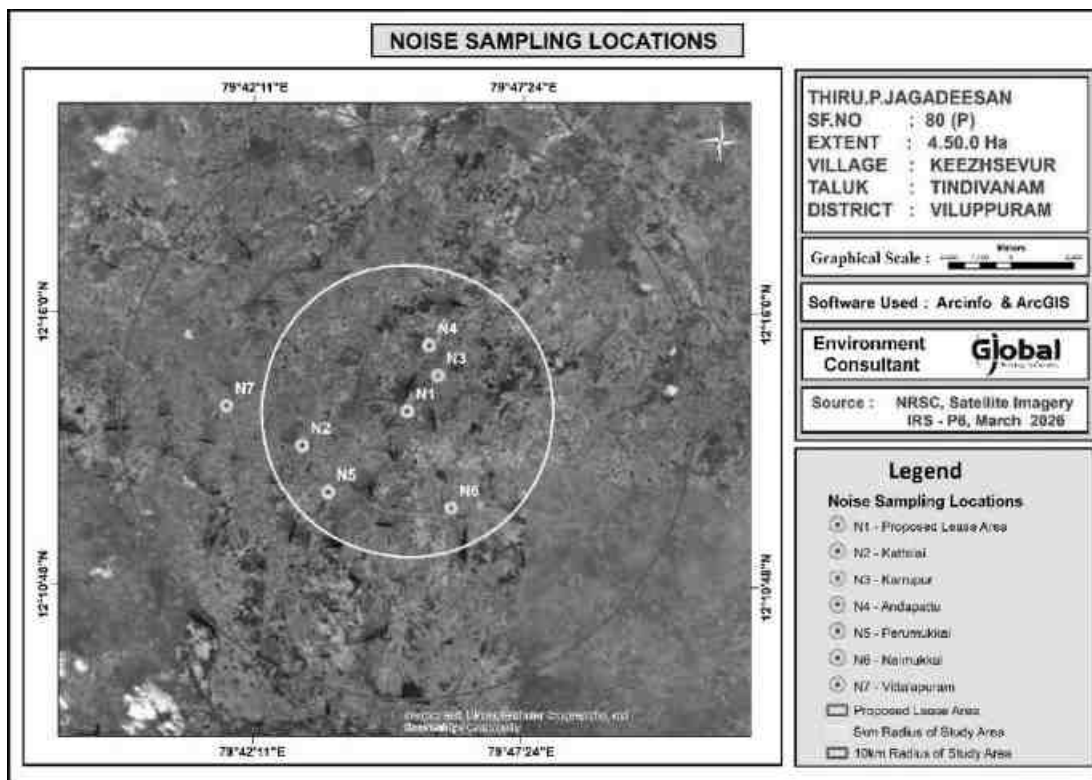
All the values were found to be within the permissible limits.

3.5.3 NOISE ENVIRONMENT

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 3.16 NOISE MONITORING LOCATIONS

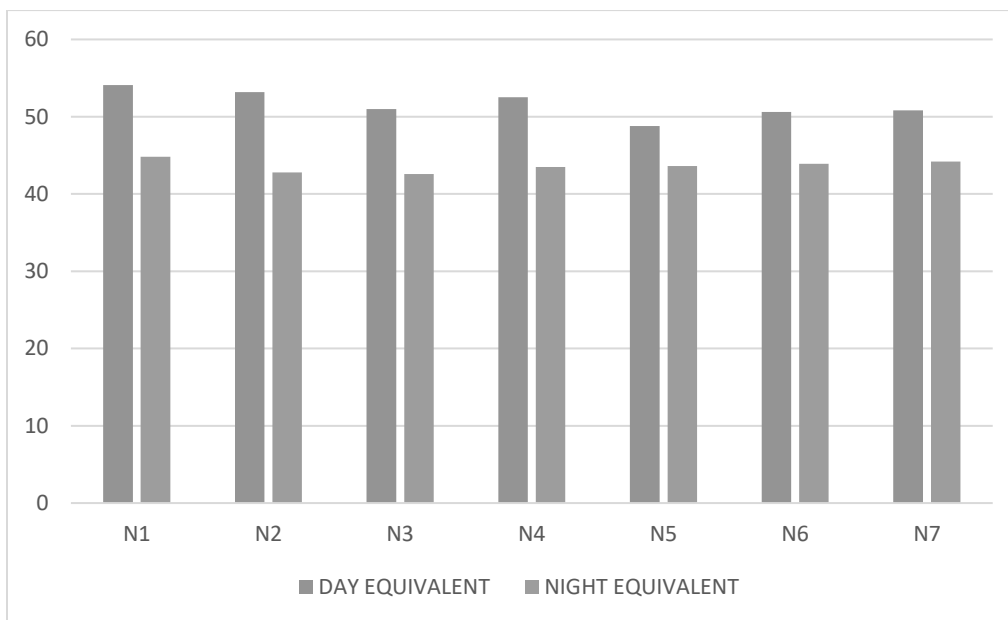


The results are given in Table below.

Table 3.8 Noise monitoring results					
S. No	Location	Day equivalent	Night equivalent	Day equivalent limits by CPCB	Night equivalent limits by CPCB
1	Within Mine Lease area	54.1	44.8	75	70
2	Kattalai	53.2	42.8		
3	Karrupur	51.0	42.6		
4	Andapattu	52.5	43.5		
5	Perumukkal	48.8	43.6		
6	Nalmukkal	50.6	43.9		
7	Vittallapuram	50.8	44.2		

The results are plotted as below.

FIG 3.17 DAY AND NIGHT EQUIVALENT VALUES IN 7 LOCATIONS



All the values are found to be within CPCB norms.

3.5.4 SOIL ENVIRONMENT

Soil samples have been collected from the mine lease area and 6 other locations from Kattalai, Karrupur, Andapattu, Perumukkal, Nalmukkal and Vittallapuram Villages. The locations are shown in figure below.

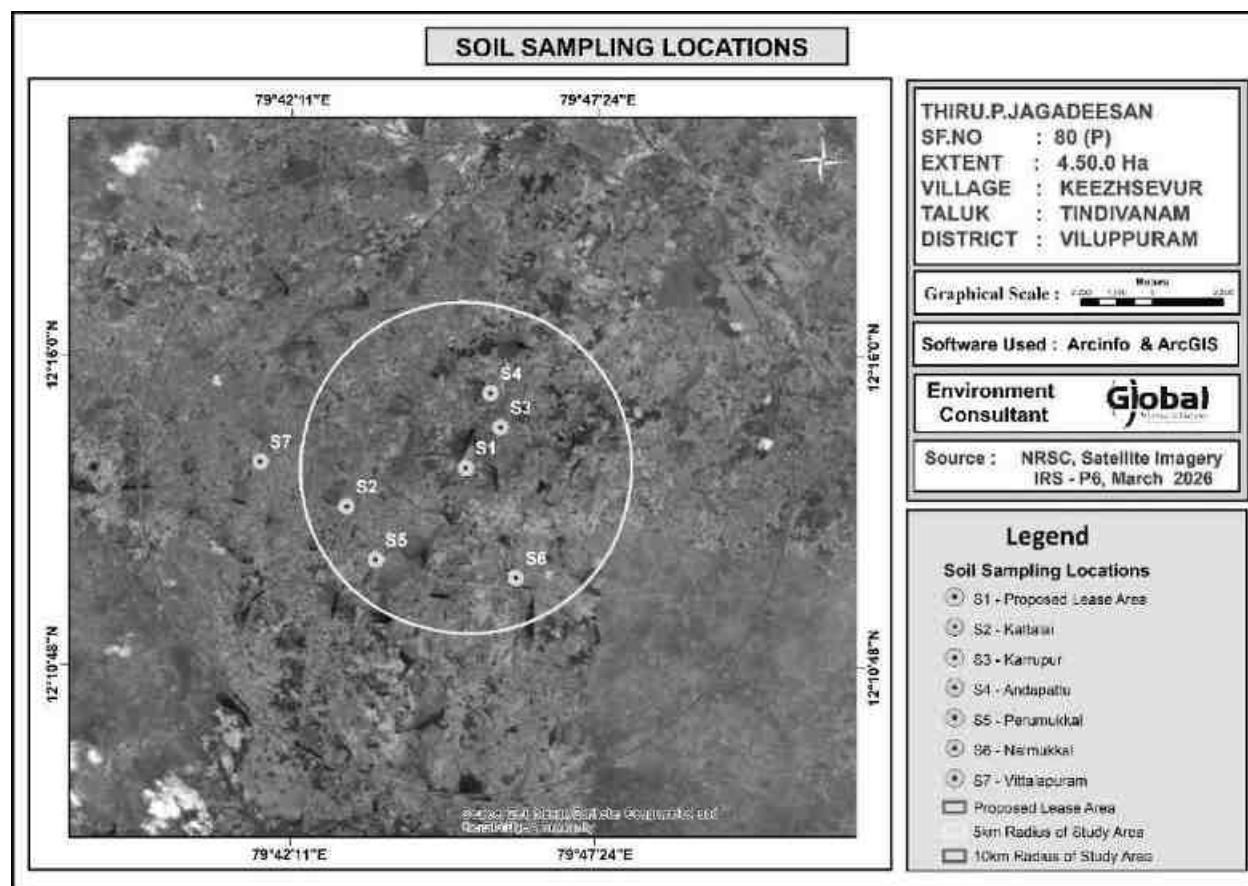


FIG 3.18 SOIL SAMPLING LOCATIONS

The results are summarized in the table below.

Table 3.9 RESULTS OF SOIL SAMPLE ANALYSIS

S. No	Parameter	Unit	S1	S2	S3	S4	S5	S6	S7
1	pH at 25 °C	-	8.31	6.89	7.58	8.04	6.56	8.29	7.52
2	Electrical Conductivity	µmho s/cm	246.8	242.7	204.1	118.3	168.9	166.4	123.6
3	Dry matter content	%	94.32	93.08	92.37	95.92	94.06	96.52	95.92
4	Water Content	%	5.68	6.92	7.63	4.08	5.94	3.48	4.08
5	Organic Matter	%	0.61	0.55	0.47	0.81	0.62	0.32	0.41
6	Soil texture	-	SILTY CLAY	SILTY CLAY	CLAY	SILTY CLAY	SILTY CLAY	SILT LOAM	SILT LOAM
7	Grain Size Distribution	%	6.73	2.76	5.28	8.94	5.87	34.72	34.58
	i. Sand								
8	i. Silt	%	35.51	57.94	37.52	39.81	44.52	53.27	53.16

9	ii. Clay	%	57.76	39.30	57.20	51.25	49.61	12.01	12.26
10	Phosphorous as P	mg/kg	0.49	0.58	0.78	1.08	1.16	0.66	0.74
11	Sodium as Na	mg/kg	246	738	832	146	968	482	468
12	Potassium as K	mg/kg	178	302	408	118	626	358	324
13	Nitrogen and Nitrogenous Compounds	mg/kg	206	296	316	366	198	234	240
14	Total Soluble Sulphate	%	BDL(D. L.0.02)	BDL(D. L.0.02)	BDL(D. L.0.02)	BDL(D. L.0.02)	BDL(D. L.0.02)	BDL(D. L.0.02)	BDL(D. L.0.02)
15	Porosity	%	19.4	17.6	18.8	15.4	18.6	15.6	15.8
16	Water Holding Capacity	Inches /foot	42	38	38	42	36	38	40

3.5.5 BIOLOGICAL ENVIRONMENT

The biological study of the area has been conducted in order to understand the ecological status of the existing flora and fauna to generate baseline information and evaluate the probable impacts on the biological environment. The details are given below.

Flora in the study area

Field survey is done. 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. Also, data from the State Forest department is used.

Core Zone

During the field visit, it is observed that there are no national parks / Sanctuaries / forests in the 10km buffer area. The study area is devoid of any major plantations.

Table 3.10 Flora in Core Zone			
S.No.	Scientific name	Vernacular/English name	Type of flora
1	Calotropis gigantea	Erukku	Shrubs
2	Cassia auriculata	Aavarai	
3	Achyranthes aspera	Nayuruvi	

Buffer zone

Only common trees, shrubs, bushes, etc. are found. The list is given below.

Table 3.11 Flora in Buffer zone			
S.No.	Scientific name	Vernacular/English name	Type of flora
1	Azadirachta indica	Neem	Trees
2	Carica papaya	Papaya	
3	Mangifera indica	Mango	
4	Acacia leucophloea	Velamaram	
5	Acacia nilotica	Karu- velamaram	
6	Moringa oleifera	Murungai	
7	Tamarindus indica	Puli	
8	Tectona grandis	Theku	
9	Manilkara zapota	Sappota	
10	Musa paradisiaca	Valzhlai	
11	Borassus flabelliformis	Panna-maram	
12	Ficus benghalensis	Alamaram	
13	Ficus religiosa	Arasamaram	
14	Phyllanthus emblica	Nelli	
15	Calotropis gigantea	Yerukku	Shrubs
16	Cassia auriculata	Aavarai	
17	Ricinus communis	Aamanakku	
18	Tecoma stans	Arali	
19	Aloe vera	Kathalai	
20	Catharanthus roseus	Nithyakalyani	Herbs
21	Acalypha indica	Kuppaimeni	
22	Coccinia grandis	Kovai	Climbers
23	Cissus quadrangularis	Pirandai	
24	Jasminum angustifolium	malli	
25	Ziziphus oenopia	Ilandai	
26	Cymbopogon	Kanam	Grasses
27	Cyperus rotundus	Kora grass	
28	Cynodon dactylon	Arugu	

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 3.12 Fauna in buffer zone

S.No.	Scientific name	Common name	Type of fauna	Schedule to which the species belong
1	Canis familiaris	Common dog	Mammals	IV
2	Felis catus domesticus	Domestic cat		IV
3	Golunda ellioti	Indian bush rat		IV
4	Funambulus palmarum	Squirrel		IV
5	Lepus nigricollis	Indian hare		IV
6	Bos indicus	Domestic cow		IV
7	Common Crow	Corvus splendens	Birds	V
8	House Sparrow	Passer domesticus		IV
9	Common Myna	Acridotheres tristis		IV
10	Streptopelia chinensis	Pigeon		IV
11	Calotes versicolor	Lizard	Amphibia	IV
12	Ptyas mucosa	Snake		IV
13	Rana hexadactyla	Frog		IV

3.5.6 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 Latitude: 12°14'03.59"N to 12°14'11.71"N Longitude: 79°45'05.95"E to 79°45'14.45"E.

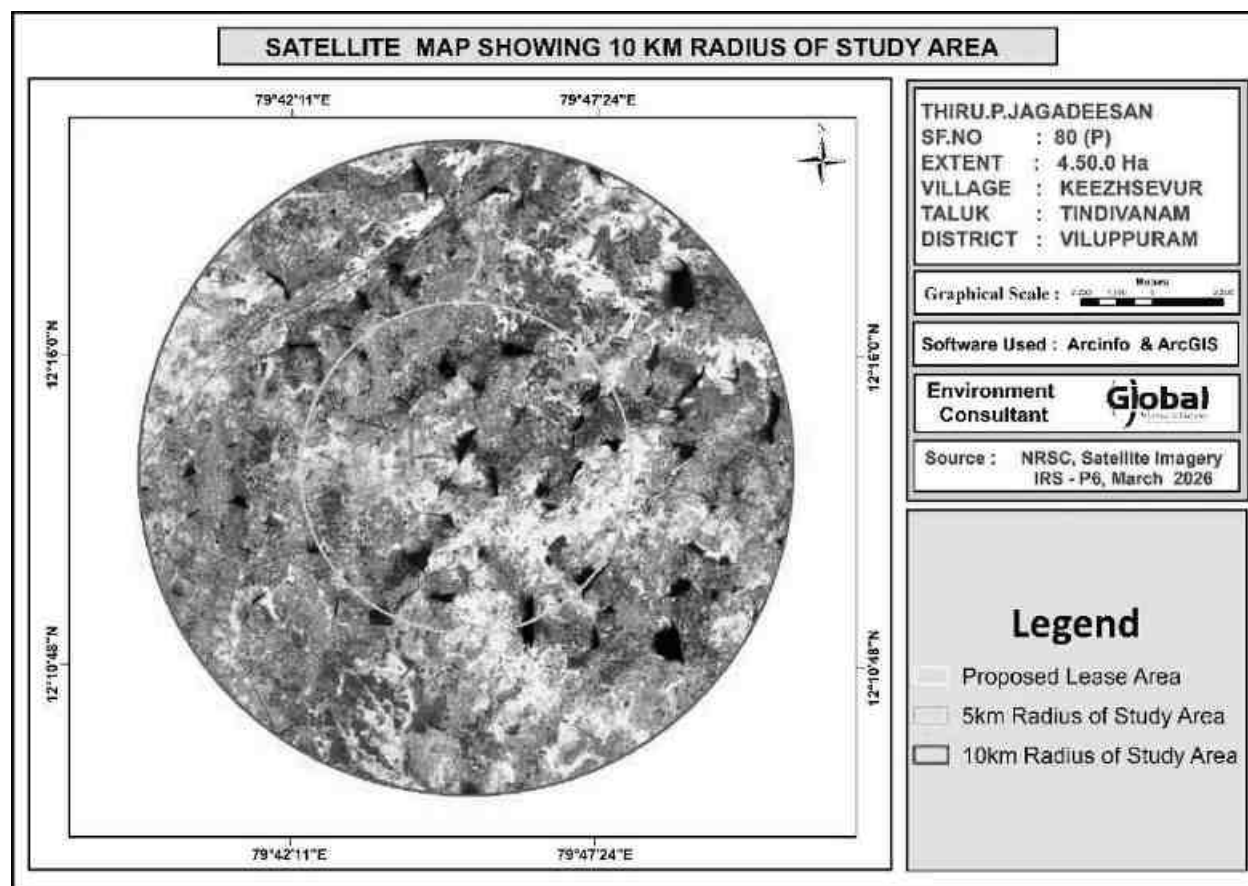


Figure No. 3.19 Remote Sensing Satellite Image

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 LULC 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 3.13 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

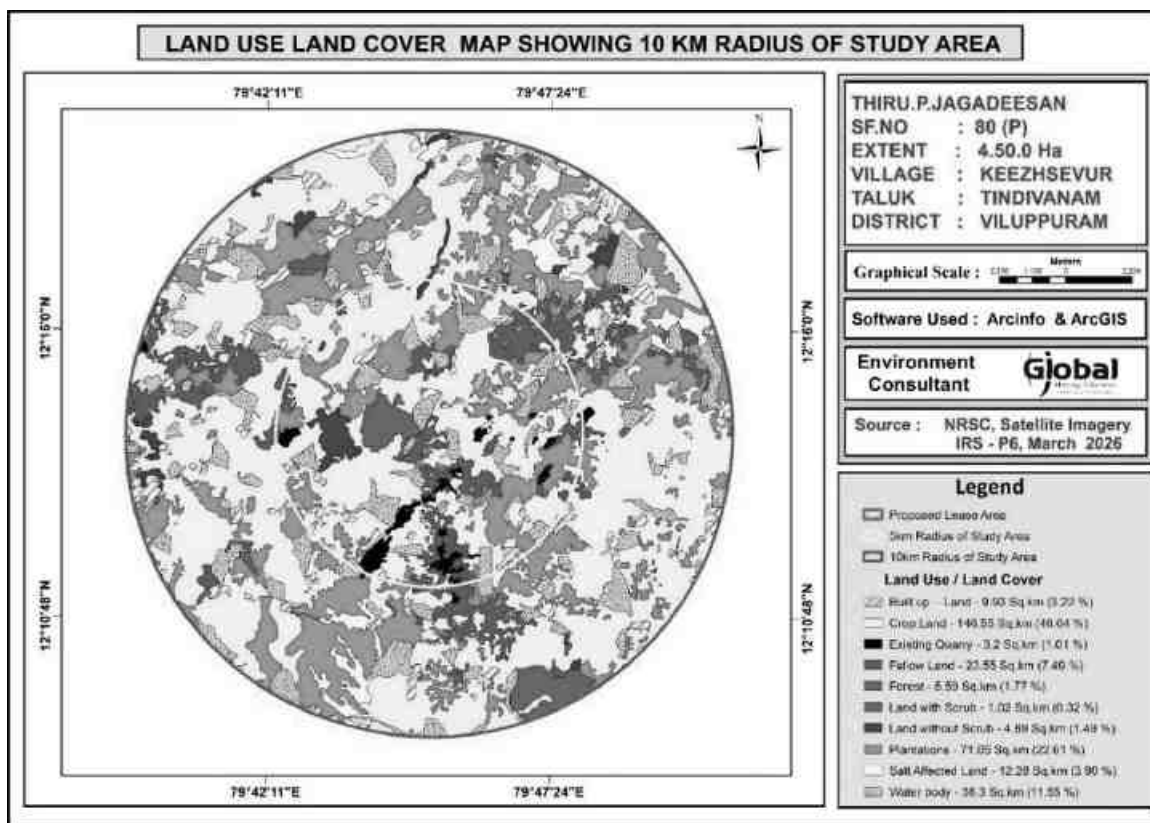
Land Use Pattern of 10 km Radial Buffer Area of Project Site

The existing land use pattern and land cover distribution of the whole acquired block, have been studied from the satellite imagery and subsequent ground checking during the field surveys.

It mainly comprises of agricultural land with bi-annual crops of Kharif (Kharif: Jowar, Bajra, Cotton, etc. Season: July to October) and Rabi (Rabi: Wheat, Rai etc. Season: December to March). The presence of the agricultural land is followed by few dense settlements Keezhsevir village, natural or man-made pond etc. The shortage of rainfall, availability of ground water at deeper level and other climatic condition do not support good agricultural productivity inspite of having enough land. There is no demarcated forest land within the study area, however, some scattered forest is found throughout the 10 km radius, especially along the periphery of the villages.

The general landuse pattern of the core and buffer may be broadly classified into four major types – Buildup or habitation, Agriculture, Water Bodies, Waste land and Other categories. Under buildup or habitation category covered villages, town and infrastructure. Under agriculture category considered crop land/fallow land and plantation. Under the water body categories Reservoir/ lake, pond, River and stream. Under wasteland category considered landwith scrub and land without scrub is interpreted. Lastly other category's covered Mines area and forest are interpreted under this category. These categories are delineated from the selected satellite image using image elements such as color, tone, texture, size, shape and associated elements. The delineated landuse units are transformed into a spatial database in GIS environment. Estimated for area and representation of each category in the study area. The total area of LULC in the study area is calculated as 314.16 sq.km and spatial distribution of various LULC categories within buffer area are discussed below. The 5km and 10km radius landuse map is shown above. The details are given below.

FIG 3.20 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.

Built-up / Settlements

Settlements in the study area are generally small to medium size in stature and area scattered. Tindivanam Taluk is the relatively larger settlements observed at the north part of the study area.

Interpretation of settlement from the satellite image is based upon the image elements such as color, tone, texture and association. It is delineated by their typical red color. Association with linear features such as roads reaffirmed the presence of delineation of settlements. The spatial extent of settlement is estimated as 9.93 sq.km representing 3.22 % of the study area.

Agricultural Land

Under the broad category of agriculture crop land, fallow land and plantation is delineated. Cultivation is mostly dependent upon river water for irrigational activities are good. River, Ponds and tanks in each village act as rainwater storage units and do support domestic requirement and even cultivation to some extent. Because of these conditions, minimal water requiring crops such as corn, sunflower, oil seeds, grams, millets and coriander are cultivated. Cultivation is the most predominant crop cultivated and even if it failed their stalks are used as fodder for cattle.

Crop and Fallow land are interpreted using their image elements such as light to green, smooth to medium tone, they are the second most predominant landuse category delineated in the buffer area. As explained earlier, cultivation mostly depends upon river, canal and rainfall and majority of the land parcels are tilled and ready for cultivation with even a scanty Canal. Hence, cropland is the predominant category estimated at 146.55 Sq.km representing 46.64 % of the buffer area.

Wasteland

The last category of the landuse units in the study area is “Wasteland” which denotes land parcels that could not be utilized for cultivation even after conservation measures – such as land with scrub, land without scrub area.

Next to agricultural area, natural vegetation such as land with scrub forms the predominant LULC category of the buffer area. Land with scrub is sparse and delineated as patches scattered in all the parts of the buffer area. The spatial pattern of scrub suggests it is closely associated with water courses. This category occupies land with scrub an area of 1.02 sq.km representing 0.32% of the total core and buffer area.

Land without scrub, on the other hand is interpreted using brown to white color, medium tone and medium texture and is generally restricted around land covered with scrub and fallow land. They occur as small patches and very minimal area covering 4.69 sq.km representing 1.49% of the buffer area.

Water bodies

Many Streams small and big water bodies are seen in the study area distributed all over the study area. They support the domestic water requirements and for cattle. At some places, they may also use for irrigation purpose and are very limited. Few dry stream courses are also seen in the study area. In the satellite image, water bodies are interpreted by their light blue to greyish blue color, smooth tone and smooth texture.

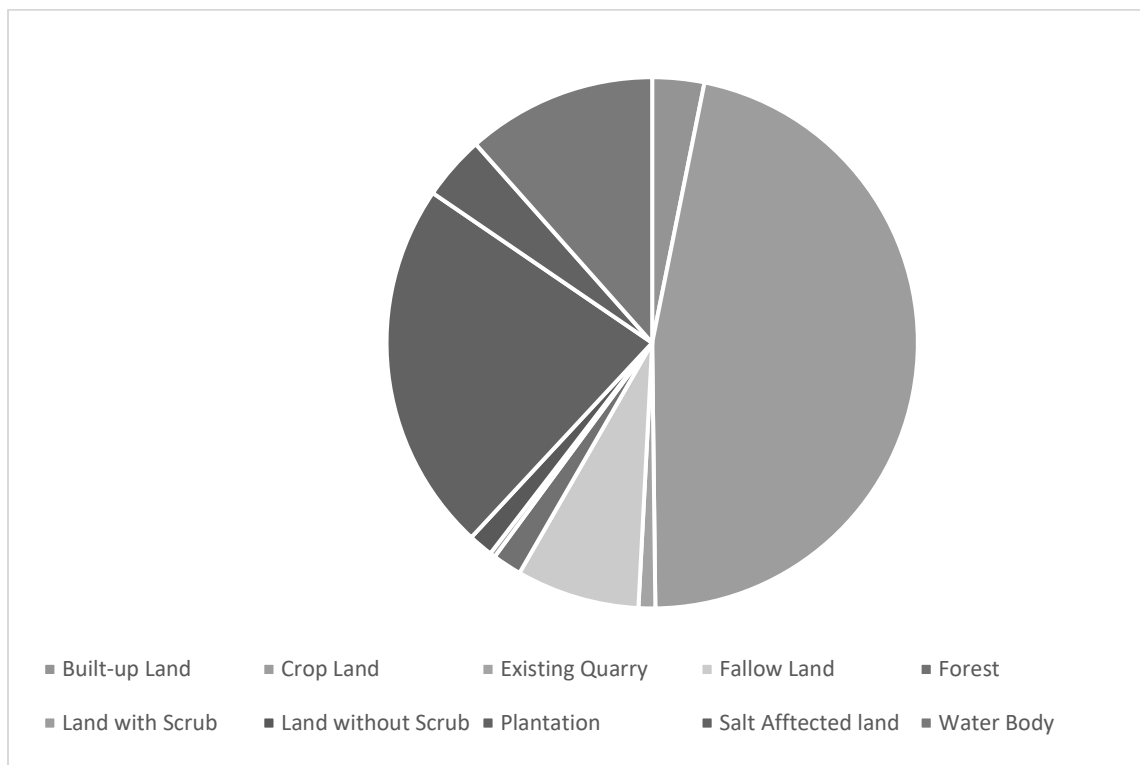
Most of the water bodies retain water for a shorter period after precipitation due to the soil constraint and hence go dry soon. Spatial extent of rivers, stream and water bodies is estimated at 36.3 sq.km and 11.55%.

Mining area

Mining area seen in the study area distributed all over the study area. Major domestic income from mining business. Spatial extent of mining is estimated at 3.2 sq.km 1.01 %.

Table 3.14 Major Land Use Units of the Study Area in Percentage

S. No	1st Level Classification	Area in (sq.km)	Percentage (%)	2nd Level Classification	Area in (sq.km)	Percentage (%)
1	Built-up or habitation	17.23	5.35	Residential	9.93	3.22
				Commercial/Industrial		
2	Agriculture	247.3	76.80	Crop/fallow land	170.1	54.13
3	Water bodies	35.96	11.17	Reservoir/Lake /Pond	36.3	11.55
				River/Stream		
4	Waste Land	13.39	4.16	Open without scrub	4.69	1.49
				Open with scrub	1.02	0.32
5	Mines	7.28	2.26	Mines	3.2	1.01
6	Forest	0.85	0.26	Forest	5.59	1.77
7	Plantation	71.05	22.61	Plantation	71.05	22.61
8	Salt Affected land	12.28	3.9	Salt Affected land	12.28	3.9
Total		314.16	100	Total	314.16	100



3.5.7 SOCIOECONOMIC ENVIRONMENT

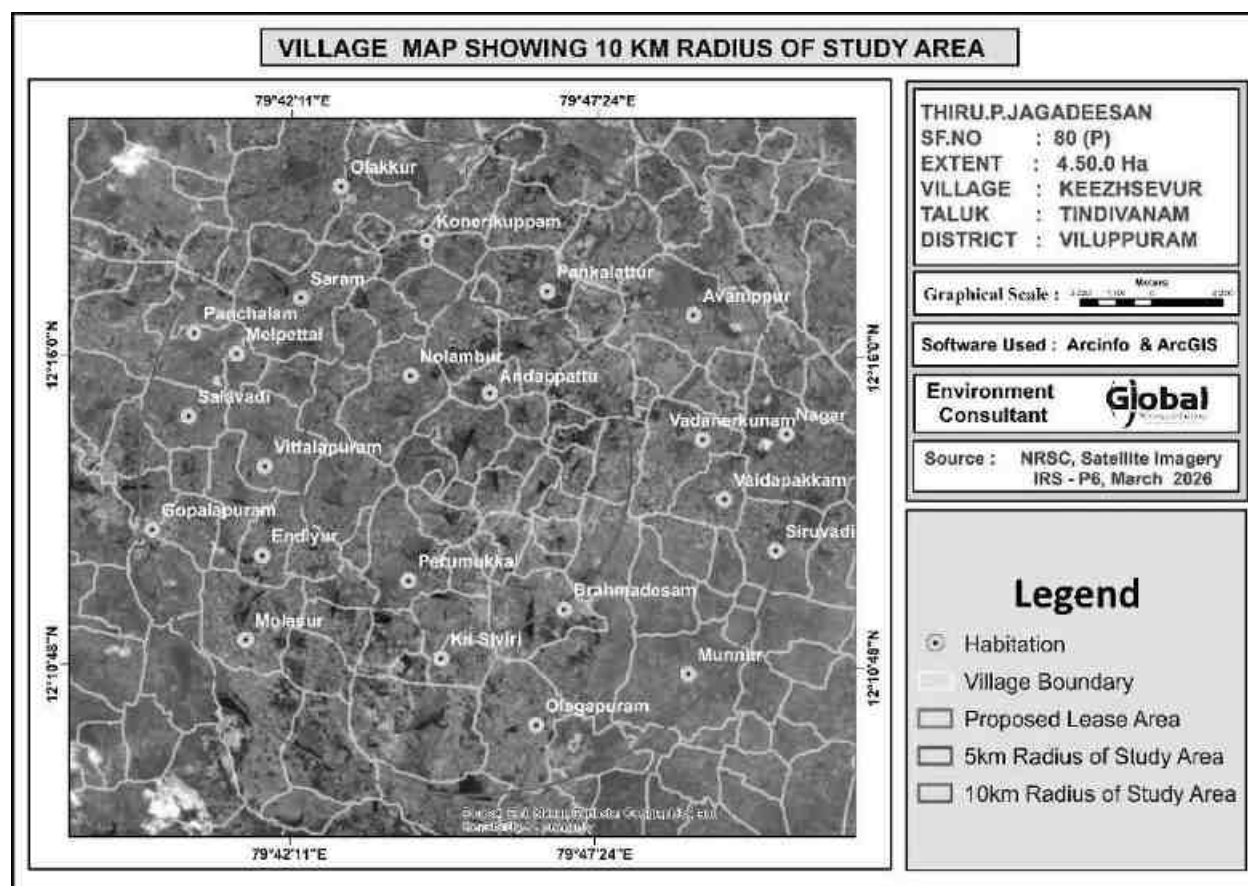
The socio-economic environment of the study area is studied by conducting primary sites through site visits and conducting sample surveys. The secondary data obtained from Census 2011 is also used. The following data area collected from secondary data:

- Demographic pattern.
- Health pattern
- Occupational structure.

3.5.7.1 DETAILS OF VILLAGES

The profile of the villages located in the study area is given in Fig 3.16 below.

FIG 3.19 VILLAGE MAP OF THE STUDY AREA



3.5.7.2 DETAILS OF VILLAGES

The project is located in Keezhsevur Village, Tindivanam Taluk, Villupuram District, Tamil Nadu. The total population is 66915 which comprise of 33502 males and 33413 females. There are 23 rural villages and one urban area in the study area. List of villages are given below.

Table 3.15 Village details in study area				
S.No.	Village/Town Name	Radius	Taluk Name	District Name
1	Nolambur	1-5km	Tindivanam	Villupuram
2	Andappattu			
3	Perumukkal			
4	Pankalattur	6-10km		
5	Konerikuppam			
6	Olakkur			
7	Saram			
8	Panchalam			
9	Meloettai			
10	Salavadi			
11	Gopalapuram			
12	Endiyur			
13	Molasur			
14	Kil Siviri			
15	Olagapuram			
16	Munnur			
17	Siruvadi			
18	Vaidapakkam			
19	Vadanerkunam			
20	Nagar			
21	Avanippur			
22	Vittalapuram			
23	Brahmadesam			

Table 3.16 Population profile of the study area

Particulars	No of Population	Percentage (%)
A. Population break-up by Gender		
Male Population	33502	50.06
Female Population	33413	49.94
Total	66915	100
B. Population break-up by Caste		
Scheduled Caste	24258	36.25
Scheduled Tribes	748	1.147
Others	41909	62.63
Total	66915	100
C. Literacy Level		
Total Literate Population	43768	65.40
Others	23147	34.60
Total	66915	100
D. Occupational structure		
Main workers	24610	36.77
Marginal workers	9092	13.58
Total Workers	33702	50.36
Total Non-workers	33213	49.64
Total	66915	100

Table 3.17 Population profile – Keezhsevr Village

Particulars	No. of Population	Percentage (%)
A. Population Break-up by Gender		
Male Population	534	49.67
Female Population	541	50.33
Total Population	1,075	100.00
B. Population Break-up by Social Category		
Scheduled Caste (SC)	656	61.02
Scheduled Tribe (ST)	125	11.63
Others	294	27.35

Total Population	1,075	100.00
C. Literacy Level		
Literate Population	734	68.28
Illiterate Population	341	31.72
Total Population	1,075	100.00
D. Occupational Structure		
Main Workers	570	53.02
Marginal Workers	89	8.28
Total Workers	659	61.30
Non-Workers	416	38.70
Total Population	1,075	100.00

The above table shows that the male and female population ratios are almost equal. Among the total population 1.147 % belong to Scheduled Tribes, 36.25 % are Scheduled Caste and the balance 62.63 % people belong to other castes. Among the total population 65.40 % of the people are literate. Among the total population 35.4 % are literate males and 30 % are literate females. This shows that the male literates are higher than the female literates. The results are plotted in figures below.

FIG 3.22 GENDER-WISE POPULATION DISTRIBUTION

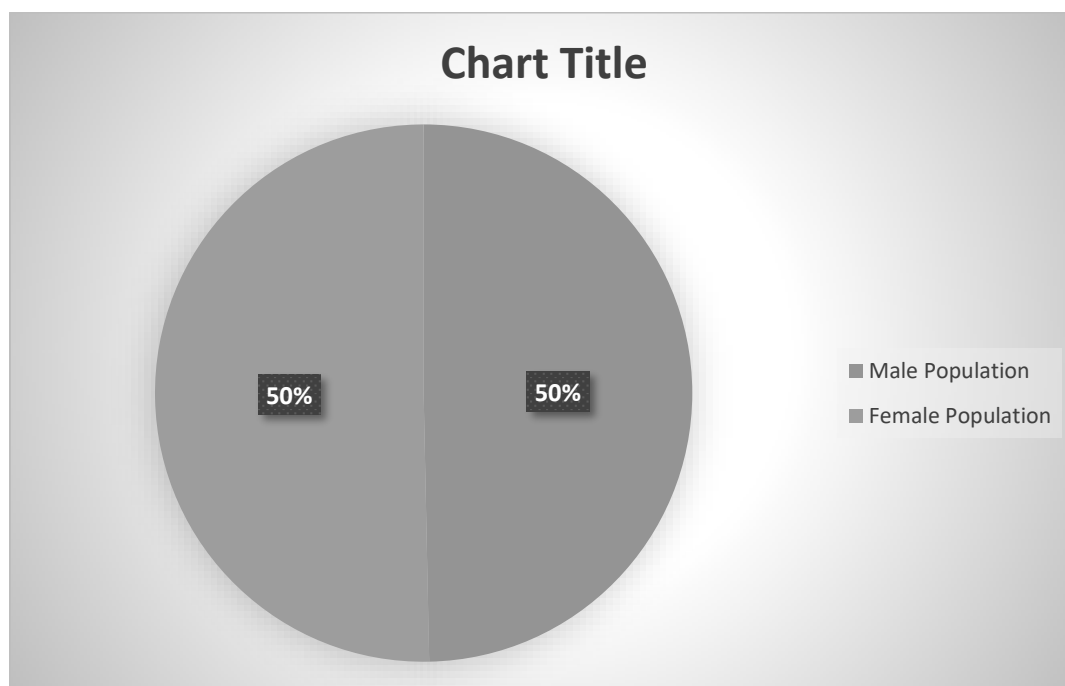


FIG 3.23 GENDER WISE LITERACY DISTRIBUTION

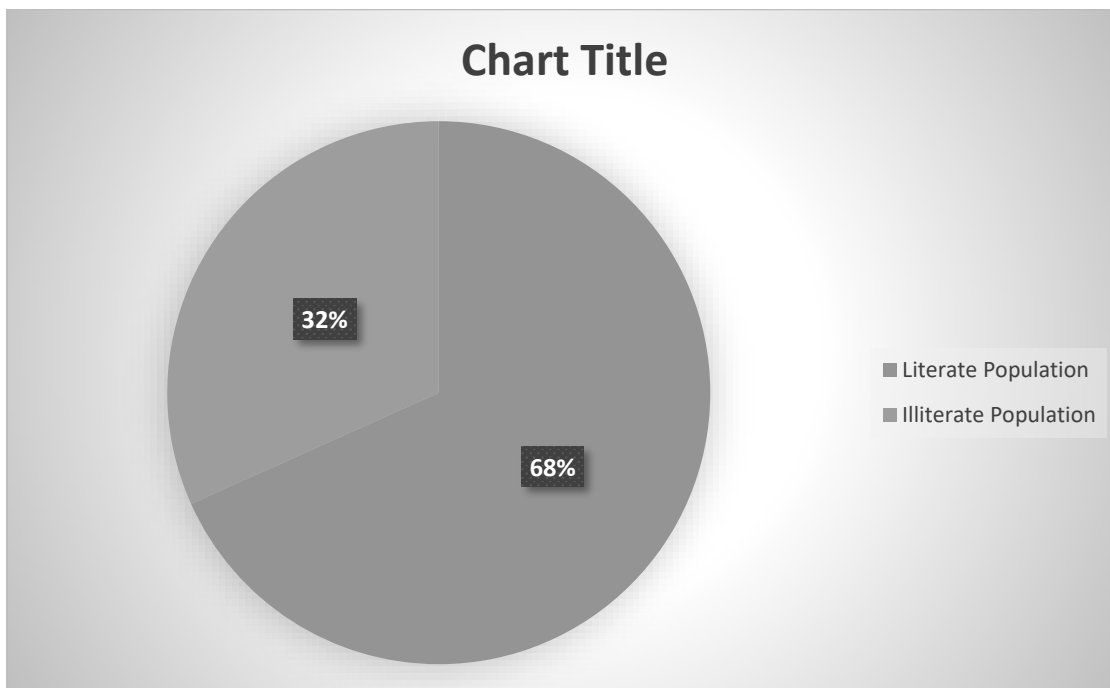
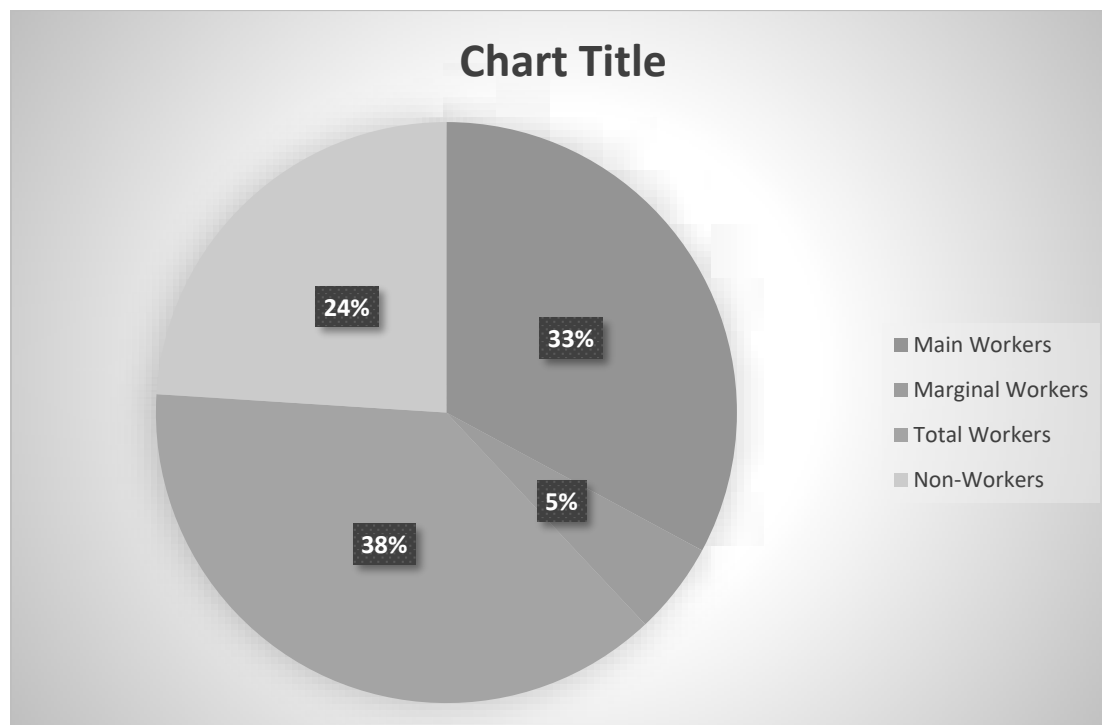


FIG 3.24 OCCUPATIONAL STRUCTURE WITHIN BUFFER ZONE



3.5.7.3 Infrastructure facilities in the study area

Education

Table 3.18 Educational infrastructure -10 km radius from proposed mine lease		
S. No.	Particulars	Available in village (Nos)
1	Govt. Primary School	22
2	Govt. Middle School	12
3	Govt. Secondary School	20
4	Govt. Senior Secondary School	36
5	Govt. Arts and Science Degree College	42
6	Govt. Engineering College	0
7	Govt. Medicine College	0
8	Govt. Management Institute	0
9	Govt. Polytechnic	0
10	Govt. Vocational Training School/ITI	0

In the study area, there are totally 22 Primary Schools functioning in these 24 urban areas. Among them 23 villages have 22 primary school, 12 Middle schools & 20 Secondary school.

Healthcare

In the study area, the following facilities are available.

Table 3.19 Medical Infrastructure-10 km radius from proposed mine lease		
S.No.	Particulars	Available in village (Nos)
1	Community Health Centre	9
2	Primary Health Centre	8
3	Primary Health Sub Centre	13
4	Maternity And Child Welfare Centre	8
5	TB Clinic	5
6	Hospital Allopathic	0

Other Infrastructure

The other infrastructure facilities available are given below.

Table 3.20 Other Infrastructure-10 km radius from proposed mine lease		
S.No.	Particulars	Available in village
1	Tap Water-Treated	24
2	Covered Well	27
3	Hand Pump	27

4	Tube Wells/Borehole	23
5	Post office	39
6	Public bus services	22
7	Commercial Bank	38
8	Cooperative bank	36

Sample Survey

The expert visited 7 villages in the study area. 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 and primary health centers. 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 Keezhsevir which is about 1.8 km (SW) from the lease area. Major schools with higher secondary and senior secondary schools are located in Keezhsevir. The major Keezhsevir Union located in the area is Perambalur. Facilities like petrol pump stations, ATM facility are available in Keezhsevir.

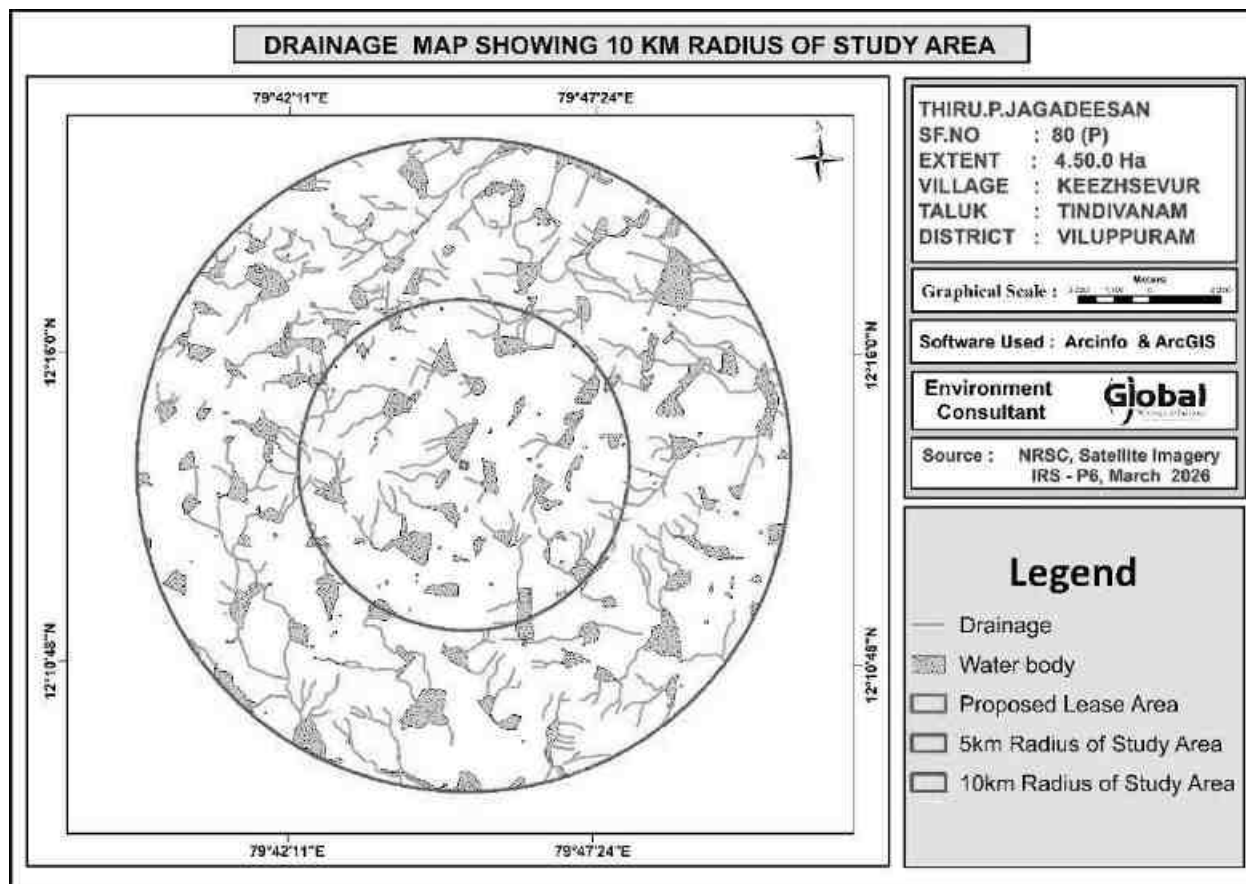
3.5.8 HYDROGEOLOGY OF THE STUDY AREA

The hydrological and hydrogeological pattern of the study area is studied in detail using satellite imagery.

3.5.8.1 HYDROGEOLOGICAL STUDY

To assess the hydrogeological condition of the surrounding proposed mine lease area. The study area is located in Keezhsevir Village, Tindivanam Taluk, Villupuram District, Tamil Nadu State is Considered to understand the nature of the general hydrogeological conditions of the surrounding proposed mine lease area.

FIGURE 3. 25 10 KILOMETER RADIUS OF THE DRAINAGE MAP



3.5.8.2 PHYSIOGRAPHY AND DRAINAGE

Physiography: The area applied for quarry lease is exhibits hilly terrain covered by top soil formation. The massive Charnockite formation is noticed below 1m (Avg) Topsoil and sloping towards southeast side of the area, the altitude of the area is above 78m (maximum) from MSL.

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. the major water bodies in buffer zone are Tank -120m (W), Tank - 330m (SW), Tank - 370m (E), Nilavial Vaikkal - 220m (S).

3.5.9 GEOLOGY, GEOMORPHOLOGY AND SOIL

3.5.9.1 Geology

Geologically in Villupuram district is characterized by a combination of ancient crystalline hard rocks and younger sedimentary formations. The western part of the district is dominated by hard rocks such as granitic gneiss, hornblende gneiss, and charnockite, with intrusions of dolerite dykes and pegmatites. These rocks are highly metamorphosed and have undergone intense folding, faulting, and crushing.

The greater part of the district is covered with metamorphic crystalline rocks of Archaean age belonging to the Charnockite – khondalite group.

The basic and ultrabasic intrusive and extrusive rocks are present. Dark looking dolerite dykes form the youngest basic intrusives.

Overlying the Archaeans are the fossiliferous upper cretaceous formations mainly occur. Overlying the cretaceous rocks are the cuddalore formation of mio-pliocene age. These comprises sand stone, often ferruginous, pebble bed, sand and clay with lignite. White to greysilica sand of sub recent age occur as long leaner bands along the north – eastern coast of the district around Marakkanam.

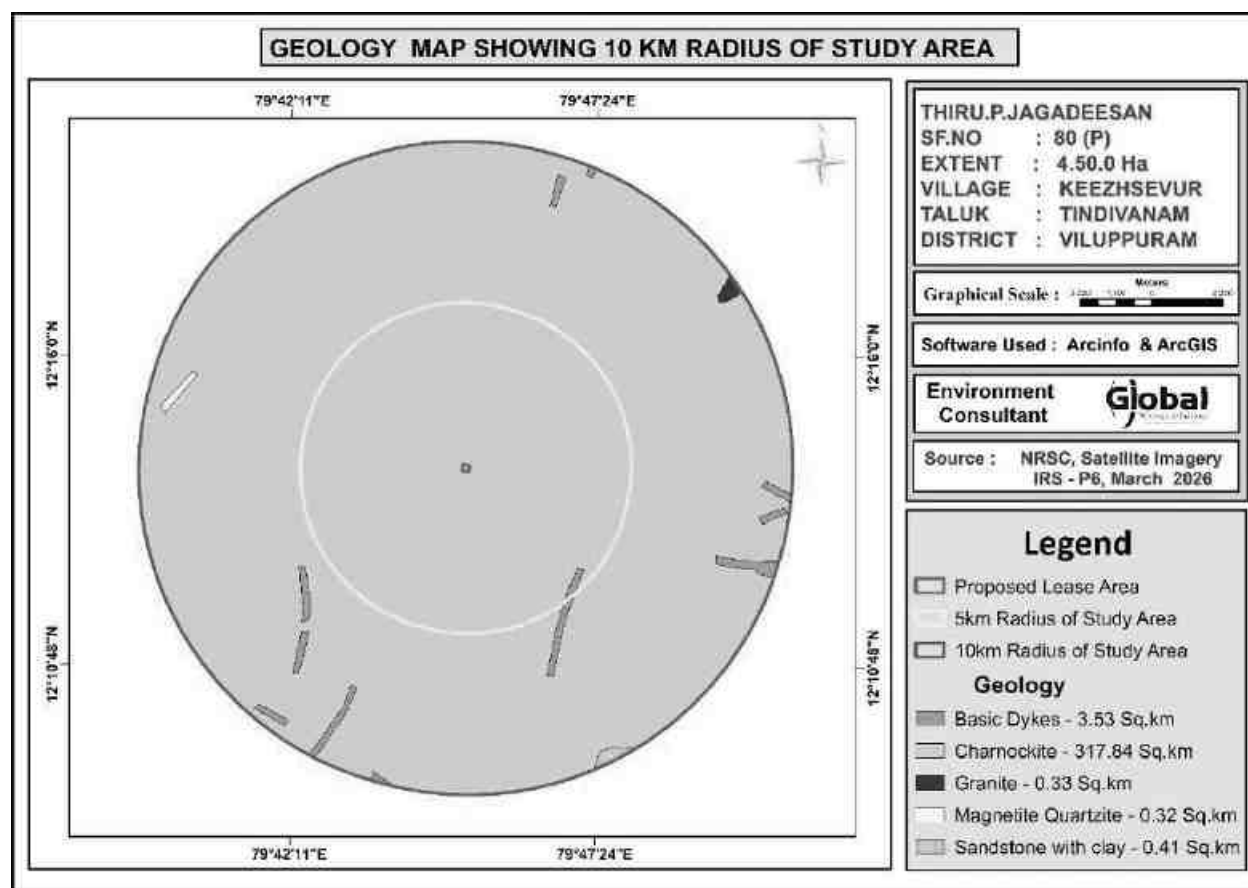
During sub recent to recent times there has been the deposition of alluvium, coastal sands and soils including lateritic soil.

Recent alluvial deposits occur mainly along the courses of the Coleroon River, Marudaiyar River, and Vellar River. These deposits are composed of medium- to coarse-grained sediments and fine floodplain materials. The Quaternary alluvium overlies both Archaean crystalline rocks and Cretaceous formations, particularly in Tindivanam Taluk. It lies within the central part of Villupuram

district and is influenced predominantly by the district's hard-rock terrain and associated alluvial deposits. The underlying geology is mainly composed of Archaean crystalline rocks, especially granitic gneiss and charnockite formations, which serve as the basement rocks. In areas adjacent to river systems, these rocks are overlain by younger alluvial deposits consisting of sand, silt, and gravel.

The geological framework of Tindivanam Taluk contributes significantly to groundwater occurrence, soil development, and land-use patterns, with weathered and fractured hard rocks forming the principal groundwater -bearing zones.

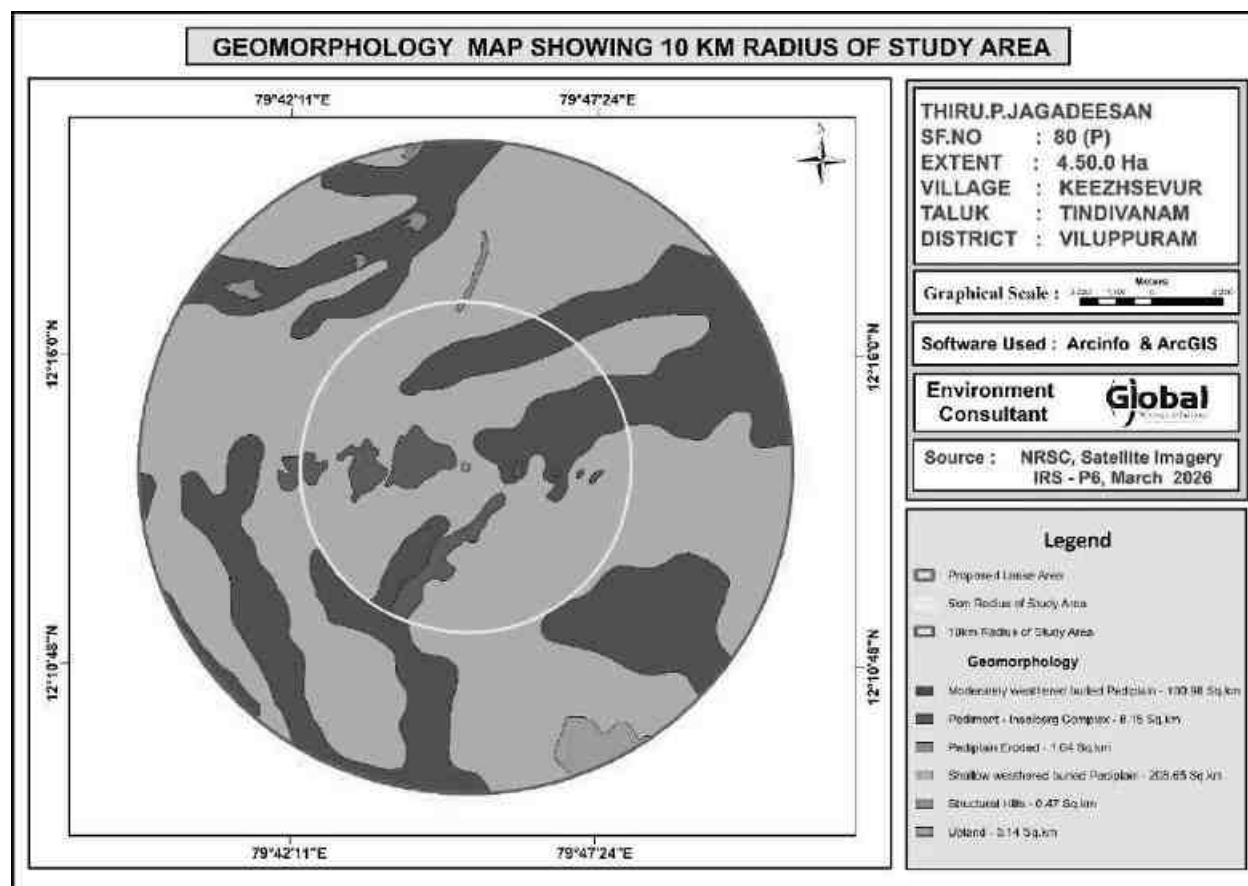
FIGURE 3.26 10 KILOMETER RADIUS OF THE GEOLOGY MAP



3.5.9.2 Geomorphology

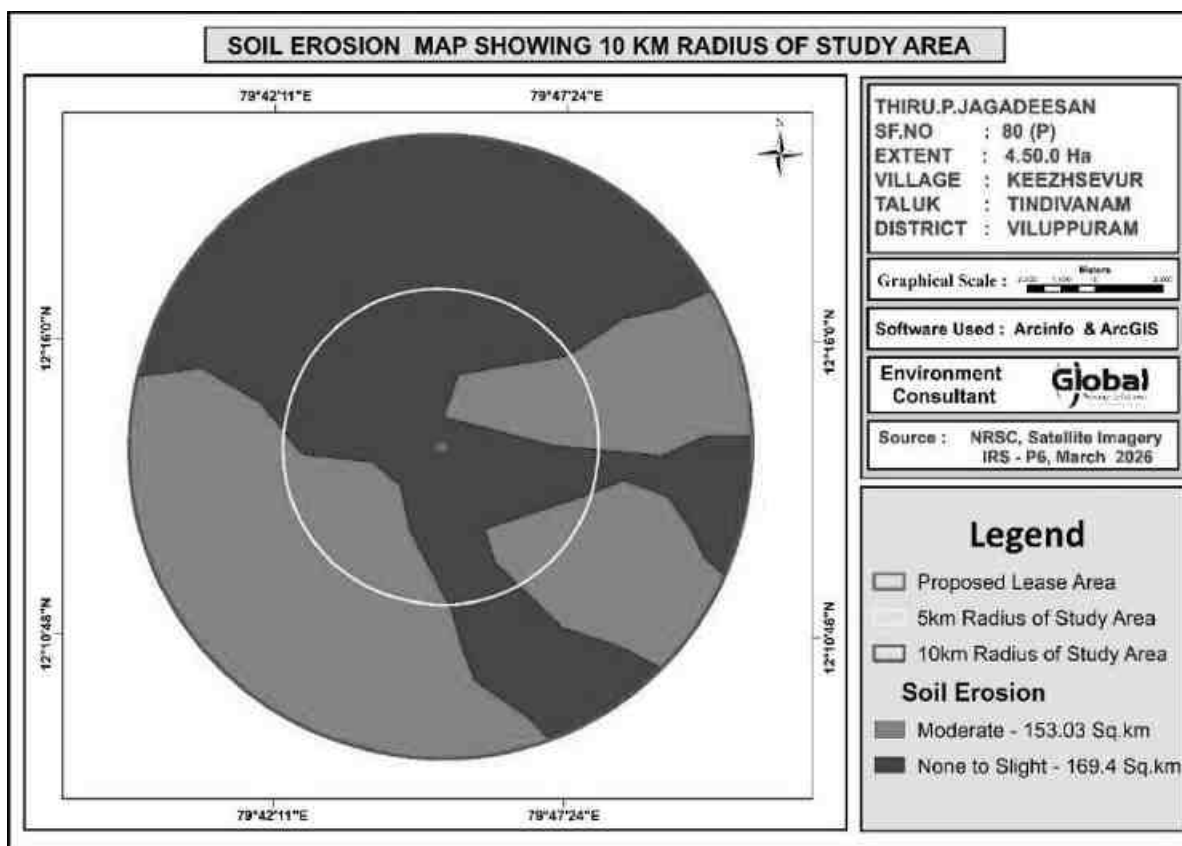
The Core and 10 Km buffered zone geomorphological features (Figure 3.24) shows that the district is pediment pediplain complex, western, southern and eastern part of the district are covered by moderately dissected denudational hills & valley. The area is falls under moderately dissected structural hills & valley. The water bodies are through the district. The most of the lineament are trending in NNE-SSW direction, while geomorphic lineaments are trending in E-W direction. The study area falls Moderately denudational hills and valleys, Pediment pediplain complex, Moderately dissected structural hills and valleys, low dissected structural hill and valleys. Predominantly the buffer zone is dominated by Shallow Weathered buried Pediplain, and the lease area falls under Pediment - Inselberg Complex. Geomorphology of the study area is detailed below figure.

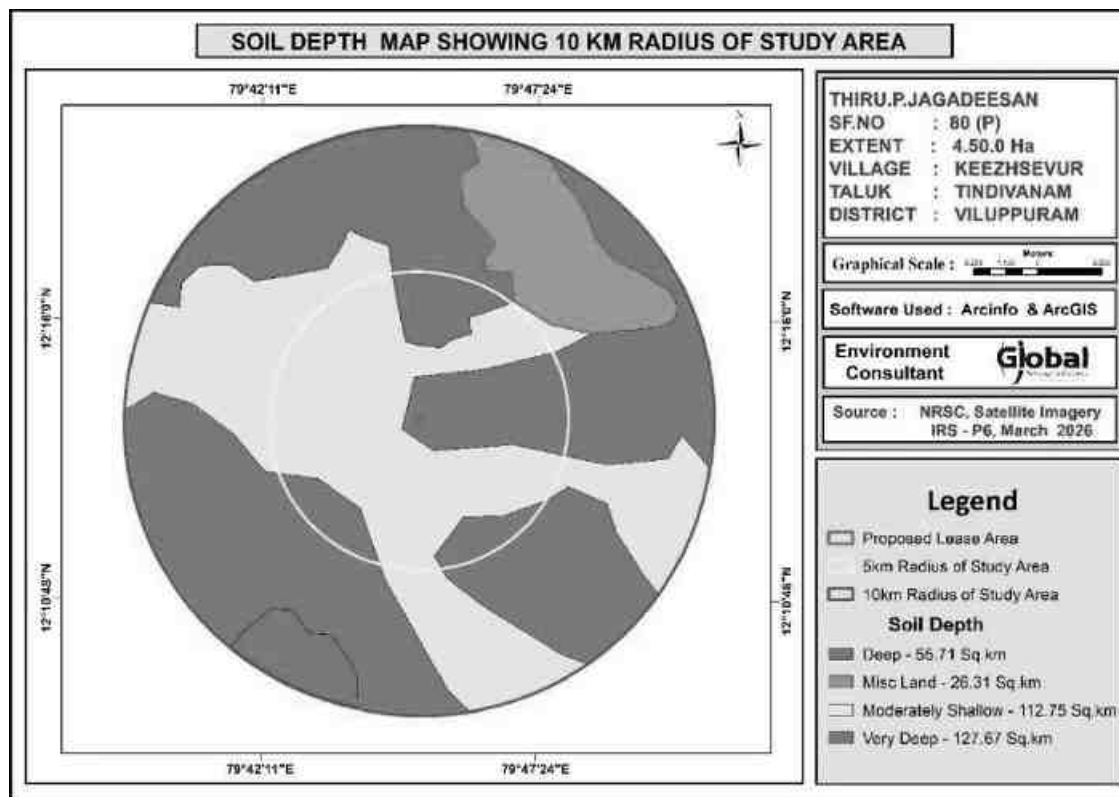
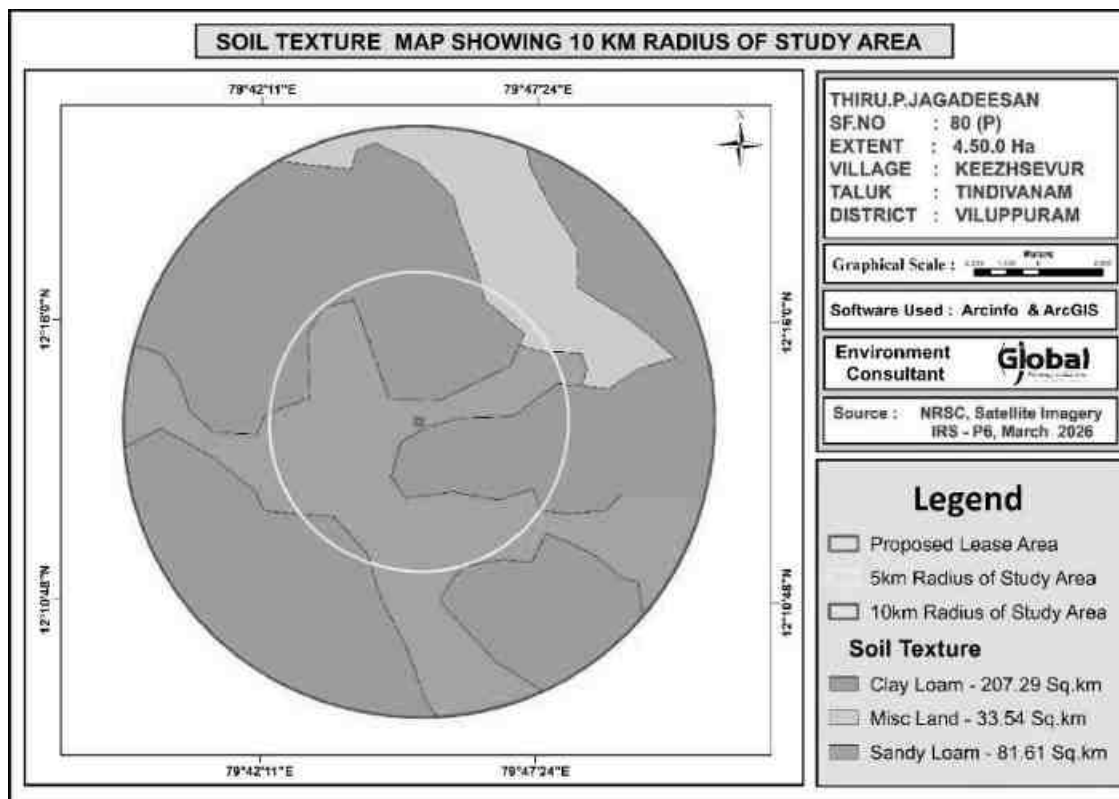
FIGURE 3.27 10 KM RADIUS OF THE STUDY AREA GEOMORPHOLOGY MAP



Soil: The soil types in the study area are mostly Calcareous black soil, Red loamy soil, clayey soil and Calcareous clayey soil (Figure 3.23.). Calcareous black soil was distributed over the study area. Clay loamy soil is found in north, east, west and central part of the study area (207.29 sq.km), Misc Land is found in north-eastern part of the study area (33.54 sq.km) and Sandy Loam soil is found in north-eastern part of the study area (81.61 sq.km)

FIGURE 3.28 10 KM RADIUS OF THE STUDY AREA SOIL TYPE MAP





3.5.10 FIELD INVESTIGATION

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 is 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**

4.1 INTRODUCTION

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

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

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

4.2 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 of S. F. Nos. 80 (P) over an extent of 4.50.0 Ha in Keezhsevur Village, Tindivanam Taluk, Viluppuram 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 524460 m³ / 14,42,265 Ts of Rough Stone and 270655 m³ / 5,41,310 Ts of Gravel up to the depth of 52 m BGL for the period of first five years and 5,21,440 m³ / 1433960 Ts rough stone and 270655 m³ / 5,41,310 Ts of Gravel up to the depth of 67 m BGL for the period of second 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 Consent Patta Land. The project area of 4.50.0 Ha boundary barrier except in eastern direction. It is proposed to be altered by effective quarrying operation such as excavation (3.87.0 Ha), Infrastructure (0.01.00), Road (0.01.00 Ha) and green belt will be developed in the safety zone of 0.61.0 Ha. The ultimate depth of quarrying is proposed with maximum depth of 67 m below ground level and Water table is found at a depth of 85m in summer and 82m in rainy seasons.

4.3 MEASURES FOR MINIMIZING AND /OR OFFSETTING ADVERSE IMPACTS IDENTIFIED

Aspect	Impact	Mitigation measures																															
Topography	The area is Plain topography covered by rough stone and Gravel. Quarrying activity will lead to change in geological setting of the area i.e., Due to the quarrying activity in the mine lease area will leads to affect the aesthetic view on the environment. Further, due to the movement of heavy vehicles in and around the mine lease area will leads to affect the surrounding agricultural lands, ecology and biodiversity, human habitations due to the emissions from vehicles like SO ₂ , NO _x , PM ₁₀ , PM _{2.5} , etc., The existing land use pattern is given as under.	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 67 m below ground level for second five years. 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>Present Area (Hect)</th><th>Area in use during the quarrying period (Hect)</th></tr><tr><td>Quarrying Pit</td><td>Nil</td><td>3.87.00</td></tr><tr><td>Infrastructure</td><td>Nil</td><td>0.01.00</td></tr><tr><td>Roads</td><td>Nil</td><td>0.01.00</td></tr><tr><td>Green Belt</td><td>Nil</td><td>0.61.00</td></tr><tr><td>Unutilized</td><td>4.50.0</td><td>Nil</td></tr><tr><td>Total</td><td>4.50.0</td><td>4.50.0</td></tr></table>	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)	Quarrying Pit	Nil	3.87.00	Infrastructure	Nil	0.01.00	Roads	Nil	0.01.00	Green Belt	Nil	0.61.00	Unutilized	4.50.0	Nil	Total	4.50.0	4.50.0	<table><tr><th>Land Use</th><th>Area in use during the quarrying period (Hect)</th></tr><tr><td>Area left for water body</td><td>3.87.00</td></tr><tr><td>Green Belt</td><td>0.61.00</td></tr><tr><td>Remaining area</td><td>0.02.00</td></tr><tr><td>Total</td><td>4.50.0</td></tr></table>	Land Use	Area in use during the quarrying period (Hect)	Area left for water body	3.87.00	Green Belt	0.61.00	Remaining area	0.02.00	Total	4.50.0
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Area left for water body	3.87.00																																
Green Belt	0.61.00																																
Remaining area	0.02.00																																
Total	4.50.0																																
		At the mine closure stage 3.87.00 Ha of lease area will be left as rain water harvesting pond 0.61.00 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,</td><td>610</td><td rowspan="5">3m x 3m</td><td rowspan="5">85%</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>	Year	Species	No. of trees	Spacing	Survival	I	Pungai, Vagai, Vembu, Manjal konrai,	610	3m x 3m	85%	II	-	III	-	IV	-	V	-													
Year	Species	No. of trees	Spacing	Survival																													
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II		-																															
III		-																															
IV		-																															
V		-																															

The ultimate pit dimension of the mine lease area is given below.	

	Ultimate Pit dimension at the end of Mining plan Period								
	Pit No.	Length (max) (m)	Width (Avg) (m)	Depth (max) (m)			Naval, Puvarasu, etc		
	I	209	185	52 (below ground level)	Total		610		
	If mining is not done systematically it will leads to the dumping failure in the mining area.				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 45° slope and with conventional opencast Mechanized method. As per the approved mining plan a safety distance of 7.5 m shall be provided. There is no overburden anticipated during the entire Rough Stone quarrying operation. The excavated rough stone will be directly loaded into tipper to the needy crusher/other buyers.				
Drainage	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 67 m below ground level. The ground water table is reported as 85m below ground level. In the proposed mining plan only 52m (below ground level) and 67m (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.				
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 67 m below ground level and the ground water table is reported as 85m below ground level. In the proposed mining plan				

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. P. JAGADEESAN, OVER AN EXTENT OF 4.50.0 HA LOCATED AT THE S.F.NO.80(P) OF KEEZHSEVUR VILLAGE, TINDIVANAM TALUK, VILUPPURAM DISTRICT, TAMIL NADU STATE.

		only 52m (below ground level) and 67m (below ground level) depth has been envisaged as workable depth for safe & economic quarrying for the entire lease period. 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 67 m below ground level. In the post mining stage, the quarried-out pit will be used for rainwater harvesting.

4.3.1 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

4.3.2 WATER ENVIRONMENT

4.3.2.1 Impact on Surface Water Resources

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

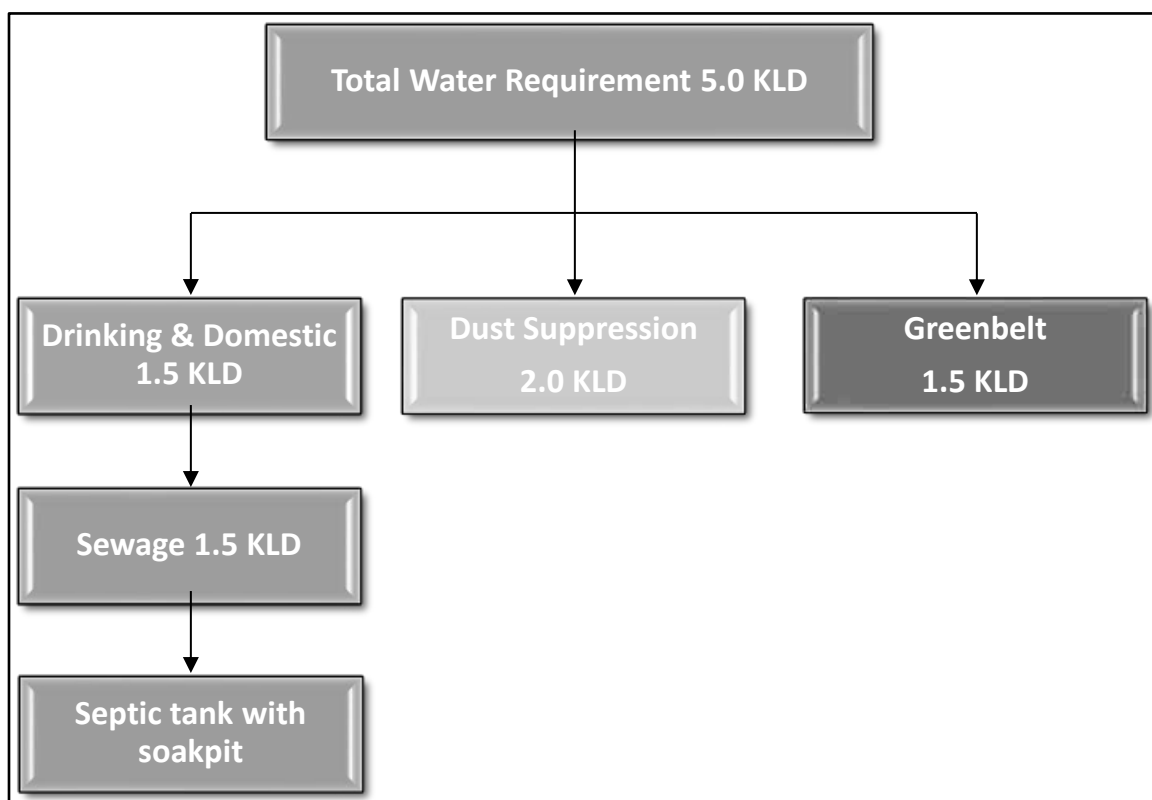
The following water bodies are located within 10 km radius of the project site are three Tank situated on west, east southwest side of the area and is 120m, 360m and 330m away from the area and there is Nilavial Vaikkal passing on south side of the area and is 220m away from the area

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.

4.3.2.2 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 5.0 KLD which will be sourced from outside agencies. Negligible sewage of 1.5 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



4.3.2.3 Impact on Ground Water

The mining activity is not likely to intersect ground water as the ground water table in this area is noticed at a depth of 85m and presently, in the proposed mining plan only 52m (below ground level) and 67m 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. The mining will go up to the maximum depth of 67 m 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.

4.3.2.4 Mitigation measures

- Entire lease area will be provided with proper garland drains.
- Check wears will be provided to prevent solids from wash off.
- Construction of garland drains around freshly excavated so that flow of water with loose material is prevented.
- The mine water will be passed through the natural slopes and valleys and gets accumulated in the settling tank (Bottom pit)

4.3.2.5 Ground water environment in buffer zone

The scenario of ground water in Keezhsevr Village, Tindivanam Taluk, Villupuram District, Tamil Nadu State is given below.

TABLE 4.1 Ground Water Level Status in Villupuram District							
S. No.	Assessment Unit (Firka)	Net Annual Ground water availability	Existing gross ground water consumption for irrigation	Existing gross ground water consumption for domestic and industrial water supply	Existing gross ground water consumption for all uses	Stage of ground water development	Category
1	Keezhsevr	410.51	OE	39.85	4.93	9.86	Over Exploited

Source: *nwm.gov.in*

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

4.3.3 VEGETATION IN THE CORE ZONE

The mine lease area is devoid of major plantation. Shrubs and bushes are majorly found within the lease area. The proponent has planned to develop green belt in an area of 0.61.0 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 610 trees are planned to be planted. Spacing will be 3m x 3m.

FAUNA

There are no sanctuaries/national parks in the buffer zone of 10 km 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.

4.4 AIR ENVIRONMENT

4.4.1 IMPACT DUE TO MINING OPERATION

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

4.4.2 IMPACT ON AIR ENVIRONMENT

The impacts on air environment from a mining activity depend on various factors like production capacity, machinery involved, operations and maintenance of various equipment's 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.

4.4.3 Air Emissions

The impacts on air environment from a mining activity depend on various factors like production capacity, machinery involved, operations and maintenance of various equipment's 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.

4.4.4 Quantitative Estimation of Impacts on Air Environment

An attempt has been made to predict the incremental rise of various ground level concentrations above the baseline status in respect of air pollution due to proposed is Thiru.P.Jagadeesan 524460 m³ / 14,42,265 Ts of Rough Stone and 270655 m³ / 5,41,310 Ts of Gravel up to the depth of 52 m BGL for the period of first five years and 5,21,440 m³ / 1433960 Ts of rough stone up to the depth of 67 m BGL for the period of second five years and cluster queries, M/s.Karpaga Vinayagaaa Mines 2559078.38 m³ of rough stone & 186256.89 m³ of gravel for a period of five year period as per approved mining plan by the open-cast semi-mechanised mining method.

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

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

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

The AERMOD 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.

4.4.5 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.

4.4.6 Emission Details

All the emissions discussed above are quantified for proposed maximum production of Thiru.P.Jagadeesan 524460 m³ / 14,42,265 Ts of Rough Stone and 270655 m³ / 5,41,310 Ts of Gravel up to the depth of 52 m BGL for the period of first five years and 5,21,440 m³ / 1433960 Ts rough stone up to the depth of 67 m BGL for the period of second five years and cluster queries, M/s.Karpaga Vinayagaaa Mines 2559078.38 m³ of rough stone & 186256.89 m³ of gravel for a period of five year

period as per approved mining plan by the open-cast semi-mechanised mining method. The existing air quality levels are covered in the baseline scenario.

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

4.4.7 Meteorological Data

The meteorological data recorded continuously during the month of December 2025 – February 2026 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 MoEFCC 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.

4.4.8 Summary of Predicted Ground Level Concentrations

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

The maximum ground level concentration is estimated to be about 3.08 $\mu\text{g}/\text{m}^3$ of PM 2.5 & 4.74 $\mu\text{g}/\text{m}^3$ of PM₁₀ within the mine area and cluster area is estimated to be about 3.29 $\mu\text{g}/\text{m}^3$ of PM 2.5 & 5.58 $\mu\text{g}/\text{m}^3$ of PM₁₀, where mining operations are being carried out. The impact of mining operations would be negligible beyond 0.4 km.

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

4.4.9 Emission sources & Quantification

Various point and non-point sources of emissions from Proposed Rough Stone Quarry of Thiru.P.Jagadeesan is quantified and presented below:

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

Quantity, TPA	524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel - first five years and 5,21,440 m ³ / 1433960 Ts rough stone - second five years.
Operational Hours Per Year	2400
Activity Rate, t/hr.	400
Emission of dust, g/t.	0.27
Emission of dust, g /hr.	59.234
Area of influence, m ²	629
Uncontrolled emission rate g/s/m ²	0.00007398
Controlled emission rate, PM10 g/s/m ²	0.000073986
Controlled emission rate, PM2.5 g/s/m ²	0.000056120

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

Quantity, TPA	524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel - first five years and 5,21,440 m ³ / 1433960 Ts rough stone - second five years.
Operational Hours Per Year	2400

Capacity of each Dumper (T)	10
Total No. of Tippers/ year	15388
Lead length/trip, Km	3.2
Total VKT/Year	120902
Emission Kg/VKT	0.35
Total emission Kg/Year	86837
Uncontrolled emission rate g/s/m	6.879
Controlled emission rate, PM10 g/s/m	0.68792
Controlled emission rate, PM2.5 g/s/m	0.51268

Area Emissions – Total Material handling (Cluster Rough Stone)

Quantity, m3	Proposed Quarries: 524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel - first five years and 5,21,440 m ³ / 1433960 Ts rough stone - second five years. Cluster queries: M/s.Karpaga Vinayagaaa Mines Rough Stone: 9,03,730 m ³ Gravel: 65,776 m ³
Operational Hours Per Year	2400
Activity Rate, t/hr.	387.45
Emission of dust, g/t.	0.39
Emission of dust, g /hr.	86.34
Area of influence, m2	639
Uncontrolled emission rate g/s/m2	0.0009382
Controlled emission rate, PM10 g/s/m2	0.00093829
Controlled emission rate, PM2.5 g/s/m2	0.00073092

Line Source – Transport of Rough Stone (Cluster)

Quantity, m3	Proposed Quarries: 524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel - first five years and 5,21,440 m ³ / 1433960 Ts rough stone - second five years. Cluster queries:

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. P. JAGADEESAN, OVER AN EXTENT OF 4.50.0 HA LOCATED AT THE S.F.NO.80(P) OF KEEZHSEVUR VILLAGE, TINDIVANAM TALUK, VILUPPURAM DISTRICT, TAMIL NADU STATE.

	M/s.Karpaga Vinayagaaa Mines Rough Stone: 9,03,730 m ³ Gravel: 65,776 m ³
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	22910
Lead length/trip, Km	0.29
Total VKT/Year	97845
Emission Kg/VKT	0.39
Total emission Kg/Year	78956
Uncontrolled emission rate g/s/m	9.7476
Controlled emission rate, PM10 g/s/m	9.74768
Controlled emission rate, PM2.5 g/s/m	0.69767

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 %

4.4.10 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 - 4.7 to 4.8.

Table 4.3 Concentrations of PM2.5 after Project Implementation					
SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Within Mine Lease area	22.4	3.08	25.48	60
2	Kattalai	22.4	2.78	25.18	
3	Karrupur	22.4	2.47	24.87	
4	Andapattu	22.4	2.16	24.56	
5	Perumukkal	22.4	1.85	24.25	
6	Nalmukkal	22.4	1.54	23.94	
7	Vittallapuram	22.4	1.23	23.63	
Table 4.3a Cluster Concentrations of PM2.5 after Project Implementation					
SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Within Mine Lease area	22.4	3.29	25.69	60
2	Kattalai	22.4	2.96	25.36	
3	Karrupur	22.4	2.63	25.03	
4	Andapattu	22.4	2.30	24.7	
5	Perumukkal	22.4	1.98	24.38	
6	Nalmukkal	22.4	1.65	24.05	
7	Vittallapuram	22.4	1.32	23.72	
Table 4.3b Concentrations of PM10 after Project Implementation					
SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Within Mine Lease area	49.2	4.74	53.94	100
2	Kattalai	49.2	4.26	53.46	
3	Karrupur	49.2	3.79	52.99	
4	Andapattu	49.2	3.32	52.52	
5	Perumukkal	49.2	2.84	52.04	
6	Nalmukkal	49.2	2.37	51.57	
7	Vittallapuram	49.2	1.90	51.1	
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	Within Mine Lease area	49.2	5.58	54.78	100
2	Kattalai	49.2	5.02	54.22	
3	Karrupur	49.2	4.46	53.66	
4	Andapattu	49.2	3.90	53.1	
5	Perumukkal	49.2	3.35	52.55	
6	Nalmukkal	49.2	2.79	51.99	
7	Vittallapuram	49.2	2.23	51.43	

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 $51.1 \mu\text{g}/\text{m}^3$ to $53.94 \mu\text{g}/\text{m}^3$ and for PM2.5 are in the range of $23.63 \mu\text{g}/\text{m}^3$ to $25.48 \mu\text{g}/\text{m}^3$ and PM10 are surrounding area range of $51.43 \mu\text{g}/\text{m}^3$ to $54.78 \mu\text{g}/\text{m}^3$ and for PM2.5 are in the range of $23.72 \mu\text{g}/\text{m}^3$ to $25.69 \mu\text{g}/\text{m}^3$ 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.

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

4.5.1 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.

4.5.2 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, the values are given below.

TABLE 4.7 Noise Levels in Monitoring Locations

S. No.	Location	Day Equivalent (in dBA)	Night Equivalent (dBA)
1	Within Mine Lease area	54.1	44.8
2	Kattalai	53.2	42.8
3	Karrupur	51.0	42.6
4	Andapattu	52.5	43.5
5	Perumukkal	48.8	43.6
6	Nalmukkal	50.6	43.9
7	Vittallapuram	50.8	44.2

The noise levels are within the MoEFCC 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 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).

4.5.3 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.

4.6 MITIGATION MEASURES

4.6.1 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 MoEFCC limits since the baseline value is low.

4.6.2 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

4.6.3 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.

4.6.4 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 MOEFCC.
- ✚ 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.

4.6.5 SOCIO ECONOMIC IMPACT

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

4.6.5.1 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 35 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, Rheumatic 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.

4.6.6 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 1.5 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.

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 41(5) of the Tamil Nadu Minor Mineral Concession Rules, 1959 and the same has been approved by the Assistant Director, Dept. of Geology & Mining, Villupuram vide Rc.No. B/G&M/251/2025 dated 30.10.2025.

- 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 MoEFCC and Tamil Nadu State Pollution Control Board. In case the SEIAA/TNPCB/MoEFCC 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 – 3.4, 3.10, 3.12 & 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/MoEFCC/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 MoEFCC/ 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

6.2 DETAILED BUDGET AND PROCUREMENT SCHEDULES

The budget planned for environmental monitoring is given below.

Table 6.3 - Environmental Management Plan Budget

Table 6.3 - Environmental Management Plan Budget (in Lakhs)		
Mitigation Measures	Capital cost	Recurring Cost / Annum
Air Environment	7.82	1.76
Noise Environment	0.30	0.02
Waste Management	0.25	0.12
Mine Closure	0.98	0.20
Implementation of EC, Mining Plan & DGMS Condition	1.01	0.76
Total	10.36	2.86
Total EMP Cost is 51.51 lakhs (This amount will be subjected to change after public hearing) i.e., Rs. 15.54 Lakhs of Capital Cost+ Rs. 35.97 Lakhs of Recurring Cost (For 10 Years)		
<i>*Life of Capital - 5 years, augmented by 50% in 6th year</i>		

CHAPTER 7

ADDITIONAL STUDIES

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

- 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

S.No	Name of the Quarry Owner	S.F. Nos & Village	Lease Period	Area
a. Abandoned Quarry				
1.	A.Kamatchi, W/o.Arivoli, No.64. Appasamy Nagar, Tindivnam.	Tindivanam & Keezsevr 79/2	23.4.2007 to 22.4.2012	0.87.0 Ha
2.	P.Srinivasan,S/o.Pattabi Reddiyar,No.142,Mosque Street,C.Pallaravam,Chennai	Tindivanam &Senalur 4/1A 4/2A1 4/2B1(P)	13.11.2015 to 12.11.2020	0.82.0 0.59.5 0.20.0/ 0.20.5 1.61.5/ 1.62.0 Ha
b. Existing Quarry				
1.	M/s.Karpaga Vinayagaaa Mines,No.50,NH2,Kambar Street,Maraimalai Nagar, Chenagalpattu- 603 209	Tindivanam & Keezsevr 75(P) 76/1(P)	26.12.2024 to 25.12.2029	0.03.0 0.97.0 Ha
c. Proposed Quarry				
1.	Thiru.P.Jagadeesan, S/o.Pachaiyappan, No.85/2, Kanakku Pillai Street, Annampakkam Village, Tindivanam Taluk, Viluppuram District	Tindivanam & Keezhsevr S.F.NO. 80	-	4.50.0 Ha

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

7.3.2 AIR QUALITY IMPACT PREDICTION FOR THE CLUSTER

The AERMOD atmospheric dispersion modeling (AERMOD Cloud remote version) is used for assessment of incremental Ground level concentration (GLC) for the cluster area. Area source model taken into consideration taking into consideration of wet drilling and loading of the cluster mines. Further line source model was taken into consideration for transportation through haul road. Baseline meteorological studies were conducted for the period of December 2025 to February 2026. The following sources are considered.

Emission sources & Quantification of the cluster area.

Various point and non-point sources of emissions from Proposed Rough Stone Quarry of Thiru.P.Jagadeesan is quantified and presented below:

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

Quantity, TPA	524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel - first five years and 5,21,440 m ³ / 1433960 Ts rough stone - second five years.
Operational Hours Per Year	2400
Activity Rate, t/hr.	400
Emission of dust, g/t.	0.27
Emission of dust, g /hr.	59.234
Area of influence, m ²	629
Uncontrolled emission rate g/s/m ²	0.00007398
Controlled emission rate, PM10 g/s/m ²	0.000073986
Controlled emission rate, PM2.5 g/s/m ²	0.000056120

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

Quantity, TPA	524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel - first five years and 5,21,440 m ³ / 1433960 Ts rough stone

	- second five years.
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	15388
Lead length/trip, Km	3.2
Total VKT/Year	120902
Emission Kg/VKT	0.35
Total emission Kg/Year	86837
Uncontrolled emission rate g/s/m	6.879
Controlled emission rate, PM10 g/s/m	0.68792
Controlled emission rate, PM2.5 g/s/m	0.51268

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

Quantity, m3	Proposed Quarries: 524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel - first five years and 5,21,440 m ³ / 1433960 Ts rough stone - second five years. Cluster queries: M/s.Karpaga Vinayagaaa Mines Rough Stone: 9,03,730 m ³ Gravel: 65,776 m ³
Operational Hours Per Year	2400
Activity Rate, t/hr.	387.45
Emission of dust, g/t.	0.39
Emission of dust, g /hr.	86.34
Area of influence, m2	639
Uncontrolled emission rate g/s/m2	0.0009382
Controlled emission rate, PM10 g/s/m2	0.00093829
Controlled emission rate, PM2.5 g/s/m2	0.00073092

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

Quantity, m3	Proposed Quarries: 524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel - first five years and 5,21,440 m ³ / 1433960 Ts rough stone

	- second five years. Cluster queries: M/s.Karpaga Vinayagaaa Mines Rough Stone: 9,03,730 m ³ Gravel: 65,776 m ³
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	22910
Lead length/trip, Km	0.29
Total VKT/Year	97845
Emission Kg/VKT	0.39
Total emission Kg/Year	78956
Uncontrolled emission rate g/s/m	9.7476
Controlled emission rate, PM10 g/s/m	9.74768
Controlled emission rate, PM2.5 g/s/m	0.69767

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 7.1 Isopleth of GLC Prediction for PM_{2.5}

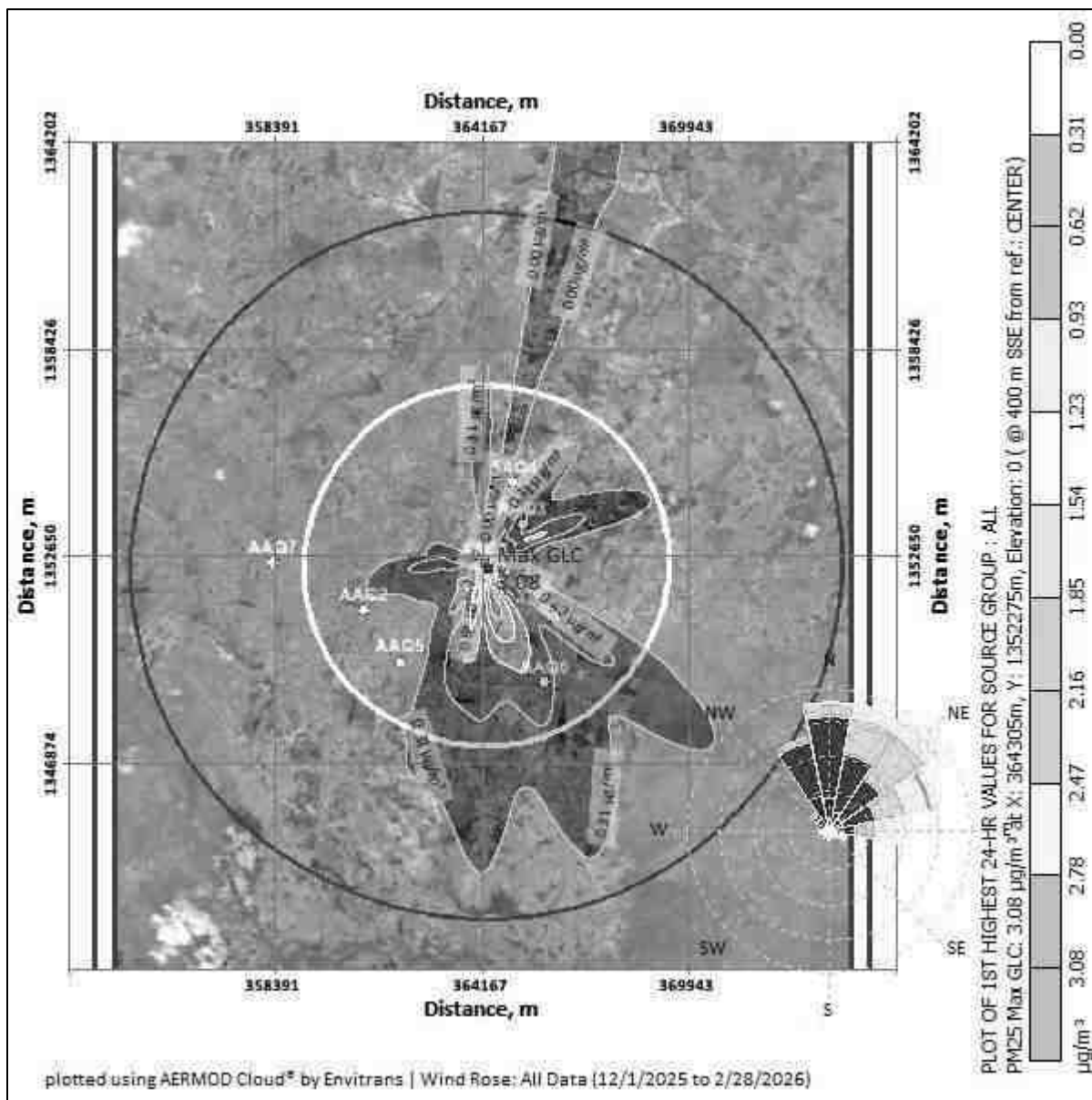


FIG 7.2 Isopleth of GLC Prediction for PM₁₀

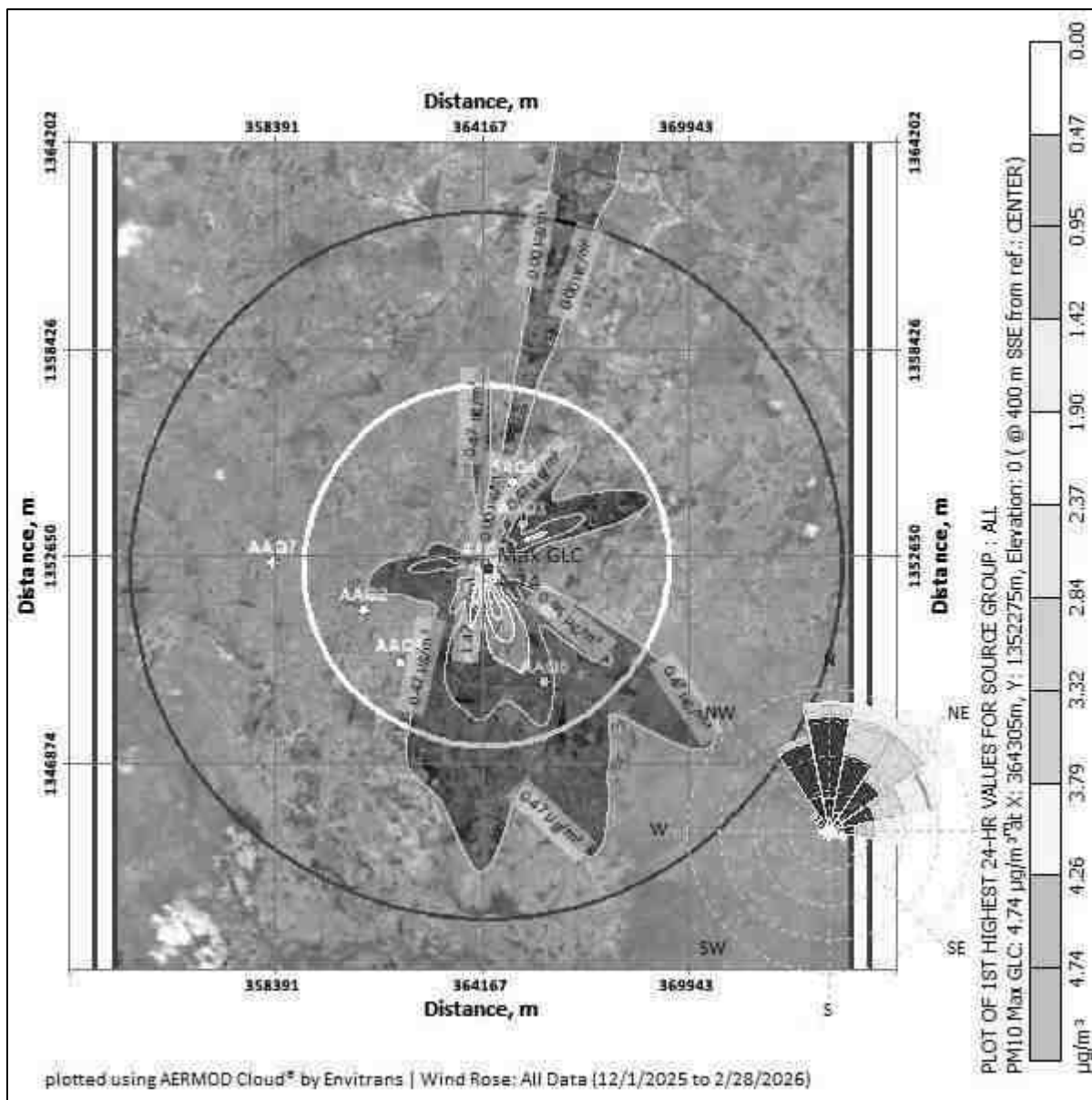
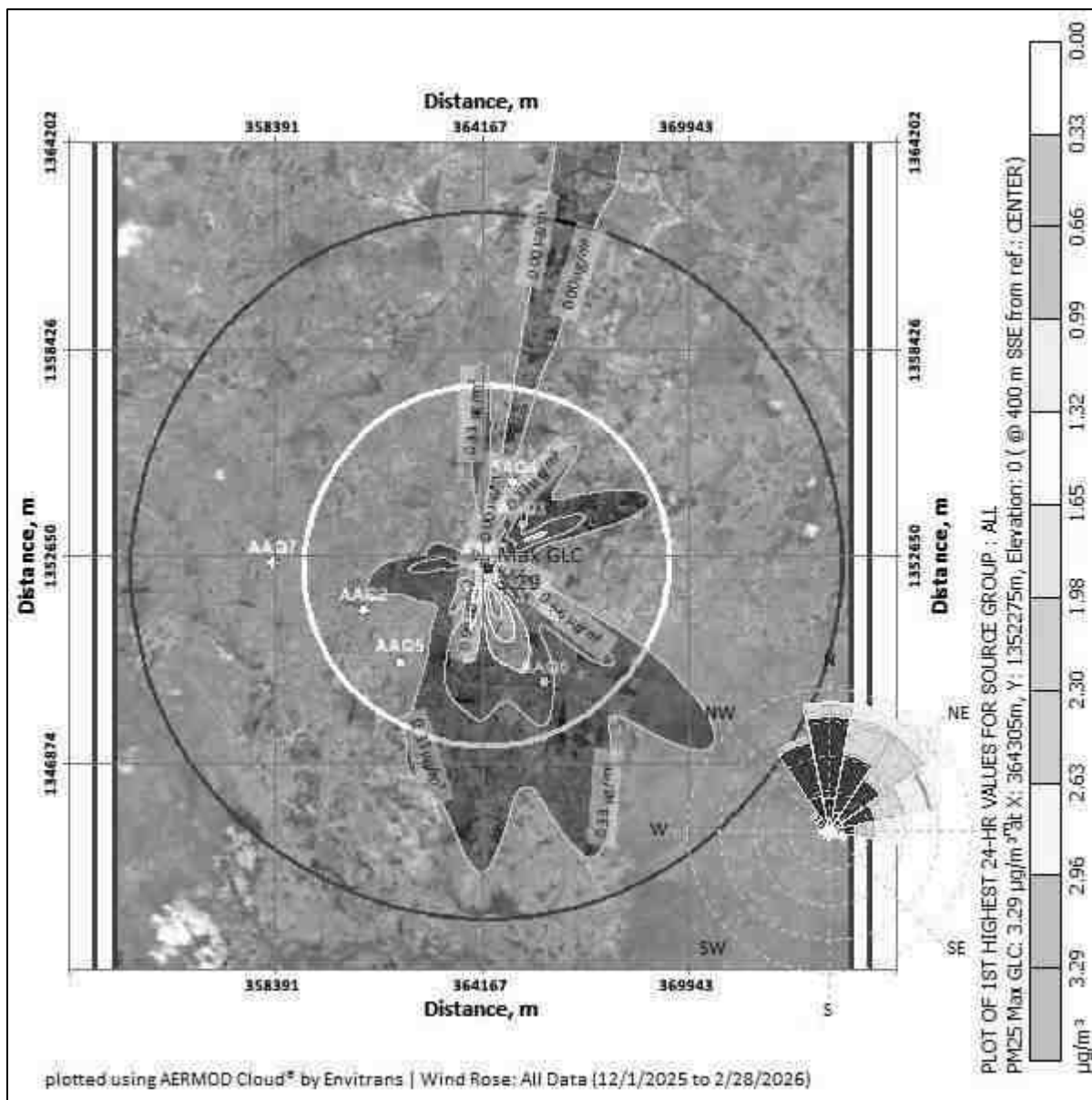


FIG 7.3 Isopleth of GLC Prediction –Cumulative for PM_{2.5}



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 – 7.3.

Table 7.3 Concentrations of PM2.5 after Project Implementation					
SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Within Mine Lease area	22.4	3.08	25.48	60
2	Kattalai	22.4	2.78	25.18	
3	Karrupur	22.4	2.47	24.87	
4	Andapattu	22.4	2.16	24.56	
5	Perumukkal	22.4	1.85	24.25	
6	Nalmukkal	22.4	1.54	23.94	
7	Vittallapuram	22.4	1.23	23.63	
Table 7.4 Cluster Concentrations of PM2.5 after Project Implementation					
SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Within Mine Lease area	22.4	3.29	25.69	60
2	Kattalai	22.4	2.96	25.36	
3	Karrupur	22.4	2.63	25.03	
4	Andapattu	22.4	2.30	24.7	
5	Perumukkal	22.4	1.98	24.38	
6	Nalmukkal	22.4	1.65	24.05	
7	Vittallapuram	22.4	1.32	23.72	
Table 7.5 Concentrations of PM10 after Project Implementation					
SL. No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Within Mine Lease area	49.2	4.74	53.94	100
2	Kattalai	49.2	4.26	53.46	
3	Karrupur	49.2	3.79	52.99	
4	Andapattu	49.2	3.32	52.52	
5	Perumukkal	49.2	2.84	52.04	
6	Nalmukkal	49.2	2.37	51.57	
7	Vittallapuram	49.2	1.90	51.1	

Table 7.6 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	Within Mine Lease area	49.2	5.58	54.78	100
2	Kattalai	49.2	5.02	54.22	
3	Karrupur	49.2	4.46	53.66	
4	Andapattu	49.2	3.90	53.1	
5	Perumukkal	49.2	3.35	52.55	
6	Nalmukkal	49.2	2.79	51.99	
7	Vittallapuram	49.2	2.23	51.43	

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 $51.1 \mu\text{g}/\text{m}^3$ to $53.94 \mu\text{g}/\text{m}^3$ and for PM2.5 are in the range of $23.63 \mu\text{g}/\text{m}^3$ to $25.48 \mu\text{g}/\text{m}^3$ and PM10 are surrounding area range of $51.43 \mu\text{g}/\text{m}^3$ to $54.78 \mu\text{g}/\text{m}^3$ and for PM2.5 are in the range of $23.72 \mu\text{g}/\text{m}^3$ to $25.69 \mu\text{g}/\text{m}^3$ which are within the statutory limits in each case. The mitigation measures undertaken in the mine for control of air pollution are given below.

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

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

Cumulative Impact 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 7.7 Impact on Traffic

Mineral Transportation - Production Per day in tons			
Quarry	Quarry Name	Total Miner \]al in tons per day	No. of Lorry Load per day
P1 (Proposed)	Thiru. P. Jagadeesan	1322	132
Total		1322	132

The cumulative study shows that the overall production of minerals from the one quarry is 1322 tons per day with a capacity of 132 trips per day.

The proposed project (1 No) will bring 132 trips per day. The existing road can absorb this additional traffic due to this project. Various measures like proper maintenance of road, covering of the loaded truck with tarpaulin, water sprinkling will be carried out to ensure no adverse impact on the logistical front. Traffic density study is detailed in section 2.11 of Chapter 2.

7.3.3 HYDROGEOLOGICAL STUDY

There are three 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.

7.3.4 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 52 m (BGL) for first five years and 67 m BGL for second five years, 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

7.3.5 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.

7.3.6 MINE CLOSURE PLAN

The quarrying operation is proposed up to a depth of 52 m BGL for first five years and 67 m BGL for second five years, which will be achieved in 10 years. The ultimate pit dimension will be length 209 m x Width 185 m x Depth 52 m for first five years and length 209 m x Width 185 m x Depth 67 m for second five years. 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

8.1 INTRODUCTION

Thiru.P.Jagadeesan has proposed Rough stone and gravel quarry over an extent of 3.00.0 ha located at S.F.No. 80 (p) of Keezhsevir Village, Tindivanam Taluk, Viluppuram District, Tamil Nadu state

8.2 PROJECT BENEFITS

Project benefits are attributed in various ways as under:

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

8.3 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.

8.4 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.

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

The mining activity at proposed Rough Stone and Gravel of Thiru.P.Jagadeesan will create direct employment opportunity for 36 local people. As per MOEFCC 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.

8.6 OTHER TANGIBLE

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. TO25B0108TN5214172N, dated 16.02.2026 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.
	1.5 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 Three Tank situated on west, east, southwest side of the area and is 120m, 360m and 330m away from the area.
	There is Nilavial Vaikkal passing on south side of the area and is 220m away from the area
	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 67 m below ground level. The ground water table is reported as 85m below ground level. In the proposed mining plan only 52m (below ground level) and 67m depth has been envisaged as workable depth for safe & economic quarrying for the entire lease period. 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 1.5 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 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.

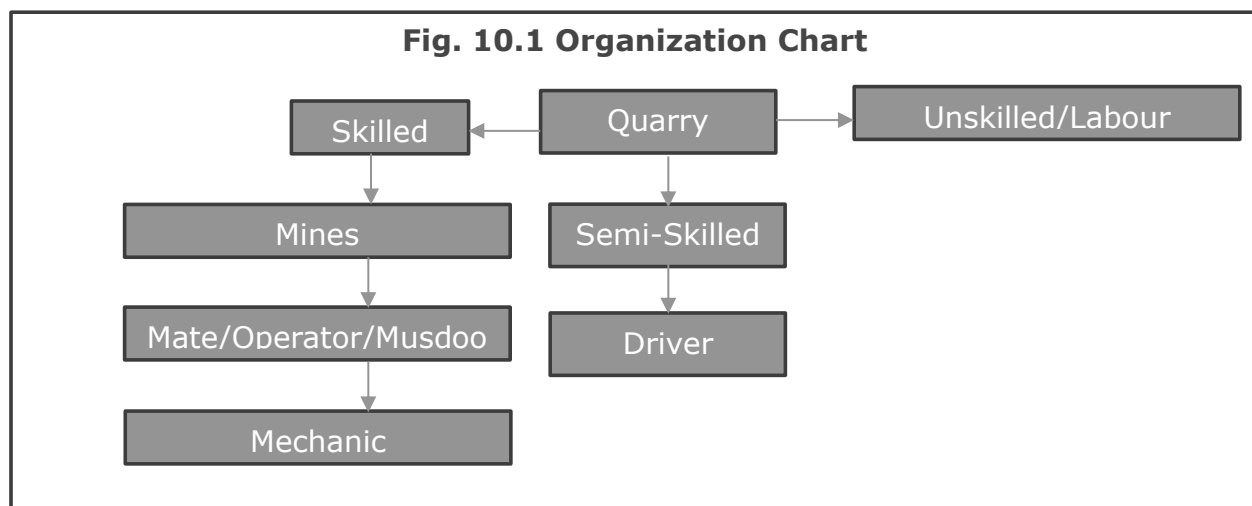
	The main attributes that retard the survival of sapling is fugitive dust, this fugitive dust can be controlled by water sprinkling on the haul roads and installing a sprinkler unit near the newly planted area.
	Regular review on green belt development programme.
	Year wise greenbelt development plan 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.

Fig. 10.1 Organization Chart



1.	Skilled	Mines Manager	1 Nos.
		Foreman / Mate	2 Nos.
		Operator	12 Nos.
		Mechanic	1 Nos.
2.	Semi-skilled	Driver	5 Nos.
3.	Unskilled	Labours	15 Nos.
Total			36 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 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	0.22	0.22
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	5.00	0.25
	Muffle blasting – To control fly rocks during blasting	0.00	0.05
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	0.50	0.10

	No overloading of trucks/tippers/tractors	0.00	0.05
	Stone carrying trucks will be covered by tarpaulin	0.00	0.10
	Enforcing speed limits of 20 km/hr within ML area	0.10	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	0.88
	Installing wheel wash system near gate of quarry	2.00	0.05
Sub-Total (A)		7.82	1.76
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 outside ML area (430 Nos.)	0.98	0.20
Sub-Total (D)		0.98	0.20
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	0.32	0.03
	Health checkup for workers will be provisioned	0.00	0.16
	First Aid facility Provision	0.00	0.04
	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	0.44	0.01

	Installation of CCTV cameras in the mines and mine entrance	0.15	0.02
Sub-Total €		1.01	0.76
Grant Total		10.36	2.86

Environmental Management Plan Budget for 10 years			
Sl. No	Year	Capital cost* (Lakhs)	Recurring Cost @ 5% Escalation (Lakhs)
1	1 st	10.36	2.86
2	2 nd	0.0	3.00
3	3 rd	0.0	3.15
4	4 th	0.0	3.31
5	5 th	0.0	3.48
6	6 th	5.18	3.65
7	7 th	0.0	3.83
8	8 th	0.0	4.02
9	9 th	0.0	4.23
10	10 th	0.0	4.44
Total		15.54	35.97
Grand Total (Lakhs)		51.51	
The total EMP Cost is 51.51 Lakhs (For 10 Years)			
i.e., Rs. 15.54 Lakhs of Capital Cost (Rs. 10.36 Lakhs for 1 st first years and Rs. 5.18 Lakhs for 2 nd five years) + Rs. 35.97 Lakhs of Recurring cost (For 10 Years)			
*Life of Capital – 5 years, augmented by 50% in 6 th year			

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 51.51 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. P. Jagadeesan has obtained Precise Area Communication Letter from Assistant Director, Department of Geology and Mining, Villupuram to quarry out 524460 m³ / 14,42,265 Ts of Rough Stone and 270655 m³ / 5,41,310 Ts of Gravel for first five years and 5,21,440 m³ / 1433960 Ts Rough stone for second five years over an extent of 4.50.0 Ha located in S.F.No. 80 (P) of Keezhsevir Village, Tindivanam Taluk, Villupuram District, Tamil Nadu State.

As per EIA notification, 2006 and its subsequent amendments the proposed "Rough Stone and Gravel Quarry of Thiru.P. Jagadeesan 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. TO25B0108TN5214172N, Dated: 16.02.2026. This report has been prepared in line with the approved TOR for production of maximum excavation of 524460 m³ / 14,42,265 Ts of Rough Stone and 270655 m³ / 5,41,310 Ts of Gravel for first five years and 5,21,440 m³ / 1433960 Ts Rough stone for second five years.

S.No.	Description	Status/Remarks
1.	Sector	1(a), non-coal mining
2.	Category of the project	B1
3.	Proposed mineral	Rough Stone
4.	Type of Lease	Fresh
5.	Extent of the lease	4.50.0 Ha
6.	Proposed depth of Mining	52 m BGL for first five years and 67 m BGL for second five years
7.	Method of mining	Opencast Mechanized
8.	Proposed lease period	10 Years

9.	Proposed Environmental Clearance	10 Years
10.	Proposed production quantity for Ten years	524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel for first five years and 5,21,440 m ³ / 1433960 Ts Rough stone for second five years

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

11.1.1 LOCATION

This project site is located in Keezhsevir Village, Tindivanam Taluk, Villupuram District, Tamil Nadu, Tamil Nadu State with Latitude: 12°14'03.59"N to 12°14'11.71"N and Longitude: 79°45'05.95"E to 79°45'14.45"E. with Survey of India Topo Sheet No. 57 P/16. 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. December 2025 to February 2026).

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°W-S45°E with vertical dipping.

11.1.3 PROJECT DESCRIPTION

This is a proposed Rough Stone quarry by Opencast Mechanized mining method with drilling and blasting. The quarrying is restricted up to a depth of 67 m Below Ground Level. The geological reserves are estimated to be 26,88,000 m³ / 73,92,000 Ts of Rough Stone & 3,13,600 m³ / 6,27,200 Ts of Gravel. The mineable reserve calculated by deducting 7.5 m safety distance and bench loss. The mineable reserves are

1045900 m³ / 28,76,225 Ts of Rough Stone and 270655 m³ / 5,41,310 Ts of Gravel which will be recovered at the rate of 100% recovery upto a depth of 67 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 quarrying operation.

S.No.	Type of Detail	Description
1	Sector	1(a) Non coal mining
2	Fresh/Existing project	Fresh Quarry
3	Category	B1
4	Nature of mineral	Minor mineral
5	Production	524460 m ³ / 14,42,265 Ts of Rough Stone and 270655 m ³ / 5,41,310 Ts of Gravel for first five years and 5,21,440 m ³ / 1433960 Ts Rough stone for second five years
6	Life	10 years
7	Waste generation and management	There is no overburden anticipated during the quarrying operation. Hence, no waste generation.
8	Bench height and width	Height and Width – 5m
9	Ultimate pit depth	67 m below ground level
10	End use	Rough Stone will be loaded into tippers to needy buyers for producing aggregates, M-sand.

11.1.4 PROJECT REQUIREMENTS

The requirements of the project is given below.

S.No.	Nature of requirement	Description
1	Water requirement	Total water requirement of 5.0 KLD which will be procured from the outside agencies. Out of 1.5 KLD drinking water requirements, Green belt development is 1.5 KLD and dust suppression is 2.0 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 4,64,677 (L) for entire life of the project.
3	Manpower requirement	Total Manpower - 36 Nos. Statutory persons – 12 Nos.
4	Financial requirement	The total project cost as per PFR will be INR 164.08 lakhs including Operational cost, Fixed Asset cost and EMP cost
5	Funds for Socio economic development	INR 5.0 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,	There is Three Tank situated on west, east southwest side of the area and is 120m, 360m and 330m away from the area. There is Nilavial Vaikkal passing on south side of the area and is 220m away from the area

B	Coastal zone, biospheres,	Nil within 10km radius
C	Mountains, forests	Sevur-110m(W) Kumalampattu-8.5Km(SE)
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	Kilsevurvillage -855m (N)
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Tindivanam – 9 km -W
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 December 2025 to February 2026.

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 has been carried out in 7 locations and the results are given below.

Table 11.2: Details Of Ambient Air Quality Monitoring Locations			
S. No.	Station Code	Locations	Coordinates
1	AAQ 1	Within Mine Lease area	12°14'6.82"N & 79°45'10.14"E
2	AAQ 2	Kattalai	12°13'25.87"N & 79°43'6.57"E
3	AAQ 3	Karrupur	12°14'43.12"N & 79°45'42.47"E
4	AAQ 4	Andapattu	12°15'16.00"N & 79°45'35.27"E
5	AAQ 5	Perumukkal	12°12'32.60"N & 79°43'43.12"E
6	AAQ 6	Nalmukkal	12°12'16.41"N & 79°45'59.99"E
7	AAQ 7	Vittallapuram	12°14'9.24"N & 79°41'44.39"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} (µg/m³)			
AAQ-1	20.5	32.1	25.7
AAQ-2	20.8	25.7	23.4
AAQ-3	21.4	26.8	24.4
AAQ-4	20.7	26.3	23.3
AAQ-5	22.1	26.8	24.8
AAQ-6	19.9	27.2	23.4
AAQ-7	22.4	26.1	24.1
CPCB NAAQS 2009 for PM_{2.5} - 60 µg/m³			
Particulate matter PM₁₀ (µg/m³)			
AAQ-1	43.7	66.9	53.5
AAQ-2	46.3	57.2	51.9
AAQ-3	47.5	53.6	54.2
AAQ-4	48.4	61.4	54.4
AAQ-5	49.2	59.6	55.2
AAQ-6	42.3	57.8	49.7
AAQ-7	48.6	56.8	52.4
CPCB NAAQS 2009 for PM₁₀ - 100 µg/m³			

Sulphur Di-oxide as SO₂ (µg/m³)			
AAQ-1	4.4	7.9	6.0
AAQ-2	3.6	6.4	5.0
AAQ-3	4.7	7.5	5.8
AAQ-4	4.7	6.6	5.9
AAQ-5	5.4	7.8	6.5
AAQ-6	3.3	6.8	5.1
AAQ-7	5.3	7.8	6.4
CPCB NAAQS 2009 for SO₂ – 80 µg/m³			
Oxide of Nitrogen as NO₂ (µg/m³)			
AAQ-1	6.9	9.8	8.3
AAQ-2	10.2	12.8	11.5
AAQ-3	11.3	14.2	12.6
AAQ-4	9.7	12.6	11.3
AAQ-5	11.3	14.2	12.6
AAQ-6	6.7	9.7	8.2
AAQ-7	9.2	11.9	10.4
CPCB NAAQS 2009 for NO₂ – 80 µg/m³			

11.2.2 WATER ENVIRONMENT

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

Table 11.3 Results of Ground Water sampling Analysis in 7 locations								Standards as Per IS 10500: 2012	
Parameter	W1	W2	W3	W4	W5	W6	W7	Accept able Limits	Permis sible Limits
Odour	Agree able	Agree eable	Agree eable	Agreea ble	Agree eable	Agreea ble	Agreea ble	Agreea ble	Agreea ble
Turbidity	<1	<1	<1	<1	<1	<1	<1	1	5
pH at 25 °C	8.18	6.78	6.92	7.09	7.03	6.81	6.73	6.5-8.5	No Relaxati on
Electrical Conductivity	448.3	1182	1592	1638	1104	2394	1068	-	-
Total Dissolved Solids	272	714	958	986	664	1442	642	500	2000
Total hardness as CaCO ₃	96.0	582	428	448	432	518	426	200	600

DRAFT EIA/EMP FOR THE PROPOSED ROUGH STONE AND GRAVEL QUARRY OF THIRU. P. JAGADEESAN, OVER AN EXTENT OF 4.50.0 HA LOCATED AT THE S.F.NO.80(P) OF KEEZHSEVUR VILLAGE, TINDIVANAM TALUK, VILUPPURAM DISTRICT, TAMIL NADU STATE.

Calcium as Ca	16.1	107.2	102.4	108.8	76.8	117.2	85.6	75	200
Magnesium as Mg	13.6	76.3	41.8	42.8	58.3	54.7	51.5	30.0	100
Calcium as CaCO ₃	40.2	268	256	272	192	293	214	-	-
Magnesium as CaCO ₃	55.8	314	172	176	240	225	212	-	-
Total alkalinity as CaCO ₃	132	418	524	510	362	396	296	200	600
Chloride as Cl ⁻	52.4	216	286	308	189	562	192	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)	BDL (D.L - 0.2)	0.2	1
Sulphates as SO ₄ ²⁻	23.4	138	197	212	96.5	363	264	200	400
Iron as Fe	0.03	0.02	0.04	0.06	0.05	0.09	0.06	0.3	No Relaxation
Nitrate as NO ₃	1.47	3.48	3.73	3.14	2.98	4.67	3.29	45	No Relaxation
Fluoride as F	0.29	0.49	0.58	0.61	0.39	0.67	0.31	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)	BDL (D.L - 0.05)	0.1	0.3

Parameter	SW1	SW2	CPCB Designated Best Use	
			Acceptable Limits	Permissible Limits
Odour	AGREEABLE	AGREEABLE	Agreeable	Agreeable
Turbidity, NTU	<1	<1	2	5
pH at 25 °C	7.26	7.48	6.5- 8.5	No Relaxation
Electrical Conductivity, µS/cm	317.4	375.7	-	-
Total Dissolved Solids, mg/l	194	228	500	2000

Total hardness as CaCO ₃ , mg/l	96.6	76.4	200	600
Calcium as Ca, mg/l	24.2	17.1	75	200
Magnesium as Mg, mg/l	8.80	8.16	30.0	100
Calcium as CaCO ₃ , mg/l	60.4	42.8	-	-
Magnesium as CaCO ₃ , mg/l	36.2	33.6	-	-
Total alkalinity as CaCO ₃ , mg/l	54.8	81.2	200	600
Chloride as Cl ⁻ , mg/l	39.2	51.4	250	1000
Free Residual chlorine as Cl ⁻ , mg/l	BDL (D.L - 0.2)	BDL (D.L - 0.2)	0.2	1
Sulphates as SO ₄ ²⁻ , mg/l	57.3	83.7	200	400
Iron as Fe, mg/l	0.04	0.07	0.3	No Relaxation
Nitrate as NO ₃ , mg/l	3.57	5.67	45	No Relaxation
Fluoride as F, mg/l	0.58	0.69	1	1.5
Manganese as Mn, mg/l	BDL (D.L - 0.05)	BDL (D.L - 0.05)	0.1	0.3
TSS, mg/l	14	18		
COD, mg/l	BDL (D.L - 4.0)	BDL (D.L - 4.0)	-	-
BOD, mg/l / 3 days @ 27°C as O ₂	BDL (D.L - 2.0)	BDL (D.L - 2.0)	2.0	2.0
DO, mg/l	6.2	6.1	6.0	6.0

All the values were found to be within permissible limits

11.2.3 NOISE ENVIRONMENT

Noise levels were measured in 7 locations and the results are given below.

Table 11.5 Noise monitoring results					
S. No	Location	Day equivalent	Night equivalent	Day equivalent limits by CPCB	Night equivalent limits by CPCB
1	Within Mine Lease area	54.1	44.8	55	50
2	Kattalai	53.2	42.8		
3	Karrupur	51.0	42.6		
4	Andapattu	52.5	43.5		
5	Perumukkal	48.8	43.6		
6	Nalmukkal	50.6	43.9		
7	Vittallapuram	50.8	44.2		

11.2.4 SOIL ENVIRONMENT

12 Soil samples are collected from 7 locations and the results are given below.

S.N o	Parameter	Unit	S1	S2	S3	S4	S5	S6	S7
1	pH at 25°C	-	8.31	6.89	7.58	8.04	6.56	8.29	7.52
2	Electrical Conductivity	µmhos /cm	246.8	242.7	204.1	118.3	168.9	166.4	123.6
3	Dry matter content	%	94.32	93.08	92.37	95.92	94.06	96.52	95.92
4	Water Content	%	5.68	6.92	7.63	4.08	5.94	3.48	4.08
5	Organic Matter	%	0.61	0.55	0.47	0.81	0.62	0.32	0.41
6	Soil texture	-	SILTY CLAY	SILTY CLAY	CLAY	SILTY CLAY	SILTY CLAY	SILT LOAM	SILT LOAM
7	Grain Size Distribution	%	6.73	2.76	5.28	8.94	5.87	34.72	34.58
	i. Sand	-	SILT LOAM	silty clay	silty clay loam	silt loam	silty clay loam	silt loam	loam
8	ii. Silt	%	35.51	57.94	37.52	39.81	44.52	53.27	53.16
9	iii. Clay	%	57.76	39.30	57.20	51.25	49.61	12.01	12.26
10	Phosphorous as P	mg/kg	0.49	0.58	0.78	1.08	1.16	0.66	0.74
11	Sodium as Na	mg/kg	246	738	832	146	968	482	468
12	Potassium as K	mg/kg	178	302	408	118	626	358	324
13	Nitrogen and Nitrogenous Compounds	mg/kg	206	296	316	366	198	234	240

14	Total Soluble Sulphate	%	BDL (D.L.0.0 2)	BDL (D.L.0.0 2)	BDL (D.L.0.0 2)	BDL (D.L.0.0 2)	BDL (D.L.0.0 2)	BDL (D.L.0.0 2)	BDL (D.L.0.0 2)
15	Porosity	%	19.4	17.6	18.8	15.4	18.6	15.6	15.8
16	Water Holding Cabacity	Inches /foot	42	38	38	42	36	38	40

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.

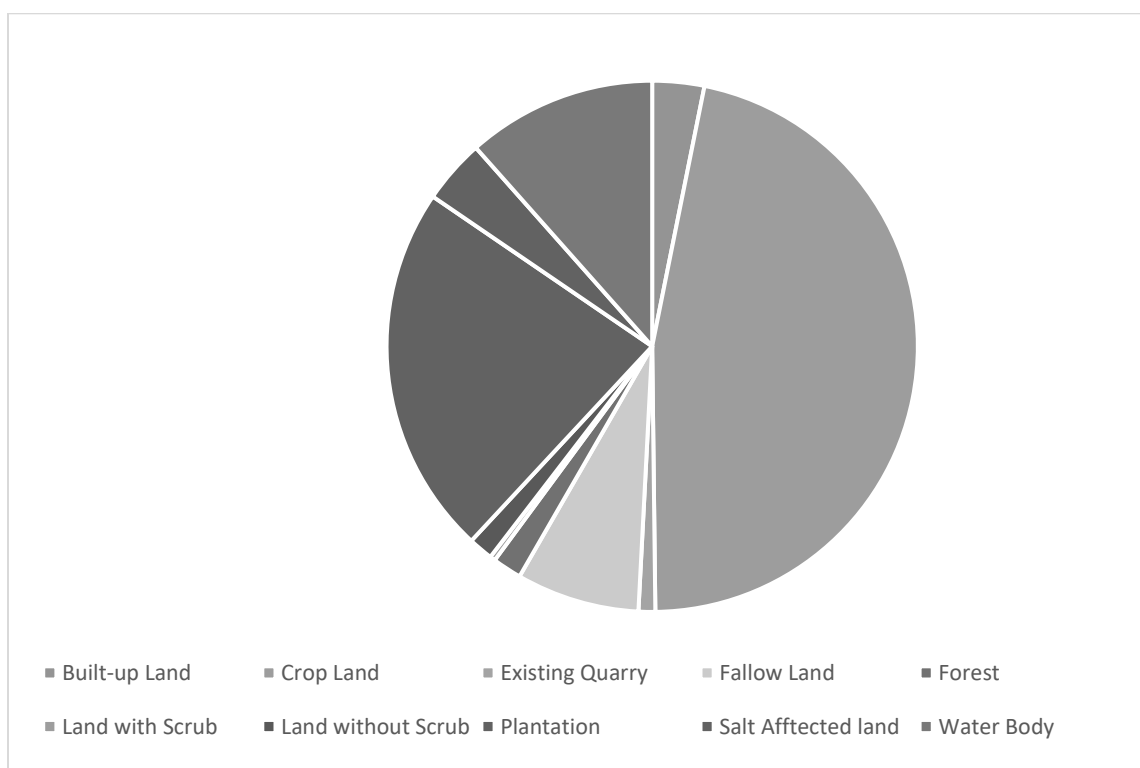
11.2.6 LAND USE

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

S. No	1st Level Classification	Area in (sq.km)	Percentage (%)	2nd Level Classification	Area in (sq.km)	Percentage (%)
1	Built-up or habitation	17.23	5.35	Residential	9.93	3.22
				Commercial/Industrial		
2	Agriculture	247.3	76.80	Crop/fallow land	170.1	54.13
3	Water bodies	35.96	11.17	Reservoir/Lake /Pond	36.3	11.55
				River/Stream		
4	Waste Land	13.39	4.16	Open without scrub	4.69	1.49

				Open with scrub	1.02	0.32
5	Mines	7.28	2.26	Mines	3.2	1.01
6	Forest	0.85	0.26	Forest	5.59	1.77
7	Plantation	71.05	22.61	Plantation	71.05	22.61
8	Salt Affected land	12.28	3.9	Salt Affected land	12.28	3.9
Total		314.16	100	Total	314.16	100



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 nearby villages in the study area. 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 and primary health centres. 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 Tindivanam which is about 1.8 km (SE) from the lease area. Major schools with higher secondary and senior secondary schools are located in Tindivanam. The major Tindivanam Union located in the area is Villupuram. Facilities like petrol pump stations, ATM facility are available in Tindivanam.

11.2.8 HYDROGEOLOGY OF THE LEASE AREA

There are three 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 52 m BGL for first five years and 67 m BGL for second five years. 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 67 m below ground level. Other than quarrying of minerals, no other change will be done since there is no dumping. To prevent soil erosion during monsoon season, garland drain will be constructed with silt traps. At the mine closure stage, 3.87.0 Ha of lease area will be left as rain water harvesting pond. 0.61.0 Ha will be developed with green belt. For this, plants like Pongamia pinnata, Syzigium cumini, Albizia lebeck, Thespesia populnea, Bauhinia racemose, Cassia siamea, Azadirachta indica are selected. A total of 610 trees are planned to be planted. Spacing will be 3m x 3m.

11.3.2 WATER ENVIRONMENT: IMPACT AND MITIGATION MEASURES

There is no water body present inside the lease area. The entire water requirement for the project is 5.0 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 52 m BGL for first five years and 67 m BGL for second five years, there will not be any seepage. However, the rain

water percolation and collection of water from seepage shall be less than 300 lpm and it shall be pumped out periodically by a stand by diesel powered Centrifugal pump motivated with 7.5 H.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

There is Three Tank situated on west, east southwest side of the area and is 120m, 360m and 330m away from the area.

There is Nilavial Vaikkal passing on south side of the area and is 220m away from the area.

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

11.2.11 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.

11.2.12 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 of 7.5m barriers in the lease area.

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

11.2.13 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 90 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 MoEFCC limits since the baseline value is low.

11.2.14 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 MOEFCC.
- ✦ 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

11.2.15 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.

11.2.16 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, Rhematic 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.

11.2.17 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 51.51 Lakhs is allocated.

11.2.18 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 36 Nos. 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 and 51.51 lakhs for the ten 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/26-29/RA 0478. The registered office of Global Mining Solutions is at Plot No.6, S.F.No.13/2 A2, VS City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamilnadu-636455.

Declaration by Experts contributing to the proposed Rough Stone and Gravel Quarry over an extent 4.50.0 Ha, while total cluster area of 8.50.0 Ha at Keezhsevr Village, Tindivanam Taluk, Villupuram District, Tamil Nadu State. (ToR Identification No. - TO25B0108TN5214172N, Dated: 16.02.2026).

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

EIA Coordinator Name: M. Manikandan

M. MANIKANDAN

EIA CO-ORDINATOR
GLOBAL MINING SOLUTIONS
SALEM

Signature & Date

Period of involvement: December 2025 to February 2026.

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: December 2025 to February 2026.</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: December 2025 to February 2026.</u>	K. Abirami
3	SHW	Ramados N	Assessment of waste generated from the project, suggested waste management practices. <u>Period: December 2025 to February 2026.</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: December 2025 to February 2026.</u>	K. Sarasvathy
5	EB	Saravanan S	Baseline data collection of related to ecology of the area. <u>Period: December 2025 to February 2026.</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: December 2025 to February 2026.</u>	N. Ravinthiran
7	AQ	Srilatha Thiruveedhula	Air quality modeling utilizing the area source model.	T. Srilatha

			<i>Predication of the ground level concentration of the dust. Suggesting suitable mitigation measures. <u>Period: December 2025 to February 2026.</u></i>	
8	NV	<i>Dhanalakshmi Ramanathan</i>	<i>Ambient noise study of the area. Incremental noise generation due to quarry operation and impact of the noise due to the project. <u>Period: December 2025 to February 2026.</u></i>	<i>R. Dhanal</i>
9	LU	<i>Srilatha Thiruveedhula</i>	<i>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: December 2025 to February 2026.</u></i>	<i>T. Srilatha</i>
10	RH	<i>S.V. Prashant</i>	<i>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: December 2025 to February 2026.</u></i>	<i>S. Prashanth</i>
11	SC	<i>Shisupal Sing</i>	<i>Soil monitoring, secondary data collection on soil type, soil management practices, utilization of topsoil. <u>Period: December 2025 to February 2026.</u></i>	<i>Shisupal Sing</i>
12	GEO	<i>Valliappan Meyyappan</i>	<i>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: December 2025 to February 2026.</u></i>	<i>V. Meyyappan</i>

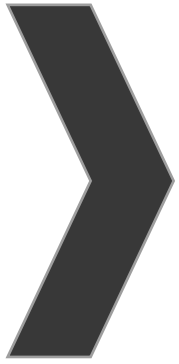
TM- EC						
S. No	Name of TM (EC)	Sector(s) proposed	Approved (to work under)	Period of involvement	Type of work	Signature
1.	Abirami	1	Manikandan Manickam	Period: December 2025 to February 2026.	Associate d with EIA Coordinat or in overall preparatio n of Draft EIA/EMP report.	
TM- FAE:						
S. No	Name of TM (FAE)	Function al Area	Approved FAE (to work under)	Period of involveme nt	Type of work	
1	Kamaraj S	LU	Srilatha Thiruveedhu la	Period: December 2025 to February 2026.	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	Period: December 2025 to February 2026.	Associated with Experts in studying hydrogeological pattern of study area, Studying ground water and the impact of the project on ground water	

2	B.J.Sampatkkumar	SE	Saraswathy K	<i>Period: December 2025 to February 2026.</i>	Assisted by the Expert in preparation of socio-economic report.
		SC	Shishupal Singh	<i>Period: December 2025 to February 2026.</i>	Assisted by the Expert in interpretation of soil sampling and their quality involved in the project.
3	Mownica Balaji	NV	Dhanalakshmi Ramanathan	<i>Period: December 2025 to February 2026.</i>	Associated with the expert team in suggesting control measures for noise and Ground Vibration.
		AP	Dhanalakshmi Ramanathan		Associated with expert team in assessing existing air quality, impact of the project on ambient air and suggesting mitigation measures for air pollution
4	Balasubramani G	NV	Dhanalakshmi Ramanathan	<i>Period: December 2025 to February 2026.</i>	Associated with the expert in selection of base line monitoring stations, Review of Noise quality results, Review of emission sources – drilling, blasting, excavation and transportation, Identification of impacts on environment, identification of remedial measures

					and input to EIA preparation
		Geo	Valliappan Meyyappan		Associated with the expert in preparing Geological map.
5	Suresh Mani	LU	Srilatha Thiruveedhula	<i>Period: December 2025 to February 2026.</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 Thiruveedhula	<i>Period: December 2025 to February 2026.</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	Valliappan Meyyappan		Associated with the Qualified Person & Experts in preparing Geological map, assessing stability of quarry slope faces and dump, management plan for mine stability and after use of mining quarry and geological features of the area during mine plan preparation.
7	Prabu M	Geo	Valliappan Meyyappan	<i>Period: December 2025 to February 2026.</i>	Associated with Experts and involved in Field Investigations, Mapping /Geo-referencing
8	Abirami Kaliyaperumal	RH	S V Prashant	<i>Period: December 2025 to February 2026.</i>	Associated with experts and involved in the identification risk and hazard, suggesting safeguard measures.
9	Dhanalakshmi Ramanathan	AQ	Srilatha Thiruveedhu la	<i>Period: December 2025 to February 2026.</i>	Involved with Expert team and involved in calculating air emission values using Meteorological data and Providing inputs for running modelling (ISCT3, AERMOD).
10	Manikandan Manickam	AP	Ramadoss N	<i>Period: December 2025 to</i>	Associated with expert team in assessing existing air quality, impact of

				February 2026.	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: 13076
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA),
TAMIL NADU)



Dated: 16/02/2026



To,

P JAGADEESAN

S/o.Pachaiyappan, No.85/2, Kanakku Pillai Street, Annampakkam Village, Tindivanam Taluk,
Viluppuram District - 604101, TAMIL NADU.
paridhiarivoli@gmail.com

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

Sir/Madam,

Sub: SEIAA, Tamil Nadu – Proposed Rough Stone and Gravel quarry over an area of 4.50.0 ha of in S.F.No's: 80(P) in Keezhsevvur Village, Tindivanam Taluk, Viluppuram District, Tamil Nadu by Thiru.P.Jagadeesan - under project category – “B1” and Schedule S.No. 1(a) – ToR issued along with Public Hearing- preparation of EIA report – Regarding.

Ref:

1. Online proposal No. SIA/TN/MIN/559371/2025, Dated: 27/11/2025.
2. Your application submitted for Terms of Reference dated: 01.12.2025
3. Minutes of the 666th SEAC -I Meeting held on 20.01.2026.
4. Minutes of the 958th Authority meeting held on 06.02.2026

2. The particulars of the proposal are as below:

(i) TOR Identification No.	TO25B0108TN5214172N
(ii) File No.	13076
(iii) Clearance Type	TOR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vii) Name of Project	Rough Stone and Gravel Quarry of Thiru.P.Jagadeesan
(viii) Name of Company/Organization	P JAGADEESAN
(ix) Location of Project (District, State)	VILLUPURAM, 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 interalia including Form-1 (Part A and B) were submitted to the SEIAA for an appraisal by the SEAC under the provision of EIA notification 2006 and its subsequent amendments.
2. The above-mentioned proposal has been considered by SEIAA in the meeting held on 06.02.2026. The minutes of the meeting and all the Application and documents submitted [viz. Form-1 Part A, Part B] are available on PARIVESH portal which can be accessed by scanning the QR Code above.
3. The State Expert Appraisal Committee (SEAC), based on the information & clarifications provided by the project proponent and after detailed deliberations on all technical aspects recommended the proposal for grant of Terms of Reference with public hearing under the provision of EIA Notification, 2006 and as amended thereof subject to the stipulation of specific and general conditions as detailed in Annexure (2).
4. The SEIAA has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the SEAC hereby decided to issue the following Terms of Reference with public hearing for instant proposal of **Thiru.P.Jagadeesan** 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.

Annexure 1

Specific Terms of Reference s for (Mining Of Minerals)

1. Seac Conditions - Site Specific

S. No	Terms of Reference
1.1	1. A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of required statutory personnel, appropriate environmental management, system of maintaining the haul roads and village/panchayat roads, authorized blasting operation, Monitoring system of the environmental & other statutory compliances & its reporting status, etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal: (i) Copy of the agreement forming CMC. (ii) The Organisation chart of the Committee with defining the role of the members (iii) The 'Standard Operating Procedures' (SoP) executing the planned activities. 2. The PP shall ensure the installation of CCTV at the proposed quarry site and ensure its inclusion during the EIA presentation.

2. Seac Standard Conditions

S. No	Terms of Reference
2.1	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

S. No	Terms of Reference
	(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 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.

S. No	Terms of Reference
	· 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, 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.

S. No	Terms of Reference
	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 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.

3. Seiaa Specific Conditions :

S. No	Terms of Reference
3.1	After detailed discussions, the Authority accepts the recommendation of SEAC-I and decided to grant Terms of Reference (ToR) along with Public Hearing for the quantity of 10,45,900 m³ of rough stone and the 2,70,655 m³ of Gravel up to the depth of 67m 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 & normal conditions & SEIAA Standard conditions

4. Seiaa Standard Conditions :

S. No	Terms of Reference
4.1	<u>Cluster Management Committee</u> - 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. - The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc., - 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. - 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. - 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. - 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. - The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner. - The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public in the vicinity. <u>Agriculture & Agro-Biodiversity</u> - Impact on surrounding agricultural fields around the proposed mining Area. - Impact on soil flora & vegetation around the project site. - 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. - The Environmental Impact Assessment should study the agro-biodiversity, agro- forestry, horticultural plantations, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem. - Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services. - The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock. <u>Forests</u> - The project proponent shall detailed study on impact of mining on Reserve forests and free ranging wildlife. - The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.

S. No	Terms of Reference
	17. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection. 18. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site. <u>Water Environment</u> 19. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period. 20. Erosion Control measures. 21. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas. 22. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir. 23. The project proponent shall study and furnish the details on potential fragmentation impact on natural Environment, by the activities. 24. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts. 25. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components. 26. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites. 27. The EIA shall include the impact of mining activity on the following: - Hydrothermal/Geothermal effect due to destruction in the Environment. - Bio-geochemical processes and its foot prints including Environmental stress. - Sediment geochemistry in the surface streams. <u>Energy</u> 28. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished. <u>Climate Change</u> 29. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities. 30. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and physical, chemical & biological soil features. 31. Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood. <u>Mine Closure Plan</u> 32. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued. <u>EMP</u> 33. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued and the scope for achieving SDGs. 34. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan. <u>Risk Assessment</u> 35. To furnish risk assessment and management plan including anticipated vulnerabilities during

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

Standard Terms of Reference for (Mining of minerals)

1.

S. No	Terms of Reference
1.1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994
1.2	A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given
1.3	All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee
1.4	All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the 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

S. No	Terms of Reference
	Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report
1.8	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided
1.9	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period
1.10	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given
1.11	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given
1.12	A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees
1.13	Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished
1.14	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated
1.15	The vegetation in the RF / PF areas in the study area, with necessary details, should be given
1.16	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted
1.17	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ 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

S. No	Terms of Reference
	sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished
1.18	A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled- I fauna found in the study area, the necessary plan alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost
1.19	Proximity to Areas declared as Critically Polluted or the Project areas likely to come under the Aravali Range, (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered
1.20	Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority)
1.21	R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report
1.22	One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given
1.23	Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map
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

S. No	Terms of Reference
1.25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided
1.26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided
1.27	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided
1.28	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central 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

S. No	Terms of Reference
1.36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations
1.37	Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation
1.38	Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project
1.39	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project
1.40	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given
1.41	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out
1.42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report
1.43	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc
1.44	Besides the above, the below mentioned general points are also to be followed:- a) All documents to be properly referenced with index and continuous page numbering. b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated. c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project. d) Where the documents provided are in a language other than English, an English translation should be provided. e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted. f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed. g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation. h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable. i) The EIA report should also include (i) surface plan of the area indicating 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

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.

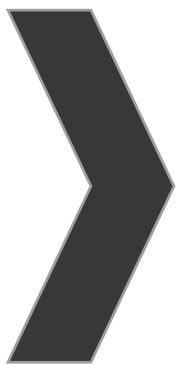
31. A detailed plan on plastic waste management shall be furnished. Further, the proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throw away plastics irrespective of thickness with 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.





ANNEXURE-2

ந.க.எண். ஆ/புலி(ம)கர/251/2025
நாள்:- 29.9.2025.

உதவி இயக்குநர் அலுவலகம்,
புலியியல் மற்றும் சுரங்கத்துறை,
விழுப்புரம்.



ஒளிவீச்சு

பொருள்: கனிமங்களும் குவாரிகளும் - சிறுகனிமம் - சாதாரண கற்கள் மற்றும் கிராவல் - விழுப்புரம் மாவட்டம் - திண்டிவனம் வட்டம் - கீழ்சேலூர் கிராமம் - பட்டா புல எண்: 80/ (பகுதி) - 4.50.0 ஹெக்டேர் பரப்பளவில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை உரிமம் வழங்க கோரி திரு. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவர் இணையவழியில் அளித்த விண்ணப்பம் - உரிமம் வழங்க பரிந்துரை செய்து அறிக்கை வரப்பெற்றது - புலத்தணிக்கை மேற்கொள்ளப்பட்டது - குவாரி குத்தகை உரிமம் வழங்க 4.50.0 ஹெக்டேர் பரப்பினை தகுதியான நிலப்பரப்பாக கருதி ஏற்பளிக்கப்பட்ட சுரங்கத்திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணைய இசைவினை பெற்று சமர்ப்பிக்கக் கோருதல் - தொடர்பாக.

- பார்வை:**
1. திரு.ப. ஜெகதீசன் த-பெ. பச்சையப்பன், நெ.85/2, கணக்கு பிள்ளை தெரு, அண்ணம்பாக்கம் கிராமம், திண்டிவனம் வட்டம், விழுப்புரம் மாவட்டம் என்பவரின் இணைய வழி (MIMAS), விண்ணப்பம் நாள்: 07.07.2025
 2. திண்டிவனம் சார் ஆட்சியர் அவர்களின் கடிதம் ந.க.அ3/4760/2025 நாள்: 08.08.2025
 3. விழுப்புரம் மாவட்ட புலியியல் மற்றும் சுரங்கத்துறை உதவி புலியியலாளர் புலத்தணிக்கை அறிக்கை நாள்: 22.09.2025

விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், அண்ணம்பாக்கம் கிராமம், நெ.85/2, கணக்குபிள்ளை தெரு என்ற முகவரியில் வசிக்கும் திரு.ப. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவர், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம பட்டா புல எண்: 80/ - 5.44.50 ஹெக்டேரில் பகுதியளவு 4.50.0 ஹெக்டேர் பரப்பில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுப்பது தொடர்பாக 1959-ஆம் ஆண்டு தமிழ்நாடு சிறுவகை கனிமச்சலுகை விதிகள், விதி எண். 19(1)-ன்கீழ் குவாரிப்பணி செய்ய உரிமம் வழங்க கோரி பார்வை 1-ல் காணும் மனுவுடன் தொடர்புடைய ஆவணங்களை இணைத்து விண்ணப்பித்துள்ளார்.

2) மேற்படி விண்ணப்பம் தொடர்பாக நில இரூப்பு அறிக்கை கோரப்பட்டதை தொடர்ந்து, பார்வை (2)-ல் கண்டுள்ளவாறு திண்டிவனம் சார் ஆட்சியர் அவர்களிடமிருந்து வரப்பெற்ற விசாரணை அறிக்கை பரிசீலனை செய்யப்பட்டதில், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், அண்ணம்பாக்கம் கிராமம், நெ.85/2, கணக்குபிள்ளை தெரு என்ற முகவரியில் வசிக்கும் திரு.ப. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவர், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம பட்டா புல எண்: 80/ - 5.44.50 ஹெக்டேரில் பகுதியளவு 4.50.0 ஹெக்டேர் பரப்பில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை அனுமதி கோரியது தொடர்பாக, திண்டிவனம் வருவாய்



வட்டாட்சியர் விசாரணை அறிக்கையின்பேரில் புலத்தணிக்கை மேற்கொண்டு அளித்துள்ளதாகவும்,

திண்டிவனம் வட்டம், கீழ்சேலூர் கிராமத்தில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை அனுமதி கோரிய இடமானது கீழ்சேலூர் கிராம புன்செய் புல எண். 80/- மொத்த பரப்பு 5.44.50 ஹெக்டேர் எனவும், இதில் மனுதாரர் புல எண். 80/ (பகுதி) 4.50.0 ஹெக்டேர் பரப்பளவில் குவாரி பணி செய்திட குவாரி குத்தகை உரிமம் கோரியுள்ளார் எனவும், மேற்படி இடமானது ரயத்து புன்செய் என்ற வகைப்பாட்டை உடைய பட்டா நிலம் எனவும், இதற்கான அபதிவேடு, 10(1) சிட்டா மற்றும் புலப்பட நகல் ஆகிய கிராம கணக்குகளில் நகல் உள்ளதாகவும், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராமத்தில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை அனுமதி கோரிய புல எண்: 80/ (மொத்த பரப்பு 5.44.50)-ல் புல எண். 80/ (பகுதி) 4.50.0 ஹெக்டேர் இடமானது பட்டா எண். 1243-ன்படி அறிவொளி மனைவி காமாட்சி என்ற பெயரில் கிராமக்கணக்கில் தாக்கலாகியுள்ளது எனவும், மேற்படி புலமானது டி.ஆர். 2025/0103/07/434448TR நாள்: 12.06.2025-ன்படி பச்சையப்பன் தந்தை நித்தியானந்தம் என்பவரிடமிருந்து அறிவொளி மனைவி காமாட்சி என்பவருக்கு பட்டா எண். 1243-ன்படி பட்டா மாற்றம் செய்யப்பட்டுள்ளது எனவும், மேற்படி பட்டதாரரிடமிருந்து மனுதாரர் திண்டிவனம் 1 எண். இணை சார்பதிவாளர் அலுவலகத்தின் மூலம் ஆவண எண். 1282/2025 நாள்: 25.06.2025-ன்படி 25.06.2025 முதல் 24.06.2035 வரை நில குத்தகை பத்திரம் பதிவு செய்துள்ளார் எனவும் தெரிவித்துள்ளார்.

குவாரி குத்தகை உரிமம் வழங்க கோரியுள்ள புலமானது தற்போது கரம்பாக உள்ளது கிராம கணக்குகளை ஆய்வு செய்ததில் தெரிய வருகிறது எனவும், மேற்படி புலத்தில் இருந்து உத்தேசமாக 150 மீட்டர் தொலைவில் ஏரியும், 200 மீட்டர் தொலைவில் பாதுகாப்பட்ட காடுகள் அமைந்துள்ளது கிராமக்கணக்குகள் மற்றும் வரைபடங்கள் வாயிலாகவும் நேரடி தணிக்கையிலும் தெரிய வருகிறது எனவும், மனுதாரர் குவாரி குத்தகை அனுமதி கோரியது நோட்டரி பப்ளிக் வழக்கறிஞரிடம் பெற்று சமர்ப்பித்துள்ளதாகவும், அரசுக்கு செலுத்த வேண்டிய கனிம வரி பாக்கி ஏதும் நிலுவை இல்லையென்றும், அரசுக்கு செலுத்த வேண்டிய வருமான வரி பாக்கி ஏதும் நிலுவை இல்லையென்றும், தமிழ்நாடு மாநிலத்தில் இதுவரை குவாரி குத்தகை உரிமம் எதுவும் பெறவில்லை என உறுதிமொழி ஆவணங்களின் நகல்களை சமர்ப்பித்துள்ளதாகவும், குத்தகை உரிமம் கோருவதற்கான விண்ணப்பக் கட்டணம் ரூ.1500/-ஐ விழுப்புரம் பாரத மாநில வங்கிக் கிளையில் செலுத்துச்சீட்டு எண். 20250707015976 நாள்: 07.07.2025-ன்படி செலுத்தியுள்ளார் எனவும், குத்தகை உரிமம் கோரும் புலத்திற்கு தெற்கு பகுதியில் செங்கல்பட்டு மாவட்டம், மறைமலைநகரைச் சேர்ந்த தி/ள். கற்பக விநாயகா மைன்ஸ் என்பவர், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம புல எண். 75 (பகுதி) (3.03.0 ஹெக்) மற்றும் 76/1 (1.76.0 ஹெக்) ஆகியவற்றில் 4.79.0 ஹெக்டேர் பரப்பளவில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுத்து குவாரிப்பணி செய்ய அனுமதி பெறப்பட்டு குவாரிப்பணி நடைபெற்று வருகிறது என தெரிவித்துள்ளார்.



புலத்தின் நான்கெல்லைகள் (சக்குபந்தி) புல எண். 80/-

புல எண் / திசைகள்	80/-
வடக்கு	அயன் புஞ்சை புல எண். 81/1 மற்றும் 82/1 எம்.கே. ரமேஷ் மற்றும் 2 நபர்கள்
தெற்கு	அயன் புஞ்சை புல எண். 75/ மற்றும் 76/ தி/ள். கற்பக விநாயகா மைன்ஸ்
கிழக்கு	அயன் புஞ்சை புல எண். 79/4 மற்றும் 71/1, 79/4 - எம்.கே. ரமேஷ் மற்றும் 2 நபர்கள் 77/1 - சுந்தரம் நாயுடு மற்றும் 1 நபர்கள்
மேற்கு	அயன் புஞ்சை புல எண். 80/ பகுதி மனுதாரர் குவாரி உரிமம் பெறவுள்ள இடத்தின் மீதமுள்ள பகுதி

குவாரி குத்தகை உரிமம் அனுமதி கோரிய புலங்களில் இருந்து 300 மீட்டர் சுற்றளவு தொலைவிற்குள் குடியிருப்பு ஏதும் அமைய பெறுவில்லை எனவும், குவாரி குத்தகை உரிமம் அனுமதி கோரிய இடத்திற்கு அருகில் புராதன சின்னங்களோ, கல் கட்டிடங்களோ, விலையுயர்ந்த மரங்களோ 50 மீட்டர் சுற்றளவு தொலைவிற்குள் உயரழுத்த மற்றும் தாழ்வழுத்த மின் கம்பிகளோ, தொலைபேசி கம்பிகளோ, ரயில் பாதைகளோ ஏதும் செல்லவில்லை எனவும், மேலும், மயானம், சுடுகாடு, இடுகாடு மற்றும் அரசு புறம்போக்கு நிலங்களோ ஏதும் அமையப்பெறுவில்லை எனவும், குவாரி குத்தகை உரிமம் அனுமதி கோரிய இடத்திற்கு 1 கி.மீ சுற்றளவு தொலைவிற்குள் தேசிய பூங்காக்கள், வனவிலங்கு சரணாலயம், புலிகள் காப்பகம், யானை வழித்துடங்கள் ஏதும் அமையவில்லை எனவும், உத்தேசமாக 200 மீட்டருக்கு அப்பால் பாதுகாக்கப்பட்ட காடுகள் அமைந்துள்ளதால் வனத்துறையினரிடம் தடையில்லா சான்று பெற்றிட அறிவுறுத்தலாம் எனவும், மேற்படி புலத்தில் வெட்டியெடுக்கும் கற்களை சேமித்து வைத்திட போதிய இட வசதி உள்ளது எனவும், குவாரி குத்தகை உரிமம் கோரிய இடத்திற்கு உத்தேசமாக 150 மீட்டருக்கு அப்பால் ஏரி அமைந்துள்ளது எனவும், எனவே, பாதுகாப்பு இடைவெளியுடன் கூடிய வேலி அமைத்துவிட்டு குவாரிப்பணிகளை மேற்கொள்ளலாம் என்ற நிபந்தனையின் அடிப்படையில் குவாரிப்பணி செய்ய குத்தகை உரிமம் வழங்கலாம் எனவும் தெரிவித்துள்ளார்.

மேலும், சாதாரண கற்கள் குவாரிப்பணி செய்ய உத்தேசிக்கப்பட்டுள்ள புலத்திலிருந்து வெட்டியெடுக்கப்படும் கற்களை கொண்டு செல்ல கீழ்சேலூர் கிராம எல்லை புஞ்சை புல எண். 76/1, 76/2 மற்றும் வடகொளப்பாக்கம் கிராம எல்லை அயன் புஞ்சை புல எண். 10/5ஏ வழியாகவும், நல்லாளம் - கீழ்சேலூர் ரோடு வழியாகவும் போதிய பாதை வசதி உள்ளது எனவும், மேற்படி புல எண். 76/1, 76/2 புலனிற்கு அருகில் நிலவியல் வாய்க்கால் உள்ளது எனவும், நிலவியல் வாய்க்காலுக்கு எவ்வித இடையூறும் ஏற்படுத்தாமல் குறுகிய பாலம் ஒன்றை ஏற்படுத்தி குவாரிப்பணிகளை மேற்கொள்ளலாம் என்ற நிபந்தனையின் அடிப்படையில் குவாரிப்பணி செய்ய குத்தகை உரிமம் வழங்கலாம் எனவும், மேலும், சாதாரண கற்கள் வெட்டியெடுக்க குவாரி குத்தகை உரிமம் வழங்குவது தொடர்பாக, கீழ்சேலூர் கிராம பொது மக்களிடமிருந்து எவ்வித ஆட்சேபமும்



வரப்பெறவில்லை எனவும், கீழ்சேலூர் கிராம குடிகளிடமிருந்து வாக்குமூலம் பெறப்பட்டு இணைக்கப்பட்டுள்ளது எனவும், குவாரி குத்தகை அனுமதி வழங்கப்படும் பட்சத்தில் சுற்றியுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளிவிட்டு குவாரிப்பணி செய்யப்பட வேண்டுமெனவும், சுற்றியுள்ள நீர்நிலைப் பகுதிகளுக்கு 50 மீட்டர் பாதுகாப்பு இடைவெளிவிட்டு குவாரிப்பணி செய்யப்பட வேண்டுமெனவும், குவாரியில் வெடிவைக்கும் பட்சத்தில் அருகிலுள்ள பட்டா நிலங்களுக்கு எவ்வித இடையூறும் ஏற்படாத வகையில் முன்கூட்டியே தகவல் தெரிவிக்கப்பட வேண்டும் என்ற நிபந்தனையின் அடிப்படையிலும், பாதுகாப்பு இடைவெளியுடன் கூடிய வேலி அமைக்க வேண்டும் என்ற நிபந்தனையின் அடிப்படையிலும் குவாரிப்பணி செய்ய குத்தகை உரிமம் வழங்கலாம் எனவும் தெரிவித்துள்ளார்.

மேலும், குவாரி குத்தகை அனுமதி கோரியுள்ள புலத்திற்கான கிராமக்கணக்குகளின் நகல், சிட்டா, அடங்கல், புலப்படம், அ-பதிவேடு, கிராம வரைபடம் மற்றும் மனுதாரர் நில குத்தகை ஒப்பந்தம் பெற்றதற்கான ஆவணங்கள், விண்ணப்ப கட்டணம், கனிம வரி பாக்கி ஏதும் நிலுவை இல்லை என்பதற்கான ஆவணங்களின் நகல்கள் இணைக்கப்பட்டுள்ளது எனவும், எனவே, திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம பொதுமக்கள் கொடுத்துக்கொண்ட வாக்குமூலம், திண்டிவனம் வருவாய் வட்டாட்சியர் சமர்ப்பித்துள்ள அறிக்கையின் அடிப்படையில், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், அண்ணம்பாக்கம் கிராமம், நெ. 85/2, கணக்குப்பிள்ளை தெரு என்ற முகவரியைச் சேர்ந்த திரு.ப. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவருக்கு விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம புல எண். 80/- (பகுதி) - 4.50.0 ஹெக்டேர் பரப்பளவில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை அனுமதி கோரியது தொடர்பாக, பாதுகாப்பு விதிகளில் தெரிவிக்கப்பட்டுள்ள நிபந்தனைகளுக்குப்பட்டு பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுத்து குவாரிப்பணி செய்ய பரிந்துரை செய்துள்ளார்.

6) பார்வை (4)-ல் காணும் விழுப்புரம் மாவட்ட புவியியல் மற்றும் சுரங்கத்துறை உதவி புவியியலாளர் அவர்களின் புலத்தணிக்கை அறிக்கையில், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், அண்ணம்பாக்கம் கிராமம், நெ.85/2, கணக்குப்பிள்ளை தெரு என்ற முகவரியில் வசிக்கும் திரு.ப. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவர், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம பட்டா புல எண்: 80/ - 5.44.50 ஹெக்டேரில் பகுதியளவு 4.50.0 ஹெக்டேர் பரப்பில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை உரிமம் கோரியது தொடர்பாக, திண்டிவனம் சார் ஆட்சியர் அவர்களிடமிருந்து வரப்பெற்ற பரிந்துரை அறிக்கையை தொடர்ந்து 22.09.2025 அன்று புலத்தணிக்கை செய்யப்பட்டது எனவும், இத்தணிக்கையின்போது உதவி புவியியலாளர் மற்றும் விண்ணப்பதாரர் உடனிருந்தனர் எனவும் தெரிவித்துள்ளார்.

மேலும், குவாரி குத்தகை உரிமம் வழங்க கோரிய விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம பட்டா புல எண்: 80/ - 5.44.50 ஹெக்டேர்



புன்செய் நிலமானது பட்டா எண். 1243-ன்படி திருமதி. காமாட்சி க.பெ. அறிவுரை மேற்படி
என்பவரின் பெயரில் கிராமக்கணக்கில் தாக்கலாகியுள்ளது எனவும், இப்படிப்பட்ட நிலத்தை
பட்டாதாரிடமிருந்து விண்ணப்பதாரர் திரு. ஜெகதீசன் த.பெ. பச்சையப்பன் என்பவர்
சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி அமைத்துக் கொள்வதற்கு 10
ஆண்டுகளுக்கு திண்டிவனம் இணை எண்.1 சார்பதிவாளர் அலுவலக குத்தகை
ஆவண எண். 1282/2025 நாள்: 25.06.2025-ன்படி குத்தகை ஆவணம் பதிவு செய்து
அதற்கான ஆவணத்தினை சமர்ப்பித்துள்ளார் எனவும், எனவே, விண்ணப்பதாரர்
மேற்படி நிலத்தில் குவாரி செய்ய தகுதியுடையவர் எனவும், குத்தகை உரிமம் வழங்க
கோரியுள்ள புலங்களின் சக்குபந்தி விவரம் கீழ்க்கண்டவாறு அமைந்துள்ளது எனவும்
தெரிவித்துள்ளார்.

நான்கு எல்லைகள் விவரம்.

வ. எண்.	புல எண் / பரப்பு (ஹெக்டேர்)	வடக்கு	தெற்கு	கிழக்கு	மேற்கு
1.	80 / (பகுதி) - 4.50.0	புல எண். 81/1, 82/1 பட்டா நிலங்கள்	புல எண். 75, 76/1 பட்டா நிலங்கள்	புல எண். 79/4, 77/1 பட்டா நிலங்கள்	புல எண். 80/-ல் குவாரி குத்தகை கோரும் பரப்பு போக மீதமுள்ள பட்டா நிலம்

மேற்படி, குவாரி குத்தகை கோரும் புலங்கள் சமதளப்பரப்பாக காணப்படுகிறது எனவும், மேற்படி புலத்தில் காணப்படும் கற்கள் சாள்ளகைட் வகையைச் சேர்ந்த கற்கள் எனவும், இக்கற்கள் கட்டுமான பணிக்கு பயன்படும் சாதாரண கற்கள், எம். சாண்ட், ஐல்வி தயாரிக்க உகந்தது எனவும், மேலும், குவாரி குத்தகை உரிமம் கோரும் புலனுக்கு அருகில் நீர் நிலைகள், ஏரி புறம்போக்கு, ஆறு, குளம், கண்மாய் போன்றவை 50 மீட்டர் சுற்றளவில் ஏதும் இல்லை எனவும், மேலும், 60 மீட்டர் சுற்றளவில் பாதுகாக்கப்பட்ட வனப்பகுதிகள் ஏதுமில்லை எனவும், குவாரி குத்தகை கோரும் புலங்களுக்கு 300 மீட்டர் சுற்றளவில் அங்கீகரிக்கப்பட்ட வீட்டு மனைகள், நத்தம் மற்றும் குடியிருப்பு பகுதிகள் ஏதுமில்லை எனவும், குவாரி குத்தகை அனுமதி புலங்களுக்கு 50 மீட்டர் சுற்றளவில் நெடுஞ்சாலை, இருப்புபாதை, கடுகாடு, இடுகாடு மற்றும் உயர்வழுத்த / தாழ்வழுத்த மின்கம்பிகள் ஏதும் செல்லவில்லை எனவும், மேலும், 1 கி.மீ இடைவெளியில் தேசிய பூங்காக்கள், வனவிலங்கு சரணாலயம், புலிகள் காப்பகம், யானை வழித்தடங்கள் ஏதுமில்லை எனவும், மேற்படி, புலத்தணிக்கையின்போதும், பொதுமக்களிடமிருந்து ஆட்சேபனை ஏதும் வரப்பெறவில்லை எனவும் தெரிவித்துள்ளார்.

குவாரி குத்தகை கோரும் புலனிலிருந்து கனிமங்களை எடுத்து செல்வதற்கு பட்டா புல எண்கள்: 76/1, 76/2, 10/55ஏ வழியாக போதிய அணுகுபாதை வசதி உள்ளது எனவும், இருப்பினும் அணுகுபாதை வசதி ஏற்படுத்தப்பட உள்ள சர்வே எண்கள்: 76/1 மற்றும் 76/2-ல் உள்ள நிலவியல் வாய்க்காலுக்கு எவ்வித இடையறும்



ஏற்படுத்தாவண்ணம் சிறிய பாலம் அமைத்து அதன்பின்னர் பாதை அமைக்கப்பட வேண்டும் எனவும்,

எனவே, திண்டிவனம் சார் ஆட்சியர் அவர்களின் பரிந்துரை அறிக்கை விண்ணப்பதாரரின் கோரிக்கை மற்றும் கள ஆய்வின் அடிப்படையில், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேஷூர் கிராம பட்டா புல எண்: 80/ - 5.44.50 ஹெக்டேரில் பகுதியளவு 4.50.0 ஹெக்டேர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க பத்து (10) ஆண்டுகளுக்கு கீழ்க்கண்ட நிபந்தனைகளுக்கு உட்பட்டு 1959-ஆம் ஆண்டு தமிழ்நாடு சிறுவகை கனிமச்சலுகை விதிகளில் விதி எண். 19(1)-ன்கீழ் உரிமம் வழங்க மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் தடையில்லா சான்று மற்றும் தமிழ்நாடு மாசுக்கட்டுப்பாடு வாரியம் அவர்களின் தடையின்மை சான்றினை பெற்று சமர்ப்பித்த பின்பு அதன் நிபந்தனைகளுக்கு உட்பட்டு சாதாரண கற்கள் மற்றும் கிராவல் குவாரி பணி செய்து கொள்ள விண்ணப்பதாரர் திரு. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவருக்கு அனுமதி வழங்கலாம் என பரிந்துரை செய்துள்ளார்.

நிபந்தனைகள்:-

1. விண்ணப்ப புலங்களின் அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளியும் மற்றும் அரசு புறம்போக்கு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி மேற்கொள்ளப்பட வேண்டும்.
2. குவாரிப்பணி மேற்கொள்ளும் போது அருகிலுள்ள பட்டா மற்றும் அரசு புறம்போக்கு நிலங்களுக்கு எவ்வித இடையூறும் இல்லாமல் குவாரிப்பணி செய்ய வேண்டும்.
3. குவாரிப்பணி தொடங்குவதற்கு முன்னர் சர்வே எண். 76/1, 76/2 ஆகியவற்றில் செல்லும் நிலவியல் வாய்க்காலுக்கு எவ்வித இடையூறும் ஏற்படுத்தா வண்ணம் அனுசூபாதை அமைக்க வேண்டும்.
4. குவாரி குத்தகை வழங்கும் முன்பு விண்ணப்பித்துள்ள இடத்தினை DGPS சர்வே பணி மேற்கொண்டு அதன் அறிக்கையை சமர்ப்பிக்க வேண்டும்.
5. முறைப்படியும், விஞ்ஞான பூர்வமாகவும் குவாரிப்பணி செய்ய வேண்டும்.
6. சான்றிதழ் பெறப்பட்ட போர்மேன், வெடிப்பாளர் மற்றும் கரங்க மேலாளர் மூலம் குவாரிப்பணி செய்யப்பட வேண்டும்.
7. குவாரிப்பணி தொடங்குவதற்கு முன் கரங்க பாதுகாப்பு இயக்குநர், சென்னை அவர்களுக்கு தகவல் தெரிவிக்கப்பட வேண்டும்.
8. பாறைகளை தகர்க்க கைத்துளைப்பான்களை கொண்டு பாறைகளை துளையிட்டு குறைவான வெடிப்பொருட்களை பயன்படுத்த வேண்டும்.
9. குவாரிப்பணி தொடங்குவதற்கு முன்பாக குவாரியை சுற்றி முள்கம்பி வேலி அமைத்து குவாரிப்பணி தொடங்க வேண்டும்.
10. குவாரித் தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்ய Mettaliferrous Mines விதிகளின்படி அகலமானதும், பாதுகாப்பானதுமான Benches அமைத்து



பாதுகாப்பான முறையில் குவாரிக்குள் வாகனங்கள் சென்று வரவும் மற்றும் குவாரி தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்தும் குவாரிப்பணி செய்ய வேண்டும்.

11. குவாரிப்பணி செய்வதற்கு பரிந்துரை செய்யப்பட்ட கனிமங்களான சாதாரண கற்கள் மற்றும் கிராவல் ஆகியவற்றை தவிர வேறு கனிமங்கள் ஏதும் கண்டறியப்பட்டால் உடனடியாக குவாரிப்பணியினை நிறுத்துவதோடு, புவியியல் மற்றும் சுரங்கத்துறை, விழுப்புரம் அலுவலகத்திற்கு தகவல் தெரிவிக்க வேண்டும்.
12. தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி-41ன்படி தகுதிவாய்ந்த நபரால் சுரங்க திட்டம் தயார் செய்து உதவி இயக்குநர் அவர்களின் ஒப்புதல் பெறவேண்டும்.
13. தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி-42ன்படி மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்திடமிருந்து சுற்றுச்சூழல் சான்று பெற்று சமர்ப்பிக்கப்படவேண்டும்.

எனவே, திண்டிவனம் சார் ஆட்சியர் மற்றும் விழுப்புரம் மாவட்ட புவியியல் மற்றும் சுரங்கத்துறை உதவி புவியியலாளர் 'ஆகியோரின் பரிந்துரை' அறிக்கையினை பரிசீலனை செய்யப்பட்டு, விழுப்புரம் மாவட்டம், திண்டிவனம் லட்டம், கீழ்சேலூர் கிராம மட்டா புல எண்: 80/- 5.44.50 ஹெக்டேரில் பகுதியளவு 4.50.0 ஹெக்டேர் பரப்பில் அரசு நிபந்தனைகளுக்குட்பட்டு 10 (பத்து) வருட காலத்திற்கு விண்ணப்பத்தாரர் திரு. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவருக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதப்படுகிறது. அதன் அடிப்படையில், தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி எண்.41-ன்படி குவாரிப்பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்க திட்டத்தினை தகுதிவாய்ந்த நபர் (RQP) மூலமாக கீழ்க்கண்ட நிபந்தனைகளுக்குட்பட்டு தயாரித்து அதனை 90 தினங்களுக்குள் உதவி இயக்குநர் (புவியியல் மற்றும் சுரங்கத்துறை) அவர்களின் பரிசீலனைக்கு சமர்ப்பிக்குமாறு விண்ணப்பதாரருக்கு இதன் மூலம் அறிவுறுத்தப்படுகிறது.

நிபந்தனைகள்:-

1. விண்ணப்ப புலங்களின் அருகிலுள்ள மட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளியும் மற்றும் அரசு புறம்போக்கு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி மேற்கொள்ளப்பட வேண்டும்.
2. குவாரிப்பணி மேற்கொள்ளும் போது அருகிலுள்ள மட்டா மற்றும் அரசு புறம்போக்கு நிலங்களுக்கு எவ்வித இடையூறும் இல்லாமல் குவாரிப்பணி செய்ய வேண்டும்.



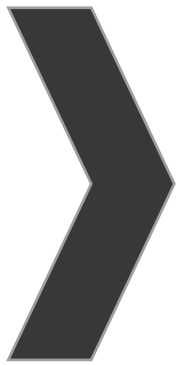
3. குவாரிப்பணி தொடங்குவதற்கு முன்னர் சர்வே எண் 76/1, 76/2 ஆகியவற்றில் செல்லும் நிலவியல் வாய்க்காலுக்கு எவ்வித இடையூறும் ஏற்படுத்தா வண்ணம் அணுகுபாதை அமைக்க வேண்டும்.
4. குவாரி குத்தகை வழங்கும் முன்பு விண்ணப்பித்துள்ள இடத்திலே எவ்வித இடையூறும் ஏற்படா வண்ணம் சர்வே பணி மேற்கொண்டு அதன் அறிக்கையை சமர்ப்பிக்க வேண்டும்.
5. முறைப்படியும், விஞ்ஞான பூர்வமாகவும் குவாரிப்பணி செய்ய வேண்டும்.
6. சான்றிதழ் பெறப்பட்ட போர்மேன், வெடிப்பாளர் மற்றும் சுரங்க மேலாளர் மூலம் குவாரிப்பணி செய்யப்பட வேண்டும்.
7. குவாரிப்பணி தொடங்குவதற்கு முன் சுரங்க பாதுகாப்பு இயக்குநர், சென்னை அவர்களுக்கு தகவல் தெரிவிக்கப்பட வேண்டும்.
8. பாறைகளை தகர்க்க கைத்துளைப்பான்களை கொண்டு பாறைகளை துளையிட்டு குறைவான வெடிப்பொருட்களை பயன்படுத்த வேண்டும்.
9. குவாரிப்பணி தொடங்குவதற்கு முன்பாக குவாரியை சுற்றி முள்கம்பி வேலி அமைத்து குவாரிப்பணி தொடங்க வேண்டும்.
10. குவாரித் தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்ய Mettalliferrous Mines விதிகளின்படி அகலமானதும், பாதுகாப்பானதுமான Benches அமைத்து பாதுகாப்பான முறையில் குவாரிக்குள் வாகனங்கள் சென்று வரவும் மற்றும் குவாரி தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்தும் குவாரிப்பணி செய்ய வேண்டும்.
11. குவாரிப்பணி செய்வதற்கு பரிந்துரை செய்யப்பட்ட கனிமங்களான சாதாரண கற்கள் மற்றும் கிராவல் ஆகியவற்றை தவிர வேறு கனிமங்கள் ஏதும் கண்டறியப்பட்டால் உடனடியாக குவாரிப்பணியினை நிறுத்துவதோடு, புவியியல் மற்றும் சுரங்கத்துறை, விழுப்புரம் அலுவலகத்திற்கு தகவல் தெரிவிக்க வேண்டும்.
12. தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி-42ன்படி மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்திடமிருந்து சுற்றுச்சூழல் சான்று பெற்று சமர்ப்பிக்கப்படவேண்டும்.

உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
விழுப்புரம்.

பெறுநர்:-

திரு.ப. ஜெகதீசன் த-பெ. பச்சையப்பன்,
நெ.85/2, கணக்கு பிள்ளை தெரு,
அண்ணம்பாக்கம் கிராமம்,
திண்டிவனம் வட்டம்,
விழுப்புரம் மாவட்டம் - 604 101.

நகல்: இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை.
நகல்: மாநில சுற்றுச்சூழல் தாக்க தடையாக்க மதிப்பீட்டு ஆணையம், சென்னை.



ANNEXURE-3

From
Thiru.S.Rameshkumar, M.Sc.,
Assistant Director,
Dept. of Geology and Mining,
Viluppuram District,
Viluppuram.

To
Thiru.P.Jagadeesan,
S/o.Pachaiyappan,
No.85/2, Kanakku Pillai Street,
Annampakkam Village,
Tindivanam Taluk,
Viluppuram District.

Rc.No.B/G&M/251/2025, Dated 30.10.2025.

Sir,

Sub: Mines and Minerals – Minor Mineral – Rough stone and Gravel - Viluppuram District – Tindivanam Taluk – Keelsevur Village – Patta lands in S.F.No.80 (Part) - over an extent of 4.50.0 Hectares - quarry lease application preferred by Thiru.P.Jagadesan, S/o.Pachaiyappan – Precise area communicated - Draft Mining Plan submitted – Approved – Regarding.

- Ref: 1. Application dated 07.07.2025 from Thiru.P.Jagadesan, S/o.Pachaiyappan, No.85/2, Kanakku Pillai Street, Annampakkam Village, Tindivanam Taluk, Viluppuram District.
2. Assistant Director, Geology and Mining, Viluppuram Precise area communication notice Rc.No. B/G&M/251/2025, Dated: 29.09.2025.
3. Draft Mining Plan submitted by Thiru.P.Jagadesan, S/o.Pachaiyappan, Dated: 23.10.2025.

Thiru.P.Jagadesan, S/o.Pachaiyappan has preferred an application for quarrying of Rough stone and Gravel over an extent of 4.50.0 Hects of Patta land in S.F.No.80 (Part) in Keelsevur Village, Tindivanam Taluk, Viluppuram District for a period of 10 years under the provisions of Rule 19 (1) of Tamil Nadu Minor Mineral Concession Rules, 1959. In this regard, the precise area communication has been issued vide letter dated 29.09.2025 with a direction to submit draft mining plan for approval and to obtain Environment Clearance in respect of the precise area as per Rule 41 of Tamil Nadu Minor Mineral Concession Rules, 1959.

2) Accordingly, the applicant has submitted three copies of draft Mining Plan vide letter dated 23.10.2025 and the same has been examined in details and it is found correct.

3) As per the mining plan, the available geological and minable reserves as follows.

Depth in Mts.	Geological reserves	Minal Reserves
67 m below ground level	Rough stone: 2688000 cbm / 7392000 MT	Rough stone : 1045900 cbm/ 2876225 MT
	Gravel : 313600 cbm / 627200 MT	Gravel : 270655 cbm / 541310 MT

4) Hence, as per the power delegated under Rule 41 of TNMMCR, 1959 and as per the guidelines/instructions issued by the Commissioner of Geology and Mining, vide letter Rc.No.3868/LC/2012 dated.19.11.2012, the said mining plan submitted by the applicant is hereby approved subject to the following conditions;

- a. The mining plan is approved without prejudice to any other Law applicable to the quarry lease from time to time whether such laws are made by the Central Government, State Government or any other authority.
- b. This approval of the mining plan does not in any way imply the approval of the Government in terms or any other provisions of the Mines and Minerals (Development and Regulation) Amended Act, 2015, or any other connected laws including Forest Conservation Act, 1980, Forest Conservation Rules, 1981, Environment Protection Act, 1980, Explosives Act, 1884 (Central Act IV of 1884) and the Rules made there under and the Tamil Nadu Minor Mineral Concession Rules, 1959.
- c. The mining plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.
- d. All the conditions stipulated in the precise area communication letter / lease agreement / environment clearance / Tamil Nadu Pollution Control Board conditions etc., should be followed during the entire quarry operation as per rules.
- e. The applicant should get prior Environmental clearance from the appropriate authority and same has to be submit to the Assistant Director, Geology and Mining, Viluppuram for further action.

- f. The dust emission at the time of quarrying and transportation shall be controlled by water spraying in the roads and quarrying pits in order to control Air Pollution in the leasehold area.
- g. Low Density explosives shall be used for quarrying rough stone during the validity period of the mining plan / EC in order to reduce the Noise Pollution in the leasehold area.
- h. Progressive Mine Closure shall be carried out as per the approved mining plan.
- i. Afforestation shall be carried out along the boundary of the leasehold area, 7.5 meters safety distance area and other areas which are situated within the specific safety zone so that the climate of the area can be made as moderately conducive to the livelihood of the employees in the quarry site.
- j. Provisions of the Mines Act, 1952 and the Rules and Regulations made there under including submission of notice of opening, appointment of manager and other statutory officials as required under Mines Act, 1952 shall be complied with.
- k. Provisions made under Mines and Minerals (Development & Regulation) Act, 1957, MMDR Amendment Act, 2015 made there under shall be complied with.
- l. This approval of Mining Plan is restricted to the mining plan area only. The mining lease area is as shown on the statutory plan. The Assistant Director, Geology and Mining does not take any responsibility regarding correctness of the boundaries of the lease shown on the ground with reference to the lease map and others plans furnished by the lessee.
- m. The earlier instances of irregular / illegal quarrying, if any, shall not be regularized through the approval of this document.
- n. The lessee shall remit the penalty / Cost of Mineral / other dues if any as arrived by the Assistant Director (G&M), Villupuram District.

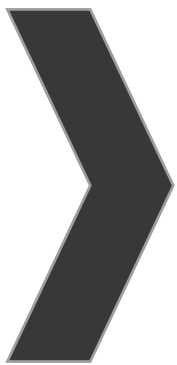
- o. The quarry laborers shall be registered with the Labour Board and shall be enrolled under the Insurance Scheme.
- p. Non adherence to any condition set-out above, the approval shall be deemed to have been withdrawn with immediate effect.

Encl: Two copies of Approved Mining Plan.


Assistant Director,
Dept. of Geology and Mining,
Viluppuram.

Copy to:-

1. The Director of Geology and Mining, Chennai-32.
2. The Chairman, State Level Environment Impact Assessment Authority, 3rd Floor, Panagal Maaligai, No.1, Jeenai Road, Saidapet, Chennai-15.



APPROVAL MINING PLAN

MINING PLAN FOR KEEZHSEVUR ROUGH STONE & GRAVEL QUARRY



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

LOCATION OF THE QUARRY LEASE APPLIED AREA

STATE : TAMIL NADU
DISTRICT : VILUPPURAM
TALUK : TINDIVANAM
VILLAGE : KEEZHSEVUR
S.F.NO : 80(P)
EXTENT : 4.50.0Ha

FOR

APPLICANT

Thiru.P.Jagadeesan,
S/o.Pachaiyappan,
No.85/2, Kanakku Pillai Street,
Annampakkam Village,
Tindivanam Taluk,
Viluppuram District - 604 101.

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/23-26 / SA 0241

CONTACT: 97502 23535, 94446 54520

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



P.Jagadeesan,
S/o.Pachaiyappan,
No.85/2, Kanakku Pillai Street,
Annampakkam Village,
Tindivanam Taluk,
Viluppuram District - 604 101.



CONSENT LETTER FROM THE APPLICANT

The Mining Plan in respect of **Rough Stone and Gravel** quarry over an extent of 4.50.0Hectares of Patta land in S.F.No. 80(P) of Keezhsevir Village, Tindivanam Taluk, Viluppuram District, Tamil Nadu State has been prepared by

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

I request to the Assistant Director, Department of Geology and Mining, Viluppuram 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/23-26 / SA 0241

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


P.Jagadeesan

Place: Viluppuram

Date: 01.10.2025

P.Jagadeesan,
S/o.Pachaiyappan,
No.85/2, Kanakku Pillai Street,
Annampakkam Village,
Tindivanam Taluk,
Viluppuram District - 604 101.



DECLARATION

The Mining Plan in respect of **Rough Stone and Gravel** quarry over an extent of 4.50.0 Hectares of Patta land in S.F.No. 80(P) of Keezhsevir Village, Tindivanam Taluk, Viluppuram 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

P.Jagadeesan

Place: Viluppuram

Date: 01.10.2025

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/23-26 / SA 0241

CONTACT: 97502 23535, 94446 54520



CERTIFICATE

This is to certify that, the provisions of Minor Minerals Conservation and Development Rules, 2010 (MMCDR) have been observed in the Mining Plan for the grant of **Rough Stone and Gravel** quarry lease over an extent of 4.50.0 Hectares of Patta land in S.F.No. 80(P) of Keezhsevir Village, Tindivanam Taluk, Viluppuram District, Tamil Nadu State applied by Thiru. P.Jagadeesan, 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

Place: Salem

Date: 02.10.2025

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

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/23-26 / SA 0241

CONTACT: 97502 23535, 94446 54520



CERTIFICATE

Certified that, in preparation of Mining Plan for **Rough Stone and Gravel** quarry over an extent of 4.50.0Hectares of Patta land in S.F.No. 80(P) of Keezhsevrur Village, Tindivanam Taluk, Viluppuram District, Tamil Nadu State for Thiru. P.Jagadeesan, 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: 02.10.2025

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/23-26 / SA 0241. I am a Post graduate in Geology (M.Sc., Geology) from Annamalai university and more than five years of experience in mining Field.

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

Accordingly I prepared this Mining Plan in respect of Rough Stone and Gravel quarry lease applied for an extent of 4.50.0Ha of (Patta land) in S.F.No. 80(P) of Keezhsevir Village, Tindivanam Taluk, Viluppuram District, by Thiru.P.Jagadeesan, for a period of Ten years. Since the Mining Plan is prepared as per the provisions contained in Rule 15(1) (a) and (b) of Minerals (Other than Atomic, Hydro Carbons Energy Minerals) concession Rules 2016, the same may be approved by the Competent Authority.


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

Qualified Person

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

Place: Salem

Date: 02.10.2025

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Annexure

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MINING PLAN FOR MINOR MINERALS

ROUGH STONE AND GRAVEL

Over an extent of 4.50.0hectares of Patta land in S.F.No.80(P) of Keezhsevir Village, Tindivanam Taluk, Viluppuram 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.P.Jagadeesan, S/o.Pachaiyappan, No.85/2, Kanakku Pillai Street, Annampakkam Village, Tindivanam Taluk, Viluppuram District - 604 101.
2. The application was processed by the Assistant Director, Department of Geology and Mining, Viluppuram, and passed an order vide Rc.No. A/G&M/251/2025 dated 29.09.2025. 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 4.50.0 hectares of Patta lands in S.F.No.80(P) of Keezhsevir Village, Tindivanam Taluk, Viluppuram District of Tamil Nadu State for a period of ten years.
3. Accordingly, Mining Plan is prepared under the provisions of rule 19(1), 41 and 42 as per the amendments under Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating following the conditions imposed in the precise area communication letter.
 - a) A 7.5 meters of safety distance should be left out for the adjacent patta lands and 10 meters of safety distance should be left out for the adjacent government lands while quarrying operation
 - b) There is no cause any hindrance to adjacent lands and Government lands while quarrying operations.
 - c) before the commencement of quarrying operation the applicant should not cause any hindrance to Nilavial Vaikkal passing in S.F.No.76/1, 76/2 when approach road formation.



- d) The applicant should submit DGPS survey report before the grant of quarry lease.
 - e) The quarrying operations should be done proper scientific method only.
 - f) The quarrying operations should be done through certified Mines Manager, Mines foreman.
 - g) Before the start of the quarrying operations, the applicant should inform the Director of Mines Safety, Chennai region.
 - h) The applicant should use jackhammers and mild explosives during blasting in the quarry operations.
 - i) Barbed wire fencing should be erected all along the boundary of the lease granted area before quarrying operations.
 - j) The applicant ensures labours safety and vehicles safely passing within the quarry as per the Metalliferous Mines Rule, should keep widening and safety benches.
 - k) If any mineral other than the recommended for quarrying, such as rough stone and gravel, is discovered, the quarrying operations should be stopped immediately and the department of Geology and Mining viluppuram should be informed.
 - l) The applicant has obtain Environmental clearance from State Level Environmental Impact Assessment Authority, Chennai, Tamil Nadu before grant of quarry lease.
4. Geological Resources is estimated at 73,92,000Ts of Rough stone and 6,27,200Ts of gravel formation and Mineable Reserves is estimated at 28,76,225Ts of Rough Stone and 5,41,310Ts of gravel formation and after leaving necessary safety distance from the lease boundary as indicated in the precise area letter and relevant mining laws in force.
5. The production schedule is proposed production of 14,42,265Ts of Rough Stone, 5,41,310Ts of gravel formation for the period of first five years upto a depth of 52m below ground level and remaining quantity of 14,33,960Ts of Rough Stone will be proposed for the period of second five years upto a depth of 67m (below ground level).
6. The applicant ensured that, child labours under 18 years of age will not be engaged for quarrying operation.



7. The applicant ensure that will appoint should have valid certified persons (Mines Manager, Foreman, Mate) during quarrying operation.

8. Environmental parameters,

- i) The area does not attract the Forest Conservation Act, 1980 as there is no forest around 280m 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	:	Keezhsevir																																						
b.	Name of the Panchayat Union	:	Olakkur																																						
c.	The proposed total Movable Reserves	:	28,76,225Ts of Rough Stone, 5,41,310Ts of gravel formation																																						
d.	The proposed quantity of reserves (level of production) for Five years to be mined is (Recoverable reserves)	:	14,42,265Ts of Rough Stone, 5,41,310Ts of gravel formation																																						
e.	Total extent of the area	:	4.50.0Ha																																						
f.	Proposed Period of mining	:	Five Years																																						
g.	Existing depth	:	It is fresh quarry lease applied area																																						
h.	Proposed Depth of mining	:	52m 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. 30,00,000/- Rs. 82,50,000/- Rs. 6,30,000/- Total Project cost(A+B+C)= Rs.1,18,80,000/-																																						
l.	The area applied for lease is bounded by Eight corners and the coordinates are clearly marked in plate no II.																																								
	<table border="1"> <thead> <tr> <th rowspan="2">Corners</th><th colspan="2">Co-ordinates</th><th rowspan="2">Distance between the corners</th></tr> <tr> <th>Latitude</th><th>Longitude</th></tr> </thead> <tbody> <tr> <td>1</td><td>12° 14' 05.33"N</td><td>79° 45' 05.95"E</td><td>1-2 = 201.4m</td></tr> <tr> <td>2</td><td>12° 14' 11.71"N</td><td>79° 45' 07.49"E</td><td>2-3 = 20.0m</td></tr> <tr> <td>3</td><td>12° 14' 11.56"N</td><td>79° 45' 08.13"E</td><td>3-4 = 173.6m</td></tr> <tr> <td>4</td><td>12° 14' 10.11"N</td><td>79° 45' 13.68"E</td><td>4-5 = 24.2m</td></tr> <tr> <td>5</td><td>12° 14' 09.90"N</td><td>79° 45' 14.45"E</td><td>5-6 = 136.2m</td></tr> <tr> <td>6</td><td>12° 14' 05.55"N</td><td>79° 45' 13.60"E</td><td>6-7 = 60.6m</td></tr> <tr> <td>7</td><td>12° 14' 03.59"N</td><td>79° 45' 13.31"E</td><td>7-8 = 59.0m</td></tr> <tr> <td>8</td><td>12° 14' 04.05"N</td><td>79° 45' 11.41"E</td><td>8-1 = 169.8m</td></tr> </tbody> </table>			Corners	Co-ordinates		Distance between the corners	Latitude	Longitude	1	12° 14' 05.33"N	79° 45' 05.95"E	1-2 = 201.4m	2	12° 14' 11.71"N	79° 45' 07.49"E	2-3 = 20.0m	3	12° 14' 11.56"N	79° 45' 08.13"E	3-4 = 173.6m	4	12° 14' 10.11"N	79° 45' 13.68"E	4-5 = 24.2m	5	12° 14' 09.90"N	79° 45' 14.45"E	5-6 = 136.2m	6	12° 14' 05.55"N	79° 45' 13.60"E	6-7 = 60.6m	7	12° 14' 03.59"N	79° 45' 13.31"E	7-8 = 59.0m	8	12° 14' 04.05"N	79° 45' 11.41"E	8-1 = 169.8m
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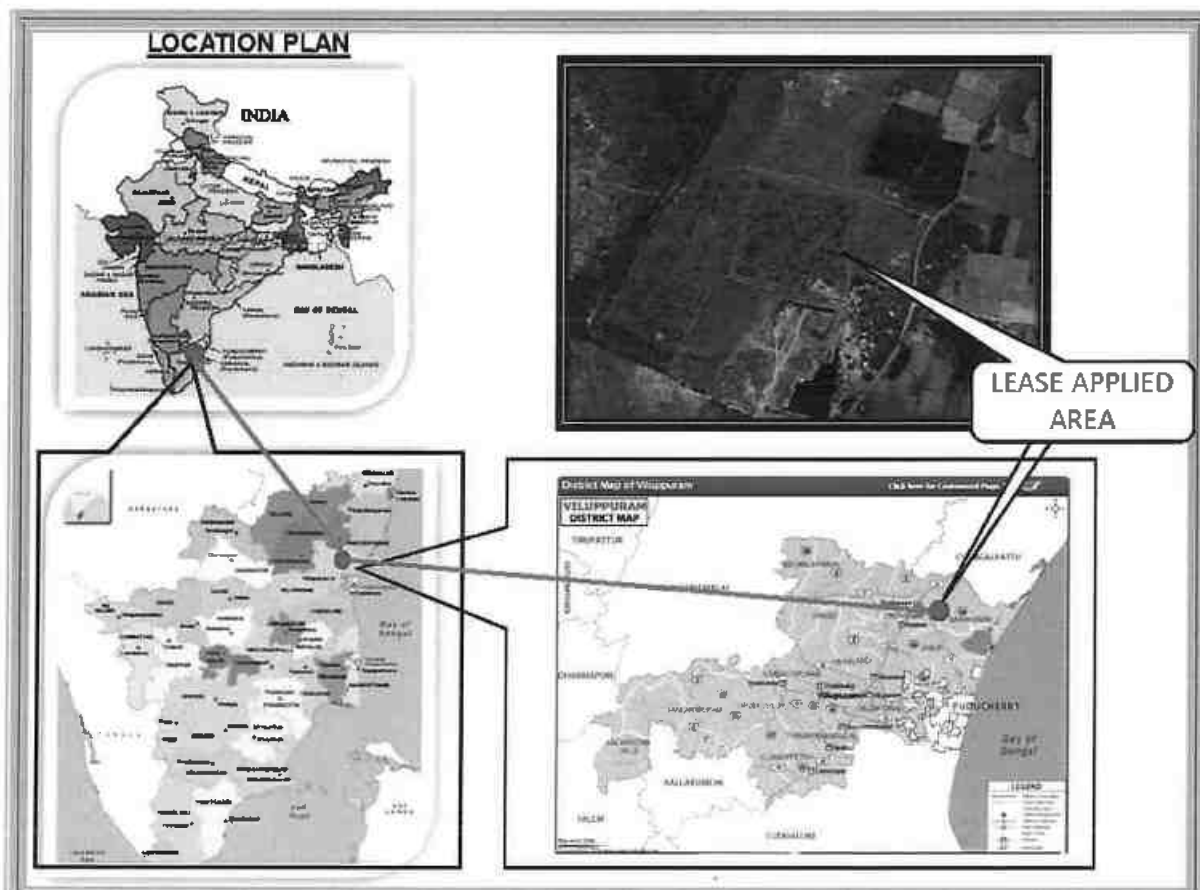
2.0 General Information:

2.1	a.	Name of the Applicant	:	Thiru.P.Jagadeesan,
	b.	Address of the Applicant with phone No and e-mail id if any	:	S/o.Pachaiyappan, No.85/2, Kanakku Pillai Street, Annampakkam Village, Tindivanam Taluk, Viluppuram District - 604 101. Cell No.: 75987 88766
	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, Viluppuram, vide Rc. No. A/G&M/251/2025 dated 29.09.2025
	c.	Period of permission / lease granted	:	The Assistant Director, Department of Geology and Mining, Viluppuram, has grant of lease period for ten years .
	d.	Name and Address of the QP preparing Mining Plan	:	C.Natarajan, M.Sc.,M.Phil., Qualified Person M/s. GLOBAL MINING SOLUTIONS (NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT) PLOT No. 6, SF No. 13/2, A2, Vs City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamil Nadu - 636 455 NABET ACCREDITATION NO - NABET/EIA/23-26 / SA 0241 Contact: 97502 23535, 94446 54520.



3.0 Location:

S.No	Details of the Area:	
1	Corner Coordinates	Latitude: 12°14'03.59"N to 12°14'11.71"N Longitude: 79°45'05.95"E to 79°45'14.45"E
2	Toposheet Number	57 P/ 16
3	The altitude of the area	78m (MSL)
4	Extent	4.50.0Ha
5	Survey Nos	80 (P)
6	Village	Keezhsevir
7	Taluk	Tindivanam
8	District	Viluppuram
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 Tmt.Kamatchi, vide Patta No.1243, the applicant has obtained consent from Pattadar, Please refer Annexure No: IV & VII.
c.	Toposheet No. with Latitude and Longitude	:	Topo Sheet No: 57 P/ 16 Latitude: 12°14'03.59"N to 12°14'11.71"N Longitude: 79°45'05.95"E to 79°45'14.45"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 Kilarungunam – Keezhsevir village road on eastern side of the area. The Nearest Railway line is Viluppuram to Chennai line which is about 7.7Km on Northwestern side of the area.



SATELLITE IMAGERY OF THE LEASE APPLIED AREA



TOPOGRAPHICAL VIEW OF LEASE APPLIED AREA

Fig. Location of the lease applied area



PART - A

4.0 Geology and Mineral Reserves:

4.1	a. Topography	: ➤ The area applied for quarry lease is exhibits almost plain topography covered by Gravel formation. The massive Charnockite formation is noticed below 7m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 78m (maximum) from MSL. ➤ No major river is found nearby the lease applied area. ➤ Water table is found at a depth of 85m in summer and 82m 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 SE80°. The general geological succession of the area is given as under.



			AGE Recent Archaean ROCK TYPE Gravelly soil Unconformity 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 adjacent existing quarry pit.
4.3	a.	Estimation of Reserves	: The Geological and Recoverable reserves are estimated by cross sectional method. Two sections have been drawn, one section drawn length wise as (X-Y) and another one section drawn width wise as (A-B) to cover maximum area considered for lease. The Plans and Sections have been drawn with a scale of 1:1000 and 1:500 respectively. Please refer plate No.III.

a. Geological Resources

The quarrying is restricted up to a depth of 67m below ground level only, availability of resources is given below.

Table -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	224	200	7	313600	-	2	627200.00	-
	II	224	200	5	-	224000	2.75	-	616000.00
	III	224	200	5	-	224000	2.75	-	616000.00
	IV	224	200	5	-	224000	2.75	-	616000.00
	V	224	200	5	-	224000	2.75	-	616000.00
	VI	224	200	5	-	224000	2.75	-	616000.00
	VII	224	200	5	-	224000	2.75	-	616000.00
	VIII	224	200	5	-	224000	2.75	-	616000.00
	IX	224	200	5	-	224000	2.75	-	616000.00
	X	224	200	5	-	224000	2.75	-	616000.00
	XI	224	200	5	-	224000	2.75	-	616000.00
	XII	224	200	5	-	224000	2.75	-	616000.00
	XIII	224	200	5	-	224000	2.75	-	616000.00
Total					313600	2688000	-	627200.00	7392000.00

Gravel Formation

: 6,27,200Ts

The Geological Resources of Rough stone

: 73,92,000Ts



b. Mineable Reserve

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

Table No-2

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Rough stone in m ³	Bulk Density	Gravel formation in Ts	Mineable Reserves of Rough stone in Ts
XY-AB	I	209	185	7	270655	-	2	541310.00	-
	II	195	171	5	-	166725	2.75	-	458493.75
	III	185	161	5	-	148925	2.75	-	409543.75
	IV	175	151	5	-	132125	2.75	-	363343.75
	V	165	141	5	-	116325	2.75	-	319893.75
	VI	155	131	5	-	101525	2.75	-	279193.75
	VII	145	121	5	-	87725	2.75	-	241243.75
	VIII	135	111	5	-	74925	2.75	-	206043.75
	IX	125	101	5	-	63125	2.75	-	173593.75
	X	115	91	5	-	52325	2.75	-	143893.75
	XI	105	81	5	-	42525	2.75	-	116943.75
	XII	95	71	5	-	33725	2.75	-	92743.75
	XIII	85	61	5	-	25925	2.75	-	71293.75
Total					270655	1045900	-	541310.00	2876225.00

The mineable reserve is computed as 28,76,225Ts of Rough stone and 5,41,310Ts of Gravel formation upto a depth 67m below ground level only.





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

The Yearwise Production and Development Table

Table No -3

Year	Section	Bench	Length in(m)	Width in (m)	Depth in (m)	Gravel in m ³	Roughstone in m ³	Bulk Density	Gravel in Ts	Mineable Reserves of Rough stone in Ts
I	XY-AB	I	72	185	7	93240	-	2	186480.00	-
		II	65	171	5	-	55575	2.75	-	152831.25
		III	60	161	5	-	48300	2.75	-	132825.00
Total						93240	103875	-	186480.00	285656.25
II	XY-AB	I	63	185	7	81585	-	2	163170.00	-
		II	63	171	5	-	53865	2.75	-	148128.75
		III	63	161	5	-	50715	2.75	-	139466.25
Total						81585	104580	-	163170.00	287595.00
III	XY-AB	I	74	185	7	95830	-	2	191660.00	-
		II	67	171	5	-	57285	2.75	-	157533.75
		III	62	161	5	-	49910	2.75	-	137252.50
Total						95830	107195	-	191660.00	294786.25
IV	XY-AB	IV	76	151	5	-	57380	2.75	-	157795.00
		V	66	141	5	-	46530	2.75	-	127957.50
		Total						-	103910	-
V	XY-AB	VI	56	131	5	-	36680	2.75	-	100870.00
		VII	46	121	5	-	27830	2.75	-	76532.50
		VIII	36	111	5	-	19980	2.75	-	54945.00
		IX	26	101	5	-	13130	2.75	-	36107.50
		X	16	91	5	-	7280	2.75	-	20020.00
Total						-	104900	-	-	288475.00
Grand Total						270655	524460	-	541310.00	1442265.00

The applicant has proposed to carry out 14,42,265Ts of Rough stone and 5,41,310Ts of Gravel formation upto a depth of 52m below ground level for the period of first five years and remaining quantity of 14,33,960Ts of Rough Stone will be proposed for the period of second five years upto a depth of 67m (below ground level).





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

Table No-4

Year	Section	Bench	Length in(m)	Width in (m)	Depth in (m)	Rough stone in m³	Bulk Density	Mineable Reserves of Rough stone in Ts
VI	XY-AB	IV	99	151	5	74745	2.75	205548.75
		V	42	141	5	29610	2.75	81427.50
Total						104355	-	286976.25
VII	XY-AB	V	57	141	5	40185	2.75	110508.75
		VI	99	131	5	64845	2.75	178323.75
Total						105030	-	288832.50
VIII	XY-AB	VII	99	121	5	59895	2.75	164711.25
		VIII	80	111	5	44400	2.75	122100.00
Total						104295	-	286811.25
IX	XY-AB	VIII	19	111	5	10545	2.75	28998.75
		IX	99	101	5	49995	2.75	137486.25
		X	99	91	5	45045	2.75	123873.75
Total						105585	-	290358.75
X	XY-AB	XI	105	81	5	42525	2.75	116943.75
		XII	95	71	5	33725	2.75	92743.75
		XIII	85	61	5	25925	2.75	71293.75
Total						102175	-	280981.25
Grand Total						521440	-	1433960.00

5.5		Machineries to be used					
	a.	Drilling		:	It is proposed to use following machineries for quarrying rough stone		
		S.No	Type	Nos	Dia Hole mm	Make	Motive power
		1	Jack hammer	5	32	Atlas Copco	Compressed air
		2	Compressor	2	-	Atlas Capco	Diesel Drive
	b.	Loading		:	Excavator of 0.90m ³ bucket capacity (with Rock breaker attachment) (2No).		
	c.	Transportation		:	Tipper 5Nos (10/20Ts) capacity.		

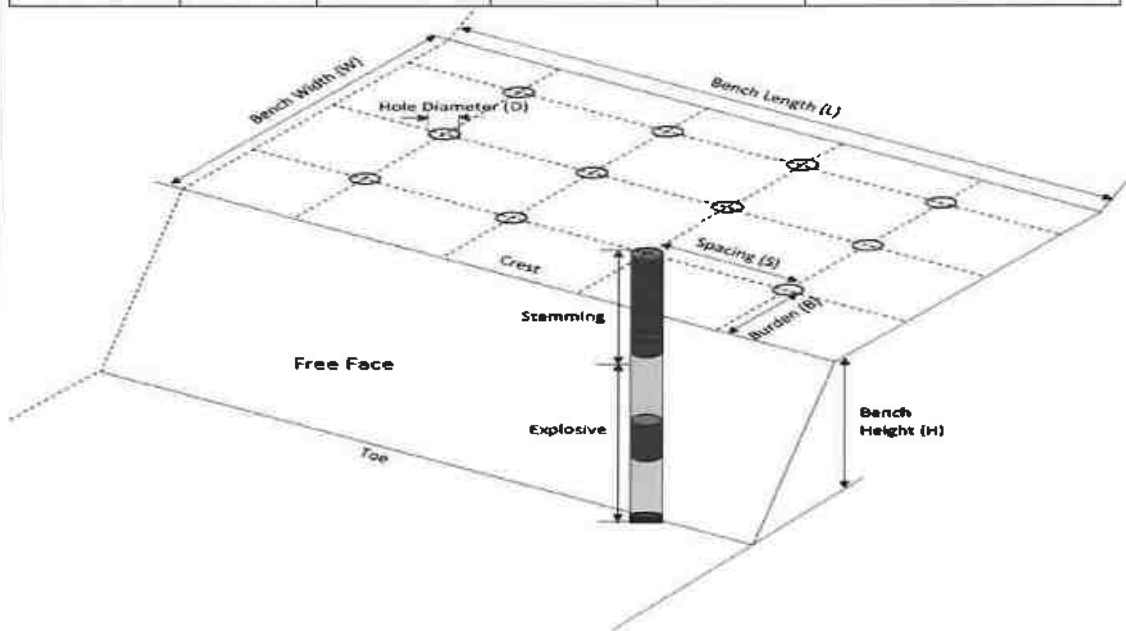


5.6	Disposal of Overburden	: The overburden in the form of Gravel, after the excavation gravel will be directly loaded into tipper to the needy buyers for road project and construction works for filling and leveling of low lying areas.																				
5.7	Brief Note on Conceptual Mining Plan for the entire lease period	Conceptual Mining Plan is prepared with an object of ten years of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructures etc. Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc. Ultimate Pit dimension is <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>209</td><td>185</td><td>52</td></tr></table> Ultimate pit dimension End of the lease period <table><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>209</td><td>185</td><td>67</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	209	185	52	Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in(m)	I	209	185	67
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I	209	185	67																			

6.0 Blasting:

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

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



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



6.3	Measures proposed to minimize ground vibration due to blasting	➤ Controlled blasting measures will be adopted for minimizing ground vibration and fly rock. ➤ Shallow depths jackhammer drilling and blasting is proposed to be carried out with minimum use of explosive mainly to give shattering effect in rough stone for easy excavation and to control fly rock. <table><tr><td>Number of holes</td><td>:</td><td>320</td></tr><tr><td>Powder factor</td><td>:</td><td>6Ts/Kg of explosives</td></tr><tr><td>Total explosive required</td><td>:</td><td>160Kg slurry explosives</td></tr><tr><td>Charge / hole</td><td>:</td><td>0.5Kg</td></tr><tr><td>Blasting time</td><td>:</td><td>12-2 Pm</td></tr></table>	Number of holes	:	320	Powder factor	:	6Ts/Kg of explosives	Total explosive required	:	160Kg 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 85m below ground level. In the proposed mining plan only 52m (below ground level) and 67m depth has been envisaged as workable depth for safe & economic quarrying for the entire lease period. Hence the quarrying operation may not affect the ground water.
7.2	Arrangement and Places where the mine water is finally proposed to be discharged	➤ The ground water may not rise immediately in this type of mining. However, the rain water percolation and collection of water from the seepage shall be less than 300lpm and it shall be pumped about periodically by a stand by diesel powered Centrifugal pump motivated with 7.5H.P.Motor. The quality of water is potable and it is not contaminated with any hazardous things. Hence, water stored in the quarry pit will be pumped into the adjacent agricultural fields. Further the water stored in the old pit will also be used for plantation purposes



8.0 Other Permanent Structures:

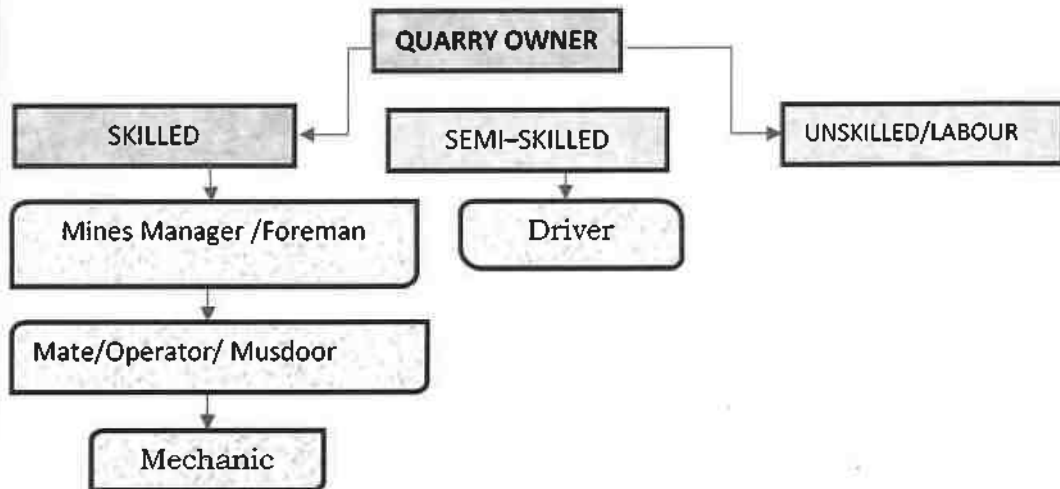
8.1	Habitations / Village	:	There are no habitations within a radius of 300m.
8.2	Power lines (HT/LT)	:	There is no Power line (HT/LT) passing within a radius of 50m.
8.3	Water bodies (River, Pond, Lake, Odai, Channel etc)	:	There is Three Tank situated on west, east southwest side of the area and is 120m, 360m and 330m away from the area. There is Nilavial Vaikkal passing on south side of the area and is 220m away from the area
8.4	Archeological / Historical Monuments	:	There are no Archaeological / Historical Monuments within a radius of 300m.
8.5	Road (NH, SH, Village Road etc)	:	The National Highway (NH-179B) Viluppuram – Chennai is about 6.8km on Northwestern side of the area. The State Highway (SH-134) Marakkanam-Tindivanam is about 3.2Km on Southwestern 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 Sevur Reserved Forest on west side and is 280m away from the area. There is no Wild Life Sanctuary etc., within a radius of 1Km.
8.8	Any Interstate Border, Protected areas under the Wild Life (Protection) Act, 1972, Critically Polluted Areas as Identified by Central Pollution Control Board and Notified Eco sensitive areas	:	There are No inter State border within a radius of 10Kms.
8.9	Any Other Structures	:	Nil



9.0 Employment Potential & Welfare Measures:

9.1 Employment Potential (Management & Supervisory personal)

The proposed organization chart



1.	Skilled	Mines Manager	1 No.
		Foreman / Mate	2 No.
		Operator	12 No.
		Mechanic	1 No.
2.	Semi-skilled	Driver	5 No.
3.	Unskilled	Labours	15Nos
Total =			36Nos

Allowing 10% absentee, the no. of men of roll will be around 32.

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 Keezhsevir village which is about 1.2Km on Northeastern side of the area.



b.	Sanitary facilities	:	Semi-permanent latrines & urinals shall be maintained at convenient places for use of labours as per the provisions of Rule (33) of the Mines Rules, 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 10.5Km (SW) in Tindivanam 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.		



10.5	Human Settlement	: The nearest habitations with the population is given as under.	
Table No-6			
S. No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population
1.	Keezhsevir	1.2km - NE	350
2.	Nolambur	2.3km - NW	200
3.	Nalmukkal	3.5km - SE	300
4.	Kilarungunam	1.7km - S	500
10.6	Plan for Air, Dust Suppression	: Air or dust expected to be generated from drilling process, hauling roads, places of excavation etc., will be suppressed by periodical wetting of land by water spraying. Wet drilling and dust extractor arrangements will be provided to drilling units so as to control raise of dust from the site of drilling. Operators, those exposed directly to such conditions will be provide such protective equipment like mask, ear plug, helmet, gloze etc., as per the Mines Act.	
10.7	Plan for Noise Control	: Quarrying of Rough Stone will be carried out by drilling and blasting by using low power explosives, and hence, noise will be very minimum. However, periodical noise level monitoring will be carried out to check the noise level in and around the quarry site. Nowhere the noise level should exceed the permissible limit of 80db during the quarry working hours.	
10.8	Environmental Impact Assessment Statement Describing Impact on mining on the next Five years	: The mining plan proposed is for a small production of Rough stone without involving deep hole drilling and heavy blasting. Such limited mining activity is not likely to cause any impact adversely on environment as far as pollution of air, water and noise is concerned, anyhow environmental impact studies will be conducted as per EIA notification issued by MOEF.	



10.9	Proposal for Waste Management	:	There is no waste anticipated in this rough stone quarry operation.
10.10	Proposal of Reclamation of Land affected during mining activities and at the end of mining.	:	In the proposed mining plan 52m (below ground level) and 67m 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 67m depth, fencing will be constructed around the quarried pits to prevent inherent entry of the public and cattle.
10.11	Program for Afforestation	:	The 7.5m safety distance along the lease boundary has been identified to be utilized for afforestation. Appropriate native species of Neem/Pungan trees will be planted in the first year. Nearly 6100Sqm area is proposed to use under afforestation by planting 732nos 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. 27,00,000
	2. First aid room and accessories		Rs.1,00,000
	3. Labour Shcd		Rs.1,00,000
	4. Sanitary Facility		Rs.1,00,000
	Total=		Rs. 30,00,000 /-
	B. Operational Cost:		
	1. Machineries	:	Rs.80,00,000-
	2. Fencing cost	:	Rs. 2,50,000
	Total	:	Rs.82,50,000/-



CSR Cost(2% of Total Project Cost)	Rs. 2,37,600/-

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

Place : Salem

Date : 02.10.2025

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

This mining plan is approved based on the instructions and guidelines issued by the Commissioner of Geology and mining, Chennai vide letter No.No.3748/AC/2012 dated 19-11-2012 and based on incorporation of the conditions laid by the Assistant Director, G.S., Geology and Mining, Vileppuram in precise area communication letter.
Re.No. B/GSM/251/2025 Dated: 29/9/2025
Assistant Director,
G.S., Geology and Mining,
Dated: 30/10/2025

ந.க.எண். ஆ/புலி(ம)கர/251/2025
நாள்:- 29.9.2025.

உதவி இயக்குநர் அலுவலகம்,
புலியியல் மற்றும் சுரங்கத்துறை,
விழுப்புரம்.



ஒளிவீச்சு

பொருள்: கனிமங்களும் குவாரிகளும் - சிறுகனிமம் - சாதாரண கற்கள் மற்றும் கிராவல் - விழுப்புரம் மாவட்டம் - திண்டிவனம் வட்டம் - கீழ்சேலூர் கிராமம் - பட்டா புல எண்: 80/ (பகுதி) - 4.50.0 ஹெக்டேர் பரப்பளவில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை உரிமம் வழங்க கோரி திரு. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவர் இணையவழியில் அளித்த விண்ணப்பம் - உரிமம் வழங்க பரிந்துரை செய்து அறிக்கை வரப்பெற்றது - புலத்தணிக்கை மேற்கொள்ளப்பட்டது - குவாரி குத்தகை உரிமம் வழங்க 4.50.0 ஹெக்டேர் பரப்பினை தகுதியான நிலப்பரப்பாக கருதி ஏற்பளிக்கப்பட்ட சுரங்கத்திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணைய இசைவினை பெற்று சமர்ப்பிக்கக் கோருதல் - தொடர்பாக.

- பார்வை:**
1. திரு.ப. ஜெகதீசன் த-பெ. பச்சையப்பன், நெ.85/2, கணக்கு பிள்ளை தெரு, அண்ணம்பாக்கம் கிராமம், திண்டிவனம் வட்டம், விழுப்புரம் மாவட்டம் என்பவரின் இணைய வழி (MIMAS), விண்ணப்பம் நாள்: 07.07.2025
 2. திண்டிவனம் சார் ஆட்சியர் அவர்களின் கடிதம் ந.க.அ3/4760/2025 நாள்: 08.08.2025
 3. விழுப்புரம் மாவட்ட புலியியல் மற்றும் சுரங்கத்துறை உதவி புலியியலாளர் புலத்தணிக்கை அறிக்கை நாள்: 22.09.2025

விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், அண்ணம்பாக்கம் கிராமம், நெ.85/2, கணக்குபிள்ளை தெரு என்ற முகவரியில் வசிக்கும் திரு.ப. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவர், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம பட்டா புல எண்: 80/ - 5.44.50 ஹெக்டேரில் பகுதியளவு 4.50.0 ஹெக்டேர் பரப்பில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுப்பது தொடர்பாக 1959-ஆம் ஆண்டு தமிழ்நாடு சிறுவகை கனிமச்சலுகை விதிகள், விதி எண். 19(1)-ன்கீழ் குவாரிப்பணி செய்ய உரிமம் வழங்க கோரி பார்வை 1-ல் காணும் மனுவுடன் தொடர்புடைய ஆவணங்களை இணைத்து விண்ணப்பித்துள்ளார்.

2) மேற்படி விண்ணப்பம் தொடர்பாக நில இரூப்பு அறிக்கை கோரப்பட்டதை தொடர்ந்து, பார்வை (2)-ல் கண்டுள்ளவாறு திண்டிவனம் சார் ஆட்சியர் அவர்களிடமிருந்து வரப்பெற்ற விசாரணை அறிக்கை பரிசீலனை செய்யப்பட்டதில், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், அண்ணம்பாக்கம் கிராமம், நெ.85/2, கணக்குபிள்ளை தெரு என்ற முகவரியில் வசிக்கும் திரு.ப. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவர், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம பட்டா புல எண்: 80/ - 5.44.50 ஹெக்டேரில் பகுதியளவு 4.50.0 ஹெக்டேர் பரப்பில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை அனுமதி கோரியது தொடர்பாக, திண்டிவனம் வருவாய்



வட்டாட்சியர் விசாரணை அறிக்கையின்பேரில் புலத்தணிக்கை மேற்கொண்டு அளித்துள்ளதாகவும்,

திண்டிவனம் வட்டம், கீழ்சேலூர் கிராமத்தில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை அனுமதி கோரிய இடமானது கீழ்சேலூர் கிராம புன்செய் புல எண். 80/- மொத்த பரப்பு 5.44.50 ஹெக்டேர் எனவும், இதில் மனுதாரர் புல எண். 80/ (பகுதி) 4.50.0 ஹெக்டேர் பரப்பளவில் குவாரி பணி செய்திட குவாரி குத்தகை உரிமம் கோரியுள்ளார் எனவும், மேற்படி இடமானது ரயத்து புன்செய் என்ற வகைப்பாட்டை உடைய பட்டா நிலம் எனவும், இதற்கான அபதிவேடு, 10(1) சிட்டா மற்றும் புலப்பட நகல் ஆகிய கிராம கணக்குகளில் நகல் உள்ளதாகவும், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராமத்தில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை அனுமதி கோரிய புல எண்: 80/ (மொத்த பரப்பு 5.44.50)-ல் புல எண். 80/ (பகுதி) 4.50.0 ஹெக்டேர் இடமானது பட்டா எண். 1243-ன்படி அறிவொளி மனைவி காமாட்சி என்ற பெயரில் கிராமக்கணக்கில் தாக்கலாகியுள்ளது எனவும், மேற்படி புலமானது டி.ஆர். 2025/0103/07/434448TR நாள்: 12.06.2025-ன்படி பச்சையப்பன் தந்தை நித்தியானந்தம் என்பவரிடமிருந்து அறிவொளி மனைவி காமாட்சி என்பவருக்கு பட்டா எண். 1243-ன்படி பட்டா மாற்றம் செய்யப்பட்டுள்ளது எனவும், மேற்படி பட்டதாரரிடமிருந்து மனுதாரர் திண்டிவனம் 1 எண். இணை சார்பதிவாளர் அலுவலகத்தின் மூலம் ஆவண எண். 1282/2025 நாள்: 25.06.2025-ன்படி 25.06.2025 முதல் 24.06.2035 வரை நில குத்தகை பத்திரம் பதிவு செய்துள்ளார் எனவும் தெரிவித்துள்ளார்.

குவாரி குத்தகை உரிமம் வழங்க கோரியுள்ள புலமானது தற்போது கரம்பாக உள்ளது கிராம கணக்குகளை ஆய்வு செய்ததில் தெரிய வருகிறது எனவும், மேற்படி புலத்தில் இருந்து உத்தேசமாக 150 மீட்டர் தொலைவில் ஏரியும், 200 மீட்டர் தொலைவில் பாதுகாப்பட்ட காடுகள் அமைந்துள்ளது கிராமக்கணக்குகள் மற்றும் வரைபடங்கள் வாயிலாகவும் நேரடி தணிக்கையிலும் தெரிய வருகிறது எனவும், மனுதாரர் குவாரி குத்தகை அனுமதி கோரியது நோட்டரி பப்ளிக் வழக்கறிஞரிடம் பெற்று சமர்ப்பித்துள்ளதாகவும், அரசுக்கு செலுத்த வேண்டிய கனிம வரி பாக்கி ஏதும் நிலுவை இல்லையென்றும், அரசுக்கு செலுத்த வேண்டிய வருமான வரி பாக்கி ஏதும் நிலுவை இல்லையென்றும், தமிழ்நாடு மாநிலத்தில் இதுவரை குவாரி குத்தகை உரிமம் எதுவும் பெறவில்லை என உறுதிமொழி ஆவணங்களின் நகல்களை சமர்ப்பித்துள்ளதாகவும், குத்தகை உரிமம் கோருவதற்கான விண்ணப்பக் கட்டணம் ரூ.1500/-ஐ விழுப்புரம் பாரத மாநில வங்கிக் கிளையில் செலுத்துச்சீட்டு எண். 20250707015976 நாள்: 07.07.2025-ன்படி செலுத்தியுள்ளார் எனவும், குத்தகை உரிமம் கோரும் புலத்திற்கு தெற்கு பகுதியில் செங்கல்பட்டு மாவட்டம், மறைமலைநகரைச் சேர்ந்த தி/ள். கற்பக விநாயகா மைன்ஸ் என்பவர், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம புல எண். 75 (பகுதி) (3.03.0 ஹெக்) மற்றும் 76/1 (1.76.0 ஹெக்) ஆகியவற்றில் 4.79.0 ஹெக்டேர் பரப்பளவில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுத்து குவாரிப்பணி செய்ய அனுமதி பெறப்பட்டு குவாரிப்பணி நடைபெற்று வருகிறது என தெரிவித்துள்ளார்.



புலத்தின் நான்கெல்லைகள் (சக்குபந்தி) புல எண். 80/-

புல எண் / திசைகள்	80/-
வடக்கு	அயன் புஞ்சை புல எண். 81/1 மற்றும் 82/1 எம்.கே. ரமேஷ் மற்றும் 2 நபர்கள்
தெற்கு	அயன் புஞ்சை புல எண். 75/ மற்றும் 76/ தி/ள். கற்பக விநாயகா மைன்ஸ்
கிழக்கு	அயன் புஞ்சை புல எண். 79/4 மற்றும் 71/1, 79/4 - எம்.கே. ரமேஷ் மற்றும் 2 நபர்கள் 77/1 - சுந்தரம் நாயுடு மற்றும் 1 நபர்கள்
மேற்கு	அயன் புஞ்சை புல எண். 80/ பகுதி மனுதாரர் குவாரி உரிமம் பெறவுள்ள இடத்தின் மீதமுள்ள பகுதி

குவாரி குத்தகை உரிமம் அனுமதி கோரிய புலங்களில் இருந்து 300 மீட்டர் சுற்றளவு தொலைவிற்குள் குடியிருப்பு ஏதும் அமைய பெறுவில்லை எனவும், குவாரி குத்தகை உரிமம் அனுமதி கோரிய இடத்திற்கு அருகில் புராதன சின்னங்களோ, கல் கட்டிடங்களோ, விலையுயர்ந்த மரங்களோ 50 மீட்டர் சுற்றளவு தொலைவிற்குள் உயரமுத்த மற்றும் தாழ்வழுத்த மின் கம்பிகளோ, தொலைபேசி கம்பிகளோ, ரயில் பாதைகளோ ஏதும் செல்லவில்லை எனவும், மேலும், மயானம், சுடுகாடு, இடுகாடு மற்றும் அரசு புறம்போக்கு நிலங்களோ ஏதும் அமையப்பெறுவில்லை எனவும், குவாரி குத்தகை உரிமம் அனுமதி கோரிய இடத்திற்கு 1 கி.மீ சுற்றளவு தொலைவிற்குள் தேசிய பூங்காக்கள், வனவிலங்கு சரணாலயம், புலிகள் காப்பகம், யானை வழித்துடங்கள் ஏதும் அமையவில்லை எனவும், உத்தேசமாக 200 மீட்டருக்கு அப்பால் பாதுகாக்கப்பட்ட காடுகள் அமைந்துள்ளதால் வனத்துறையினரிடம் தடையில்லா சான்று பெற்றிட அறிவுறுத்தலாம் எனவும், மேற்படி புலத்தில் வெட்டியெடுக்கும் கற்களை சேமித்து வைத்திட போதிய இட வசதி உள்ளது எனவும், குவாரி குத்தகை உரிமம் கோரிய இடத்திற்கு உத்தேசமாக 150 மீட்டருக்கு அப்பால் ஏரி அமைந்துள்ளது எனவும், எனவே, பாதுகாப்பு இடைவெளியுடன் கூடிய வேலி அமைத்துவிட்டு குவாரிப்பணிகளை மேற்கொள்ளலாம் என்ற நிபந்தனையின் அடிப்படையில் குவாரிப்பணி செய்ய குத்தகை உரிமம் வழங்கலாம் எனவும் தெரிவித்துள்ளார்.

மேலும், சாதாரண கற்கள் குவாரிப்பணி செய்ய உத்தேசிக்கப்பட்டுள்ள புலத்திலிருந்து வெட்டியெடுக்கப்படும் கற்களை கொண்டு செல்ல கீழ்சேலூர் கிராம எல்லை புஞ்சை புல எண். 76/1, 76/2 மற்றும் வடகொளப்பாக்கம் கிராம எல்லை அயன் புஞ்சை புல எண். 10/5ஏ வழியாகவும், நல்லாளம் - கீழ்சேலூர் ரோடு வழியாகவும் போதிய பாதை வசதி உள்ளது எனவும், மேற்படி புல எண். 76/1, 76/2 புலனிற்கு அருகில் நிலவியல் வாய்க்கால் உள்ளது எனவும், நிலவியல் வாய்க்காலுக்கு எவ்வித இடையூறும் ஏற்படுத்தாமல் குறுகிய பாலம் ஒன்றை ஏற்படுத்தி குவாரிப்பணிகளை மேற்கொள்ளலாம் என்ற நிபந்தனையின் அடிப்படையில் குவாரிப்பணி செய்ய குத்தகை உரிமம் வழங்கலாம் எனவும், மேலும், சாதாரண கற்கள் வெட்டியெடுக்க குவாரி குத்தகை உரிமம் வழங்குவது தொடர்பாக, கீழ்சேலூர் கிராம பொது மக்களிடமிருந்து எவ்வித ஆட்சேபமும்



வரப்பெறவில்லை எனவும், கீழ்சேலூர் கிராம குடிகளிடமிருந்து வாக்குமூலம் பெறப்பட்டு இணைக்கப்பட்டுள்ளது எனவும், குவாரி குத்தகை அனுமதி வழங்கப்படும் பட்சத்தில் சுற்றியுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளிவிட்டு குவாரிப்பணி செய்யப்பட வேண்டுமெனவும், சுற்றியுள்ள நீர்நிலைப் பகுதிகளுக்கு 50 மீட்டர் பாதுகாப்பு இடைவெளிவிட்டு குவாரிப்பணி செய்யப்பட வேண்டுமெனவும், குவாரியில் வெடிவைக்கும் பட்சத்தில் அருகிலுள்ள பட்டா நிலங்களுக்கு எவ்வித இடையூறும் ஏற்படாத வகையில் முன்கூட்டியே தகவல் தெரிவிக்கப்பட வேண்டும் என்ற நிபந்தனையின் அடிப்படையிலும், பாதுகாப்பு இடைவெளியுடன் கூடிய வேலி அமைக்க வேண்டும் என்ற நிபந்தனையின் அடிப்படையிலும் குவாரிப்பணி செய்ய குத்தகை உரிமம் வழங்கலாம் எனவும் தெரிவித்துள்ளார்.

மேலும், குவாரி குத்தகை அனுமதி கோரியுள்ள புலத்திற்கான கிராமக்கணக்குகளின் நகல், சிட்டா, அடங்கல், புலப்படம், அ-பதிவேடு, கிராம வரைபடம் மற்றும் மனுதாரர் நில குத்தகை ஒப்பந்தம் பெற்றதற்கான ஆவணங்கள், விண்ணப்ப கட்டணம், கனிம வரி பாக்கி ஏதும் நிலுவை இல்லை என்பதற்கான ஆவணங்களின் நகல்கள் இணைக்கப்பட்டுள்ளது எனவும், எனவே, திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம பொதுமக்கள் கொடுத்துக்கொண்ட வாக்குமூலம், திண்டிவனம் வருவாய் வட்டாட்சியர் சமர்ப்பித்துள்ள அறிக்கையின் அடிப்படையில், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், அண்ணம்பாக்கம் கிராமம், நெ. 85/2, கணக்குப்பிள்ளை தெரு என்ற முகவரியைச் சேர்ந்த திரு.ப. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவருக்கு விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம புல எண். 80/- (பகுதி) - 4.50.0 ஹெக்டேர் பரப்பளவில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை அனுமதி கோரியது தொடர்பாக, பாதுகாப்பு விதிகளில் தெரிவிக்கப்பட்டுள்ள நிபந்தனைகளுக்குப்பட்டு பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுத்து குவாரிப்பணி செய்ய பரிந்துரை செய்துள்ளார்.

6) பார்வை (4)-ல் காணும் விழுப்புரம் மாவட்ட புவியியல் மற்றும் சுரங்கத்துறை உதவி புவியியலாளர் அவர்களின் புலத்தணிக்கை அறிக்கையில், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், அண்ணம்பாக்கம் கிராமம், நெ.85/2, கணக்குப்பிள்ளை தெரு என்ற முகவரியில் வசிக்கும் திரு.ப. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவர், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம பட்டா புல எண்: 80/ - 5.44.50 ஹெக்டேரில் பகுதியளவு 4.50.0 ஹெக்டேர் பரப்பில் பத்தாண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை உரிமம் கோரியது தொடர்பாக, திண்டிவனம் சார் ஆட்சியர் அவர்களிடமிருந்து வரப்பெற்ற பரிந்துரை அறிக்கையை தொடர்ந்து 22.09.2025 அன்று புலத்தணிக்கை செய்யப்பட்டது எனவும், இத்தணிக்கையின்போது உதவி புவியியலாளர் மற்றும் விண்ணப்பதாரர் உடனிருந்தனர் எனவும் தெரிவித்துள்ளார்.

மேலும், குவாரி குத்தகை உரிமம் வழங்க கோரிய விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம பட்டா புல எண்: 80/ - 5.44.50 ஹெக்டேர்



புன்செய் நிலமானது பட்டா எண். 1243-ன்படி திருமதி. காமாட்சி க.பெ. அறிவுரை
என்பவரின் பெயரில் கிராமக்கணக்கில் தாக்கலாகியுள்ளது எனவும், இப்படிப்பட்ட
பட்டாதாரிடமிருந்து விண்ணப்பதாரர் திரு. ஜெகதீசன் த.பெ. பச்சையப்பன் என்பவர்
சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி அமைத்துக் கொள்வதற்கு 10
ஆண்டுகளுக்கு திண்டிவனம் இணை எண்.1 சார்பதிவாளர் அலுவலக குத்தகை
ஆவண எண். 1282/2025 நாள்: 25.06.2025-ன்படி குத்தகை ஆவணம் பதிவு செய்து
அதற்கான ஆவணத்தினை சமர்ப்பித்துள்ளார் எனவும், எனவே, விண்ணப்பதாரர்
மேற்படி நிலத்தில் குவாரி செய்ய தகுதியுடையவர் எனவும், குத்தகை உரிமம் வழங்க
கோரியுள்ள புலங்களின் சக்குபந்தி விவரம் கீழ்க்கண்டவாறு அமைந்துள்ளது எனவும்
தெரிவித்துள்ளார்.

நான்கு எல்லைகள் விவரம்.

வ. எண்.	புல எண் / பரப்பு (ஹெக்டேர்)	வடக்கு	தெற்கு	கிழக்கு	மேற்கு
1.	80 / (பகுதி) - 4.50.0	புல எண். 81/1, 82/1 பட்டா நிலங்கள்	புல எண். 75, 76/1 பட்டா நிலங்கள்	புல எண். 79/4, 77/1 பட்டா நிலங்கள்	புல எண். 80/-ல் குவாரி குத்தகை கோரும் பரப்பு போக மீதமுள்ள பட்டா நிலம்

மேற்படி, குவாரி குத்தகை கோரும் புலங்கள் சமதளப்பரப்பாக காணப்படுகிறது எனவும், மேற்படி புலத்தில் காணப்படும் கற்கள் சாள்ளகைட் வகையைச் சேர்ந்த கற்கள் எனவும், இக்கற்கள் கட்டுமான பணிக்கு பயன்படும் சாதாரண கற்கள், எம். சாண்ட், ஐல்வி தயாரிக்க உகந்தது எனவும், மேலும், குவாரி குத்தகை உரிமம் கோரும் புலனுக்கு அருகில் நீர் நிலைகள், ஏரி புறம்போக்கு, ஆறு, குளம், கண்மாய் போன்றவை 50 மீட்டர் சுற்றளவில் ஏதும் இல்லை எனவும், மேலும், 60 மீட்டர் சுற்றளவில் பாதுகாக்கப்பட்ட வனப்பகுதிகள் ஏதுமில்லை எனவும், குவாரி குத்தகை கோரும் புலங்களுக்கு 300 மீட்டர் சுற்றளவில் அங்கீகரிக்கப்பட்ட வீட்டு மனைகள், நத்தம் மற்றும் குடியிருப்பு பகுதிகள் ஏதுமில்லை எனவும், குவாரி குத்தகை அனுமதி புலங்களுக்கு 50 மீட்டர் சுற்றளவில் நெடுஞ்சாலை, இருப்புபாதை, கடுகாடு, இடுகாடு மற்றும் உயர்வழுத்த / தாழ்வழுத்த மின்கம்பிகள் ஏதும் செல்லவில்லை எனவும், மேலும், 1 கி.மீ இடைவெளியில் தேசிய பூங்காக்கள், வனவிலங்கு சரணாலயம், புலிகள் காப்பகம், யானை வழித்தடங்கள் ஏதுமில்லை எனவும், மேற்படி, புலத்தணிக்கையின்போதும், பொதுமக்களிடமிருந்து ஆட்சேபனை ஏதும் வரப்பெறவில்லை எனவும் தெரிவித்துள்ளார்.

குவாரி குத்தகை கோரும் புலனிலிருந்து கனிமங்களை எடுத்து செல்வதற்கு பட்டா புல எண்கள்: 76/1, 76/2, 10/55ஏ வழியாக போதிய அணுகுபாதை வசதி உள்ளது எனவும், இருப்பினும் அணுகுபாதை வசதி ஏற்படுத்தப்பட உள்ள சர்வே எண்கள்: 76/1 மற்றும் 76/2-ல் உள்ள நிலவியல் வாய்க்காலுக்கு எவ்வித இடையறும்



ஏற்படுத்தாவண்ணம் சிறிய பாலம் அமைத்து அதன்பின்னர் பாதை அமைக்கப்பட வேண்டும் எனவும்,

எனவே, திண்டிவனம் சார் ஆட்சியர் அவர்களின் பரிந்துரை அறிக்கை விண்ணப்பதாரரின் கோரிக்கை மற்றும் கள ஆய்வின் அடிப்படையில், விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேலூர் கிராம பட்டா புல எண்: 80/ - 5.44.50 ஹெக்டேரில் பகுதியளவு 4.50.0 ஹெக்டேர் பரப்பில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க பத்து (10) ஆண்டுகளுக்கு கீழ்க்கண்ட நிபந்தனைகளுக்கு உட்பட்டு 1959-ஆம் ஆண்டு தமிழ்நாடு சிறுவகை கனிமச்சலுகை விதிகளில் விதி எண். 19(1)-ன்கீழ் உரிமம் வழங்க மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் தடையில்லா சான்று மற்றும் தமிழ்நாடு மாசுக்கட்டுப்பாடு வாரியம் அவர்களின் தடையின்மை சான்றினை பெற்று சமர்ப்பித்த பின்பு அதன் நிபந்தனைகளுக்கு உட்பட்டு சாதாரண கற்கள் மற்றும் கிராவல் குவாரி பணி செய்து கொள்ள விண்ணப்பதாரர் திரு. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவருக்கு அனுமதி வழங்கலாம் என பரிந்துரை செய்துள்ளார்.

நிபந்தனைகள்:-

1. விண்ணப்ப புலங்களின் அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளியும் மற்றும் அரசு புறம்போக்கு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி மேற்கொள்ளப்பட வேண்டும்.
2. குவாரிப்பணி மேற்கொள்ளும் போது அருகிலுள்ள பட்டா மற்றும் அரசு புறம்போக்கு நிலங்களுக்கு எவ்வித இடையூறும் இல்லாமல் குவாரிப்பணி செய்ய வேண்டும்.
3. குவாரிப்பணி தொடங்குவதற்கு முன்னர் சர்வே எண். 76/1, 76/2 ஆகியவற்றில் செல்லும் நிலவியல் வாய்க்காலுக்கு எவ்வித இடையூறும் ஏற்படுத்தா வண்ணம் அனுசூபாதை அமைக்க வேண்டும்.
4. குவாரி குத்தகை வழங்கும் முன்பு விண்ணப்பித்துள்ள இடத்தினை DGPS சர்வே பணி மேற்கொண்டு அதன் அறிக்கையை சமர்ப்பிக்க வேண்டும்.
5. முறைப்படியும், விஞ்ஞான பூர்வமாகவும் குவாரிப்பணி செய்ய வேண்டும்.
6. சான்றிதழ் பெறப்பட்ட போர்மேன், வெடிப்பாளர் மற்றும் கரங்க மேலாளர் மூலம் குவாரிப்பணி செய்யப்பட வேண்டும்.
7. குவாரிப்பணி தொடங்குவதற்கு முன் கரங்க பாதுகாப்பு இயக்குநர், சென்னை அவர்களுக்கு தகவல் தெரிவிக்கப்பட வேண்டும்.
8. பாறைகளை தகர்க்க கைத்துளைப்பான்களை கொண்டு பாறைகளை துளையிட்டு குறைவான வெடிப்பொருட்களை பயன்படுத்த வேண்டும்.
9. குவாரிப்பணி தொடங்குவதற்கு முன்பாக குவாரியை சுற்றி முள்கம்பி வேலி அமைத்து குவாரிப்பணி தொடங்க வேண்டும்.
10. குவாரித் தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்ய Mettalliferous Mines விதிகளின்படி அகலமானதும், பாதுகாப்பானதுமான Benches அமைத்து



பாதுகாப்பான முறையில் குவாரிக்குள் வாகனங்கள் சென்று வரவும் மற்றும் குவாரி தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்தும் குவாரிப்பணி செய்ய வேண்டும்.

11. குவாரிப்பணி செய்வதற்கு பரிந்துரை செய்யப்பட்ட கனிமங்களான சாதாரண கற்கள் மற்றும் கிராவல் ஆகியவற்றை தவிர வேறு கனிமங்கள் ஏதும் கண்டறியப்பட்டால் உடனடியாக குவாரிப்பணியினை நிறுத்துவதோடு, புவியியல் மற்றும் சுரங்கத்துறை, விழுப்புரம் அலுவலகத்திற்கு தகவல் தெரிவிக்க வேண்டும்.
12. தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி-41ன்படி தகுதிவாய்ந்த நபரால் சுரங்க திட்டம் தயார் செய்து உதவி இயக்குநர் அவர்களின் ஒப்புதல் பெறவேண்டும்.
13. தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி-42ன்படி மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்திடமிருந்து சுற்றுச்சூழல் சான்று பெற்று சமர்ப்பிக்கப்படவேண்டும்.

எனவே, திண்டிவனம் சார் ஆட்சியர் மற்றும் விழுப்புரம் மாவட்ட புவியியல் மற்றும் சுரங்கத்துறை உதவி புவியியலாளர் 'ஆகியோரின் பரிந்துரை' அறிக்கையினை பரிசீலனை செய்யப்பட்டு, விழுப்புரம் மாவட்டம், திண்டிவனம் லட்டம், கீழ்சேலூர் கிராம மட்டா புல எண்: 80/- 5.44.50 ஹெக்டேரில் பகுதியளவு 4.50.0 ஹெக்டேர் பரப்பில் அரசு நிபந்தனைகளுக்குட்பட்டு 10 (பத்து) வருட காலத்திற்கு விண்ணப்பத்தாரர் திரு. ஜெகதீசன் த-பெ. பச்சையப்பன் என்பவருக்கு சாதாரண கற்கள் மற்றும் கிராவல் வெட்டியெடுக்க குவாரி குத்தகை உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதப்படுகிறது. அதன் அடிப்படையில், தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி எண்.41-ன்படி குவாரிப்பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்க திட்டத்தினை தகுதிவாய்ந்த நபர் (RQP) மூலமாக கீழ்க்கண்ட நிபந்தனைகளுக்குட்பட்டு தயாரித்து அதனை 90 தினங்களுக்குள் உதவி இயக்குநர் (புவியியல் மற்றும் சுரங்கத்துறை) அவர்களின் பரிசீலனைக்கு சமர்ப்பிக்குமாறு விண்ணப்பதாரருக்கு இதன் மூலம் அறிவுறுத்தப்படுகிறது.

நிபந்தனைகள்:-

1. விண்ணப்ப புலங்களின் அருகிலுள்ள மட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளியும் மற்றும் அரசு புறம்போக்கு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி மேற்கொள்ளப்பட வேண்டும்.
2. குவாரிப்பணி மேற்கொள்ளும் போது அருகிலுள்ள மட்டா மற்றும் அரசு புறம்போக்கு நிலங்களுக்கு எவ்வித இடையூறும் இல்லாமல் குவாரிப்பணி செய்ய வேண்டும்.



3. குவாரிப்பணி தொடங்குவதற்கு முன்னர் சர்வே எண் 76/1, 76/2 ஆகியவற்றில் செல்லும் நிலவியல் வாய்க்காலுக்கு எவ்வித இடையூறும் ஏற்படுத்தா வண்ணம் அனுகூபாதை அமைக்க வேண்டும்.
4. குவாரி குத்தகை வழங்கும் முன்பு விண்ணப்பித்துள்ள இடத்திலே எவ்வித இடையூறும் ஏற்படா வண்ணம் சர்வே பணி மேற்கொண்டு அதன் அறிக்கையை சமர்ப்பிக்க வேண்டும்.
5. முறைப்படியும், விஞ்ஞான பூர்வமாகவும் குவாரிப்பணி செய்ய வேண்டும்.
6. சான்றிதழ் பெறப்பட்ட போர்மேன், வெடிப்பாளர் மற்றும் சுரங்க மேலாளர் மூலம் குவாரிப்பணி செய்யப்பட வேண்டும்.
7. குவாரிப்பணி தொடங்குவதற்கு முன் சுரங்க பாதுகாப்பு இயக்குநர், சென்னை அவர்களுக்கு தகவல் தெரிவிக்கப்பட வேண்டும்.
8. பாறைகளை தகர்க்க கைத்துளைப்பான்களை கொண்டு பாறைகளை துளையிட்டு குறைவான வெடிப்பொருட்களை பயன்படுத்த வேண்டும்.
9. குவாரிப்பணி தொடங்குவதற்கு முன்பாக குவாரியை சுற்றி முள்கம்பி வேலி அமைத்து குவாரிப்பணி தொடங்க வேண்டும்.
10. குவாரித் தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்ய Mettalliferrous Mines விதிகளின்படி அகலமானதும், பாதுகாப்பானதுமான Benches அமைத்து பாதுகாப்பான முறையில் குவாரிக்குள் வாகனங்கள் சென்று வரவும் மற்றும் குவாரி தொழிலாளர்களின் பாதுகாப்பினை உறுதி செய்தும் குவாரிப்பணி செய்ய வேண்டும்.
11. குவாரிப்பணி செய்வதற்கு பரிந்துரை செய்யப்பட்ட கனிமங்களான சாதாரண கற்கள் மற்றும் கிராவல் ஆகியவற்றை தவிர வேறு கனிமங்கள் ஏதும் கண்டறியப்பட்டால் உடனடியாக குவாரிப்பணியினை நிறுத்துவதோடு, புவியியல் மற்றும் சுரங்கத்துறை, விழுப்புரம் அலுவலகத்திற்கு தகவல் தெரிவிக்க வேண்டும்.
12. தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி-42ன்படி மாநில சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்திடமிருந்து சுற்றுச்சூழல் சான்று பெற்று சமர்ப்பிக்கப்படவேண்டும்.

உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
விழுப்புரம்.

பெறுநர்:-

திரு.ப. ஜெகதீசன் த-பெ. பச்சையப்பன்,
நெ.85/2, கணக்கு பிள்ளை தெரு,
அண்ணம்பாக்கம் கிராமம்,
திண்டிவனம் வட்டம்,
விழுப்புரம் மாவட்டம் - 604 101.

நகல்: இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை.
நகல்: மாநில சுற்றுச்சூழல் தாக்க தடையாக்க மதிப்பீட்டு ஆணையம், சென்னை.



District : Villuppuram

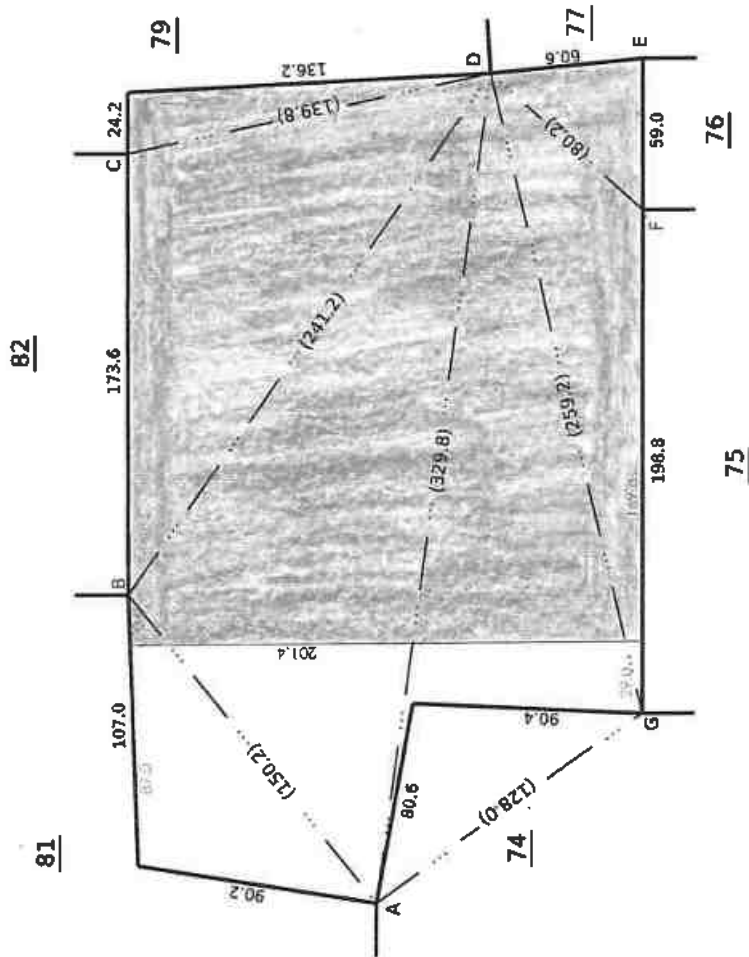
Taluk : Tindivanam

Village : Keezhseviur [163]

Survey No : 80

Area : Hect 05 Ares 44.50

Scale : 1 : 2000



LEASE APPLIED AREA



Sub Collector (Dist.)
Tindivanam.

TAHSELDAR
TINDIVANAM

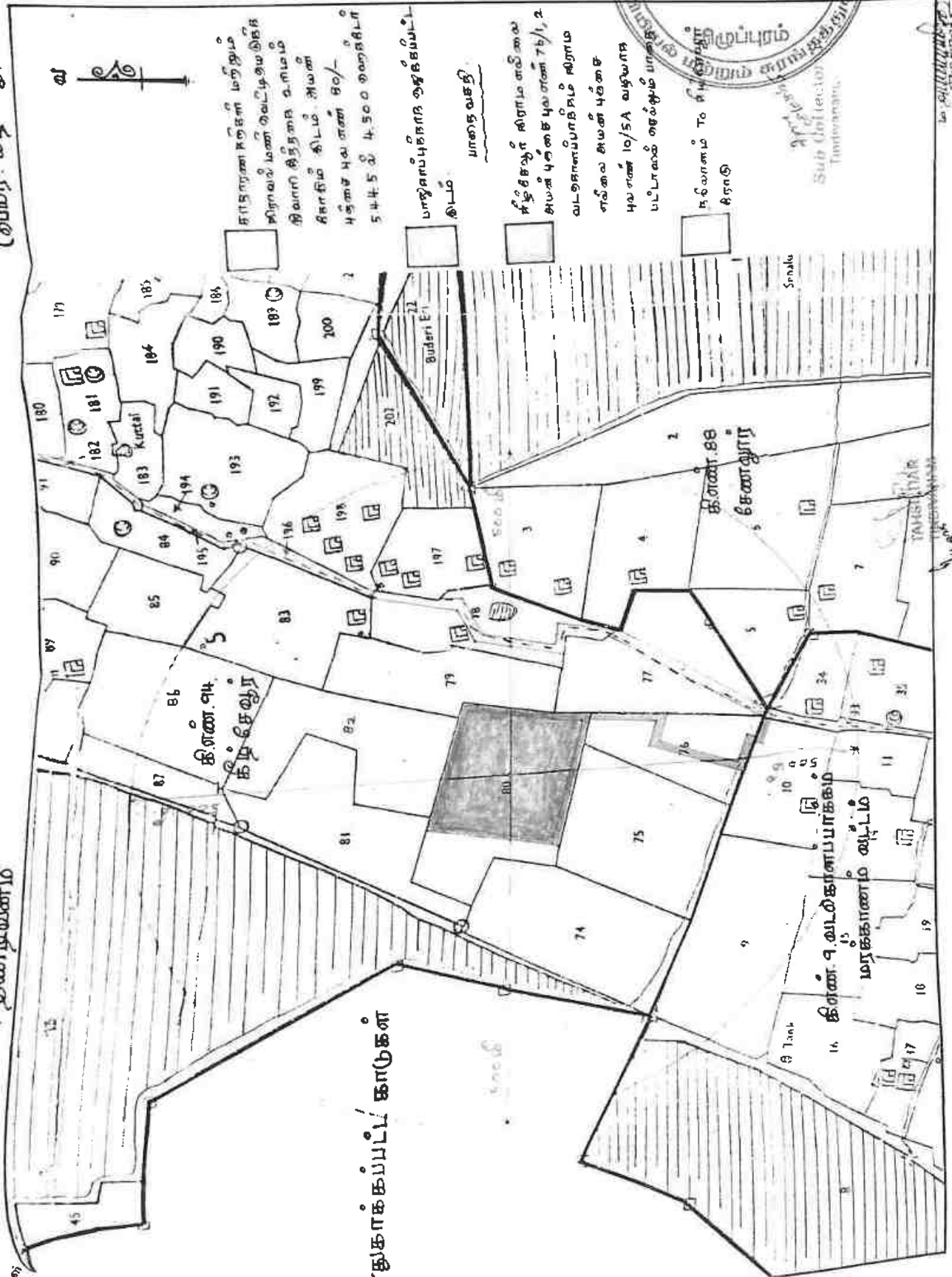
Date of issue 07 08 2025 08 08 41

Survey and Settlement Department, Government of Tamil Nadu

மாவட்டம் : விழுப்புரம்

வட்டம் : திண்டிவனம்

கிராமம் : கிராமம்
எண் : 94
பெயர் : கீழ்சேவூர்



LEASE APPLIED AREA



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

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

மாவட்டம் : விழுப்புரம்

வட்டம் : திண்டிவனம்

வருவாய் கிராமம் : கீழ்சேவர்

பட்டா எண் : 1243

உரிமையாளர்கள் பெயர்

அறிவிப்பு		மனைவி		காமராசு		மறைவை		குறிப்புகள்	
பட்டா எண்	ச. பிரிவு	பன்முகம்		நன்மை		மறைவை		குறிப்புகள்	
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை		
		ஹெக்டே - ஏர்	ரூ - பை	ஹெக்டே - ஏர்	ரூ - பை	ஹெக்டே - ஏர்	ரூ - பை		
80		5 - 44.50	22.87					2025/103/07/434448	
		5 - 44.50	22.87					Digitally signed Barathiraja A Zonal Deputy Tahsildar 12/06/2025 06:17:02 PM	

குறிப்பு :



1. மின்னணுத் தகவல் / சான்றுகூறு நுகர்வோர் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை இவற்றை தீர்வு காண உதவி செய்யும். <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் P/07/03/163/01243/20360 என்ற குறிப்பு எண்ணை உள்ளிட்டு செய்து உறுதி செய்துகொள்ளவும்.
2. இது தகவல்கள் 23-06-2025 அன்று 11:51:49 AM நேரத்தில் அச்சடிக்கப்பட்டது.
3. ஹைப்போசி கோமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்.

அ-பதிவேடு விவரங்கள் - ஊரகம்

மாவட்டம் : விழுப்புரம்

வட்டம் : திண்டிவனம்

இராமை : கீழ்சேவர்



1 புல எண்	80	9 மண் வயனமும் ரகமும்	3 - 5
2 உட்பிரிவு எண்		10. மண் தரம்	5
3 பண்டம் புல உட்பிரிவு எண்	195-1, 2 3,4,5,6,7,8,	11 தீர்வை (ரூ - ஹெ)	4.20
4 பகுதி		12 பரப்பு (ஹெக்டேர் - ஏர்)	5 : 44.50
5 அரசு / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ரூ - பை)	22.87
6 நிலத்தின் வகை	பஞ்சை	14. பட்டா எண்	1243
7 பாசன ஆதாரம்		15. குறிப்பு	
8 இடு போகமா		16 பெயர்	1.காமாட்சி

குறிப்பு:



மேற்கண்ட தகவல் / சான்றிதழ் தகவல் விவரங்கள் பின் பதிவேட்டிலிருந்து
1 பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய
தளத்தில் 07/03/163/80/-/90360 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி
செய்துகொள்ளவும்.

ANNEXURE

VII

1282/2025



தமிழ்நாடு தமிழ்நாடு TAMILNADU

25-6-2025

தேவதீபன்

சிவ்நாம பாதகம்

Rs. 1000

BK 808192

N. Pandey

25/06/2025/BK/2003

மு. ந. விழுப்புரம்
விழுப்புரம், தமிழ்நாடுகுத்தகை பத்திரம்

2025-ம் வருடம் ஜூன் மாதம் 25-ம் தேதி, விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், அன்னம்பாக்கம் கிராமத்தில் வந்து தற்காலம் சென்னை- 600 106, அரும்பாக்கம், நேரு நகர், நெ.12/22 என்ற முகவரியில் வசிக்கும் திரு.பச்சையப்பன் அவர்களின் குமாரர் திரு P.ஜெகதீசன் (ஆதார் எண்.7551 8986 7030) (குத்தகைதாரர்)-1,

விழுப்புரம் மாவட்டம், திண்டிவனம், மரக்காணம் ரோடு, அப்பாசாமி நகர், நெ.64 என்ற முகவரியில் வசிக்கும் திரு.பச்சையப்பன் அவர்களின் குமாரத்தியும் திரு.அழிவொளி அவர்களின் மனைவியுமான திருமதி. A.காமாட்சி (ஆதார் எண்.9926 7234 5064) (நில உரிமையாளர்) -2 ஆகிய நாம் இருவரும் சேர்ந்து சம்மதித்து எழுதிக் கொண்ட நிலம் குத்தகை ஒப்பந்தப் பத்திரம்.

1-வது நபர் (குத்தகைதாரர்)

2-வது நபர் (நில உரிமையாளர்)

P. J.

A. Kumari

பத்திரம் 2025	ம வருடத்திய 282	ஆவணம்
10	தாக்கனைக்கொண்டது	
1	வது தின	பதிவு அலுவலர்





யாதெனில் இதனடியில் வரும் சொத்து விபரத்தில் குறிப்பிட்டுள்ள சொத்துக்கள் அனைத்து கட்ட
3.09.2018-ம் தேதியில், அன்னம்பாக்கம் கிராமத்தில் வசிக்கும் பச்சையப்பன்
திரு. ஜெகதீசன் அவர்கள் தன்னுடைய உடன்பிறந்த சகோதரியான நம்மில் 2-வது நபர் பெயருக்கு
ஒரு தானசெட்டில்மெண்ட் பத்திரம் எழுதி மேற்படி தானசெட்டில்மெண்ட் பத்திரம் அவர்பாக்கம்
சார்பதிவுகத்தில் 1-புத்தகம் 2018-ம் வருடத்திய 2194-ம் ஆவண எண்ணாக பதிவுசெய்யப்பட்டது.

மேற்படி விதமாய் நம்மில் 2-வது நபருக்கு சொந்தமாகி அனுபவித்து வரும் புது சர்வே
எண்.80/- ஹெக்டர் 5.44.50 ஏர்ஸ் பூரா. இதற்கு ஏக்கர் 13.45 செண்ட் நிலத்தை நம்மில் 1-வது
நபருக்கு குத்தகை விட சம்மதித்து அதன்படி இன்று முதல் பத்து வருட காலகெடு வரை மேற்படி
நிலத்தை கருங்கல் சக்கை வெட்டி எடுத்து கொள்ள சம்மதித்துள்ளார். இதற்கு ஒரு வருட
காலத்திற்கு ரூ.10,000/- நம்மில் 1-வது நபர் 2-வது நபரிடம் செலுத்தி செலுத்தி விடவேண்டியது
என முழுமனதுடன் ஒப்புக் கொண்டு இந்த குத்தகை பத்திரம் எழுதிக் கொண்டோம்.

மேற்படி குத்தகை காலக்கெடுவான 10 வருட காலம் முடிந்தவுடன் நிலத்தை நம்மில் 2-வது
நபருக்கு ஒப்படைக்க வேண்டியது. மேலும் கெடு காலம் முடிந்தவுடன் இந்த குத்தகை ஒப்பந்தத்தை
நீட்டிக்க விரும்பினால் அதன்பிறகு இருவரும் சேர்ந்து புது ஒப்பந்தம் செய்து கொள்ளவேண்டியது.

மேற்படி சொத்தினை இதற்கு முன்பு நான் யாருக்கும் அடமானமோ, அல்லது வாடகை,
குத்தகை போன்றவைகள் ஏதும் இல்லை என 2-வது நபர் உறுதியளிக்கிறார். இதன்படி நாம்
இருவரும் சேர்ந்து சம்மதித்து எழுதிக் கொண்ட நிலம் குத்தகை பத்திரம்.

1-வது நபர் (குத்தகைதாரர்)

2-வது நபர்(நில உரிமையாளர்)

P. J. L.

A. Kema

9 புத்தகம்	2015 ம் வருடத்திய	1283	ஆவணம்
10	தாள்களைக்கொண்டது		
2	வது தான்		
		பதுவு அலுவலர்	





-3-

சொத்து விபரம்

திண்டிவனம் பதிவு மாவட்டம், திண்டிவனம் 1 நீ இணை சார்பதிவுக எல்லைக்குட்பட்ட
திண்டிவனம் வட்டம், கீழ்சேவூர் கிராமத்தில், பட்டா எண்.1243-ல் அடங்கிய, புஞ்சை புதிய சாலை
எண். 80/- ஹெக் 5.44.5 ஏர்ஸ் பூரா, இதற்கு ஏக்கர் 13.45 செண்ட் இதற்கு பழைய சாலை
எண்.195/1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 196/1, 188/- 199/1, 2- இனாகளில் சம்மந்தப்பட்டது.
மேற்படி சொத்து கீழ்சேவூர் கிராம எல்லைக்குட்பட்டது.

1-வது நபர் (குத்தகைதாரர்)

P. J. J.

2-வது நபர்(நில உரிமையாளர்)

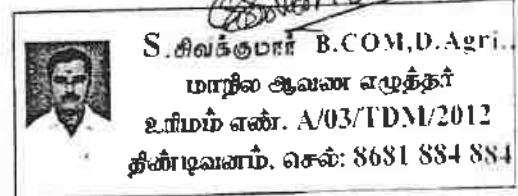
A. L. L. L.

சாட்சிகள்

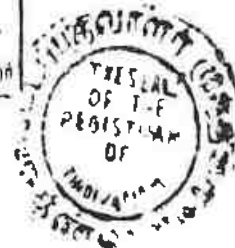
1. A. P. P. s/o Arivoli manar

2. P. L. L. s/o Pathmanabhan L. L. L.

கணினியில் நட்டச்சு செய்து,
ஆவணம் வரைவு செய்தவர்



1	தேதி 2015	ம வகுத்திய 1282	ஆவணம்
10	தாள்களைக் கொண்டது		
3	பதிவு தூள்		





உறுதிமொழி

இந்த ஆவணத்தை எழுதிக் கொடுப்பவர்களும், எழுதி பெறுபவர்களும் கீழ்க்கண்ட உறுதி மொழியை அளிக்கின்றோம்.

வழக்கிடை ஆவண சொத்து பதிவுச்சட்டம் 1908 பிரிவு 22(A) மற்றும் பிரிவு 22(B)-க்கு உட்பட்டதல்ல எனவும், ஆவணத்துடன் இணைக்கப்பட்ட அனைத்து ஆவணங்களும் இந்தியதண்டனைசட்டம் 1860 பிரிவு 470-ன்படி Forged Document அல்ல எனவும், ஆவணத்தை எழுதிப்பெறுபவர் அனைத்து ஆவணங்களையும் பரிசீலித்து வில்லங்கம்சரிபார்த்து எழுதிப்பெறுகிறார் எனவும், சொத்து மாற்றுச் சட்டம் 1882-ன்படி சொத்து பரிமாற்றம் தொடர்பான அனைத்து பிரிவுகளுக்கும் உட்பட்டு செயல்பட்டுள்ளோம் எனவும் உறுதி மொழி அளிக்கின்றோம்.

மேலும் இதனில் தங்களுக்கு தவறானதகவல்கள் அல்லது சான்று அளிக்கப்பட்டதாகபின்னால் கண்டுபிடிக்கப்பட்டால் அதற்கு நாங்கள் மட்டுமே பொறுப்பு ஆவோம் எனவும், அதற்கான சட்டப்பூர்வ நடவடிக்கைக்கு கட்டுப்படுகிறோம் எனவும், இதற்கு சார்பதிவாளர் எவ்விதத்திலும் பொறுப்பாகமாட்டார் எனவும் உறுதிமொழி அளிக்கின்றோம்.

இந்த ஆவணத்தில் கண்ட சொத்தானது நீர்நிலைகள், நீர்வழிப்பாதைகள், நீர்ப்பிடிப்பு பகுதிகளில் கட்டுப்படவில்லை எனவும், மற்றும் அரசு நிலம், இந்து சமய அறநிலையத்துறை வக்போர்ட் நிலம் பகுதியில் கட்டுப்படவில்லை என சான்றளிக்கின்றோம். மேலும் இதனில் தங்களுக்கு தவறானதகவல் அல்லது சான்று அளிப்பதாகபின்னாளில் கண்டுபிடிக்கப்பட்டால் அதனால் நான் / நாங்கள் சட்டப்பூர்வ நடவடிக்கைகளுக்கு உட்படுத்தப்படுவோம் என்பதையும் அறிவேன் / அறிவோம்.

ஆவணத்தை எழுதிப் பெறுபவர்களின்
கையொப்பம்

P. J.

ஆவணத்தை எழுதிக் கொடுப்பவர்களின்
கையொப்பம்

A. J.

பதிவு	2025	ம வகுத்தியு 282-ம் ஆவணம்
10	நாள்களைக்கொண்டது	
10	வது தாள்	பதிவு அலுவலர்



R/1 எண் இணை சார்பதிவாளர் திண்டிவனம்/புத்தகம்-1/1282/2025

30 OCT 2025

1899ம் ஆண்டு இந்திய முத்திரைச் சட்டம் 42வது பிரிவின் கீழான சான்று



1899ம் ஆண்டு இந்திய முத்திரைச் சட்டம் 42வது பிரிவின் கீழான சான்று

சென்னை நகர அருமபாகசம் சென்னை சென்னை தமிழ்நாடு இந்தியா வாரியம் கமிஷனம் திரு சென்னை
என்பவரிடமிருந்து ₹ 2500 ரூபாய் இருநூறு மட்டும் இந்த ஆவணத்திற்காக இந்திய முத்திரைச் சட்டம் 42வது
பிரிவின் கீழான சான்றுவாயிருந்த முத்திரைக் கட்டணம் வசூலிக்கப்பட்டு து எண் நான் இதன் மூலம் சான்றளிக்கிறேன்

சார்பதிவாளர் 1 எண் இணை சார்பதிவாளர் திண்டிவனம் சார்பதிவாளர் மற்றும் இணை சார்பதிவாளர்
41ன் படி ஆட்சியர்
தான் 25-06-2025

2025 ஆம் ஆண்டு ஜூன் மாதம் 25ம் தேதி முப 11:37 மணியளவில் 1 எண் இணை சார்பதிவாளர் திண்டிவனம்
சார்பதிவாளர் அலுவலகத்தில் தாக்கல் செய்து கட்டணம் ₹ 1,490/- செலுத்தியவர்

இடது பெருவிரல்



P. J.

கூடுதல் விவரங்கள் ஆவண வாசகத்தில்
உள்ளபடி

எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர்
இடது பெருவிரல்



A-kamathi

‘சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்’ என்ற
வழி இந்த நபரின் அடையாளம் விரல் ரேகை
மூலம் ஆதார் ஆணையத்துடன்
சரிபார்க்கப்பட்டது ஒப்பீட்டு எண்
UKC 5170264863f9f01ef04f09b24cffe2af8ff77
(Details from UIDAI : Kamathi Arivoli W/O: Arvoli, 25-11-
1977, xxxxxxxx5064)



எழுதி வாங்கியதாக ஒப்புக் கொண்டவர்
இடது பெருவிரல்



P. J.

‘சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்’ என்ற
வழி இந்த நபரின் அடையாளம் விரல் ரேகை
மூலம் ஆதார் ஆணையத்துடன்
சரிபார்க்கப்பட்டது ஒப்பீட்டு எண்
UKC 245020468d7013ff8374a89a0a8b0516a0f4a4d



10
12
வது தான் 1 / 2
பதிவு அலுவலர்



R/1 எண் இணை சார்பதிவாளர் திண்டிவனம்/புத்தகம்-1/1282/2025



புத்தகம் 2025 ம வருத்திப் 1282 ம ஆவணம்

A. Panicker S/o P. Arivoli manur

R/1 P. Leach S/o P. Adhameen
K. Illamparam.

1 எண் இணை சார்பதிவாளர் திண்டிவனம்
1 எண் இணை சார்பதிவாளர் திண்டிவனம்

R/1 எண் இணை சார்பதிவாளர் திண்டிவனம்/புத்தகம்-1/1282/2025 எண்ணாகப் பதிவு செய்யப்பட்டது

நாள் 25-06-2025

1 எண் இணை சார்பதிவாளர் திண்டிவனம்

1 எண் இணை சார்பதிவாளர் திண்டிவனம்

புத்தகம் 2025 ம வருத்திப் 1282 ம ஆவணம்
10 தாள்களைக் கொண்டது
6 வது தாள்





தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

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

மாவட்டம் : விழுப்புரம்

வட்டம் : திண்டிவனம்

வருவாய் கிராமம் : கீழ்சேவுர்

பட்டா எண் : 1243

உரிமையாளர்கள் பெயர்

பு. எண்	அறிவொளி உட்பிரிவு	புன்செய்		மனைவி நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
80	.	5 - 44.50	22.87	--	--	--	--	2025/0103/07/434448--- Digitally signed: Barathiraja A Zonal Deputy Tahsildar 12/06/2025 06:17:02:PM
		5 - 44.50	22.87					

குறிப்பு :



1. கோற்குறை தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் P/07/03/163/01243/20360 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
2. இந்த தகவல்கள் 23-06-2025 அன்று 11:51:49 AM நேரத்தில் அச்சடிக்கப்பட்டது.
3. கைட்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

பத்திரம் 2025 ம் வருடத்திய 1282 ஆவணம்
10 தாள்களைக்கொண்டது
7 வது தாள்
பதிவு அலுவலர்





பெயர்: [Name]
[Address]
[Phone Number]
[ID Number]
7351 6966 7330
[Barcode]

பெயர்: [Name]
[Address]
[Phone Number]
[ID Number]
7351 6966 7330
[Barcode]

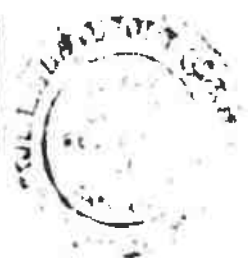
P. J. L.

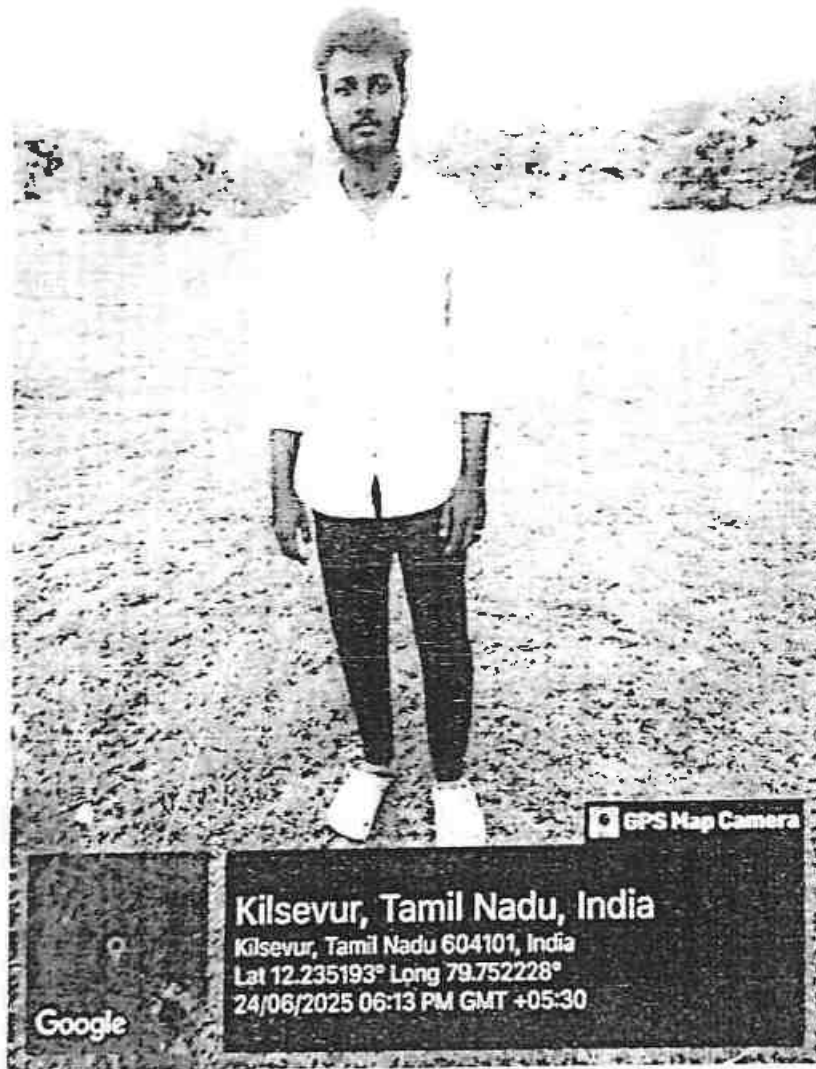
இந்திய அரசாங்கம்
Government of India
[Name]
[Address]
[Phone Number]
[ID Number]
9926 7234 5064
[Barcode]

இந்திய அரசாங்கம்
Government of India
[Name]
[Address]
[Phone Number]
[ID Number]
9926 7234 5064
[Barcode]

A. K. S.

பெயர்: [Name]
[Address]
[Phone Number]
[ID Number]





P. J. J.

A. K. K.

பேரண் 2-25	282
10	தமிழக அரசு
10	பதிவு





CHETTINAD CEMENT CORPORATION

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

21144
PHONE 22744 KARUR
TELE: 21745
GRAM "CEMENT" Puliyur C.F.
Telex: 0456-215
STD Code: 04374



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

21st September, 1987.

CERTIFICATE.

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

<u>Name of the Pit.</u>	<u>Average raising/day.</u>
1. Alambadi Pit.	- 1,700 T.
2. Mollapuram 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
(T.RAJU).

Mines Manager & Dy. General Manager.



Faculty of Science

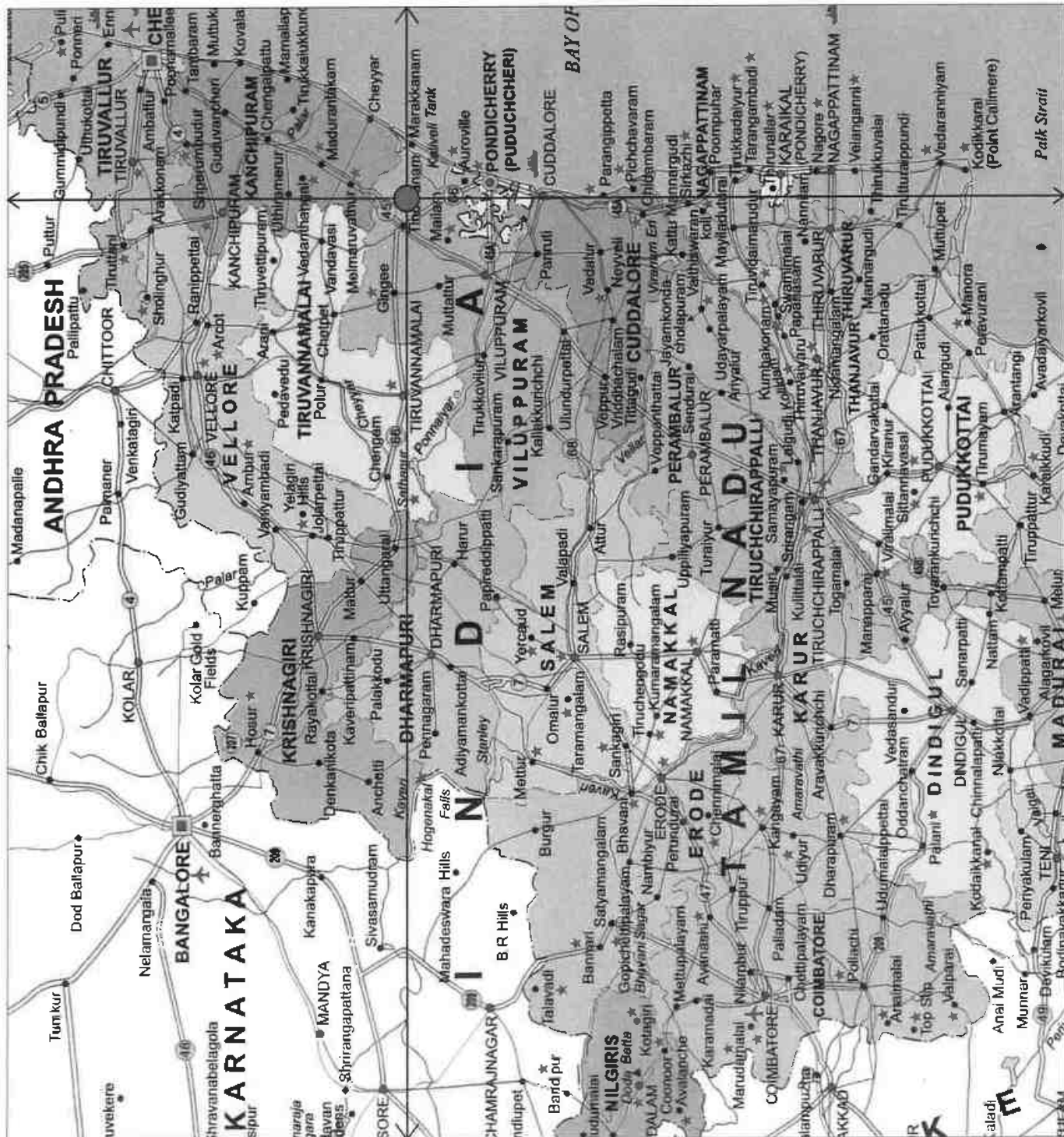
The Senate of the Annamalai University hereby makes known that D. Suresh has been admitted to the Degree of Master of Science (by Examination) in Geology, he having been certified by duly appointed Examiners at the examination held in April 1976 to be qualified to receive the same and that he was placed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

Given under the seal of the University.

Annamalainagar.
8th December 1976.

X Chandrasekha
Vice-Chancellor.

12°14'11.71"N



79°45'05.95"E

12°14'03.59"N

PLATE NO-I

DATE OF SURVEY : 01.10.2025

APPLICANT:

THIRU.P JAGADEESAN,
S/O PACHAIYAPPAN,
NO.85/2, KANAKKU PILLAI STREET,
ANNAMPAKKAM VILLAGE,
TINDIVANAM TALUK,
VILUPPURAM DISTRICT - 604 101.

QUARRY LEASE APPLIED AREA:

S.F.NO'S : 80 (P),
EXTENT : 4.50.0 Ha,
VILLAGE : KEEZHSEVUR,
TALUK : TINDIVANAM,
DISTRICT : VILUPPURAM.

INDEX

Q. LEASE APPLIED AREA : ●

TOPO SHEET No. : 57 P/16

LATITUDE : 12°14'03.59"N to 12°14'11.71"N

LONGITUDE : 79°45'05.95"E to 79°45'14.45"E

LOCATION PLAN

NOT TO SCALE

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 LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

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



PLATE NO-ID

DATE OF SURVEY : 01.10.2025

APPLICANT:

THIRU.PJAGADEESAN,
S/o.PACHAIYAPPAN,
NO.85/2, KANAKU PILLAI STREET,
ANNAMPAKKAM VILLAGE,
TINDIVANAM TALUK,
VILUPPURAM DISTRICT - 604 101.

QUARRY LEASE APPLIED AREA:

S.F.NO'S : 80 (P),
EXTENT : 4.50.0 Ha,
VILLAGE : KEEZHSEVUR,
TALUK : TINDIVANAM,
DISTRICT : VILUPPURAM.

INDEX

- Q.LEASE APPLIED BOUNDARY 
- APPROACH ROAD 
- VILLAGE ROAD 
- STATE HIGHWAY 
- HABITATIONS 

KEY PLAN

Not To Scale

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

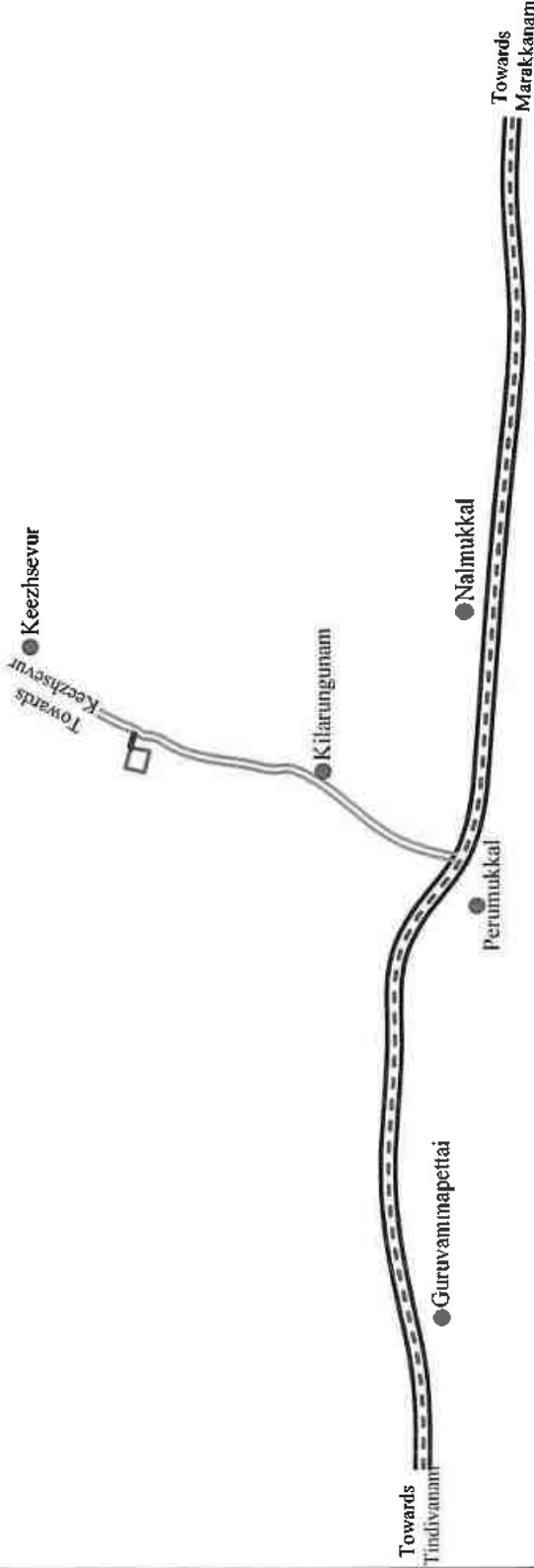




PLATE NO-1A
DATE OF SURVEY : 01.10.2025

APPLICANT:
THIRU.PJAGADEESAN,
S/o.PACHAIYAPPAN,
NO.85/2, KANAKKU PILLAI STREET,
ANNAMPAKKAM VILLAGE,
TINDIVANAM TALUK,
VILUPPURAM DISTRICT - 604 101.

QUARRY LEASE APPLIED AREA:
S.F.NO'S : 80 (P),
EXTENT : 4.50.0 Ha,
VILLAGE : KEEZHSEVUR,
TALUK : TINDIVANAM,
DISTRICT : VILUPPURAM.

INDEX

TOPO SHEET No.	: 57 P/ 16
LATITUDE	: 12°14'03.59"N to 12°14'11.71"N
LONGITUDE	: 79°45'05.95"E to 79°45'14.45"E
Q.LEASE APPLIED BOUNDARY	
7.5m SAFETY DISTANCE	
300M RADIUS	
500M RADIUS	
1KM RADIUS	
APPROACH ROAD	
VILLAGE ROAD	
BARREN LAND	
TREES	
SEASONAL AGRICULTURE	
QUARRY PIT	
TANK	
NILAVIAL VAIKKAL	
CRUSHER PLANT	
HABITATION	
SEVUR R.F.	

LAND USE PATTERN

DESCRIPTION	AREA IN (%)
ROAD	01
TREES	10
BARREN LAND	20
AGRICULTURE LAND	18
WATER BODIES	35
RESERVE FOREST	12
HABITATION	04

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.NA FARAJAN, M.Sc, M.Phil.,
QUALIFIED PERSON

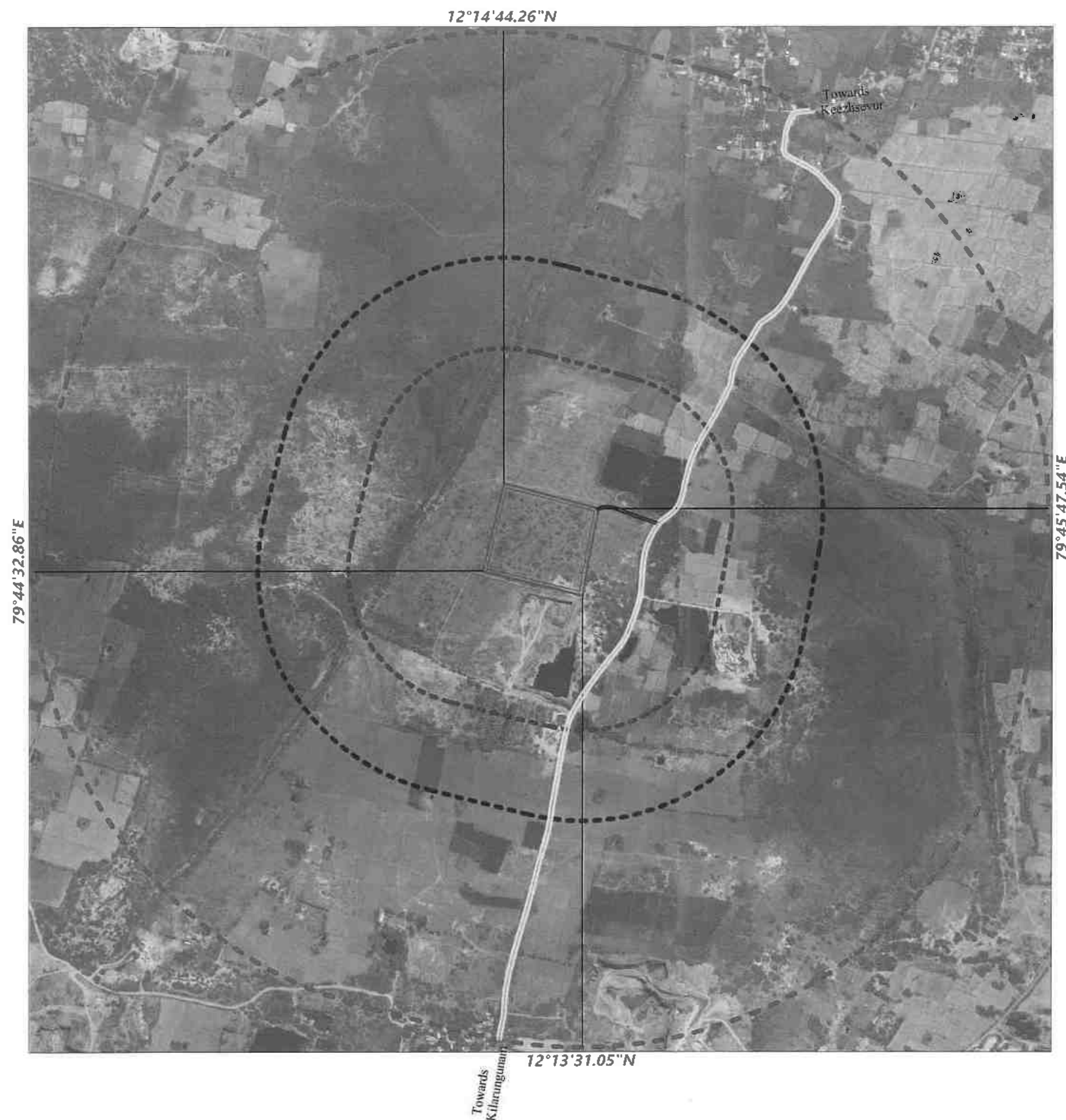


PLATE NO-IB

DATE OF SURVEY : 01.10.2025

APPLICANT:

THIRU.PJAGADEESAN,
S/o.PACHAIYAPPAN,
NO.85/2, KANAKKU PILLAI STREET,
ANNAMPAKKAM VILLAGE,
TINDIVANAM TALUK,
VILUPPURAM DISTRICT - 604 101.

QUARRY LEASE APPLIED AREA:

S.F.NO'S : 80 (P),
EXTENT : 4.50.0 Ha,
VILLAGE : KEEZHSEVUR,
TALUK : TINDIVANAM,
DISTRICT : VILUPPURAM.

INDEX

TOPO SHEET No. : 57 P/16

LATITUDE : 12°14'03.59"N to 12°14'11.71"N

LONGITUDE : 79°45'05.95"E to 79°45'14.45"E

Q.LEASE APPLIED BOUNDARY	
7.5m SAFETY DISTANCE	
300M RADIUS	
500M RADIUS	
1KM RADIUS	
APPROACH ROAD	
VILLAGE ROAD	

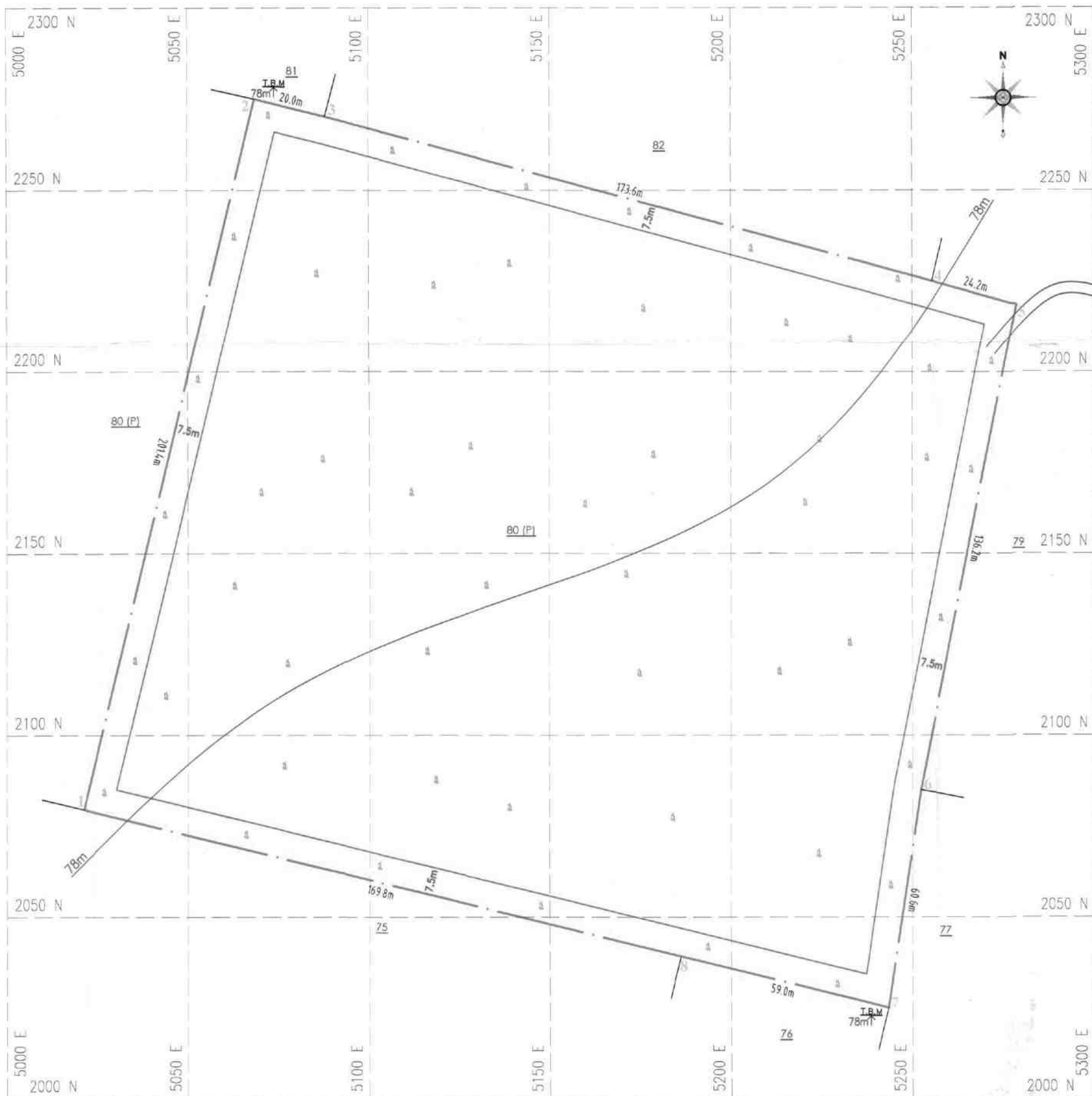
SATELLITE IMAGERY MAP

SCALE 1: 10,000

PREPARED BY :

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

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



BOUNDARY CO-ORDINATES		
S.N.	LATITUDE	LONGITUDE
1	12° 14' 05.33"N	79° 45' 05.95"E
2	12° 14' 11.71"N	79° 45' 07.49"E
3	12° 14' 11.56"N	79° 45' 08.13"E
4	12° 14' 10.11"N	79° 45' 13.68"E
5	12° 14' 09.90"N	79° 45' 14.45"E
6	12° 14' 05.55"N	79° 45' 13.60"E
7	12° 14' 03.59"N	79° 45' 13.31"E
8	12° 14' 04.05"N	79° 45' 11.41"E

DATUM : UTM-WGS84, ZONE 44 NORTH

PLATE NO-II
DATE OF SURVEY : 01.10.2025

APPLICANT:
THIRU.PJAGADEESAN,
S/o.PACHAIYAPPAN,
NO.85/2, KANAKKU PILLAI STREET,
ANNAMPAKKAM VILLAGE,
TINDIVANAM TALIK,
VILUPPURAM DISTRICT - 604 101.

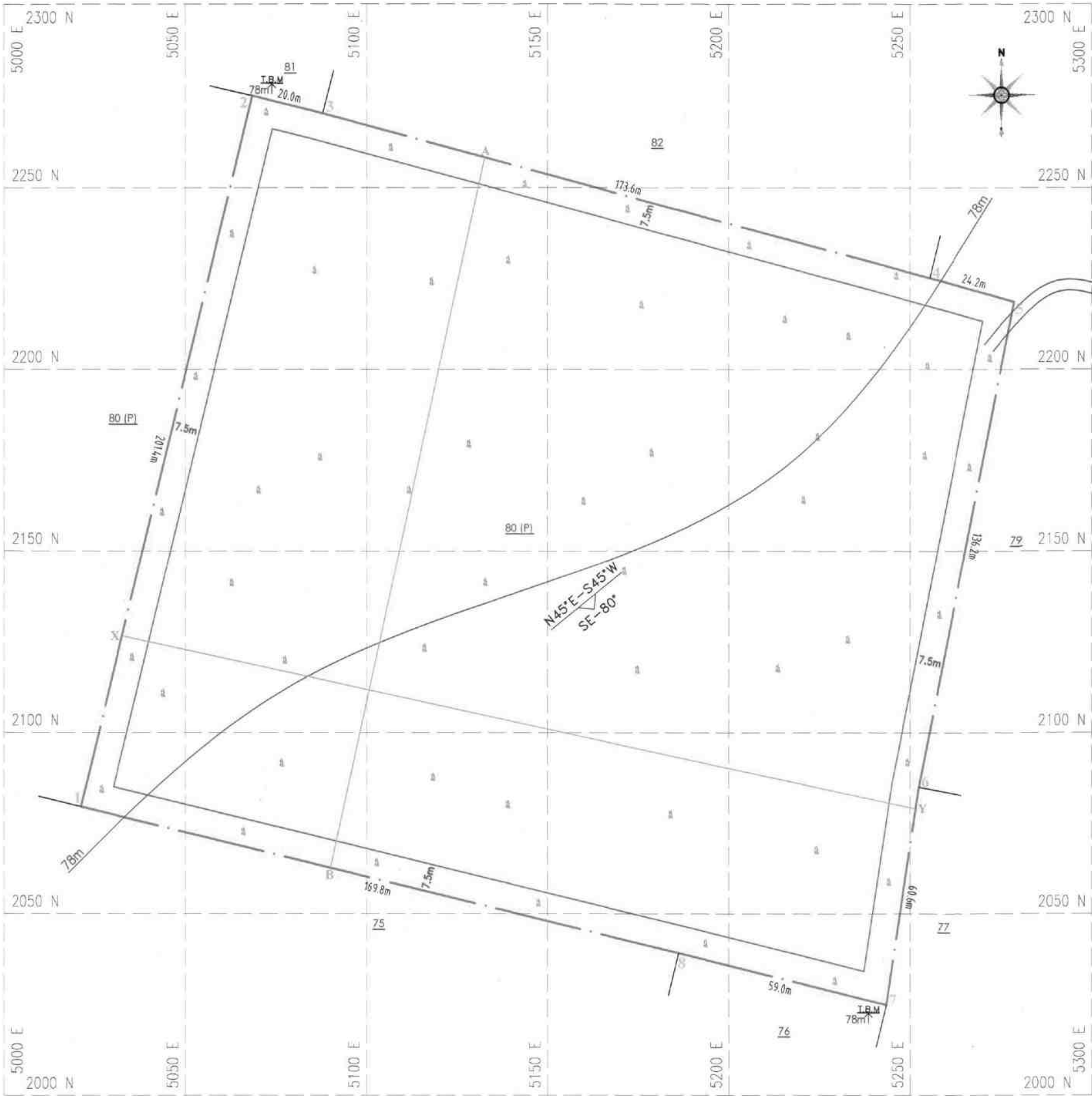
QUARRY LEASE APPLIED AREA:
S.F.NO'S : 80 (P),
EXTENT : 4.50.0 Ha,
VILLAGE : KEEZHSEVUR,
TALUK : TINDIVANAM,
DISTRICT : VILUPPURAM.

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

QUARRY LEASE & SURFACE PLAN
SCALE 1 : 1000

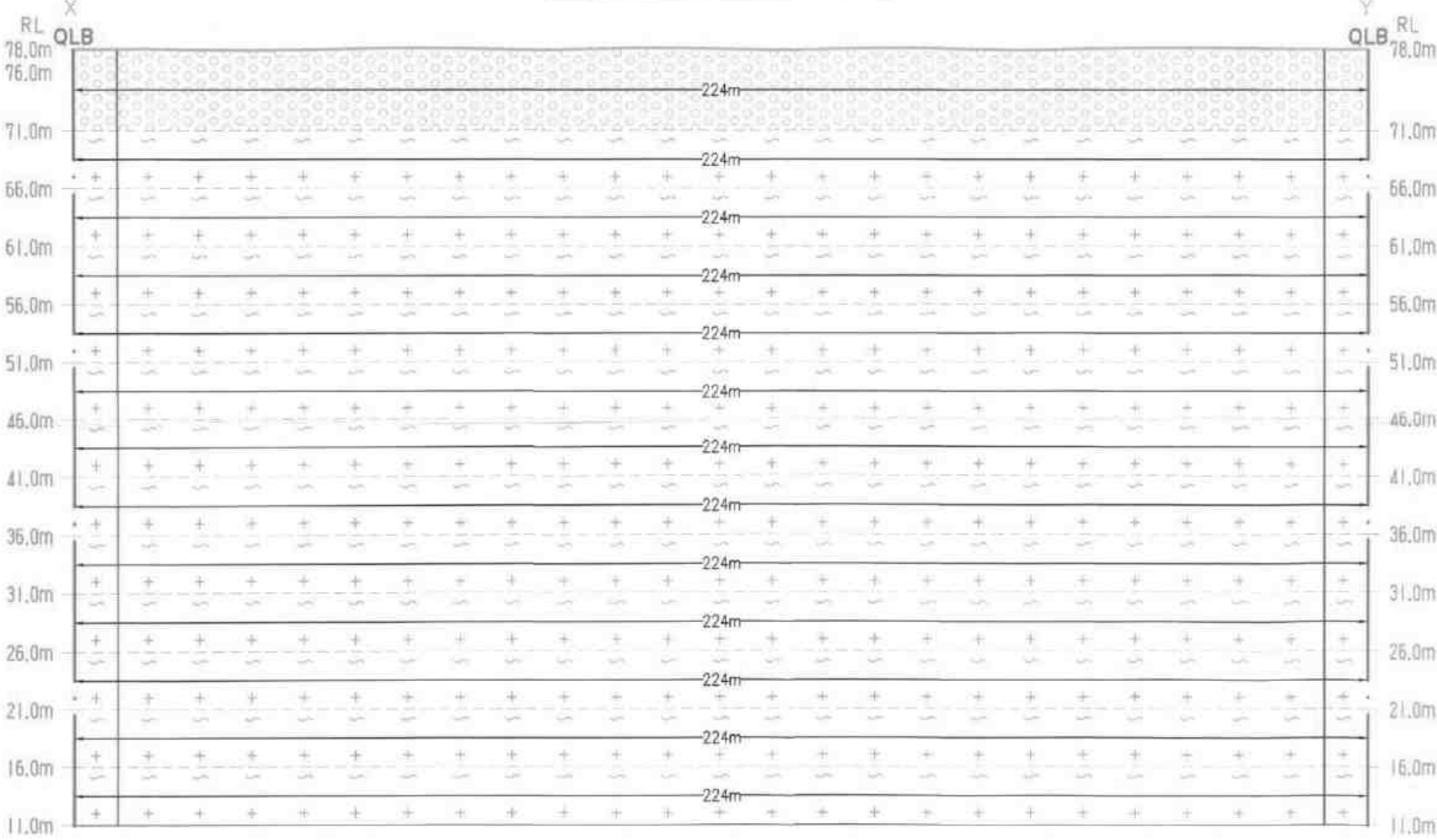
PREPARED BY:
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IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

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



30 OCT 2025 BOUNDARY CO-ORDINATES		
S.N	LATITUDE	LONGITUDE
1	12° 14' 12.71"N	79° 45' 05.95"E
2	12° 14' 11.71"N	79° 45' 07.49"E
3	12° 14' 11.56"N	79° 45' 08.13"E
4	12° 14' 10.11"N	79° 45' 13.68"E
5	12° 14' 09.90"N	79° 45' 14.45"E
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7	12° 14' 03.59"N	79° 45' 13.31"E
8	12° 14' 04.05"N	79° 45' 11.41"E
DATUM : UTM-WGS84, ZONE 44 NORTH		

SECTION ALONG X-Y



SECTION ALONG A-B



PLATE NO-III

DATE OF SURVEY : 01.10.2025

APPLICANT:
THIRU.PJAGADEESAN,
S/o.PACHAIYAPPAN,
NO.85/2, KANAKKU PILLAI STREET,
ANNAMPAKKAM VILLAGE,
TINDIVANAM TALIK,
VILUPPURAM DISTRICT - 604 101.

QUARRY LEASE APPLIED AREA:
S.F.NO'S : 80 (P),
EXTENT : 4.50.0 Ha,
VILLAGE : KEEZHSEVUR,
TALUK : TINDIVANAM,
DISTRICT : VILUPPURAM.

INDEX

Q.LEASE APPLIED BOUNDARY

7.5m SAFETY DISTANCE

TEMPORARY BENCH MARK

APPROACH ROAD

CONTOUR

SCRUB

GRAVEL

ROUGH STONE

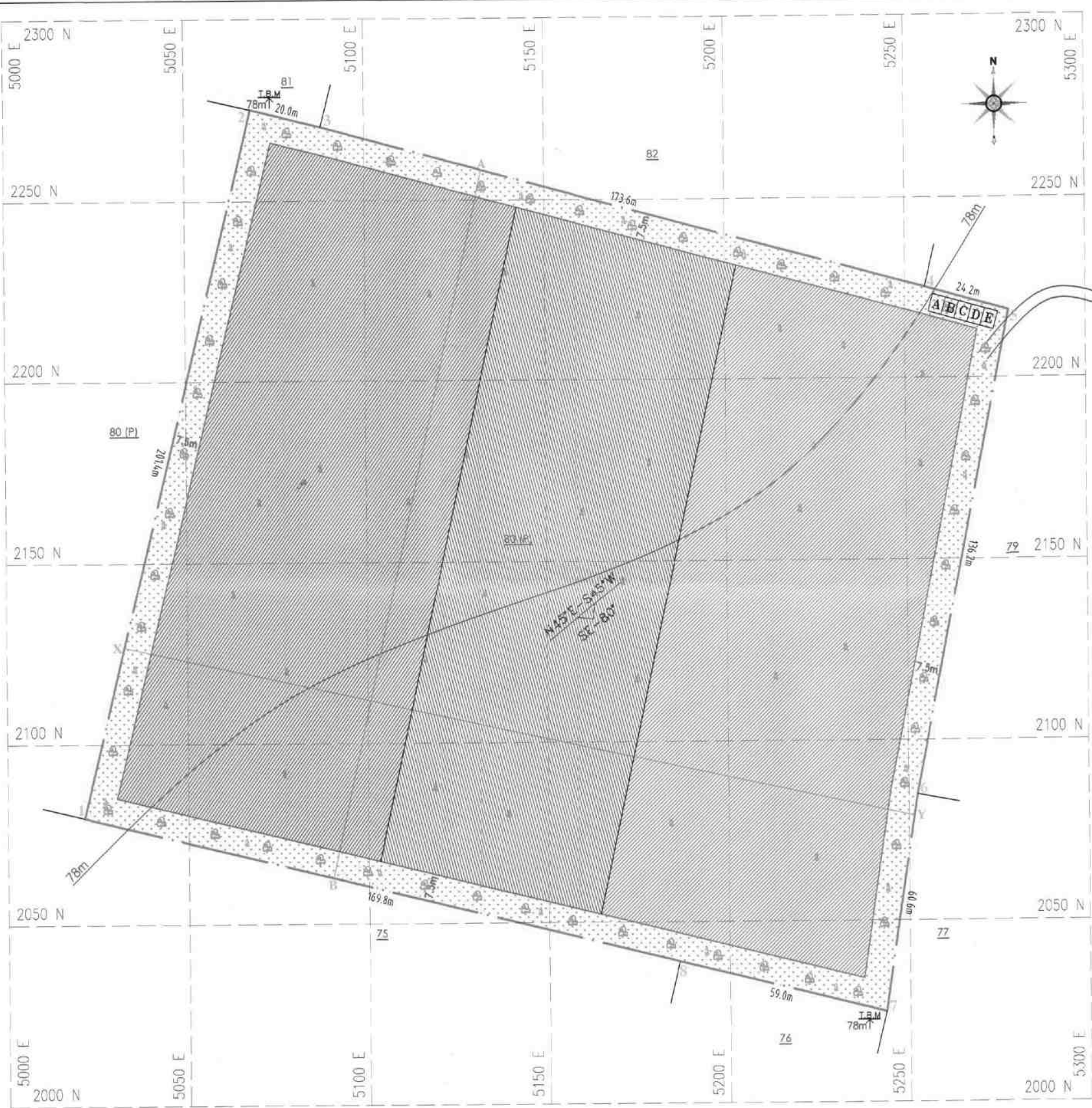
STRIKE & DIP

**TOPOGRAPHY, GEOLOGICAL
PLAN & SECTIONS**

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

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

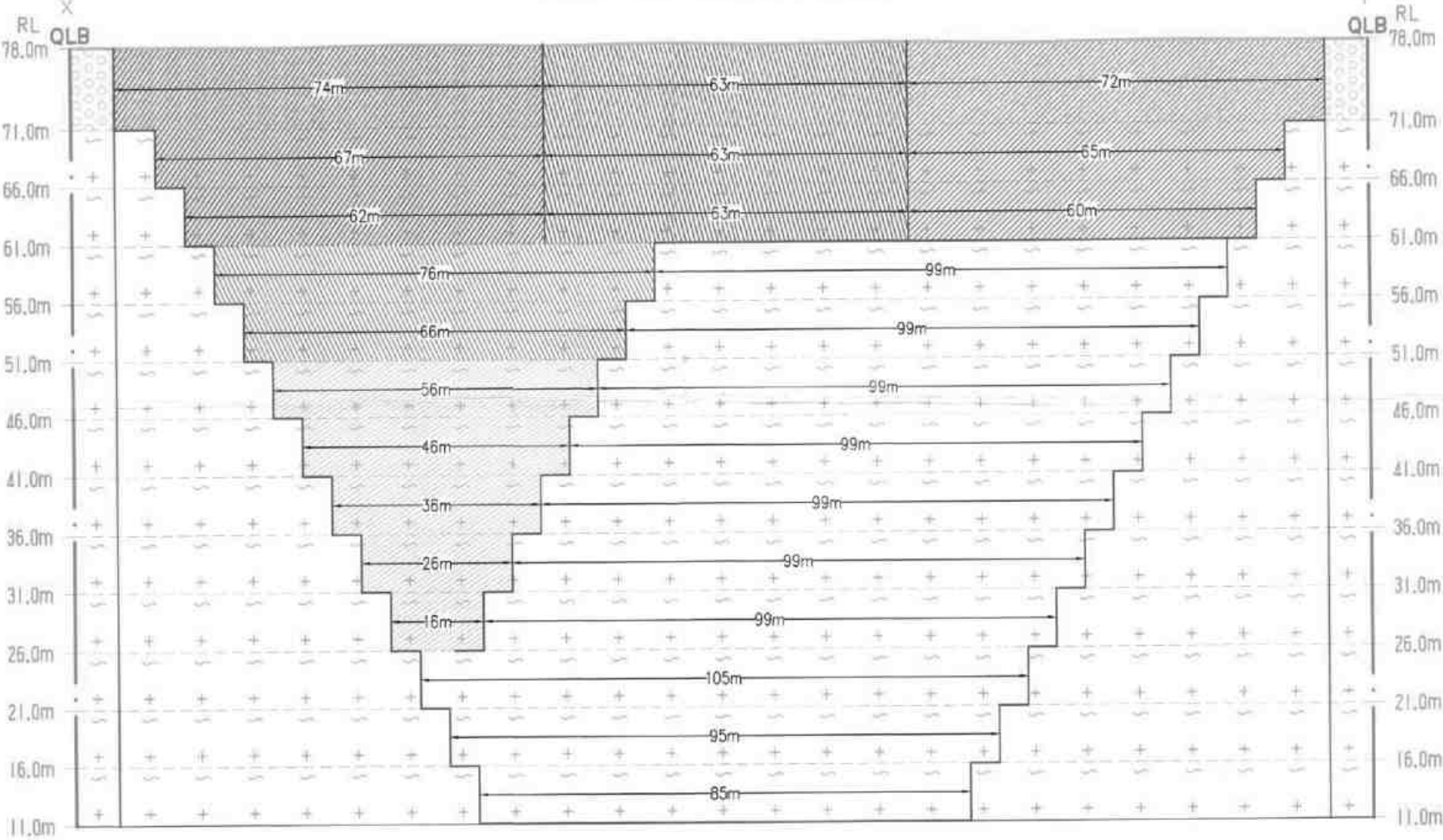
C.NATARAJAN,M.Sc,M.Phil.,
QUALIFIED PERSON



BOUNDARY CO-ORDINATES		
செதுப்புப் பரம்பல்		
S.N.	LATITUDE	LONGITUDE
1	12° 14' 05.33"N	79° 45' 05.95"E
2	12° 14' 11.71"N	79° 45' 07.49"E
3	12° 14' 11.56"N	79° 45' 08.13"E
4	12° 14' 10.11"N	79° 45' 13.68"E
5	12° 14' 09.90"N	79° 45' 14.45"E
6	12° 14' 05.55"N	79° 45' 13.60"E
7	12° 14' 03.59"N	79° 45' 13.31"E
8	12° 14' 04.05"N	79° 45' 11.41"E

DATUM : UTM-WGS84, ZONE 44 NORTH

SECTION ALONG X-Y



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	

Proposed area to be Planted

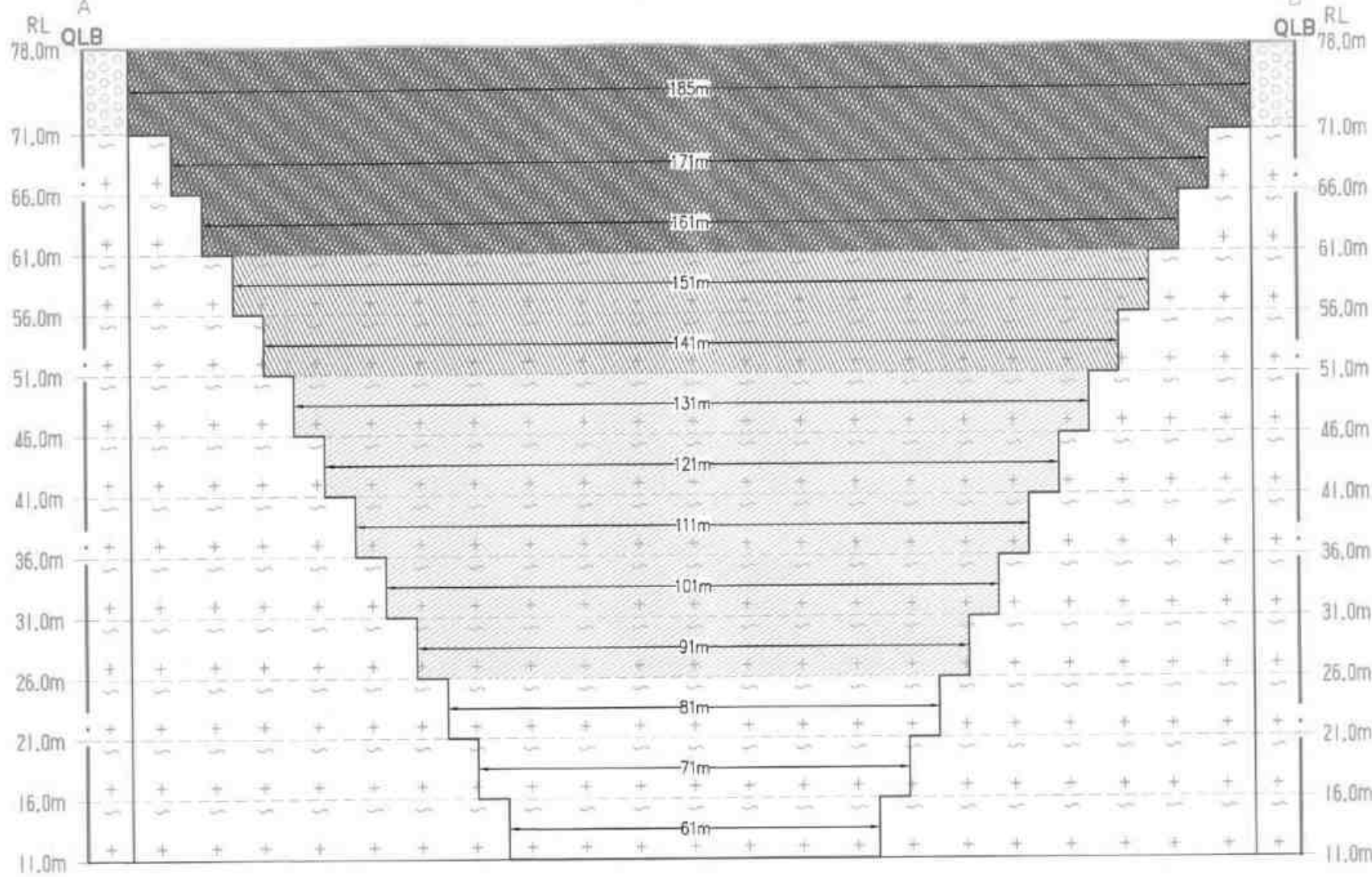
- PROPOSED SITE SERVICES**
- A - OFFICE
 - B - STORE ROOM
 - C - FIRST AID ROOM
 - D - REST SHELTER
 - E - TOILET

PLATE NO-V
DATE OF SURVEY : 01.10.2025

APPLICANT:
THIRU.PJAGADEESAN,
S/o.PACHAIYAPPAN,
NO.85/2, KANAKKU PILLAI STREET,
ANNAMPAKKAM VILLAGE,
TINDIVANAM TALUK,
VILUPPURAM DISTRICT - 604 101.

QUARRY LEASE APPLIED AREA:
S.F.NO'S : 80 (P),
EXTENT : 4.50.0 Ha,
VILLAGE : KEEZHSEVUR,
TALUK : TINDIVANAM,
DISTRICT : VILUPPURAM.

SECTION ALONG A-B



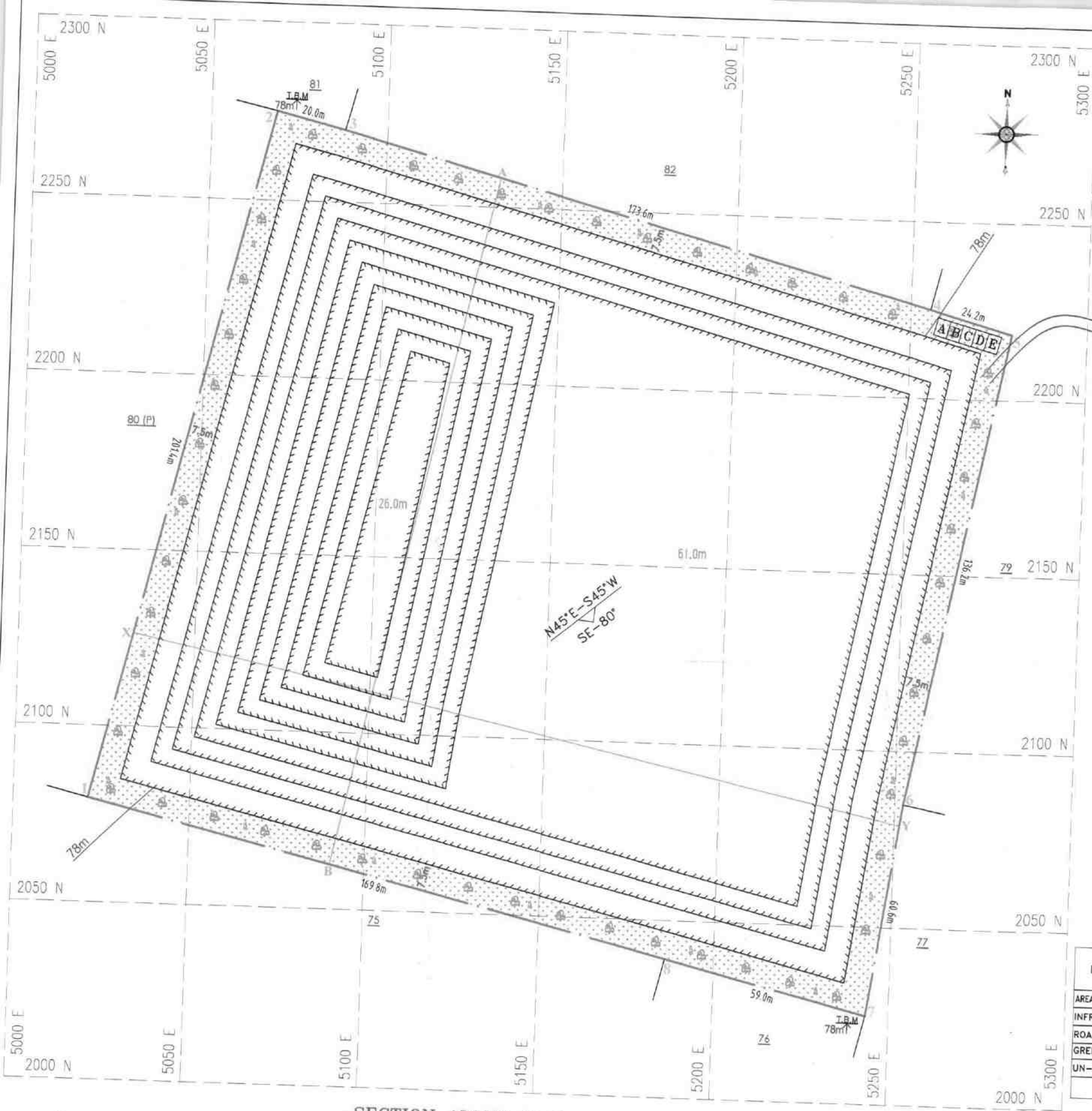
INDEX	
Q.LEASE APPLIED BOUNDARY	
7.5m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
CONTOUR	
SCRUB	
GRAVEL	
ROUGH STONE	
STRIKE & DIP	

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



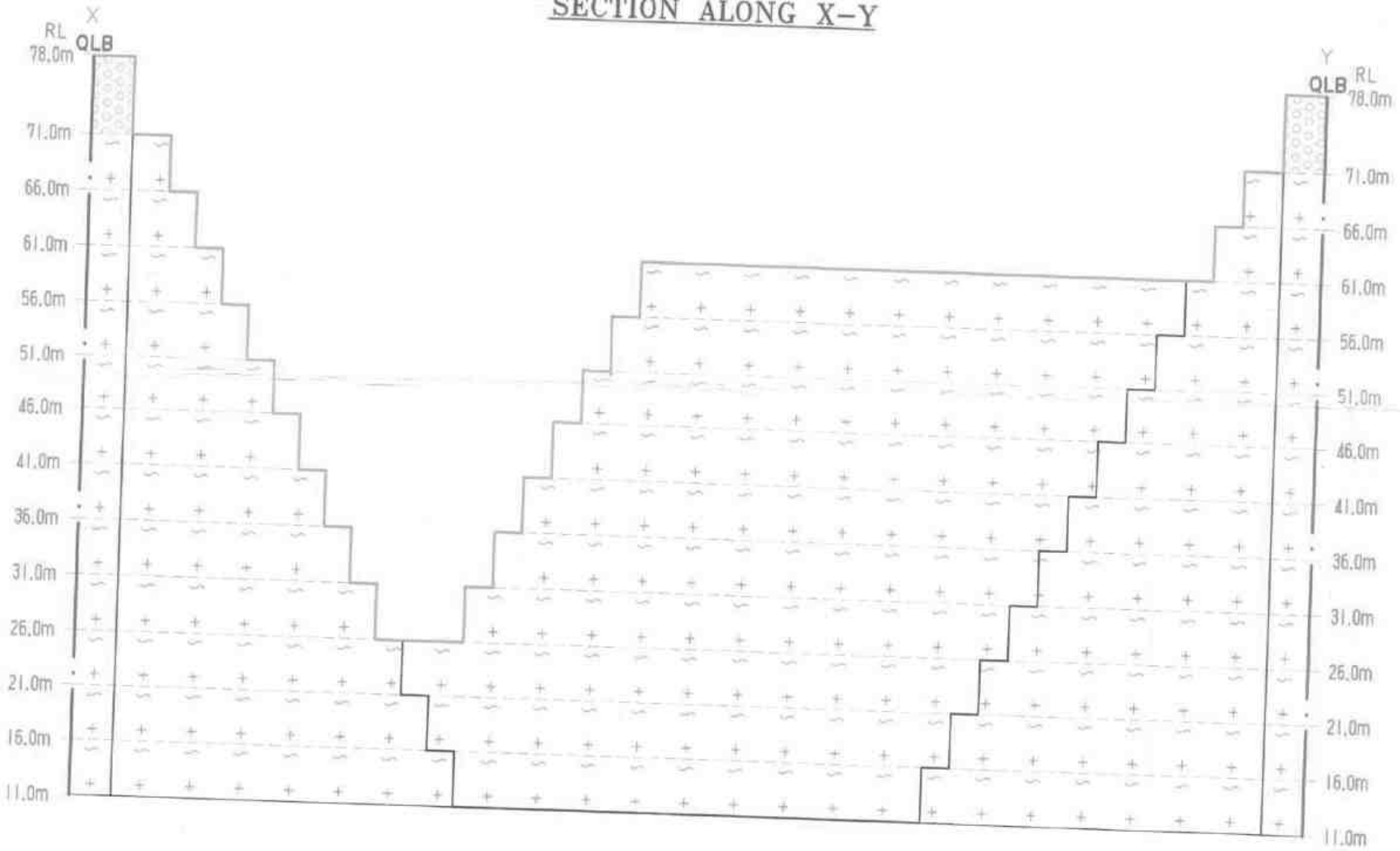
BOUNDARY CO-ORDINATES		
S.N.	LATITUDE	LONGITUDE
1	12° 14' 05.33"N	79° 45' 05.95"E
2	12° 14' 11.71"N	79° 45' 07.49"E
3	12° 14' 11.56"N	79° 45' 08.13"E
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5	12° 14' 09.90"N	79° 45' 14.45"E
6	12° 14' 05.55"N	79° 45' 13.60"E
7	12° 14' 03.59"N	79° 45' 13.31"E
8	12° 14' 04.05"N	79° 45' 11.41"E

DATUM : UTM-WGS84, ZONE 44 NORTH

PRESENT & POST LAND USE PATTERN

DESCRIPTION	PRESENT AREA (Ha)	AREA AT THE END OF THIS QUARRYING PERIOD (Ha)
AREA UNDER QUARRYING	NII	3.87.0
INFRASTRUCTURE	NII	0.01.0
ROADS	NII	0.01.0
GREEN BELT	NII	0.61.0
UN-UTILIZED AREA	4.50.0	NII
GRAND TOTAL	4.50.0	4.50.0

SECTION ALONG X-Y



Ultimate Pit Dimension of end of the Mining Plan Period
L209mX185(Avg)mXD52m(Max)

PROPOSED SITE SERVICES

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

SECTION ALONG A-B

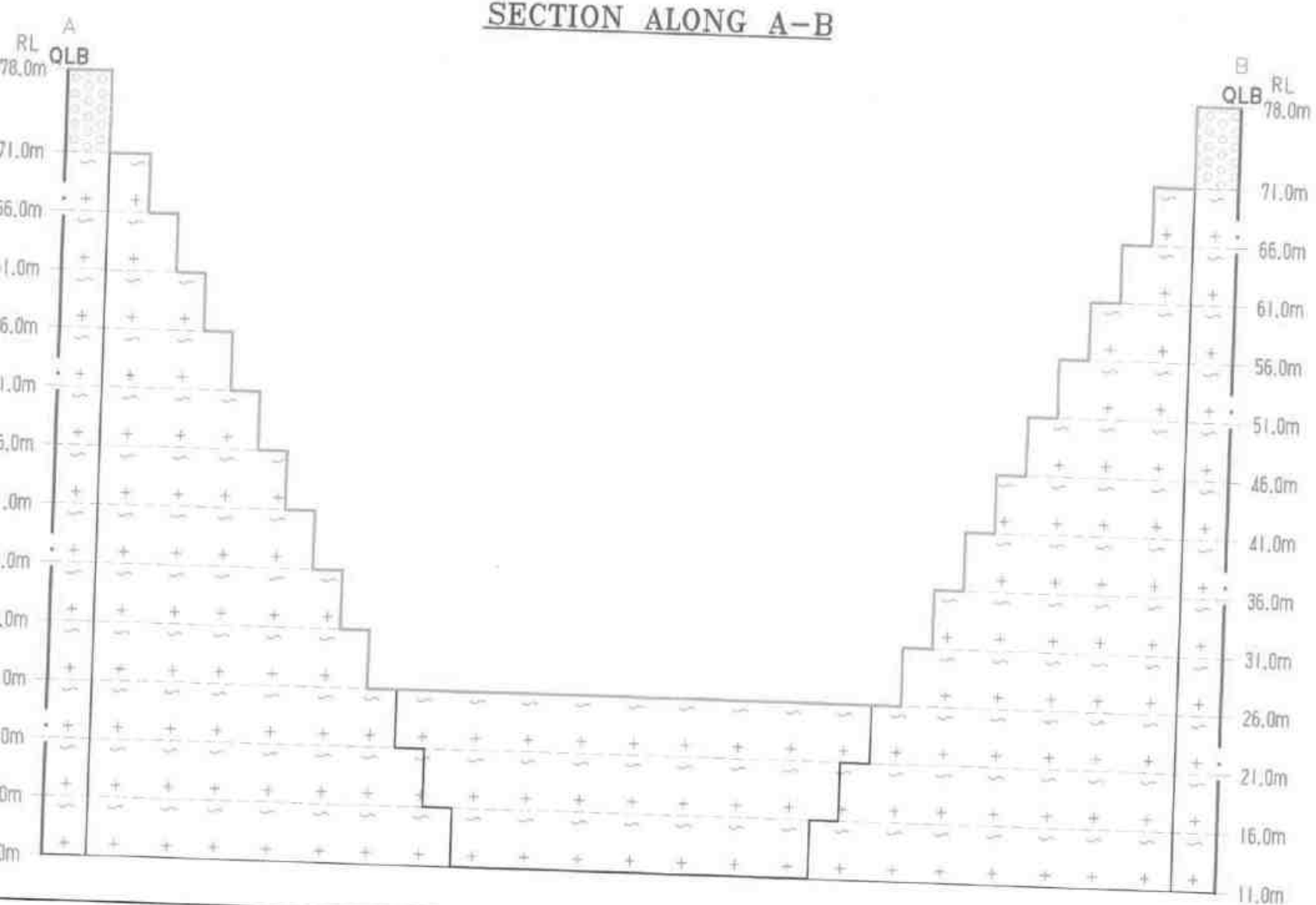


PLATE NO-VI

DATE OF SURVEY : 01.10.2025

APPLICANT:

THIRU.PJAGADEESAN,
S/o.PACHAIYAPPAN,
NO.85/2, KANAKKU PILLAI STREET,
ANNAMPACKAM VILLAGE,
TINDIVANAM TALUK,
VILUPPURAM DISTRICT - 604 101.

QUARRY LEASE APPLIED AREA:

S.F.NO'S : 80 (P),
EXTENT : 4.50.0 Ha,
VILLAGE : KEEZHSEVUR,
TALUK : TINDIVANAM,
DISTRICT : VILUPPURAM.

INDEX

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

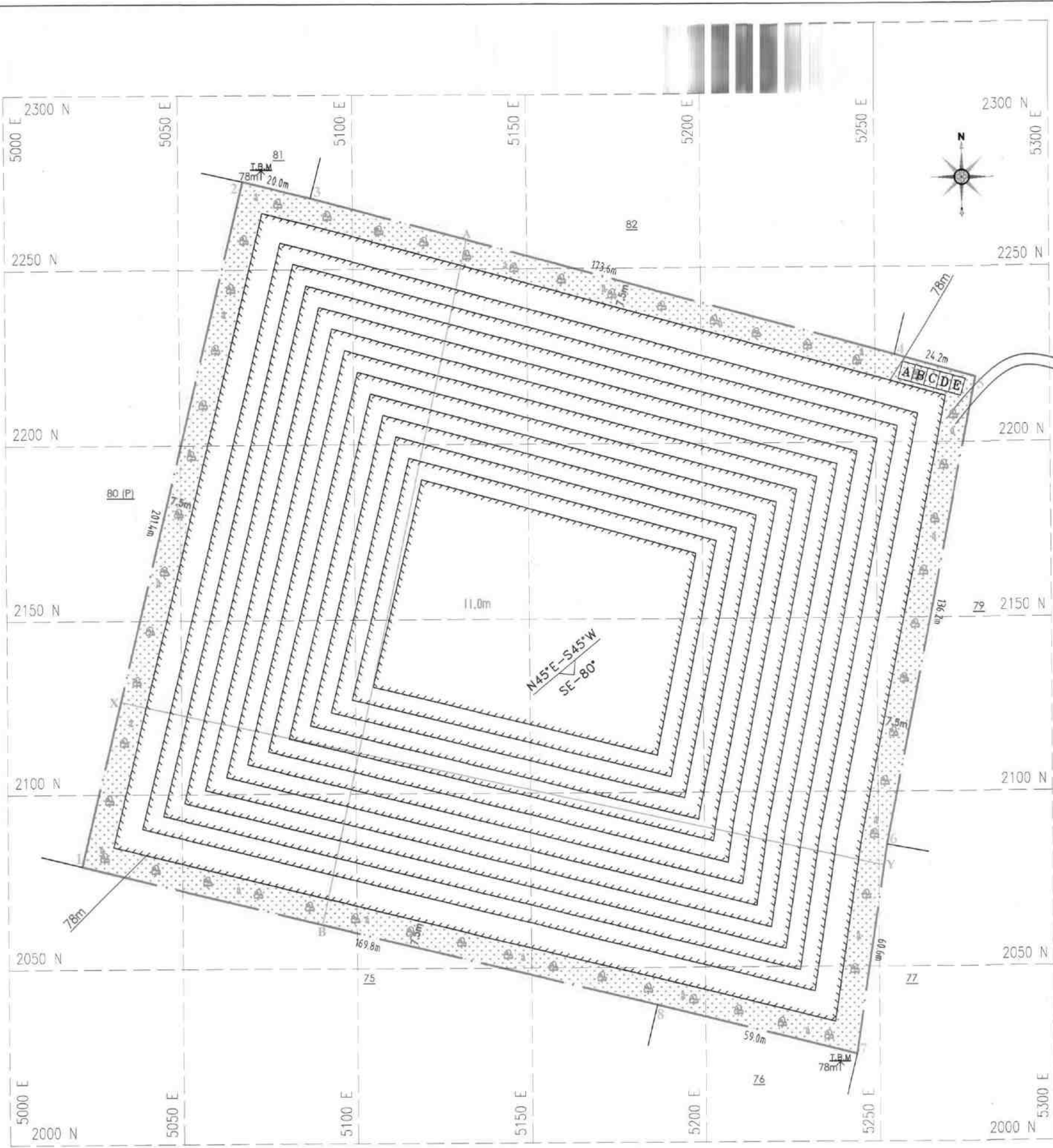
PROGRESSIVE QUARRY PLAN & SECTIONS

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



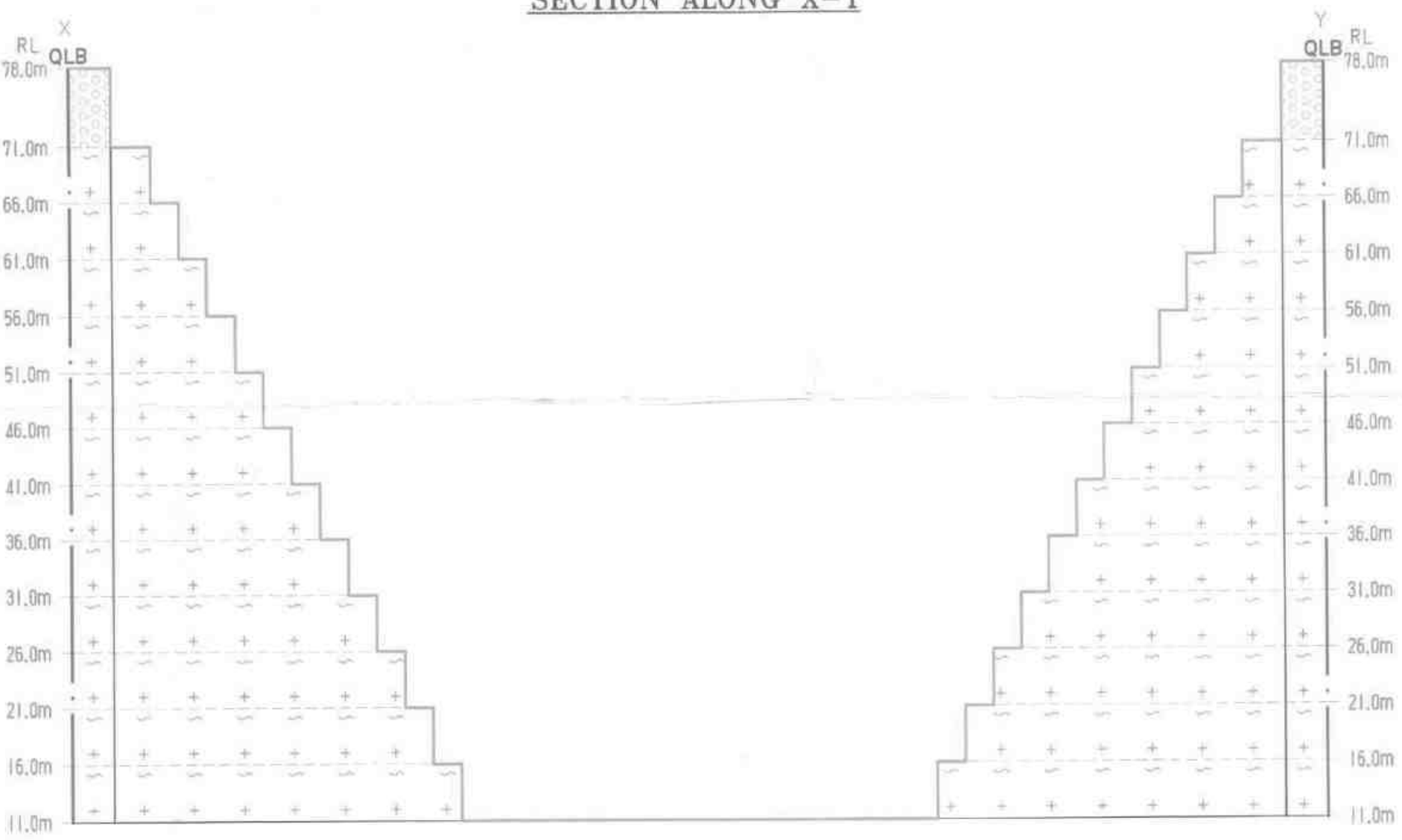
30 OCT 2025

BOUNDARY CO-ORDINATES

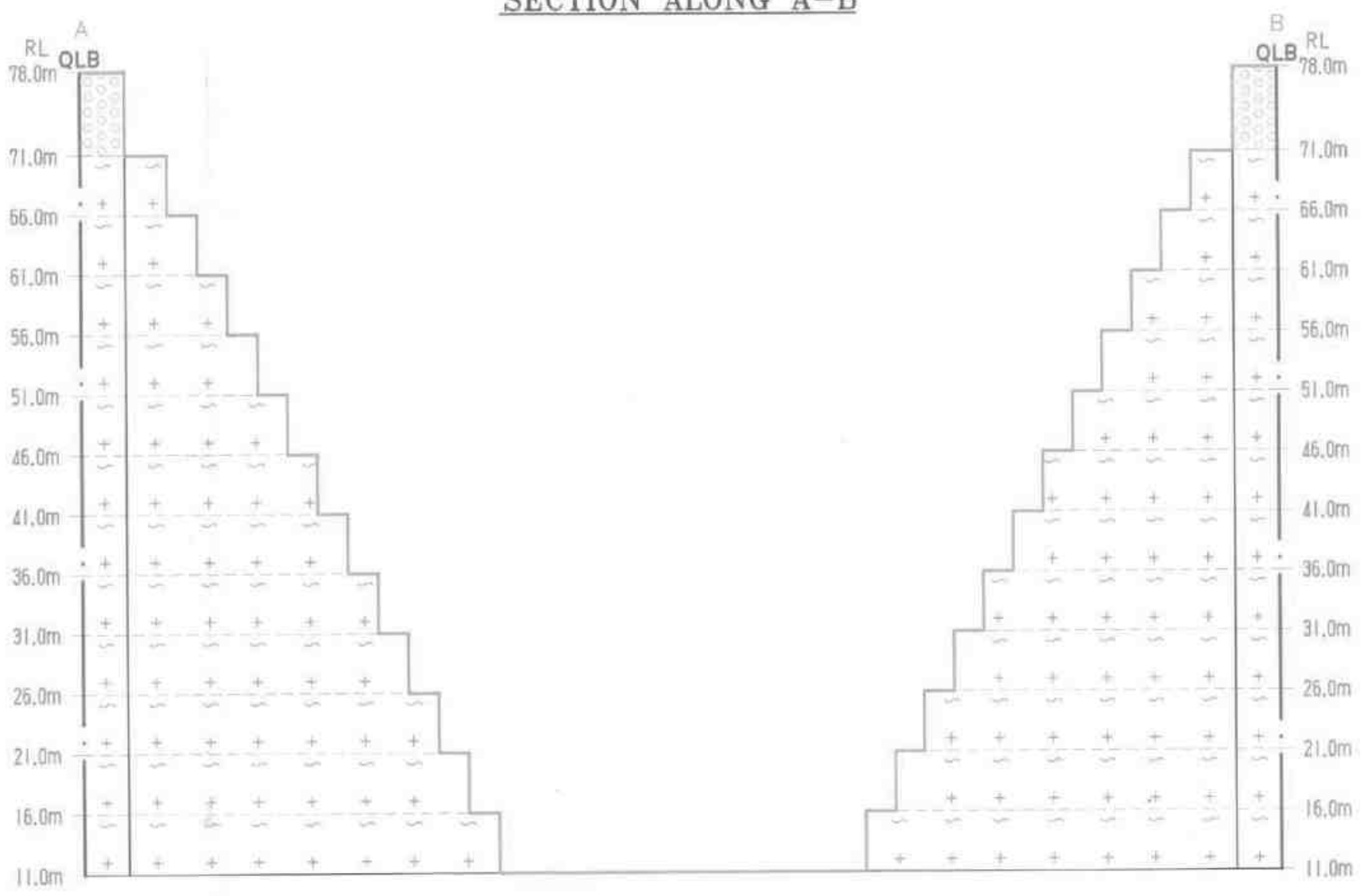
S.N.	NITUDE	LONGITUDE
1	12° 14' 05.33"N	79° 45' 05.95"E
2	12° 14' 11.71"N	79° 45' 07.49"E
3	12° 14' 11.56"N	79° 45' 08.13"E
4	12° 14' 10.11"N	79° 45' 13.68"E
5	12° 14' 09.90"N	79° 45' 14.45"E
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7	12° 14' 03.59"N	79° 45' 13.31"E
8	12° 14' 04.05"N	79° 45' 11.41"E

DATUM : UTM-WGS84, ZONE 44 NORTH

SECTION ALONG X-Y



SECTION ALONG A-B



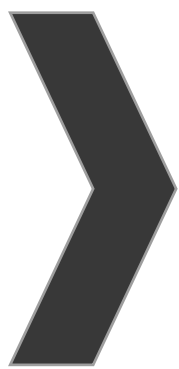
Ultimate Pit Dimension of
end of the Quarry Lease Period
L209mX185(Avg)mXD67m(Max)

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

PLATE NO-VII
DATE OF SURVEY : 01.10.2025
APPLICANT:
THIRU.PJAGADESAN,
S/o.PACHAIAPPAN,
NO.85/2, KANAKKU PILLAI STREET,
ANNAMPACKAM VILLAGE,
TINDIVANAM TALUK,
VILUPPURAM DISTRICT - 604 101.
QUARRY LEASE APPLIED AREA:
S.F.NO'S : 80 (P),
EXTENT : 4.50.0 Ha,
VILLAGE : KEEZHSEVUR,
TALUK : TINDIVANAM,
DISTRICT : VILUPPURAM.

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Q.LEASE APPLIED BOUNDARY	
7.5m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH 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,M.Phil.,
QUALIFIED PERSON



ANNEXURE-4

From
Thiru.S.Rameshkumar, M.Sc.,
Assistant Director,
Dept. of Geology and Mining,
Viluppuram District,
Viluppuram.

To
Thiru.P.Jagadeesan,
S/o.Pachaiyappan,
No.85/2, Kanakku Pillai Street,
Annampakkam Village,
Tindivanam Taluk,
Viluppuram District.

Rc.No.B/G&M/251/2025, Dated 30.10.2025.

Sir,

Sub: Mines and Minerals - Minor Mineral - Rough stone and Gravel - Viluppuram District - Tindivanam Taluk - Keelsevur Village - Patta land in S.F.No.80 (Part) - over an extent of 4.50.0 Hectares - quarry lease application preferred by Thiru.P.Jagadesan, S/o.Pachaiyappan - Details of quarries situated within 500 meter radial distance - furnished - Regarding.

- Ref: 1. Assistant Director, Geology and Mining, Viluppuram
Precise area communication notice Rc.No.
B/G&M/251/2025, Dated: 29.09.2025.
2. Representation received from Thiru.P.Jagadesan,
S/o.Pachaiyappan, Dated 23.10.2025.

With reference to your letter in the reference 2nd cited, the details of existing, proposed and abandoned quarries located within 500 mts. radial distance from the periphery of the proposed Rough stone and Gravel quarry over an extent of 4.50.0 hectares of patta land in S.F.No.80 (Part) of Keelsevur Village, Tindivanam Taluk, Viluppuram District are as follows.

1. Existing quarries:

Sl. No.	Name of the lessee / permit holder	Name of the Mineral	Taluk & Village	S.F. Nos.	Extent (in hecets)	Lease period	Remarks
1.	M/s.Karpaga Vinayagaaa Mines, No.50, NH2, Kambar Street, Maraimalai Nagar, Chenagalpattu - 603 209	Rough stone & Gravel	Tindivanam & Keelsevur	15(P) 76/1 (P)	3.03.0 0.97.0 4.00.0	26.12.2024 to 25.12.2034	-

II. Proposed Area :

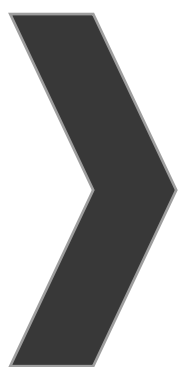
Sl. No.	Name of the lessee / permit holder	Name of the Mineral	Taluk & Village	S.F. Nos.	Extent (in hecets)	Remarks
1.	P.Jagadeesan, S/o.Pachaiyappan, No.85/2, Kanakku Pillai Street, Annampakkam Village, Tindivanam Taluk, Viluppuram District.	Rough stone & Gravel	Tindivanam & Keezsevir	80	4.50.0	.

III. Abandoned quarries :

Sl. No.	Name of the lessee / permit holder	Name of the Mineral	Taluk & Village	S.F. Nos.	Extent (in hecets)	Lease period	Remarks
1.	A.Kamatchi, W/o.Arivoli, No.64. Appasamy Nagar, Tindivnam.	Rough stone	Tindivanam & Keezsevir	76/2	0.87.0	23.4.2007 to 22.4.2012	.
2.	P.Srinivasan, S/o. Pattabi Reddiyar, No.142, Mosque Street, C.Pallavaram, Chennai.	Rough stone	Tindivanam & Senalur	4/1A 4/2A1 4/2B1 (P)	0.82.0 0.59.5 0.20.0/ <u>0.20.5</u> 1.61.5 / <u>1.62.0</u>	13.11.2015 to 12.11.2020	.

Assistant Director,
Dept. of Geology and Mining,
Viluppuram.

30/10/24



ANNEXURE-5

சான்று

விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், கீழ்சேஷூர் கிராமம் அயன் புஞ்சை சர்வே எண், 80 (P) - ல் ஹெக்டேர் 4.50.0 நிலப்பரப்பில் திரு. பச்சையப்பன் மகன் ப.ஜெகதீசன் என்பவர் சாதாரண கருங்கல் மற்றும் சரள் வெட்டி எடுக்க விண்ணப்பித்துள்ளார். மேற்படி புல எண்ணில் ஓடைகள் எதுவுமில்லை. மேற்படி புல எண்ணில் உயர் அழுத்த மின் கம்பிகள் எதுவுமில்லை. மேற்படி புல எண்ணில் 300 மீட்டர் சுற்றளவில் எந்தவிதமான குடியிருப்புகள், வரலாற்று சிறப்புமிக்க புராதான சின்னங்கள், கோவில்கள் எதுவுமில்லை. மேற்படி இடத்தில் கருங்கல் மற்றும் சரள் வெட்டி எடுக்க கிராமத்தில் நாளது தேதியில் ஆட்சேபனை எதுவுமில்லை என்று சான்றளிக்கப்படுகிறது.

இடம் : கீழ்சேஷூர்

தேதி : 24-10-2025

 24/10/2025

கிராம நிர்வாக அலுவலர்

கிராம நிர்வாக அலுவலர்

94. கீழ்சேஷூர் குருப்

88. சேனனூர். 89. கீழ்புதேர்

திண்டிவனம் வட்டம்

**TOPOGRAPHICAL VIEW OF
KEEZHSEVUR VILLAGE P.JAGADEESAN
ROUGHSTONE & GRAVEL QUARRY LEASE APPLIED AREA**



LOCATION DETAILS :

Name & Address of the Applicant :

P,Jagadeesan,
S/o. Pachaiyappan,
No.85/2, Kanakku pillai Street,
Annampakkam Village, Tndivanam Taluk,
Villupuram Dist., - 604101.

SF No. : 80(P)

Extend : 4.50.0 Ha.

Village : Keezhsevur

Taluk : Tindivanam

District: Villupuram

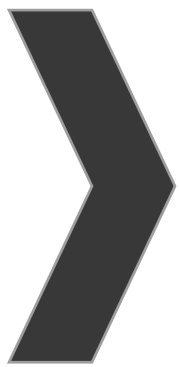
State : Tamilnadu

P. Jagadeesan
24/10/2025

அபிவிருத்தி அமைச்சர்
94. கீழ்சேவூர் குளம்
88. சேனாபுரம். 89. கீழ்ப்புத்தூர்
திண்டிவனம் வட்டம்

P. Jagadeesan

Signature of the Applicant

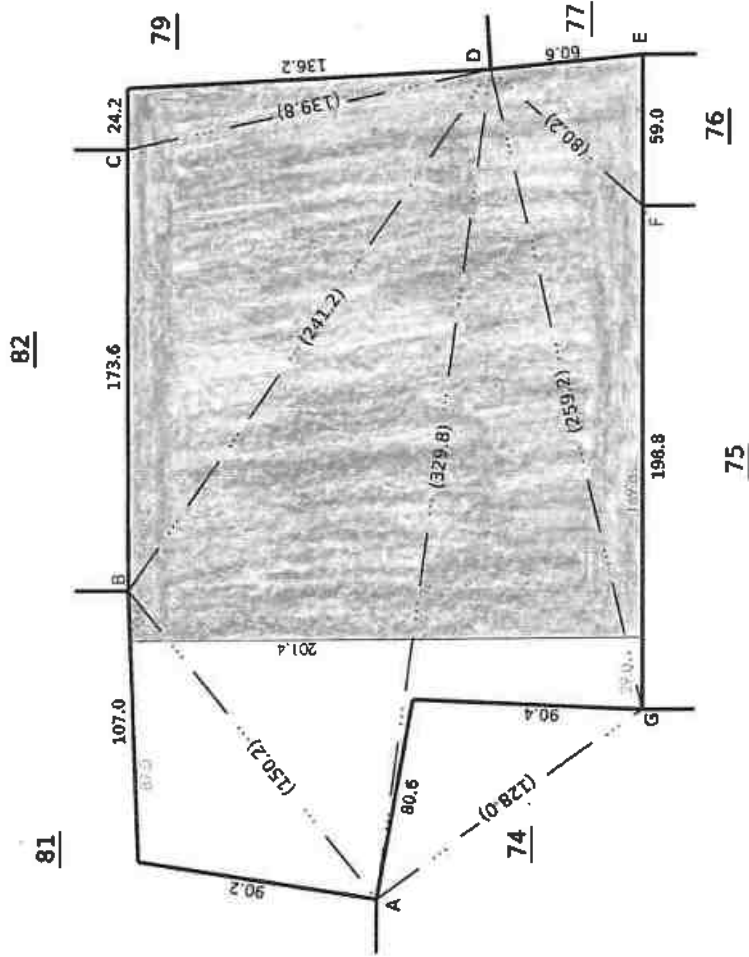


ANNEXURE-6



District : Villuppuram
Taluk : Tindivanam
Village : Keezhseviur [163]

Survey No : 80
Area : Hect 05 Ares 44.50
Scale : 1 : 2000



LEASE APPLIED AREA



Sub Collector (Civil)
Tindivanam.

TAHSELDAR
TINDIVANAM

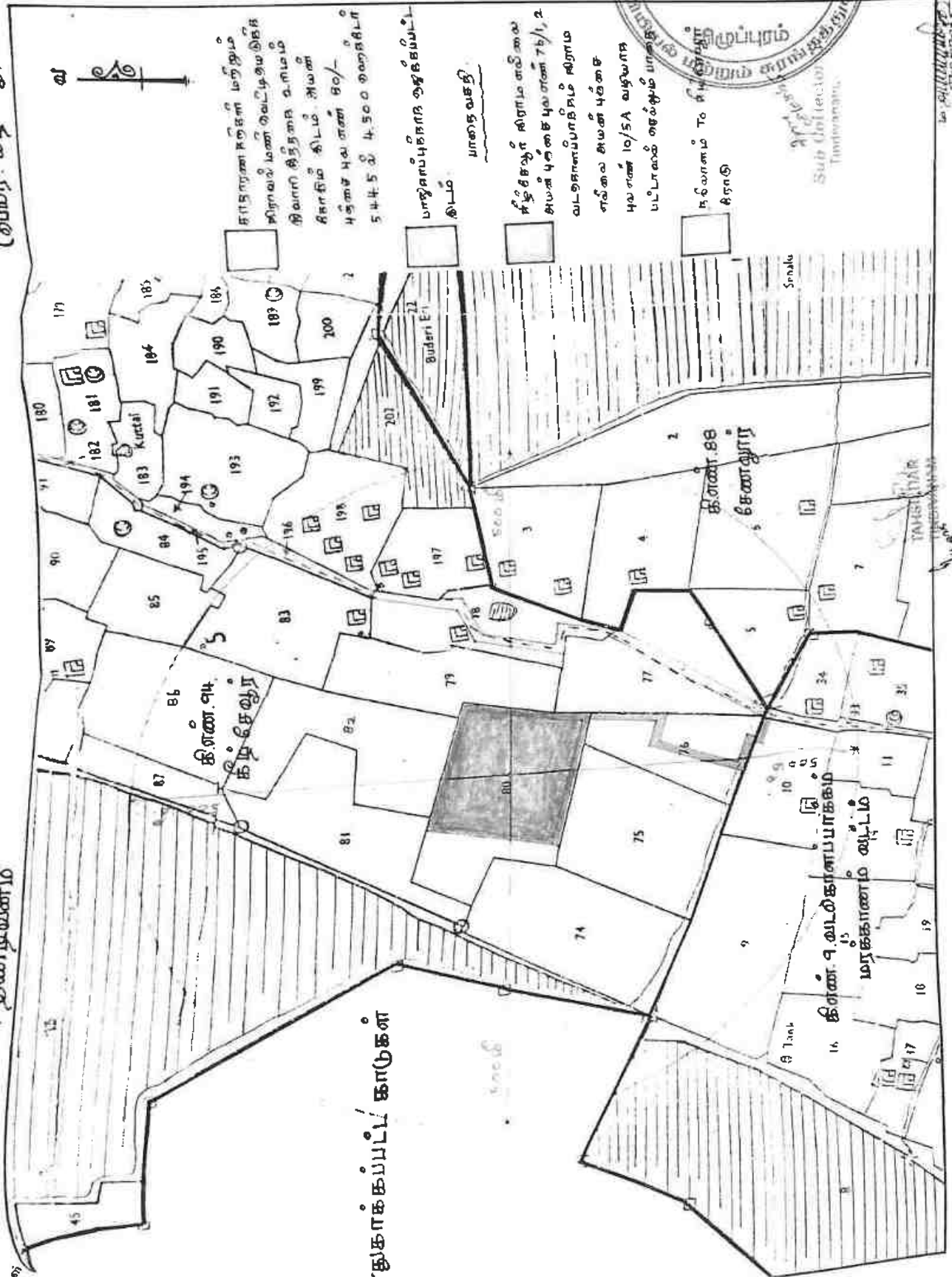
மாவட்டம்: கிருஷ்ணம்

வட்டம்: திண்டிவனம்

துகாக்கப்பட்ட காடுகள்

கிராமம்: கிழச்சேலூர்
எண்: 94

கடீருவரைபடம்



LEASE APPLIED AREA

ANNE
30 OCT 2025
Sub Director
Tirunelveli
தமிழ்நாடு அரசு
பேரவைத் துறை
30 OCT 2025



தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

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

மாவட்டம் : விழுப்புரம்

வட்டம் : திண்டிவனம்

வருவாய் கிராமம் : கீழ்சேவர்

பட்டா எண் : 1243

உரிமையாளர்கள் பெயர்

அறிவிப்பு		மனைவி		காமராசு		மறைவை		குறிப்புகள்
பட்டா எண்	ச. பிரிவு	பன்முகம்		நன்மை		மறைவை		
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்டே - ஏர்	ரூ - பை	ஹெக்டே - ஏர்	ரூ - பை	ஹெக்டே - ஏர்	ரூ - பை	
80		5 - 44.50	22.87					2025/103/07/434448
		5 - 44.50	22.87					Digitally signed Barathiraja A Zonal Deputy Tahsildar 12/06/2025 06:17:02 PM

குறிப்பு :



1. மின்னணுத் தகவல் / சான்றுகூறு நுகர்வோர் பின் பதிவேட்டிலிருந்து பெறப்பட்டவை இவற்றை தீர்வுகள்
<https://eservices.tn.gov.in> என்ற இணைய தளத்தில் P/07/03/163/01243/20360 என்ற குறிப்பு
எண்ணை உள்ளிட்டு செய்து உறுதி செய்துகொள்ளவும்.
2. இது தகவல்கள் 23-06-2025 அன்று 11:51:49 AM நேரத்தில் அச்சடிக்கப்பட்டது.
3. ஹைப்போசி கோமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்.

அ-பதிவேடு விவரங்கள் - ஊரகம்

மாவட்டம் : விழுப்புரம்

வட்டம் : திண்டிவனம்

இராமை : கீழ்சேவர்



1 புல எண்	80	9 மண் வயனமும் ரகமும்	3 - 5
2 உட்பிரிவு எண்		10. மண் தரம்	5
3 பண்டம் புல உட்பிரிவு எண்	195-1, 2 3, 4, 5, 6, 7, 8,	11 தீர்வை (ர - ஹெ)	4.20
4 பகுதி		12 பரப்பு (ஹெக்டேர் - ஏர்)	5 : 44.50
5 அரசு / ரயத்துவாரி	ரயத்துவாரி	13. மொத்த தீர்வை (ர - பை)	22.87
6 நிலத்தின் வகை	பஞ்சை	14. பட்டா எண்	1243
7 பாசன ஆதாரம்		15. குறிப்பு	
8 இடு போகமா		16 பெயர்	1.காமாட்சி

குறிப்பு:



மேற்கண்ட தகவல் / சான்றிதழ் தகவல் விவரங்கள் பின் பதிவேட்டிலிருந்து
1 பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய
தளத்தில் 07/03/163/80/-/90360 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி
செய்துகொள்ளவும்.

ANNEXURE

VII

1282/2025



தமிழ்நாடு தமிழ்நாடு TAMILNADU

25-6-2025

தேவதீபன்

சிவ்நாம பாதகம்

Rs. 1000

BK 808192

N. Pandey

12/06/2024/B1/2003

மு. நா. விழுப்புரம்

விழுப்புரம், தமிழ்நாடு

குத்தகை பத்திரம்

2025-ம் வருடம் ஜூன் மாதம் 25-ம் தேதி, விழுப்புரம் மாவட்டம், திண்டிவனம் வட்டம், அன்னம்பாக்கம் கிராமத்தில் வந்து தற்காலம் சென்னை- 600 106, அரும்பாக்கம், நேரு நகர், நெ.12/22 என்று முகவரியில் வசிக்கும் திரு.பச்சையப்பன் அவர்களின் குமாரர் திரு P.ஜெகதீசன் (ஆதார் எண்.7551 8986 7030) (குத்தகைதாரர்)-1,

விழுப்புரம் மாவட்டம், திண்டிவனம், மரக்காணம் ரோடு, அப்பாசாமி நகர், நெ.64 என்று முகவரியில் வசிக்கும் திரு.பச்சையப்பன் அவர்களின் குமாரத்தியும் திரு.அழிவொளி அவர்களின் மனைவியுமான திருமதி. A.காமாட்சி (ஆதார் எண்.9926 7234 5064) (நில உரிமையாளர்) -2 ஆகிய நாம் இருவரும் சேர்ந்து சம்மதித்து எழுதிக் கொண்ட நிலம் குத்தகை ஒப்பந்தப் பத்திரம்.

1-வது நபர் (குத்தகைதாரர்)

2-வது நபர் (நில உரிமையாளர்)

P. J.

A. Kumari

பத்திரம் 2025	10 வருடத்திய	282	ஆவணம்
10	தாக்கனைக்கொண்டது		
1	வது தின		

பதிவு அலுவலர்





யாதெனில் இதனடியில் வரும் சொத்து விபரத்தில் குறிப்பிட்டுள்ள சொத்துக்கள் அனைத்து கட்ட
3.09.2018-ம் தேதியில், அன்னம்பாக்கம் கிராமத்தில் வசிக்கும் பச்சையப்பன்
திரு. ஜெகதீசன் அவர்கள் தன்னுடைய உடன்பிறந்த சகோதரியான நம்மில் 2-வது நபர் பெயருக்கு
ஒரு தானசெட்டில்மெண்ட் பத்திரம் எழுதி மேற்படி தானசெட்டில்மெண்ட் பத்திரம் அவர்பாக்கம்
சார்பதிவுகத்தில் 1-புத்தகம் 2018-ம் வருடத்திய 2194-ம் ஆவண எண்ணாக பதிவுசெய்யப்பட்டது.

மேற்படி விதமாய் நம்மில் 2-வது நபருக்கு சொந்தமாகி அனுபவித்து வரும் புது சர்வே
எண்.80/- ஹெக்டர் 5.44.50 ஏர்ஸ் பூரா. இதற்கு ஏக்கர் 13.45 செண்ட் நிலத்தை நம்மில் 1-வது
நபருக்கு குத்தகை விட சம்மதித்து அதன்படி இன்று முதல் பத்து வருட காலகெடு வரை மேற்படி
நிலத்தை கருங்கல் சக்கை வெட்டி எடுத்து கொள்ள சம்மதித்துள்ளார். இதற்கு ஒரு வருட
காலத்திற்கு ரூ.10,000/- நம்மில் 1-வது நபர் 2-வது நபரிடம் செலுத்தி செலுத்தி விடவேண்டியது
என முழுமனதுடன் ஒப்புக் கொண்டு இந்த குத்தகை பத்திரம் எழுதிக் கொண்டோம்.

மேற்படி குத்தகை காலக்கெடுவான 10 வருட காலம் முடிந்தவுடன் நிலத்தை நம்மில் 2-வது
நபருக்கு ஒப்படைக்க வேண்டியது. மேலும் கெடு காலம் முடிந்தவுடன் இந்த குத்தகை ஒப்பந்தத்தை
நீட்டிக்க விரும்பினால் அதன்பிறகு இருவரும் சேர்ந்து புது ஒப்பந்தம் செய்து கொள்ளவேண்டியது.

மேற்படி சொத்தினை இதற்கு முன்பு நான் யாருக்கும் அடமானமோ, அல்லது வாடகை,
குத்தகை போன்றவைகள் ஏதும் இல்லை என 2-வது நபர் உறுதியளிக்கிறார். இதன்படி நாம்
இருவரும் சேர்ந்து சம்மதித்து எழுதிக் கொண்ட நிலம் குத்தகை பத்திரம்.

1-வது நபர் (குத்தகைதாரர்)

2-வது நபர்(நில உரிமையாளர்)

P. J. L.

A. Kema

9 புத்தகம்	2015 ம் வருடத்திய	1283	ஆவணம்
10	தாள்களைக்கொண்டது		
2	வது தான்		
		பதுவு அலுவலர்	





சொத்து விபரம்

திண்டிவனம் பதிவு மாவட்டம், திண்டிவனம் 1 நீ இணை சார்பதிவுக எல்லைக்குட்பட்ட
திண்டிவனம் வட்டம், கீழ்சேவூர் கிராமத்தில், பட்டா எண்.1243-ல் அடங்கிய, புஞ்சை புதிய சர்ட்டை
எண். 80/- ஹெக் 5.44.5 ஏர்ஸ் பூரா, இதற்கு ஏக்கர் 13.45 செண்ட் இதற்கு பழைய சர்ட்டை
எண்.195/1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 196/1, 188/- 199/1, 2- இனாகளில் சம்மந்தப்பட்டது.
மேற்படி சொத்து கீழ்சேவூர் கிராம எல்லைக்குட்பட்டது.

1-வது நபர் (குத்தகைதாரர்)

P. J. J.

2-வது நபர்(நில உரிமையாளர்)

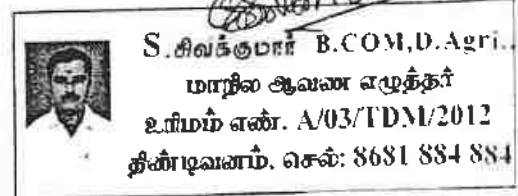
A. L. L. L.

சாட்சிகள்

1. A. P. P. s/o Arivoli manar

2. P. L. L. s/o Pathmanabhan L. L. L.

கணினியில் நட்டச்சு செய்து,
ஆவணம் வரைவு செய்தவர்



தேதி 2015 ம் வருடத்திய 1282 ஆவணம்
10 - தாள்களைக் கொண்டது
3 - துள்
பதிவு அலுவலர்





உறுதிமொழி

இந்த ஆவணத்தை எழுதிக் கொடுப்பவர்களும், எழுதி பெறுபவர்களும் கீழ்க்கண்ட உறுதி மொழியை அளிக்கின்றோம்.

வழக்கிடை ஆவண சொத்து பதிவுச்சட்டம் 1908 பிரிவு 22(A) மற்றும் பிரிவு 22(B)-க்கு உட்பட்டதல்ல எனவும், ஆவணத்துடன் இணைக்கப்பட்ட அனைத்து ஆவணங்களும் இந்தியதண்டனைசட்டம் 1860 பிரிவு 470-ன்படி Forged Document அல்ல எனவும், ஆவணத்தை எழுதிப்பெறுபவர் அனைத்து ஆவணங்களையும் பரிசீலித்து வில்லங்கம்சரிபார்த்து எழுதிப்பெறுகிறார் எனவும், சொத்து மாற்றுச் சட்டம் 1882-ன்படி சொத்து பரிமாற்றம் தொடர்பான அனைத்து பிரிவுகளுக்கும் உட்பட்டு செயல்பட்டுள்ளோம் எனவும் உறுதி மொழி அளிக்கிறோம்.

மேலும் இதனில் தங்களுக்கு தவறானதகவல்கள் அல்லது சான்று அளிக்கப்பட்டதாகபின்னால் கண்டுபிடிக்கப்பட்டால் அதற்கு நாங்கள் மட்டுமே பொறுப்பு ஆவோம் எனவும், அதற்கான சட்டப்பூர்வ நடவடிக்கைக்கு கட்டுப்படுகிறோம் எனவும், இதற்கு சார்பதிவாளர் எவ்விதத்திலும் பொறுப்பாகமாட்டார் எனவும் உறுதிமொழி அளிக்கின்றோம்.

இந்த ஆவணத்தில் கண்ட சொத்தானது நீர்நிலைகள், நீர்வழிப்பாதைகள், நீர்ப்பிடிப்பு பகுதிகளில் கட்டுப்படவில்லை எனவும், மற்றும் அரசு நிலம், இந்து சமய அறநிலையத்துறை வக்போர்ட் நிலம் பகுதியில் கட்டுப்படவில்லை என சான்றளிக்கிறோம். மேலும் இதனில் தங்களுக்கு தவறானதகவல் அல்லது சான்று அளிப்பதாகபின்னாளில் கண்டுபிடிக்கப்பட்டால் அதனால் நான் / நாங்கள் சட்டப்பூர்வ நடவடிக்கைகளுக்கு உட்படுத்தப்படுவோம் என்பதையும் அறிவேன் / அறிவோம்.

ஆவணத்தை எழுதிப் பெறுபவர்களின்
கையொப்பம்

P. J.

ஆவணத்தை எழுதிக் கொடுப்பவர்களின்
கையொப்பம்

A. J.

பதிவு	2025	ம வகுத்தியு 282-ம் ஆவணம்
10	நாள்களைக்கொண்டது	
10	வது தாள்	பதிவு அலுவலர்



R/1 எண் இணை சார்பதிவாளர் திண்டிவனம்/புத்தகம்-1/1282/2025

30 OCT 2025

1899ம் ஆண்டு இந்திய முத்திரைச் சட்டம் 42வது பிரிவின் கீழான சான்று



1899ம் ஆண்டு இந்திய முத்திரைச் சட்டம் 42வது பிரிவின் கீழான சான்று

சென்னை நகர அருமபாகசம் சென்னை சென்னை தமிழ்நாடு இந்தியா வாரியம் கமிஷனம் திரு சென்னை
என்பவரிடமிருந்து ₹ 2500 ரூபாய் இருநூறு மட்டும் இந்த ஆவணத்திற்காக இந்திய முத்திரைச் சட்டம் 42வது
பிரிவின் கீழான சான்றுவாயிருந்த முத்திரைக் கட்டணம் வசூலிக்கப்பட்டு து எண் நான் இதன் மூலம் சான்றளிக்கிறேன்

சார்பதிவாளர் 1 எண் இணை சார்பதிவாளர் திண்டிவனம் சார்பதிவாளர் மற்றும் இணை சார்பதிவாளர்
41ன் படி ஆட்சியர்
தான் 25-06-2025

2025 ஆம் ஆண்டு ஜூன் மாதம் 25ம் தேதி முப 11:37 மணியளவில் 1 எண் இணை சார்பதிவாளர் திண்டிவனம்
சார்பதிவாளர் அலுவலகத்தில் தாக்கல் செய்து கட்டணம் ₹ 1,490/- செலுத்தியவர்

இடது பெருவிரல்



P. J.

கூடுதல் விவரங்கள் ஆவண வாசகத்தில்
உள்ளபடி

எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர்
இடது பெருவிரல்



A-kamathi

‘சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்’ என்ற
வழி இந்த நபரின் அடையாளம் விரல் ரேகை
மூலம் ஆதார் ஆணையத்துடன்
சரிபார்க்கப்பட்டது ஒப்பீட்டு எண்
UKC 5170264863f9f01ef04f09b24cffe2af8ff77
(Details from UIDAI : Kamathi Arivoli W/O: Arvoli, 25-11-
1977, xxxxxxxx5064)



எழுதி வாங்கியதாக ஒப்புக் கொண்டவர்
இடது பெருவிரல்



P. J.

‘சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்’ என்ற
வழி இந்த நபரின் அடையாளம் விரல் ரேகை
மூலம் ஆதார் ஆணையத்துடன்
சரிபார்க்கப்பட்டது ஒப்பீட்டு எண்
UKC 245020468d7013ff8374a89a0a8b0516a0f4a4d



10
12
வது தான் 1 / 2
பதிவு அலுவலர்



R/1 எண் இணை சார்பதிவாளர் திண்டிவனம்/புத்தகம்-1/1282/2025



புத்தகம் திண்டிவனம்/புத்தகம்-1/1282/2025

A. Panicker S/o P. Arivoli manur

R/1 P. Leach S/o P. Arivoli manur
K. Arivoli manur

1 எண் இணை சார்பதிவாளர் திண்டிவனம்/புத்தகம்-1/1282/2025

R/1 எண் இணை சார்பதிவாளர் திண்டிவனம்/புத்தகம்-1/1282/2025 எண்ணாகப் பதிவு செய்யப்பட்டது

நாள் 25-06-2025

1 எண் இணை சார்பதிவாளர் திண்டிவனம்

1 எண் இணை சார்பதிவாளர் திண்டிவனம்

புத்தகம் 2025	ம வகுத்திய 1282	ஆவணம்
10	தாள்களைக் கொண்டு	
6	வது தாள்	





தமிழ்நாடு அரசு

வருவாய் மற்றும் பேரிடர் மேலாண்மைத் துறை

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

மாவட்டம் : விழுப்புரம்

வட்டம் : திண்டிவனம்

வருவாய் கிராமம் : கீழ்சேவுர்

பட்டா எண் : 1243

உரிமையாளர்கள் பெயர்

பு. எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
80	.	5 - 44.50	22.87	--	--	--	--	2025/0103/07/434448--- Digitally signed: Barathiraja A Zonal Deputy Tahsildar 12/06/2025 06:17:02:PM
		5 - 44.50	22.87					

குறிப்பு :



1. கோற்குறை தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் P/07/03/163/01243/20360 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
2. இந்த தகவல்கள் 23-06-2025 அன்று 11:51:49 AM நேரத்தில் அச்சடிக்கப்பட்டது.
3. கைட்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

பத்திரம் 2025 ம் வருடத்திய 1282 ஆவணம்
10 தாள்களைக்கொண்டது
7 வது தாள்
பதிவு அலுவலர்





உறுதிப்படுத்தப்பட்ட அடையாள அட்டை
Confirmed Identity Card

பரிதி
 Paridhi
 தந்தை: அருவல்
 Father: Arvull

பிறந்த நாள்: DOB 13/11/1997
 ஆண்பால்: Male

4417 7611 0086

எனது ஆதார், எனது அடையாளம்

உறுதிப்படுத்தப்பட்ட அடையாள அட்டை
Confirmed Identity Card

முகவர்: B2, அருவல், 84
 அருவல் தாது,
 திருவாரூர் தாலுக்கா, அருவல்
 திருவாரூர், திருவாரூர், திருவாரூர்
 திருவாரூர், திருவாரூர், திருவாரூர்

Address: B2, Arvull, 84
 APPASAMY NAGAR,
 Uthirameri TALUK, Marud
 Tiruvannamalai, Tiruvannamalai, Tiruvannamalai

4417 7611 0086

A. Pandu

உறுதிப்படுத்தப்பட்ட அடையாள அட்டை
Confirmed Identity Card

சாங்கேசு ப
 Sankeshu P
 பிறந்த நாள்: DOB 16/02/2002
 ஆண் / Male

4296 0414 6035

எனது ஆதார், எனது அடையாளம்

உறுதிப்படுத்தப்பட்ட அடையாள அட்டை
Confirmed Identity Card

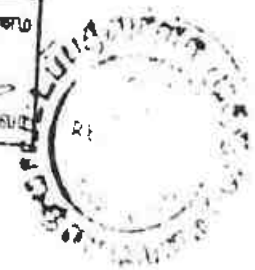
முகவர்: சாங்கேசு ப, 111,
 சாங்கேசு ப, சாங்கேசு ப,
 சாங்கேசு ப, சாங்கேசு ப, சாங்கேசு ப

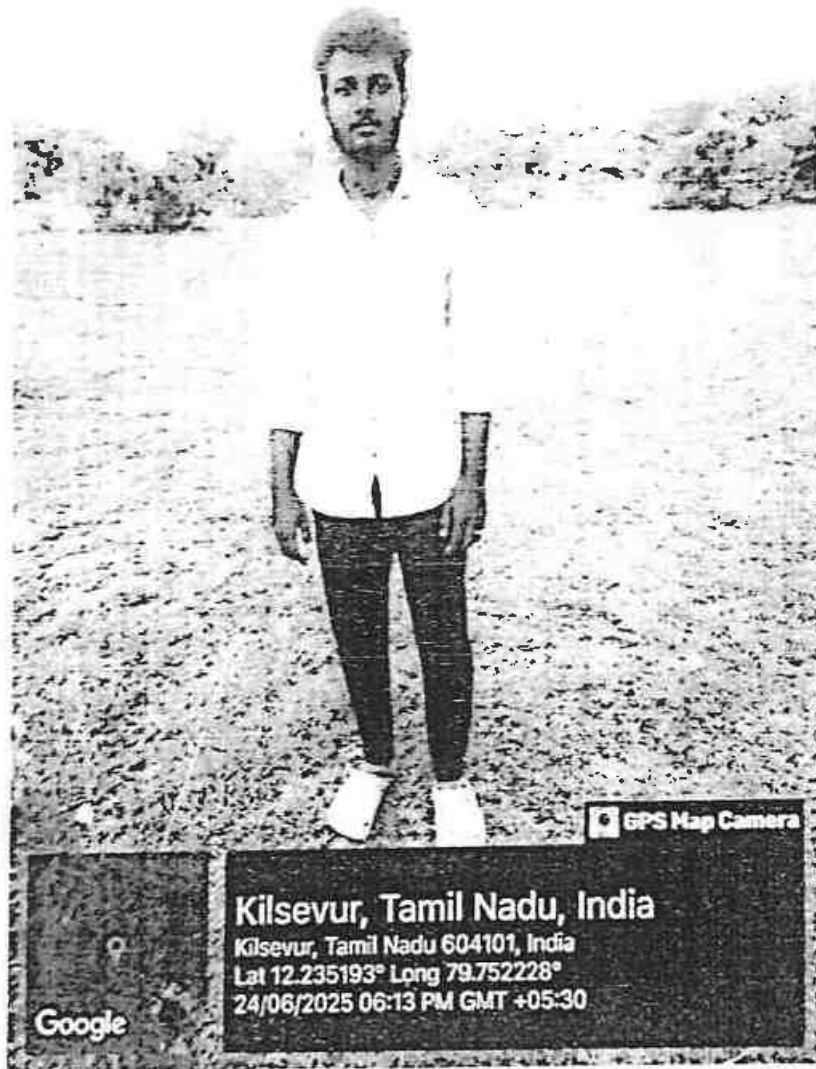
Address: C/O Sankeshu P, 111, Main Road,
 Sankeshu P, PO Perambalur,
 C/O Sankeshu P, Tiruvannamalai, Tiruvannamalai

4296 0414 6035

P. L. ...

பிறந்த நாள்: 13/11/1997
 10
 9
 வது தரள



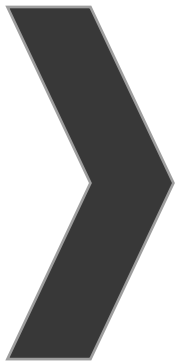


P. J. J.

A. K. K.

பெண் 2-35	282
10	தமிழ்நாடு அகாடமி
10	தமிழ்நாடு அகாடமி





ANNEXURE-7



Shrient Analytical and Research Labs Pvt. Ltd

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

TEST REPORT

Report No.	SARL/2025/5001	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5001	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	02.12.2025	Test Completed on	15.12.2025
Temperature	31.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

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	31.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(DL-1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
Verified



END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

For any Technical Issues & Complaints: 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.

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



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

TEST REPORT

Report No.	SARL/2025/5002	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevir Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5002	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	02.12.2025	Test Completed on	15.12.2025
Temperature	315°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	24.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

8 Paul
Verified



END OF THE REPORT

J. 4
Authorized Signatory
J. GNANAPRAKASAM
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

Page 2 of 14



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

TEST REPORT

Report No.	SARL/2025/5003	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5003	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	03.12.2025	Test Completed on	15.12.2025
Temperature	30.5°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.2	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	7.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

END OF THE REPORT

Please Contact:

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

Page 3 of 14



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

TEST REPORT

Report No.	SARL/2025/5004	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5004	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	03.12.2025	Test Completed on	15.12.2025
Temperature	35°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

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	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

8.12.25
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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5005	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5005	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	04.12.2025	Test Completed on	15.12.2025
Temperature	31.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.8	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	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

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/2025/5006	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5006	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	04.12.2025	Test Completed on	15.12.2025
Temperature	31.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.0	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	11.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5007	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5007	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	05.12.2025	Test Completed on	15.12.2025
Temperature	30.5°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

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	22.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

8. Patel
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J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5008	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5008	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	05.12.2025	Test Completed on	15.12.2025
Temperature	31.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2025/5009	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5009	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	06.12.2025	Test Completed on	15.12.2025
Temperature	30.5°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5010	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5010	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	06.12.2025	Test Completed on	15.12.2025
Temperature	31.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.0	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	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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

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TEST REPORT

Report No.	SARL/2025/5011	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5011	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	06.12.2025	Test Completed on	15.12.2025
Temperature	31.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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/2025/5012

Report Date. 15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5012	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	07.12.2025	Test Completed on	15.12.2025
Temperature	31.5°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	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

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TEST REPORT

Report No.	SARL/2025/5013	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5013	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	07.12.2025	Test Completed on	15.12.2025
Temperature	30.5°C	Relative Humidity	67%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5014	Report Date.	15.12.2025

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5014	Sample Received on	08.12.2025
Sample Collected by	LABORATORY	Test Commenced on	08.12.2025
Sample Collected on	07.12.2025	Test Completed on	15.12.2025
Temperature	31.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	23.5	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	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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J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2025/5029	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5029	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	09.12.2025	Test Completed on	22.12.2026
Temperature	31.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	26.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5030	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5030	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	09.12.2025	Test Completed on	22.12.2026
Temperature	31.0°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	43.4	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	3.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5031	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5031	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	09.12.2025	Test Completed on	22.12.2026
Temperature	31.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.9	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	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

S. Par
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J. G
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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



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(2)

TEST REPORT

Report No.	SARL/2025/5032	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5032	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	10.12.2025	Test Completed on	22.12.2026
Temperature	31.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
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J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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



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TEST REPORT

Report No.	SARL/2025/5033	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5033	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	10.12.2025	Test Completed on	22.12.2026
Temperature	31.0°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

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	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
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END OF THE REPORT

J. Gnanaprakasam
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Technical Manager

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TEST REPORT

Report No.	SARL/2025/5034	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5034	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	10.12.2025	Test Completed on	22.12.2026
Temperature	31.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

J. Gnanaprakasam
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TEST REPORT

Report No.	SARL/2025/5035	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5035	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	11.12.2025	Test Completed on	22.12.2026
Temperature	31.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

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	25.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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Technical Manager

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



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TEST REPORT

Report No.	SARL/2025/5036	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5036	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	11.12.2025	Test Completed on	22.12.2026
Temperature	31.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.2	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	6.4	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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
Verified



END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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

Report No.	SARL/2025/5037	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5037	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	12.12.2025	Test Completed on	22.12.2026
Temperature	31.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.5	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	12.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Paul
Verified



J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5038	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5038	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	12.12.2025	Test Completed on	22.12.2026
Temperature	31.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	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	11.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Authorized Signatory
Technical Manager

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

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TEST REPORT

Report No.	SARL/2025/5039	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5039	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	13.12.2025	Test Completed on	22.12.2026
Temperature	31.0°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.5	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	7.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
Verified



END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5040	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5040	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	13.12.2025	Test Completed on	22.12.2026
Temperature	31.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	25.4	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

S. Paul
Verified



END OF THE REPORT

J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5041	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5041	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	14.12.2025	Test Completed on	22.12.2026
Temperature	31.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5042	Report Date.	22.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5042	Sample Received on	15.12.2025
Sample Collected by	LABORATORY	Test Commenced on	15.12.2025
Sample Collected on	14.12.2025	Test Completed on	22.12.2026
Temperature	31.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

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	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

S. Paul
Verified



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J. Gnanaprasam
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J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2025/5057	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5057	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	16.12.2025	Test Completed on	29.12.2026
Temperature	32.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	66.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	32.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(DL-1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
Verified



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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2025/5058	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5058	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	16.12.2025	Test Completed on	29.12.2026
Temperature	32.5°C	Relative Humidity	60%
Sample Condition	Fit for Analysis		

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	21.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

8. Patel
Verified



END OF THE REPORT

J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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TEST REPORT

Report No.	SARL/2025/5059	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5059	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	17.12.2025	Test Completed on	29.12.2026
Temperature	32.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	30.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5060	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5060	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	17.12.2025	Test Completed on	29.12.2026
Temperature	32.0°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

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	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5061	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5061	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	18.12.2025	Test Completed on	29.12.2026
Temperature	32.5°C	Relative Humidity	60%
Sample Condition	Fit for Analysis		

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	24.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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Technical Manager

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TEST REPORT

Report No.	SARL/2025/5062	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5062	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	18.12.2025	Test Completed on	29.12.2026
Temperature	32.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

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	23.3	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	11.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5063	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5063	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	19.12.2025	Test Completed on	29.12.2026
Temperature	32.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

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	23.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

8. Paul
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TEST REPORT

Report No.	SARL/2025/5064	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5064	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	19.12.2025	Test Completed on	29.12.2026
Temperature	3262°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	24.4	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	11.6	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/2025/5065	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5065	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	20.12.2025	Test Completed on	29.12.2026
Temperature	32.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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/2025/5066	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5066	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	20.12.2025	Test Completed on	29.12.2026
Temperature	32.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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

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TEST REPORT

Report No.	SARL/2025/5067	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5067	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	20.12.2025	Test Completed on	29.12.2026
Temperature	32.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	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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Technical Manager

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TEST REPORT

Report No.	SARL/2025/5068	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevir Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5068	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	21.12.2025	Test Completed on	29.12.2026
Temperature	32.0°C	Relative Humidity	62.0%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.2	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	12.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
Verified



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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2025/5069	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5069	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	21.12.2025	Test Completed on	29.12.2026
Temperature	32.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	27.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.3	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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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2025/5070	Report Date.	29.12.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5070	Sample Received on	22.12.2026
Sample Collected by	LABORATORY	Test Commenced on	22.12.2026
Sample Collected on	21.12.2025	Test Completed on	29.12.2026
Temperature	32.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

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	6.3	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0001	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0001	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	23.12.2026	Test Completed on	05.01.2026
Temperature	32.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	22.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0002	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0002	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	23.12.2026	Test Completed on	05.01.2026
Temperature	32.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

J. Gnanaprakasam
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J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2026/0003	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0003	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	23.12.2026	Test Completed on	05.01.2026
Temperature	32.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.1	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

S. Par
Verified



END OF THE REPORT

J. G
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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



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TEST REPORT

Report No.	SARL/2026/0004	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0004	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	24.12.2026	Test Completed on	05.01.2026
Temperature	32.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Paul
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J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
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TEST REPORT

Report No.	SARL/2026/0005	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0005	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	24.12.2026	Test Completed on	05.01.2026
Temperature	32.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	23.8	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	8.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8.10.26
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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



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TEST REPORT

Report No.	SARL/2026/0006	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0006	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	24.12.2026	Test Completed on	05.01.2026
Temperature	32.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	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	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

S. Pal
Verified



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J. Gnanaprakasam
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Technical Manager

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TEST REPORT

Report No.	SARL/2026/0007	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0007	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	25.12.2026	Test Completed on	05.01.2026
Temperature	32.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	21.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

TEST REPORT

Report No.	SARL/2026/0008	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0008	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	25.12.2026	Test Completed on	05.01.2026
Temperature	32.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
Verified



END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0009	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0009	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	26.12.2026	Test Completed on	05.01.2026
Temperature	32.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	23.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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J. Gnanaprasam
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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/00010	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0010	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	26.12.2026	Test Completed on	05.01.2026
Temperature	32.0°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0011	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0011	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	27.12.2026	Test Completed on	05.01.2026
Temperature	32.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. Gnanaprakasam
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J. GNANAPRAKASAM
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TEST REPORT

Report No.	SARL/2026/0012	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0012	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	27.12.2026	Test Completed on	05.01.2026
Temperature	32.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

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	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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Technical Manager

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Report No.	SARL/2026/0013	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0013	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	28.12.2026	Test Completed on	05.01.2026
Temperature	32.0°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.4	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/2026/0014	Report Date.	05.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0014	Sample Received on	29.12.2026
Sample Collected by	LABORATORY	Test Commenced on	29.12.2026
Sample Collected on	28.12.2026	Test Completed on	05.01.2026
Temperature	32.0°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

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	22.3	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	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

S. Paul
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J. Gnanaprasam
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J. GNANAPRAKASAM
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TEST REPORT

Report No.	SARL/2026/0029	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0029	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	30.12.2026	Test Completed on	12.01.2026
Temperature	30.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(DL-1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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

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TEST REPORT

Report No.	SARL/2026/0030	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0030	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	30.12.2026	Test Completed on	12.01.2026
Temperature	30.0°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

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	25.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

8. Paul
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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0031	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0031	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	31.12.2026	Test Completed on	12.01.2026
Temperature	30.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	43.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/2026/0032	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0032	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	31.12.2026	Test Completed on	12.01.2026
Temperature	30.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.5	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	12.4	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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Report No.	SARL/2026/0033	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0033	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	01.01.2026	Test Completed on	12.01.2026
Temperature	30.0°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	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	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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Report No.	SARL/2026/0034	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0034	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	01.01.2026	Test Completed on	12.01.2026
Temperature	30.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	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/2026/0035	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0035	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	02.01.2026	Test Completed on	12.01.2026
Temperature	30.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
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END OF THE REPORT

J. 4
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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0036	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0036	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	02.01.2026	Test Completed on	12.01.2026
Temperature	30.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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/2026/0037	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0037	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	03.01.2026	Test Completed on	12.01.2026
Temperature	30.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	23.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8. Patel
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J. GNANAPRAKASAM
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TEST REPORT

Report No.	SARL/2026/0038	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0038	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	03.01.2026	Test Completed on	12.01.2026
Temperature	30.0°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2026/0039	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0039	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	03.01.2026	Test Completed on	12.01.2026
Temperature	30.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0040	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0040	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	04.01.2026	Test Completed on	12.01.2026
Temperature	30.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/2026/0041	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0041	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	04.01.2026	Test Completed on	12.01.2026
Temperature	30.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

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	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	6.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0042	Report Date.	12.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0042	Sample Received on	05.01.2026
Sample Collected by	LABORATORY	Test Commenced on	05.01.2026
Sample Collected on	04.01.2026	Test Completed on	12.01.2026
Temperature	30.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

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	23.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	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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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2026/0057	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0057	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	06.01.2026	Test Completed on	19.01.2026
Temperature	30.0°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

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	25.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0058	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0058	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	06.01.2026	Test Completed on	19.01.2026
Temperature	30.0°C	Relative Humidity	66%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	43.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0059	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0059	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	06.01.2026	Test Completed on	19.01.2026
Temperature	30.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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



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TEST REPORT

Report No.	SARL/2026/0060	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0060	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	07.01.2026	Test Completed on	19.01.2026
Temperature	30.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

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	24.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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Technical Manager

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TEST REPORT

Report No.	SARL/2026/0061	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0061	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	07.01.2026	Test Completed on	19.01.2026
Temperature	30.0°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
Verified



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J. Gnanaprakasam
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Technical Manager

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TEST REPORT

Report No.	SARL/2026/0062	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0062	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	07.01.2026	Test Completed on	19.01.2026
Temperature	30.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	24.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

S. Pal
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J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0063	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0063	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	08.01.2026	Test Completed on	19.01.2026
Temperature	30.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	24.8	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	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0064	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0064	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	08.01.2026	Test Completed on	19.01.2026
Temperature	30.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.2	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	11.2	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

S. Pal
Verified



J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0065	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0065	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	09.01.2026	Test Completed on	19.01.2026
Temperature	30.0°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.2	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	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

S. Paul
Verified



J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0066	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0066	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	09.01.2026	Test Completed on	19.01.2026
Temperature	30.0°C	Relative Humidity	66%
Sample Condition	Fit for Analysis		

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	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

S. Pal
Verified



J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0067	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0067	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	10.01.2026	Test Completed on	19.01.2026
Temperature	30.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	6.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
Verified



END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0068	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0068	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	10.01.2026	Test Completed on	19.01.2026
Temperature	30.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

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	24.0	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	12.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Paul
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J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0069	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0069	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	11.01.2026	Test Completed on	19.01.2026
Temperature	30.0°C	Relative Humidity	65%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
Verified



END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
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Technical Manager

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TEST REPORT

Report No.	SARL/2026/0070	Report Date.	19.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0070	Sample Received on	12.01.2026
Sample Collected by	LABORATORY	Test Commenced on	12.01.2026
Sample Collected on	11.01.2026	Test Completed on	19.01.2026
Temperature	30.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	22.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.8	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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Technical Manager

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

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TEST REPORT

Report No.	SARL/2026/0085	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0085	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	13.01.2026	Test Completed on	26.01.2026
Temperature	30.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.1	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	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(DL-1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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



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

Report No.	SARL/2026/0086	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0086	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	13.01.2026	Test Completed on	26.01.2026
Temperature	30.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.8	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

For Shrient Analytical and Research Labs Pvt. Ltd

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Technical Manager

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TEST REPORT

Report No.	SARL/2026/0087	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0087	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	14.01.2026	Test Completed on	26.01.2026
Temperature	30.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.3	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/2026/0088	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0088	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	14.01.2026	Test Completed on	26.01.2026
Temperature	30.0°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0089	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0089	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	15.01.2026	Test Completed on	26.01.2026
Temperature	30.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0090	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0090	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	15.01.2026	Test Completed on	26.01.2026
Temperature	30.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/2026/0091	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0091	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	16.01.2026	Test Completed on	26.01.2026
Temperature	30.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.6	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	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0092	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevir Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0092	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	16.01.2026	Test Completed on	26.01.2026
Temperature	30.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.6	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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8.01.26
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TEST REPORT

Report No.	SARL/2026/0093	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0093	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	17.01.2026	Test Completed on	26.01.2026
Temperature	30.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	26.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Technical Manager

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TEST REPORT

Report No.	SARL/2026/0094	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0094	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	17.01.2026	Test Completed on	26.01.2026
Temperature	30.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	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

8 Paul
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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0095	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0095	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	17.01.2026	Test Completed on	26.01.2026
Temperature	30.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	24.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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/2026/0096	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevir Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0096	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	18.01.2026	Test Completed on	26.01.2026
Temperature	30.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	25.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

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/2026/0097	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0097	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	18.01.2026	Test Completed on	26.01.2026
Temperature	30.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	25.5	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	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0098	Report Date.	26.01.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0098	Sample Received on	19.01.2026
Sample Collected by	LABORATORY	Test Commenced on	19.01.2026
Sample Collected on	18.01.2026	Test Completed on	26.01.2026
Temperature	30.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

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	25.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2026/0113	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0113	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	20.01.2026	Test Completed on	02.02.2026
Temperature	31.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0114	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0114	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	20.01.2026	Test Completed on	02.02.2026
Temperature	31.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/2026/0115	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0115	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	20.01.2026	Test Completed on	02.02.2026
Temperature	31.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

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	26.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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CIN : U74999TN2017PTC116807 / **GST No :** 33AAYCS7325R1ZA / **PAN No:** AAYCS7325R



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TEST REPORT

Report No.	SARL/2026/0116	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0116	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	21.01.2026	Test Completed on	02.02.2026
Temperature	31.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	25.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Paul
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J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2026/0117	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0117	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	21.01.2026	Test Completed on	02.02.2026
Temperature	31.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

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	24.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.3	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

S. Pal
Verified



END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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

Report No.	SARL/2026/0118	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-5184	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	21.01.2026	Test Completed on	02.02.2026
Temperature	31.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

S. Pal
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END OF THE REPORT

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

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



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

Report No.	SARL/2026/0119	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0119	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	22.01.2026	Test Completed on	02.02.2026
Temperature	31.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	14.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Paul
Verified



J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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- (2)

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



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

Report No.	SARL/2026/0120	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0120	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	22.01.2026	Test Completed on	02.02.2026
Temperature	31.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	25.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.4	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

S. Pal
Verified



END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0121	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0121	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	23.01.2026	Test Completed on	02.02.2026
Temperature	31.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Paul
Verified



END OF THE REPORT

J. Gnanaprasam
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TEST REPORT

Report No.	SARL/2026/0122	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0122	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	23.01.2026	Test Completed on	02.02.2026
Temperature	31.0°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

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	20.7	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	11.1	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

S. Pal
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J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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

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TEST REPORT

Report No.	SARL/2026/0123	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0123	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	24.01.2026	Test Completed on	02.02.2026
Temperature	31.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.9	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	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
Verified



END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
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TEST REPORT

Report No.	SARL/2026/0124	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0124	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	24.01.2026	Test Completed on	02.02.2026
Temperature	31.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Paul
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END OF THE REPORT

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TEST REPORT

Report No.	SARL/2026/0125	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0125	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	25.01.2026	Test Completed on	02.02.2026
Temperature	31.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.4	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	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
Verified



END OF THE REPORT

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TEST REPORT

Report No.	SARL/2026/0126	Report Date.	02.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0126	Sample Received on	26.01.2026
Sample Collected by	LABORATORY	Test Commenced on	26.01.2026
Sample Collected on	25.01.2026	Test Completed on	02.02.2026
Temperature	31.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0141	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0141	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	27.01.2026	Test Completed on	09.02.2026
Temperature	32.5°C	Relative Humidity	60%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	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(DL-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/2026/0142	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0142	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	27.01.2026	Test Completed on	09.02.2026
Temperature	32.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

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	21.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.2	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/2026/0143	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0143	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	28.01.2026	Test Completed on	09.02.2026
Temperature	32.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	63.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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TEST REPORT

Report No.	SARL/2026/0144	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0144	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	28.01.2026	Test Completed on	09.02.2026
Temperature	32.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.7	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	11.8	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/2026/0145	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0145	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	29.01.2026	Test Completed on	09.02.2026
Temperature	32.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	24.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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/2026/0146	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0146	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	29.01.2026	Test Completed on	09.02.2026
Temperature	32.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.6	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	10.6	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/2026/0147	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0147	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	30.01.2026	Test Completed on	09.02.2026
Temperature	32.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.3	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/2026/0148	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0148	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	30.01.2026	Test Completed on	09.02.2026
Temperature	36°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	21.3	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	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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

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TEST REPORT

Report No.	SARL/2026/0149	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0149	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	31.01.2026	Test Completed on	09.02.2026
Temperature	32.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	24.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Feb
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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0150	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0150	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	31.01.2026	Test Completed on	09.02.2026
Temperature	32.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

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	20.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Technical Manager

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

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

Report No.	SARL/2026/0151	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0151	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	31.01.2026	Test Completed on	09.02.2026
Temperature	32.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.4	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	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Feb
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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No. SARL/2026/0152

Report Date. 09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevir Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0152	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	01.02.2026	Test Completed on	09.02.2026
Temperature	32.5°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	26.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.3	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/2026/0153	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0153	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	01.02.2026	Test Completed on	09.02.2026
Temperature	32.5°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0154	Report Date.	09.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0154	Sample Received on	02.02.2026
Sample Collected by	LABORATORY	Test Commenced on	02.02.2026
Sample Collected on	01.02.2026	Test Completed on	09.02.2026
Temperature	32.5°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	22.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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

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TEST REPORT

Report No.	SARL/2026/0169	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0169	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	02.02.2026	Test Completed on	16.02.2026
Temperature	32.0°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.5	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	12.3	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
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0170	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0170	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	02.02.2026	Test Completed on	16.02.2026
Temperature	32.0°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	27.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

S. Pal
Verified



END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0171	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0171	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	02.02.2026	Test Completed on	16.02.2026
Temperature	32.0°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.6	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	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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CIN : U74999TN2017PTC116807 / **GST No :** 33AAYCS7325R1ZA / **PAN No:** AAYCS7325R



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TEST REPORT

Report No.	SARL/2026/0172	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0172	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	03.02.2026	Test Completed on	16.02.2026
Temperature	32.5°C	Relative Humidity	59%
Sample Condition	Fit for Analysis		

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	23.9	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	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

S. Pal
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J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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



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416/15, Dhargas Road, West Tambaram, Chennai- 600045
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TEST REPORT

Report No.	SARL/2026/0173	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0173	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	03.02.2026	Test Completed on	16.02.2026
Temperature	32.5°C	Relative Humidity	60%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
Verified



J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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



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TEST REPORT

Report No.	SARL/2026/0174	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0174	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	03.02.2026	Test Completed on	16.02.2026
Temperature	32.5°C	Relative Humidity	59%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	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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S. Pal
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END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0175	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0175	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	04.02.2026	Test Completed on	16.02.2026
Temperature	32.0°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.1	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	12.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2026/0176	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0176	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	04.02.2026	Test Completed on	16.02.2026
Temperature	32.0°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.3	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

S. Paul
Verified



END OF THE REPORT

J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0177	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0177	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	05.02.2026	Test Completed on	16.02.2026
Temperature	32.0°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	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

S. Paul
Verified



J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2026/0178	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0178	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	05.02.2026	Test Completed on	16.02.2026
Temperature	32.0°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	25.5	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	11.7	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

S. Pal
Verified



J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2026/0179	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0179	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	06.02.2026	Test Completed on	16.02.2026
Temperature	32.5°C	Relative Humidity	59%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Paul
Verified



END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0180	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0180	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	06.02.2026	Test Completed on	16.02.2026
Temperature	32.5°C	Relative Humidity	60%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0181	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0181	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	07.02.2026	Test Completed on	16.02.2026
Temperature	32.0°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.5	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

S. Pal
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J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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

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

Report No.	SARL/2026/0182	Report Date.	16.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0182	Sample Received on	09.02.2026
Sample Collected by	LABORATORY	Test Commenced on	09.02.2026
Sample Collected on	07.02.2026	Test Completed on	16.02.2026
Temperature	32.0°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

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	22.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Paul
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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0197	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0197	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	10.02.2026	Test Completed on	23.02.2026
Temperature	33.0°C	Relative Humidity	58%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(DL-1.1)	-

Remarks: Limits: *National Ambient 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/2026/0198	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0198	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	10.02.2026	Test Completed on	23.02.2026
Temperature	33.0°C	Relative Humidity	59%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.2	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	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0199	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0199	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	11.02.2026	Test Completed on	23.02.2026
Temperature	33.5°C	Relative Humidity	56%
Sample Condition	Fit for Analysis		

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	25.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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Technical Manager

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

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TEST REPORT

Report No.	SARL/2026/0200	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0200	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	11.02.2026	Test Completed on	23.02.2026
Temperature	32.5°C	Relative Humidity	57%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.3	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	12.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

8 Feb
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J. 4
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0201	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0201	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	12.02.2026	Test Completed on	23.02.2026
Temperature	33.0°C	Relative Humidity	59%
Sample Condition	Fit for Analysis		

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	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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/2026/0202	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0202	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	12.02.2026	Test Completed on	23.02.2026
Temperature	33.0°C	Relative Humidity	58%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/2026/0203	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0203	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	13.02.2026	Test Completed on	23.02.2026
Temperature	33.5°C	Relative Humidity	56%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Technical Manager

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TEST REPORT

Report No.	SARL/2026/0204	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0204	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	13.02.2026	Test Completed on	23.02.2026
Temperature	33.5°C	Relative Humidity	57%
Sample Condition	Fit for Analysis		

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	26.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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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/2026/0205	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0205	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	14.02.2026	Test Completed on	23.02.2026
Temperature	33.0°C	Relative Humidity	58%
Sample Condition	Fit for Analysis		

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	24.7	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	12.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0206	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0206	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	14.02.2026	Test Completed on	23.02.2026
Temperature	33.0°C	Relative Humidity	59%
Sample Condition	Fit for Analysis		

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	25.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.5	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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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0207	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0207	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	14.02.2026	Test Completed on	23.02.2026
Temperature	33.0°C	Relative Humidity	59%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	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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Technical Manager

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TEST REPORT

Report No.	SARL/2026/0208	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevir Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0208	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	15.02.2026	Test Completed on	23.02.2026
Temperature	33.5°C	Relative Humidity	57%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Paul
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J. Gnanaprakasam
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CIN : U74999TN2017PTC116807 / **GST No :** 33AAYCS7325R1ZA / **PAN No:** AAYCS7325R

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TEST REPORT

Report No.	SARL/2026/0209	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0209	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	15.02.2026	Test Completed on	23.02.2026
Temperature	33.5°C	Relative Humidity	56%
Sample Condition	Fit for Analysis		

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	22.7	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	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd


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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0210	Report Date.	23.02.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0210	Sample Received on	16.02.2026
Sample Collected by	LABORATORY	Test Commenced on	16.02.2026
Sample Collected on	15.02.2026	Test Completed on	23.02.2026
Temperature	33.5°C	Relative Humidity	57%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	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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CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

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TEST REPORT

Report No.	SARL/2026/0225	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0225	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	17.02.2026	Test Completed on	02.03.2026
Temperature	32.5°C	Relative Humidity	60%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0226	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0226	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	17.02.2026	Test Completed on	02.03.2026
Temperature	32.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

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	26.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.9	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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J. Gnanaprakasam
Authorized Signatory
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Technical Manager

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TEST REPORT

Report No.	SARL/2026/0227	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0227	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	17.02.2026	Test Completed on	02.03.2026
Temperature	32.5°C	Relative Humidity	60%
Sample Condition	Fit for Analysis		

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	7.4	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
J. GNANAPRAKASAM
Technical Manager

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

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

Report No.	SARL/2026/0228	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0228	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	18.02.2026	Test Completed on	02.03.2026
Temperature	32.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	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	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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0229	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0229	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	18.02.2026	Test Completed on	02.03.2026
Temperature	32.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	42.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0230	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A7- Vittallapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0230	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	18.02.2026	Test Completed on	02.03.2026
Temperature	32.0°C	Relative Humidity	62%
Sample Condition	Fit for Analysis		

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	24.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (DL – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
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END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0231	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0231	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	19.02.2026	Test Completed on	02.03.2026
Temperature	32.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	13.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0232	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0232	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	19.02.2026	Test Completed on	02.03.2026
Temperature	32.5°C	Relative Humidity	60%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

S. Pal
Verified



END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0233	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0233	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	20.02.2026	Test Completed on	02.03.2026
Temperature	32.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	25.4	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	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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J. Gnanaprasam
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TEST REPORT

Report No.	SARL/2026/0234	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0234	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	20.02.2026	Test Completed on	02.03.2026
Temperature	32.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

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	23.6	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	12.2	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

S. Pal
Verified



J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0235	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0235	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	21.02.2026	Test Completed on	02.03.2026
Temperature	32.5°C	Relative Humidity	61%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
Verified



END OF THE REPORT

J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0236	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0236	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	21.02.2026	Test Completed on	02.03.2026
Temperature	32.5°C	Relative Humidity	60%
Sample Condition	Fit for Analysis		

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	24.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Paul
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J. Gnanaprasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0237	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram 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
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0237	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Temperature	32.0°C	Relative Humidity	63%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

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

For Shrient Analytical and Research Labs Pvt. Ltd

S. Pal
Verified



J. Gnanaprakasam
Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0238	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

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

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0238	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Temperature	32.0°C	Relative Humidity	64%
Sample Condition	Fit for Analysis		

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	22.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	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

S. Paul
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J. Gnanaprasam
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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0285	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevr Village, Tindivanam Taluk, Viluppuram District.
Sample Description	NOISE LEVEL DATA

Customer Reference	By Mail	Sampling Method	SARL/IOP/023
Sample Reference No	SARL/A/CHE-0285	Date of Monitoring	22.02.2026
Sample Collected by	LABORATORY		

Time in hrs	N1	N2	N3	N4	N5	N6	N7
06.00	42.5	42.4	46.1	45.9	46.4	42.1	42.4
07.00	44.5	43.3	45.7	47.2	48.2	44.3	44.3
08.00	46.2	47.4	47.2	48.2	49.6	47.8	48.1
09.00	50.8	49.7	52.6	53.1	48.1	52.4	52.3
10.00	55.8	55.8	54.7	55.1	52.7	52.3	52.6
11.00	57.3	56.3	53.8	50.1	48.8	47.9	48.2
12.00	56.2	53.9	54.4	49.2	49.6	49.9	50.2
13.00	53.8	55.8	53.7	56	51.5	48.2	48.3
14.00	51.6	52.3	53.2	56.4	48.9	48.8	49.1
15.00	52.2	51.9	52.6	54.1	49.3	51.1	51.3
16.00	58.7	55.9	45.4	55.9	46.6	53.1	53.4
17.00	56.2	57.1	44.8	54.5	48.8	54.3	54.6
18.00	57.8	54.1	47.2	50.5	47.3	52.2	52.3
19.00	52.7	52.3	48.8	47.5	45.7	52.8	53.1
20.00	47.5	44.2	45.3	45.7	46.4	48.7	49.1
21.00	47.4	43.3	43.8	45.2	43.8	47.9	48.2
22.00	43.9	42.8	44.4	43.9	44.4	45.8	46.1
23.00	43.2	42.3	43.6	42.5	45.5	45.1	45.3
24.00	42.7	42.1	42.5	43.4	42.6	42.9	43.2
01.00	43.3	41.6	41.8	43.3	44.3	42.2	42.3
02.00	44.1	42.4	41.9	42.2	42.2	42.1	42.4
03.00	48.2	43.7	42.2	41.7	41.3	43.3	43.6
04.00	45.8	43.8	42.5	44.4	42.6	44.6	44.9
05.00	44.8	42.9	41.4	45.6	44.6	43.8	44.1

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TEST REPORT

Report No.	SARL/2026/0285

Report Date.	02.03.2026

	N1	N2	N3	N4	N5	N6	N7
DAY EQUIVALENT	54.1	53.2	51.0	52.5	48.8	50.6	50.8
NIGHT EQUIVALENT	44.8	42.8	42.6	43.5	43.6	43.9	44.2
DAY & NIGHT EQUIVALENT	52.6	51.6	49.5	51.0	47.6	49.3	49.5

Remarks:

LOCATIONS:

N1-Within Mine Lease area

N2-Kattalai

N3-Karrupur

N4-Andapattu

N5-Perumukkal

N6-Vittallapuram

N7-Vittallapuram

For Shrient Analytical and Research Labs Pvt. Ltd


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END OF THE REPORT


Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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TEST REPORT

Report No.	SARL/2026/0267	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	SOIL
Sample Mark	S1- Within Mine Lease area

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/A/CHE-0267	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	8.31
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	246.8
3	Dry matter content	IS 15106: 2002	%	94.32
4	Water Content	IS 15106: 2002	%	5.68
5	Organic Matter	IS 2720: Part 22: 1972	%	0.61
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	206
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty Clay
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	6.73
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	35.51
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	57.76
9	Phosphorus as P	IS 10158: 1982	mg/kg	0.49
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	246
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	178
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL(D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	19.4
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	42.0

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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J. GNANAPRAKASAM
Technical Manager

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Page 1 of 1



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TEST REPORT

Report No.	SARL/2026/0268	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	SOIL
Sample Mark	S2- Kattalai

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/A/CHE-0268	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.89
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	242.7
3	Dry matter content	IS 15106: 2002	%	93.08
4	Water Content	IS 15106: 2002	%	6.92
5	Organic Matter	IS 2720: Part 22: 1972	%	0.55
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	296
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty Clay
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	2.76
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	57.94
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	39.30
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	0.58
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	738
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	302
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	17.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	38.0

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0269	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	SOIL
Sample Mark	S3- Karrupur

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/A/CHE-0269	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	7.58
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	204.1
3	Dry matter content	IS 15106: 2002	%	92.37
4	Water Content	IS 15106: 2002	%	7.63
5	Organic Matter	IS 2720: Part 22: 1972	%	0.47
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	316
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Clay
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	5.28
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	37.52
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	57.20
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	0.78
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	832
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	408
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	38

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0270	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	SOIL
Sample Mark	S4- Andapattu

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/A/CHE-0270	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	8.04
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	118.3
3	Dry matter content	IS 15106: 2002	%	95.92
4	Water Content	IS 15106: 2002	%	4.08
5	Organic Matter	IS 2720: Part 22: 1972	%	0.81
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	366
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty Clay
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	8.94
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	39.81
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	51.25
	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	1.08
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	146
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	118
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	15.4
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	42.0

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

8. Par
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J. 4
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J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0271	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	SOIL
Sample Mark	S5- Perumukkal

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/A/CHE-0271	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.56
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	168.9
3	Dry matter content	IS 15106: 2002	%	94.06
4	Water Content	IS 15106: 2002	%	5.94
5	Organic Matter	IS 2720: Part 22: 1972	%	0.62
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	198
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silty Clay
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	5.87
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	44.52
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	49.61
	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	1.16
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	968
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	626
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	18.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	36

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0272	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	SOIL
Sample Mark	S6- Nalmukkal

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/A/CHE-0272	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	8.29
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	166.4
3	Dry matter content	IS 15106: 2002	%	96.52
4	Water Content	IS 15106: 2002	%	3.48
5	Organic Matter	IS 2720: Part 22: 1972	%	0.32
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	234
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	%	34.72
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	53.27
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	12.01
9	Phosphorus as P	IS 10158: 1982	mg/kg	0.66
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	482
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	358
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	15.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	38

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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Technical Manager

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TEST REPORT

Report No.	SARL/2026/0273	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	SOIL
Sample Mark	S7- Vittallapuram

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/A/CHE-0273	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	7.52
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	123.6
3	Dry matter content	IS 15106: 2002	%	95.92
4	Water Content	IS 15106: 2002	%	4.08
5	Organic Matter	IS 2720: Part 22: 1972	%	0.41
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	240
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	%	34.58
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	53.16
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	12.26
9	Phosphorus as P	IS 10158: 1982	mg/kg	0.74
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	468
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	324
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	15.8
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	40

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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Technical Manager

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TEST REPORT

Report No.	SARL/2026/0253	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	WATER
Sample Mark	W1- Within Mine Lease area

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/A/CHE-0253	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	8.18	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	448.3	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	272	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	96.0	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	16.1	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	13.6	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	40.2	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	55.8	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	132	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	52.4	1000



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TEST REPORT

Report No.	SARL/2026/0253

Report Date.	02.03.2026

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	23.4	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.03	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	1.47	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.29	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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J. GNANAPRAKASAM
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TEST REPORT

Report No.	SARL/2026/0254	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	WATER
Sample Mark	W2- Kattalai

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/A/CHE-0254	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	6.78	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1182	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	714	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	582	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	107.2	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	76.3	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	268	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	314	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	418	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/2026/0254

Report Date.	02.03.2026

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	138	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.02	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	3.48	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.49	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

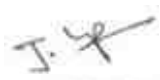
Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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J. GNANAPRAKASAM
Technical Manager

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

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TEST REPORT

Report No.	SARL/2026/0255	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	WATER
Sample Mark	W3-Karrupur

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/A/CHE-0255	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	6.92	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1592	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	958	2000
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	428	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	102.4	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	41.8	100
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	256	-
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	172	-
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	524	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	286	1000



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TEST REPORT

Report No.	SARL/2026/0255

Report Date.	02.03.2026

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	197	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.04	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	3.73	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.58	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
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0256	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	WATER
Sample Mark	W4-Andapattu

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/A/CHE-0256	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.09	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1638	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	986	2000
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	448	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	108.8	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	42.8	100
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	272	-
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	176	-
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	510	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	308	1000



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TEST REPORT

Report No.	SARL/2026/0256

Report Date.	02.03.2026

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	212	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.06	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	3.14	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.61	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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

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

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

Report No.	SARL/2026/0257	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	WATER
Sample Mark	W5-Perumukkal

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/A/CHE-0257	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.03	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1104	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	664	2000
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	432	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	76.8	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	58.3	100
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	192	-
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	240	-
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	362	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	189	1000



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TEST REPORT

Report No.	SARL/2026/0257

Report Date.	02.03.2026

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	96.5	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.05	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	2.98	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.39	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

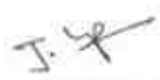
Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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END OF THE REPORT


Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

Please Contact:

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TEST REPORT

Report No.	SARL/2026/0258	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	WATER
Sample Mark	W6-Nalmukkal

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/A/CHE-0258	Sample Received on	22.02.2026
Sample Collected by	LABORATORY	Test Commenced on	22.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	6.81	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	2394	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	1442	2000
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	518	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	117.2	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	54.7	100
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	293	-
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	225	-
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	396	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	562	1000



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TEST REPORT

Report No.	SARL/2026/0258

Report Date.	02.03.2026

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	363	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.09	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	4.67	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.67	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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END OF THE REPORT


Authorized Signatory
J. GNANAPRASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0259	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhseur Village, Tindivanam Taluk, Viluppuram District.
Sample Description	WATER
Sample Mark	W7-Vittallapuram

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/A/CHE-0259	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1.0	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	6.73	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	1068	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	642	2000
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	426	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	85.6	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	51.5	100
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	214	-
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	212	-
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	296	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	192	1000



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TEST REPORT

Report No.	SARL/2026/0259

Report Date.	02.03.2026

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	264	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.06	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	3.29	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.31	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


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END OF THE REPORT


Authorized Signatory
J. GNANAPRAKASAM
Technical Manager

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TEST REPORT

Report No.	SARL/2026/0281	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	WATER
Sample Mark	SW1-Kilsevar Lake

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/A/CHE-0281	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
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	-	7.26
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	317.4
B.	Chemical parameters			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	194
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	96.6
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	24.2
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	8.80
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	60.4
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	36.2
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	54.8
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	39.2



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TEST REPORT

Report No.	SARL/2026/0281

Report Date.	02.03.2026

Sl. No	Parameters	Protocol	Unit	Result
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	57.3
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.04
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	3.57
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.58
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(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	14
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	6.2

Remarks: BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

Authorized Signatory

S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

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TEST REPORT

Report No.	SARL/2026/0282	Report Date.	02.03.2026

Customer Name & Address	Proposed Rough Stone And Gravel Quarry Of Thiru.P.Jagadeesan At S.F.No.80(P) Of Keezhsevar Village, Tindivanam Taluk, Viluppuram District.
Sample Description	WATER
Sample Mark	SW2-Perumukkal Lake

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/A/CHE-0282	Sample Received on	23.02.2026
Sample Collected by	LABORATORY	Test Commenced on	23.02.2026
Sample Collected on	22.02.2026	Test Completed on	02.03.2026
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	-	7.48
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	375.7
B.	Chemical parameters			
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	228
6	Total hardness (as CaCO ₃)	APHA 24th Edition 2340 C: 2023	mg/L	76.4
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	17.1
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	8.16
9	Calcium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Ca B: 2023	mg/L	42.8
10	Magnesium Hardness (as CaCO ₃)	APHA 24th Edition 3500 Mg B: 2023	mg/L	33.6
11	Total alkalinity (as CaCO ₃)	APHA 24th Edition 2320 B: 2023	mg/L	81.2
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	51.4



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416/15, Dhargas Road, West Tambaram, Chennai- 600045

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TEST REPORT

Report No.	SARL/2026/0282

Report Date.	02.03.2026

Sl. No	Parameters	Protocol	Unit	Result
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	83.7
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.07
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	5.67
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.69
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	18
22	Dissolved Oxygen	IS 3025 (Part 38): 1989	mg/L	6.1

Remarks: BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

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END OF THE REPORT

Authorized Signatory

S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

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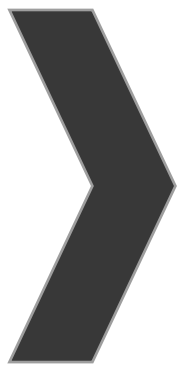
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LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

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: 30/09/2025

Valid Until: 29/09/2029

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)

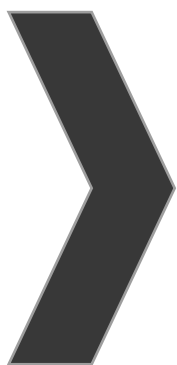
Name of Legal Entity: SHRIENT ANALYTICAL AND RESEARCH LABS PRIVATE LIMITED

Signed for and on behalf of NABL



Anuja Anand
Director

Chakravarthy T. Kannan
Chief Executive Officer



ANNEXURE-9



சுருந்தி:

தலைமை ஆசிரியர்,
ஊராட்சி நடுநிலைப்பள்ளி,
கீழ்சேலூர்,
ஒலக்கூர் ஒன்றியம்,
திண்டிவனம் வட்டம்,
விருப்பூர் மாவட்டம். 604101.

உபநாயகர்:

திரு. வசந்தன்
த/உப. பச்சையப்பன்,
பின்னம் பாக்கம் கிராமம்,
திண்டிவனம் வட்டம்,
விருப்பூர் மாவட்டம். 604101.

கீழா,

உபநாயகர்: கீழ்சேலூர் நடுநிலைப்பள்ளிக்கு, கடிவறை
மற்றும் smart class board அமைத்ததற்கு
கோடுதல் சார்பு.

கீழ்சேலூர் ஊராட்சி ஒன்றிய நடுநிலைப்பள்ளிக்கு,
மாண்புமிகு, மாண்புமிகு கடிவறை நகர்வசியுடன்
உசய்கு தரக் கோடுக்கொடும், மேலும் 1 முதல் 5 வகுப்பு—
மாண்புமிகுக்கு smart class board அமைத்ததற்கும் —
மேலும் கோடுக்கொடும்.

நாள்: 24.10.25

கிடம்: கீழ்சேலூர்.

தலைமை ஆசிரியர்
ஊராட்சி ஒன்றிய நடுநிலைப்பள்ளி,
கீழ்சேலூர்-604 101.
ஒலக்கூர் ஒன்றியம்.