DRAFT EIA / EMP REPORT

FOR

ROUGH STONE & GRAVEL QUARRY

A. Project Proponent Details	
Name	**THIRU S. SHANMUGAVEL**
Address	**300D5/2,Sankarankovil Road, Rajapalayam Town & Taluk, Virudhunagar District.**
B. Location Details	
Extent	**2.12.50 HA**
Survey No.	**586/11,12,13,14,15,17,18**
Location	**GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU**
C. Production Details	
Total Production for 5 Years	**ROUGH STONE - 72,710 m3 GRAVEL - 28,248 m3**
Depth	**29 m**
Lease Period	**5 YEARS**
D. EIA/EMP details	
ToR reference	**TO25B0108TN5835658N dated 08.04.2025**
Baseline Monitoring	**SUMMER SEASON (MAR - MAY 2025)**

CONSULTANT

CREATIVE ENGINEERS & CONSULTANTS

NABET ACCREDITED CONSULTANCY, NABL ACCREDITED TESTING LAB

9B/4, Bharathwajar Street, East Tambaram, Chennai-600059.

Ph: 044-22395170, Cell: 09444133619 Email : cecgiri@yahoo.com,

AUGUST 2025 **PRO CODE: CEC/EMP/MI-245**

REVISIONS OF EIA/EMP REPORT

Revision number	Report Status	Date of submission
00/AUGUST/25	Draft EIA /EMP Report	18.08.2025

Environmental Impact Assessment & Environmental Management Plan Report for Rough Stone and Gravel Quarry of Thiru.S.Shanmugavel, survey No. 586/11,12,13,14,15,17,18 over an area of 2.12.50 hectares in Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu and authorized for submission by Dr. B. Swamynathan, EIA Coordinator on 18.08.2025 after due review by the personnel and consultation with the project proponents. Current Revision number of the EIA/EMP report is 00/AUG/25, signifying as per the revision mentioned in the above table that this is a draft EIA/EMP report.

Signature:

Date: 18.08.2025

PROJECT PROPONENT DECLARATION

I, Thiru. S. Shanmugavel received Terms of Reference under EIA Notification 2006 from SEIAA, Tamil Nadu vide their letter TO25B0108TN5835658N dated 08.04.2025 for Rough Stone & Gravel Quarry at Survey No. 586/11,12,13,14,15,17,18 over an area of 2.12.50 Ha in Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu.

We have entrusted the EIA study to M/s. Creative Engineers & Consultants (CEC), Chennai who have been accredited by the National Accreditation Board for Education & Training (NABET), Quality Council of India with their accreditation valid upto 23.12.2026

The Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) have been prepared as per the generic structure proposed in the EIA notification 2006, ToR issued by SEIAA, Tamil Nadu. The prescribed ToR along with compliance is also incorporated in the EIA/EMP Report.

This report is prepared based on the information and data obtained from the Mining Plan and other records and the field study carried out by the consultant. The data given in the EIA/EMP report are factually correct to the best of my knowledge.

Signature:

S. Shanmugavel

Date: 18.08.2025

EIA Consultant Undertaking

[In compliance with MoEF Office Memorandum No. J-11013/41/2006-IA.II (I) dated 04.08.2009]

Creative Engineers & Consultants (CEC) is an NABL accredited testing Laboratory, and also NABET accredited Category–A environment consultancy organization for preparing EIA/EMP reports for the sectors Mining of minerals, Thermal power plants, Mineral Beneficiation & Cement plants.

CEC has been accredited by the National Accreditation Board for Education & Training (NABET), Quality Council of India for empanelment of EIA Consultants with accreditation valid unto 23.12.2026.

Thiru. S. Shanmugavel received Terms of Reference under EIA Notification 2006 from SEIAA, Tamil Nadu vide their letter TO25B0108TN5835658N dated 08.04.2025 for Rough Stone and Gravel Quarry at Survey No. 586/11,12,13,14,15,17,18 over an area of 2.12.50 Ha In Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu.

The prescribed TOR is complied with and incorporated in the EIA Report and submitted. This report is based on the information and data obtained from Approved Mining Plan, other records and data from the field study by CEC. The data generated and given in the EIA/EMP Report are factually correct. The sample analyses are carried out through CEC's laboratory.

(P. Giri)
Chief Executive & EIA Coordinator
Creative Engineers & Consultants

Date: 18.08.2025

Annexure – VII

Declaration by Experts contributing to the EIA Report for

DRAFT EIA/EMP REPORT FOR ROUGH STONE & GRAVEL QUARRY OF THIRU. S. SHANMUGAVEL, AT SURVEY NO. 586/11,12,13,14,15,17,18 OVER AN AREA OF 2.12.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU.

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

EIA coordinator:

Name: **B.Swamynathan**

Signature and Date: 18.08.2025

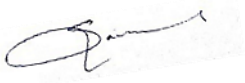
Period of involvement: **Jan 2025 onwards**

Contact information:

Functional area experts:

S. No.	Functional areas	Name of the expert/s	Involvement (period and task**)	Signature and date
1	AP*	**P.Giri**	• **Identification of baseline monitoring stations and study of the monitored data with respect to the applicable standards.** • **Identification of sources of air pollution comprising dust, gaseous emission due to mining & other activities** • **Identification of Impacts & suggestion of mitigation measures** **Period: Jan 2025 onwards**	
		B.Swamynathan	• **Data interpretation of Micro meteorological data for wind rose.** • **Identification of polluting source and suggestion of suitable mitigation measures.** **Period: Jan 2025 onwards**	

2	WP*	**G.Sandhya**	• **Study of the monitored data with respect to the applicable standards.** • **Identification of Water requirement & Source** • **Preparation of water balance diagram** • **Identification of Water polluting sources** • **Impact of the project on the water quality, both surface and groundwater** • **Suggestion of Mitigation measures to control water pollution** **Period: March 2025 onwards**	
3	SHW*	**P.Giri**	• **Quantification of mineral & waste from mining operation** • **Waste disposal method evaluation** • **Providing dump management plan** • **Providing Surface Runoff Management Structure Requirements.** • **Identification of Hazardous waste and its details of disposal** **Period: March 2025 onwards**	
4	SE*	**R.Baburaj**	• **Identification of villages in the study area and finalization of demographic profile of the villages within the study area.** • **Preparation of sections relevant to SE functional area in the EIA/EMP report** **Period: March 2025 onwards**	
5	EB*	**B.Swamynathan**	• **Perusal of existing data relevant to this project.** • **Studying the details of flora and fauna, separately for core, buffer zone and forest area based on primary field survey.** • **Identification of species , Indicating the Schedule of the fauna present in the study area** • **Assessment of impact on Biological environment and suggestion of mitigative measures** • **Collecting & providing details of existing and proposed Green belt development /plantation in the core zone** **Period: March 2025 onwards**	
6	HG*	**K.Shankar**	• **Study of existing surface drainage arrangements in the core and buffer zone, impact due to mining on these drainage courses and suggestion of mitigative measures**	

			• **Perusal of site specific ground water table details for the core zone and the study area.** • **Studied the hydrological aspects of surface and groundwater in study area** • **Study about impact on the hydrology due to mining operation** • **Suggesting mitigative measures like RWH for enhancement of ground water level** **Period: March 2025 onwards**	
7	GEO*	**K.Shankar**	• **Study of geology of the ML area and the surrounding areas.** • **Provide details about Mineral composition** **Period: March 2025 onwards**	
8	SC*	**B.Swamynathan**	• **Study of soil profile** • **Assessment of Impact on soil and suggesting plantation scheme.** **Period: March 2025 onwards**	
9	AQ*	**G.Sandhya**	• **Quantification of emission particulars** • **Air quality modelling for post project impact on the air quality prediction of the study area.** **Analysis of the Isopleth generated** • **Arriving at the post project concentration at the AAQ monitoring locations** • **Preparation of meteorological data in suitable form for input into the model** • **Simulation of model for generation of Isopleth and data interpretation.** • **Studying the impact on AAQ monitoring locations due to the generated emissions.** • **Preparation of sections relevant to AQ functional area in the EIA/EMP report.** **Period: March 2025 onwards**	
10	NV*	**P.Giri**	• **Identification of baseline monitoring stations and study of the monitored data with respect to the applicable standards.** • **Predict the noise level and vibration level due to proposed mining operation based on scientific evaluation.** • **Suggesting the Mitigation measures to control noise pollution, Suggesting the Mitigation measures to**	

			control ground vibration **Period: March 2025 onwards**	
11	LU	**B.Swamynathan**	• **Collection of Remote sensing satellite data to study the land use pattern.** • **Primary field survey and limited field verification** • **Preparation of Land use map using Satellite data of the project area separately for the core zone and the buffer zone and providing the land use pattern.** **Period: March 2025 onwards**	
12	RH*	**K.Shankar**	• **Identified Major risks involved in the project Mitigation measures suggested to avoid risk.** • **Preparation of onsite and offsite emergency management plan** **Period: March 2025 onwards**	

*One TM against each FAE may be shown
**Please attach additional sheet if required

Declaration by the Head of the accredited consultant organization/ authorized person

I, **P.Giri** hereby,confirm that the above mentioned experts prepared the EIA report for **DRAFT EIA/EMP REPORT FOR ROUGH STONE & GRAVEL QUARRY OF THIRU. S. SHANMUGAVEL, AT SURVEY NO. 586/11,12,13,14,15,17,18 OVER AN AREA OF 2.12.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU.**

I also confirm that EIA Coordinator (EC) has gone through the report, and the consultant organization shall be fully accountable for any misleading information. It is certified that no unethical practices, plagiarism involved in carrying out the work and external data / text has not been used without proper acknowledgement while preparing this EIA report.

Signature:

Name: **P.Giri**

Designation: **Chief Executive**

Name of the EIA consultant organization: **Creative Engineers & Consultants, Chennai – 59**
NABET Certificate No. & Issue Date: **No- NABET/EIA/23-26/RA 0331 & date 23.12.2026**

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* * * * * * * *

सत्यमेव जयते

File No: 11754

Government of India

Ministry of Environment, Forest and Climate Change

(Issued by the State Environment Impact Assessment Authority(SEIAA), TAMIL NADU)

***

Dated **08/04/2025**

To,

Thiru. S. Shunmugavel
S/o. Shri. Subbiah Thever,300D5/2,Sankarankovil Road,Rajapalayam Town & Taluk,Virudhunagar District., Gopalapuram, VIRUDHUNAGAR, TAMIL NADU, 625528
sasthabluemetal@gmail.com

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

Sir/Madam,

SEIAA, Tamil Nadu – Terms of Reference along with Public Hearing (ToR) for the Proposed Rough Stone and Gravel Quarry lease over an extent 2.12.5 Ha at S.F.Nos. 586/11, 12, 13, 14, 15, 17, 18 of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu by Thiru. S.Shunmugavel- 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/520271/2025, Dated: 28/01/2025.
2. Your application submitted for Terms of Reference dated: 27.01.2025.
3. Minutes of the 538th Meeting of SEAC held on 01.03.2025.
4. Minutes of the 804th Meeting of Authority held on 01.04.2025.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO25B0108TN5835658N
(ii) File No.	11754
(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 S. Shunmugavel
(viii) Name of Company/Organization	shanmugavels
(ix) Location of Project (District, State)	VIRUDHUNAGAR, TAMIL NADU
(x) Issuing Authority	SEIAA

(xii) Applicability of General Conditions no

(xiii) 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 01.04.2025 The minutes of the meeting and all the Application and documents submitted [(viz. Form-1 Part A, Part B,] are available on PARIVESH portal which can be accessed by scanning the QR Code above.

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

4.The SEIAA has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the SEAC hereby decided to issue the following Terms of Reference with public hearing for instant proposal Thiru. S.Shunmugavel under the provisions of EIA Notification, 2006 and as amended thereof.

5.The Ministry/SEIAA-TN reserves the right to stipulate additional conditions, if found necessary.

6.The Terms of Reference with public hearing to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

7.This issues with the approval of the Competent Authority.

8.The TORs with public hearing prescribed shall be valid for a period of three years from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.

Copy To

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

Annexure 1

Specific Terms of Reference for (Mining Of Minerals)

1. Seiaa Specific Conditions:

S. No	Terms of Reference
1.1	After detailed discussions, the Authority accepts the recommendation of SEAC and decided to grant **Terms of Reference (ToR) along with Public Hearing for the quantity of 72,710m^3 of Rough**

S. No	Terms of Reference
	Stone & 28,248m^3 of Gravel upto the depth of 29m 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: 1.Since waterbodies are situated within 1km, the PP shall carry out the hydrogeological and hydrological study including the details of waterflow pattern to determine the impacts of the mining operation in the waterbodies. 2. The details of enumeration of structures within 500m including schools, colleges, primary health centres should be submitted along with the EIA report.

2. Seac Conditions - Site Specific

S. No	Terms of Reference
2.1	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 statutory personnel, appropriate environmental monitoring, good maintenance of haul roads and village/panchayat roads, authorized blasting operation etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal:** **(i) Copy of the agreement forming CMC.** **(ii) The Organisation chart of the Committee with defining the role of the members** **(iii) The 'Standard Operating Procedures' (SoP) executing the planned activities**. 2. The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report. 3. Since waterbodies are situated nearby, the PP shall carry out the hydrogeological and hydrological study including the details of waterflow pattern to determine the impacts of the mining operation in the waterbodies. 4. The project proponent shall submit a Certified Compliance Report (CCR) obtained from the RO, MoEF&CC, Chennai for the previous EC dated. 11.08.2017 and appropriate mitigating measures for the non-compliance items, if any. 5. The details of enumeration of structures including schools, colleges, primary health centres should be submitted along with the EIA report. 6. The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m & upto 1km shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc. and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations. 7. The proponent shall furnish photographs of adequate fencing, garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan. 8. The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report. 9. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine. 10. The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding village and structures. 11. For the safety of the persons employed in the quarry, the PP shall carry out the scientific studies to assess the slope stability of the existing quarry wall (exists without benches) **for spelling out the slope stability action plan with mitigation measures and working methodology**, by involving

S. No	Terms of Reference
	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 Dept of Mining Engg., Anna University Chennai. A copy of such scientific study report shall be submitted with an action plan accommodating the inclusion of haul road accessibility with maintaining the proper gradient by ensuring the slope stability of the working benches to be constructed and existing quarry wall. 12. The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic/videographic evidence along with the EIA report.

3. Seac Standard Conditions

S. No	Terms of Reference
3.1	1. In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following: (i) Original pit dimension (ii) Quantity achieved Vs EC Approved Quantity (iii) Balance Quantity as per Mineable Reserve calculated. (iv) Mined out Depth as on date Vs EC Permitted depth (v) Details of illegal/illicit mining (vi) Violation in the quarry during the past working. (vii) Quantity of material mined out outside the mine lease area (viii) Condition of Safety zone/benches (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m. 2. Details of habitations around the proposed mining area and latest VAO certificate regarding the location of habitations within 300m radius from the periphery of the site. 3. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc. 4. The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within 1 km of the proposed quarry. 5. The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report. 6. The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site. 7. In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC. 8. However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual ‘Slope Stability Plan’ for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.

S. No	Terms of Reference
	9. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent. 10. The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site. 11. The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences. 12. If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines, 13. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines? 14. Quantity of minerals mined out. · Highest production achieved in any one year · Detail of approved depth of mining. · Actual depth of the mining achieved earlier. · Name of the person already mined in that leases area. · If EC and CTO already obtained, the copy of the same shall be submitted. · 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.

S. No	Terms of Reference
	23. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted. 24. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given. 25. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided. 26. Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered. 27. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided. 28. Impact on local transport infrastructure due to the Project should be indicated. 29. A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity. 30. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific. 31. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible. 32. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix-I in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner. 33. Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The 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.

S. No	Terms of Reference
	39. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given. 40. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc. 41. If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB. 42. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine. 43. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.

4. Seiaa Standard Conditions:

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

S. No	Terms of Reference
	14. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock. **Forests** 15. The project proponent shall detailed study on impact of mining on Reserve forests and free ranging wildlife. 16. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna. 17. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection. 18. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site. **Water Environment** 19. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period. 20. Erosion Control measures. 21. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas. 22. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir. 23. The project proponent shall study and furnish the details on potential fragmentation impact on natural Environment, by the activities. 24. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts. 25. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components. 26. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites. 27. The EIA shall include the impact of mining activity on the following: a) Hydrothermal/Geothermal effect due to destruction in the Environment. b) Bio-geochemical processes and its foot prints including Environmental stress. c) Sediment geochemistry in the surface streams. **Energy** 28. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished. **Climate Change** 29. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities. 30. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and physical, chemical & biological soil features. 31. Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood. **Mine Closure Plan** 32. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued. **EMP**

S. No	Terms of Reference
	33. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued and the scope for achieving SDGs. 34. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan. **Risk Assessment** 35. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining. **Disaster Management Plan** 36. To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued. **Others** 37. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc. 38. As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan. 39. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the Environment. The ecological risks and impacts of plastic & microplastics on aquatic Environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

Standard Terms of Reference for (Mining of minerals)

1.

S. No	Terms of Reference
1.1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994
1.2	A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given
1.3	All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee
1.4	All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ toposheet, topographic sheet, geomorphology and geology of the areashould be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone)
1.5	Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining

S. No	Terms of Reference
	history of the area, important water bodies, streams and rivers and soil characteristics
1.6	Details about the land proposed for mining activities should be givenwith information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority
1.7	It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large,may also be detailed in the EIA Report
1.8	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided
1.9	The study rea 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 rea delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given
1.11	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given
1.12	A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the State Expert Appraisal Committees
1.13	Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished
1.14	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated
1.15	The vegetation in the RF / PF areas in the study area, with necessary details, should be given
1.16	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other

S. No	Terms of Reference
	protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted
1.17	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlifeand 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

S. No	Terms of Reference
	mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map
1.24	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated
1.25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided
1.26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided
1.27	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided
1.28	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from State Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished
1.29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out
1.30	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same
1.31	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution
1.32	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines
1.33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report

S. No	Terms of Reference
1.34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report
1.35	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed
1.36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations
1.37	Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation
1.38	Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project
1.39	Public Hearing points raised and commitment of the Project Proponent on the same along with time 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

S. No	Terms of Reference
	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

e-KYC CAF DSS e-Processing e-Payments e-Compliance KYA
PARIVESH
CPC GREEN

A. STANDARD TERMS OF REFERENCE

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

proposed safeguard measures in each case should also be provided.

9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.

10) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.

11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.

12) Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.

13) Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.

14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.

15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.

16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.

17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from

the Standing Committee of National Board of Wildlife and copy furnished.

18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.

19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should

also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.

20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL. HTL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).

21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.

22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The

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

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

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

proposed Project.

39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.

40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.

41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.

42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.

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

44) Besides the above, the below mentioned general points are also to be followed:-

    a) Executive Summary of the EIA/EMP Report
    b) All documents to be properly referenced with index and continuous page numbering.
    c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
    d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
    e) Where the documents provided are in a language other than English, an English translation should be provided.
    f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
    g) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
    h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

i) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.

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

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

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

1. Project name and location (Village, District, State, Industrial Estate (if applicable).
2. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes.
3. Measures for mitigating the impact on the environment and mode of discharge or disposal.
4. Capital cost of the project, estimated time of completion.
5. The proponent shall furnish the contour map of the water table detailing the number of wells located around the site and impacts on the wells due to mining activity.
6. A detailed study of the lithology of the mining lease area shall be furnished.
7. Details of village map, "A" register and FMB sketch shall be furnished.
8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be 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 is acquisition, nearby (in 2-3 km.) water body, population, with in 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 -l1013/77/2004-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.

TOR COMPLIANCE

S.No	ToR Points	Reply	Pg.No
1.	**SEAC SPECIFIC CONDITIONS**		
1	After detailed discussions, the Authority accepts the recommendation of SEAC and decided to grant Terms of Reference (ToR) along with Public Hearing for the quantity of 72,710m3 of Rough Stone & 28,248m3 of Gravel upto the depth of 29m 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: 1.Since waterbodies are situated within 1km, the PP shall carry out the hydrogeological and hydrological study including the details of water flow pattern to determine the impacts of the mining operation in the waterbodies. 2.The details of enumeration of structures within 500m including schools, colleges, primary health centres should be submitted along with the EIA report.	• **Hydrogeological Study is detailed under Section 3.6, Chapter-III.** • **Details of the features produced within 500m radius are provided in Figure 2.3, Chapter-II**	**3-44** **2-13**
2. 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	• **Agreed** • **Details of the cluster management committee is provided under Section 10.2.2, Chapter-X.**	**10-2**

	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: a) Copy of the agreement forming CMC. b) The Organisation chart of the Committee with defining the role of the members c) The 'Standard Operating Procedures' (SoP) executing the planned activities.		
2	The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report.	**Agreed**	**--**
3	Since waterbodies are situated nearby, the PP shall carry out the hydrogeological and hydrological study including the details of waterflow pattern to determine the impacts of the mining operation in the waterbodies.	**Hydrogeological Study is detailed under Section 3.6, Chapter-III.**	**3-44**
4	The project proponent shall submit a Certified Compliance Report (CCR) obtained from the RO, MoEF&CC, Chennai for the previous EC dated. 11.08.2017 and appropriate mitigating measures for the non-compliance items, if any.	**Under Progress**	**-**
5	The details of enumeration of structures including schools, colleges, primary health centres should be submitted along with the EIA report.	**Details of the features produced within 500m radius are provided in Figure 2.3, Chapter-II**	**2-13**

6	The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m & upto 1km shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc. and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations.	**Details of the features produced within 500m radius are provided in Figure 2.3, Chapter-II**	**2-13**
7	The proponent shall furnish photographs of adequate fencing, garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	• **Site photographs have been provided in Chapter-II. Fencing and plantation are already carried out.**	**2-10**
8	The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report.	• **A detailed study of flora and fauna composition in the core and buffer zone of the project has been made through primary field surveys. The details are furnished in para 3.5, Chapter III.**	**3-37**
9	The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	• **EMP is prepared for the entire life of the mine. Affidavit will be provided along with the final EIA/ EMP report.**	**-**
10	The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding village and structures.	• **The details of the quarries located within the 500m radius of the project is given vide Annexure-3.** • **A cumulative impact study has been carried out and furnished in Para 7.6, Chapter-VII.** • **Environmental Management Plan is provided under Chapter-X.**	**2-13** **10-2**

<table>
<tr><td>11</td><td>For the safety of the persons employed in the quarry, the PP shall carry out the scientific studies to assess the slope stability of the existing quarry wall (exists without benches) for spelling out the slope stability action plan with mitigation measures and working methodology, 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 Dept of Mining Engg., Anna University Chennai. A copy of such scientific study report shall be submitted with an action plan accommodating the inclusion of haul road accessibility with maintaining the proper gradient by ensuring the slope stability of the working benches to be constructed and existing quarry wall.</td><td>• Pit slope stability plan has been provided under Section 7.7, Chapter-VII</td><td>7-8</td></tr>
<tr><td>12</td><td>The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic/videographic evidence along with the EIA report.</td><td>• Agreed</td><td>-</td></tr>
<tr><td colspan="4">3. SEAC STANDARD CONDITIONS</td></tr>
<tr><td>1</td><td>In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following:
i) Original pit dimension
ii) Quantity achieved Vs EC Approved Quantity
iii) Balance Quantity as per</td><td>The present proposed quarry was earlier worked by the applicant from 2018 to 2023 by EC Lr.no. DEIAA/VNR/O25/EC.NO.20/2017 Dated 11.08.2017. The pit dimension of the existing pit in the area is given below.
<table>
<tr><th></th><th>Length (Max M)</th><th>Width (Max M)</th><th>Depth (Max M)</th></tr>
<tr><td>Pit 1</td><td>113.5</td><td>33</td><td>10</td></tr>
<tr><td>Pit 2</td><td>68</td><td>53</td><td>8</td></tr>
<tr><td>Pit 3</td><td>40</td><td>22.5</td><td>10</td></tr>
</table></td><td>2-17</td></tr>
</table>

<table>
<tr>
<td></td>
<td>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.</td>
<td>
<table>
<tr><th rowspan="2">Environmental clearance</th><th rowspan="2">Proceedings & Lease Period</th><th colspan="3">Permitted Quantity as per Approved mining plan & EC</th><th colspan="3">Permit issued @ Transported quantity Depth(a)</th></tr>
<tr><th>Rough Stone</th><th>Gravel</th><th>Depth (M)</th><th>Rough Stone</th><th>Gravel</th><th>Depth (M)</th></tr>
<tr><td>EC Lr.no. DEIAA/VNR/O25/EC.NO.20/2017 Dated 11.08.2017</td><td>Rc.No,KV1/53243/2013, dated 05.05.2018, 21.05.2018 to 20.05.2023</td><td>50021</td><td>17660</td><td>22</td><td>38611</td><td>16490</td><td>Pit1-10
Pit-8
Pit-10</td></tr>
</table>
</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>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.</td>
<td>• Letter from VAO is obtained and given as Annexure – 3.</td>
<td>A-14</td>
</tr>
<tr>
<td>3</td>
<td>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.</td>
<td>• Details of the features within 500m radius are provided in Figure 2.3, Chapter-II</td>
<td>2-13</td>
</tr>
<tr>
<td>4</td>
<td>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</td>
<td>• Hydrogeological Study is detailed under Section 3.6, Chapter-III.</td>
<td>3-44</td>
</tr>
</table>

	quarry.		
5	The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report.	• **A detailed study of flora and fauna composition in the core and buffer zone of the project has been made through primary field surveys. The details are furnished in para 3.5, Chapter III.**	**3-38**
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 area no Reserve forest, Protected Areas, Sanctuaries, Tiger reserve etc., within 10km Radius.**	**3-3**
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.	• **Agreed**	**--**
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.	• **Pit slope stability plan has been provided under Section 7.7, Chapter-VII**	**7-8**

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.	• **Will be submitted along with the final 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 will be adopted in this project and details of the same has been provided in Section 4.4.2, Chapter-IV**	**4-19**
11	The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.	• **Agreed**	**--**
12	If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,	• **The present proposed quarry was earlier worked by the applicant from 2018 to 2023 by EC Lr.no. DEIAA/VNR/O25/EC.NO.20/2017 Dated 11.08.2017. Applicant furnished Letter from AD Mines, Virudhunagar.**	**2-13**
13	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?	• **The present proposed quarry was earlier worked by the applicant from 2018 to 2023 by EC Lr.no. DEIAA/VNR/O25/EC.NO.20/2017 Dated 11.08.2017.**	**2-13**
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.	The present proposed quarry was earlier worked by the applicant from 2018 to 2023 by EC Lr.no. DEIAA/VNR/O25/EC.NO.20/2017 Dated 11.08.2017. The pit dimension of the existing pit in the area is given below. **Pit 1: Length (Max M) 113.5; Width (Max M) 33; Depth (Max M) 10** **Pit 2: 68; 53; 8** **Pit 3: 40; 22.5; 10**	**2-13**

<table>
<tr><td></td><td>

- 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.

</td><td>

<table>
<tr><th rowspan="2">Environmental clearance</th><th rowspan="2">Proceedings & Lease Period</th><th colspan="3">Permitted Quantity as per Approved mining plan & EC</th><th colspan="3">Permit issued @ Transported quantity Depth(a)</th></tr>
<tr><th>Rough Stone</th><th>Gravel</th><th>Depth (M)</th><th>Rough Stone</th><th>Gravel</th><th>Depth (M)</th></tr>
<tr><td>EC Lr.no. DEIAA/VNR /O25/EC.NO.20/2017 Dated 11.08.2017</td><td>Rc.No,KV1/ 53243/2013, dated 05.05.2018, 21.05.2018 to 20.05.2023</td><td>50021</td><td>17660</td><td>22</td><td>38611</td><td>16490</td><td>Pit1-10
Pit-8
Pit-10</td></tr>
</table>

</td><td></td></tr>
<tr><td>15</td><td>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).</td><td>

- Project coordinates superimposed in satellite imagery and given as Figure No - 2.4 in Chapter – II.
- The 10km Radius Index plan showing buffer zone is given in Figure No.3.1 in Chapter – III.
- Geology Map, Geomorphology, Lithology map are enclosed as Figure No.3.18, 3.19 and 3.20, Chapter-III.

</td><td>2-4
3-2
3-45 & 48</td></tr>
<tr><td>16</td><td>The PP shall carry out Drone video survey covering the cluster, Green belt, fencing etc.,</td><td>

- Agreed

</td><td>--</td></tr>
<tr><td>17</td><td>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.</td><td>

- Site photographs have been provided in Chapter-II. Fencing and plantation are already carried out.

</td><td>2-10</td></tr>
<tr><td>18</td><td>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</td><td>

- The details of the geological and mineable reserves are provided in Table No.2.4, Chapter-II.
- The mining method will be Opencast semi mechanized mining using jackhammer drilling, blasting, excavation through excavator & mineral transport through tippers.
- The production schedule is given in Table No.2.7, Chapter-II.
- Anticipated Impacts of the mining operations and mitigation measures are discussed elaborately in

</td><td>2-15
2-17</td></tr>
</table>

	measures for the same.	**Chapter-IV.**	
19	The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.	• **The organization chart has been provided in Figure No.10.1, Chapter-X.**	**10-3**
20	The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.	• **Details of hydrogeological scenario of this project is provided under section 3.6, Chapter-III.**	**3-44**
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 on micro- meteorology, ambient air quality, Water quality, noise level, soil and flora & fauna are collected during Summer Season (March 2025 to May 2025) and detailed in Section 3.3 to 3.5 of Chapter-III. The details of Traffic is provided under Section 4.9, Chapter-IV.**	**3-13 & 3-38** **4-33**
22	The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry	• **The details of the quarries located within the 500m radius of the project is given vide Annexure-3.** • **A cumulative impact study has been carried out and furnished in Para 7.6, Chapter-VII.**	**7-5** **10-2**

	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.	• **Environmental Management Plan is provided under Chapter-X.**	
23	Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	• **The 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 of length 860 m 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. The surface runoff management structures diagram is given in Figure No 4.4, Chapter-IV.** • **Details of rainwater harvesting are provided under Section 4.3.4.2, Chapter-IV.**	**4-10** **4-16**
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.	• **The land use of the study area was studied to demarcate various LULC categories and its details are provided under section 3.4, Chapter-III.** • **The land use pattern at present and at the end of the quarrying period has been provided under section 4.5.1, Chapter-IV.** • **The post mining land use has been provided in Table No. 4.19. .The post mining land use plan showing afforestation and water body is shown in Figure No-4.5.**	**3-32** **4-24**
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.	• **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. Besides, there is no proposal for overburden dump outside the lease area.**	**2-14**

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**	**--**
27	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	• **The 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, 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. The surface runoff management structures diagram is given in Figure No 4.6, Chapter-IV.** • **The methods for reducing water consumption and rainwater harvesting is provided in section 4.3.4, Chapter-IV.**	**4-14** **4-15**
28	Impact on local transport infrastructure due to the Project should be indicated.	• **From this proposed quarry the entire output will be transported to the crusher units for producing stone aggregates of different sizes or construction of roads, bridges, buildings and other buyers etc. Details of the traffic is provided under section 4.9, Chapter-IV.**	**4-33**
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.	• **An ecological survey of the study area was conducted with reference to listing of species and assessment of the existing baseline ecological conditions. Details are provided under section 3.5.1, Chapter-III.**	**3-38**
30	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-	• **Details of Mine Closure Plan is provided under section 7.5, Chapter-VII.**	**7-4**

	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.	• **An ecological survey of the study area was conducted with reference to listing of species and assessment of the existing baseline ecological conditions. Details are provided under section 3.5.1, Chapter-III.**	**3-38**
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.	• **Agreed**	**--**
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.	• **Agreed**	**--**
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	• **The disaster management plan has been provided under section 7.3.1, Chapter-VII.**	**7-3**

	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.	• **Various risks likely to arise due to mining activities are detailed under section 7.3, Chapter-VII.**	**7-1**
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.	• **Details of occupational health and safety aspects are given under the subsections of Para 4.7, Chapter-IV.**	**4-30**
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.	• **Details of the socio-economic survey conducted in the buffer zone has been provided in Para 3.2.4, Chapter-III.** • **Public health facilities will be further aimed to be developed through CER activities wherein health checkups, medical camps for the locals will be conducted.**	**3-10**
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.	• **Nearby villages were visited for conducting study to know about socio-economic conditions, including aspirations and requirements of the people for a better living and collected relevant data. The details are provided under section 3.2.4, Chapter-III.**	**3-10**
39	Details of litigation pending against the project, if any, with direction /order	• **PP informed that there is no litigation pending against the project.**	**--**

	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.	• **The Rough stone Quarry will benefit this region in the fields of employment opportunities, improved per capita income for local people, improved social welfare facilities in respect of education, health, infrastructural etc.** • **Direct employment to about 10 people and indirect employment to scores of people.** • **By means of carrying out the socio-economic development activities, local community development is expected. Towards the same, the proponent has allocated Rs.2 Lakhs for various activities under CER. From the CER activities allocated for various social welfare activities, the villages near the lease area will be benefited.**	**2-20**
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.	• **Under Progress**	**--**
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.	• **EMP is prepared for the entire life of the mine. Affidavit will be provided along with 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.	• **Agreed**	**--**
4. 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.	• **Details of the cluster management committee is provided under Section 10.2.2, Chapter-X.**	**10-2**
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.,	• **Details of the cluster management committee is provided under Section 10.2.2, Chapter-X.**	**10-2**
3	The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.	• **Details of the cluster management committee is provided under Section 10.2.2, Chapter-X.**	**10-2**
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.	• **Details of the cluster management committee is provided under Section 10.2.2, Chapter-X.**	**10-2**
5	The committee shall deliberate on risk & emergency management plan, fire safety & evacuation plan and sustainable development goals pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.	• **Details of the cluster management committee is provided under Section 10.2.2, Chapter-X.**	**10-2**
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	• **Details of the cluster management committee is provided under Section 10.2.2, Chapter-X.**	**10-2**

	implementing the Environmental policy devised shall be given in detail in the EIA Report.		
7	The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.	• **Details of the cluster management committee is provided under Section 10.2.2, Chapter-X.**	**10-2**
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.	• **Details of the cluster management committee is provided under Section 10.2.2, Chapter-X.**	**10-2**
Agriculture & Agro-Biodiversity			
9	Impact on surrounding agricultural fields around the proposed mining Area.	• **Most of the study area remain uncultivated and only in patches of land away from the lease area, agricultural activities are carried during monsoon rainfall. Due to poor quality of the soil, inconsistent rainfall, water scarcity, high agricultural labor cost, manpower shortage and less yield are reason for very little agricultural activity in this region**	**4-26**
10	Impact on soil flora & vegetation around the project site.	• **The impact of mining on biological environment is provided under Table 4.25, Chapter-IV.**	**4-20**
11	Details of type of vegetation including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetation all along the boundary of the propose d mining area shall committed mentioned in EMP.	• **The details of flora in the core zone is provided in Table 3.23, Chapter-III. There is no major clearance of vegetation or transplantation involved.**	**3-37**
12	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.	• **An ecological survey of the study area was conducted with reference to listing of species and assessment of the existing baseline ecological conditions. Details are provided under Section 3.5.1, Chapter-III.**	**3-38**
13	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	• **The post mining land use has been provided in Table No. 4.19. The post mining land use plan showing afforestation and water body is shown in Figure No- 4.5.**	**4-24**

			4-12
14	The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.	• **Due to poor soil condition and non-availability of perineal water source, no major agricultural activity is carried out in and around the lease area. Only patches of plantation are observed in few places in the monsoon season based on water availability**	**4-26**
Forests			
15	The project proponent shall detailed study on impact of mining on Reserve forests and free ranging wildlife.	• **There are no reserve forest within 10km radius and as such no impact on this front envisaged.**	**4-26**
16	The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.	• **An ecological survey of the study area was conducted with reference to listing of species and assessment of the existing baseline ecological conditions. Details are provided under section 3.5.1, Chapter-**	**3-38**
17	The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.	• **An ecological survey of the study area was conducted with reference to listing of species and assessment of the existing baseline ecological conditions. Details are provided under section 3.5.1, Chapter-III.**	**3-38**
18	The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.	• **There are no national parks or corridors in the 10 km radius. There are no reserve forest in the proximity of the lease area.**	**4-26**
Water Environment			
19	Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be	• **The details of hydrogeological study is provided under Section 3.6, Chapter-III.**	**3-44**

	provided, covering the entire mine lease period.		
20	Erosion Control measures.	• **Since the entire material from the quarry face will be directly dispatched to the consumers, there will not be any stockpiles. There are no waste dumps in this quarry. As such there will not be any wash out due to stock pile or waste dumps.** • **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**	**4-26**
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.	• **There is no proposal to discharge any effluent into this waterbody. No major impact is envisaged on the nearby water bodies due to project operations**	**4-26**
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 major perennial waterbody in close proximity of the lease area.**	**4-26**
23	The project proponent shall study and furnish the details on potential fragmentation impact on natural Environment, by the activities.	• **The post mining land use has been provided in Table No. 4.19. The post mining land use plan showing afforestation and water body is shown in Figure No- 4.5.**	**4-24** **4-12**
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.	• **An ecological survey of the study area was conducted with reference to listing of species and assessment of the existing baseline ecological conditions. Details are provided under section 3.5.1, Chapter-III.** • **The land use pattern details are provided under section 4.5.1, Chapter-IV.**	**3-38** **4-24**
25	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	• **The nearest major water bodies is provided in Table No.3.2, Chapter-III.** • **The mining area consists of hard compact rock, hence no major water seepage within the mine is expected from the periphery. The ultimate pit depth of mining is 29 m. The ground water table in this area is below this level. Hence, ground water intersection in not envisaged and ground water will not be**	**3-3** **4-15**

		affected appreciably due to the quarrying operation.	
26	The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.	• **The details of hydrogeological study is provided under Section 3.6, Chapter-III.**	**3-44**
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 details of the same is provided in Table 4.20, Chapter-IV.**	**4-25**
Energy			
28	The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished.	• **The dust control measures are listed under Table 4.1, Water pollution control measures under Section 4.3.2, and noise pollution control measures under Section 4.4.1.2, Chapter-IV. Besides, energy consumption in this project will be optimum and as per requirement.**	**4-2** **4-12** **4-18**
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.	• **Certified vehicles with low carbon emissions will only be used. These equipment's will be properly and regularly maintained. Besides, regular vehicular emission tests will be done for the transport vehicles to ensure minimal impact due to carbon emissions. To further mediate the carbon emissions, a good greenbelt and plantation plan has been planned wherein 1000 number of plants will be planted in and around the lease area.**	**7-9**

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.	• **Certified vehicles with low carbon emissions will only be used. These equipment's will be properly and regularly maintained. Besides, regular vehicular emission tests will be done for the transport vehicles to ensure minimal impact due to carbon emissions. To further mediate the carbon emissions, a good greenbelt and plantation plan has been planned wherein 1000 number of plants will be planted in and around the lease area.**	**7-9**
31	Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood.	• **Replied above**	**--**
Mine Closure Plan			
32	Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.	• **Details of Mine Closure Plan is provided under section 7.5, Chapter-VII.**	**7-4**
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.	• **Detailed environmental management plan is provided under Chapter-X.**	**10-1**
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.	• **Detailed environmental management plan is provided under Chapter-X.**	**10-1**
Risk Assessment			
35	To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining.	• **Various risks likely to arise due to mining activities are detailed under section 7.3, Chapter-VII.**	**7-1**
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.	• **The disaster management plan has been provided under section 7.3.1, Chapter-VII.**	**7-3**
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.	• **VAO Letter has been provided as Annexure-3**	**A-17**
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.	• **Will be provided in the Final EIA/EMP Report after completion of public hearing.**	**--**
39	The project proponent shall study and furnish the possible pollution due to plastic and micro plastic on the Environment. The ecological risks and impacts of plastic &micro plastics on aquatic Environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.	• **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.**	**4-33**
STANDARD TOR FOR (MINING OF MINERALS)			

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.	• **Nil**	**--**
2	A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given	• **Precise area communication letter was obtained from the District Collector Virudhanagar.**	**11-2**
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.	• **The production capacity, quantity of waste, its management and mining technology in mine plan and EIA, etc., are compatible with one another.**	**2-24**
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).	• **Project coordinates superimposed in satellite imagery and given as Figure No - 2.4 in Chapter – II.** • **The geology and geomorphology map is provided in Figure No.3.18, 3.19, Chapter-III. The Lithology map and Soil map are provided under Figure No. 3.20, 3.21, Chapter-III.** • **The 10km Radius Index plan showing buffer zone is given in Figure No.3.1 in Chapter – III.**	**2-4** **3-45 & 48** **3-2**
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.	• **Replied in Standard ToR point no.4**	**--**
6	Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land	• **Not Applicable**	**--**

	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.	• **The proponent will frame a well-planned environmental policy. Its details are provided under Section 10.2.1, Chapter-X.** • **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 programme, social development schemes, etc in the mine. The organizational chart for the same has been provided in Figure No.10.1, Chapter-X.**	**10-1** **10-3**
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 7.4, Chapter-VII. This being an opencast mine, subsidence is not applicable. The impact due to ground vibrations due to blasting is given in para 4.3.2, Chapter-IV.**	**7-1** **4-12**
9	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.	• **The study area chosen for collecting existing environmental status covers 10 km radial distance from the project periphery (Figure No - 3.1). Data given in the report is for the life of the mine.**	**3-2**
10	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory	• **The land use of the study area was studied to demarcate various LULC categories and its details are provided under section 3.4,**	**3-32**

	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.	**Chapter-III.** • **The land use pattern at present and at the end of the quarrying period has been provided under section 4.5, Chapter-IV.** • **In the post mining stage, entire 1.16.00Ha of mined out area will be left as water body, 0.01.0 Ha will be the mine infrastructure, 0.03.0 Ha will be the mine roads, 0.36.0 Ha will be covered with vegetation, 0.46.50Ha will be undisturbed area and 0.10.00Ha will be fencing.**	**4-24**
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. Besides, there is no proposal for overburden dump outside the lease area.**	**4-24**
12	A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.	• **There is no forest land in the lease area.**	**--**
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.	• **There is no forest land in the lease area.**	**--**

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**	**--**
15	The vegetation in the RF / PF areas in the study area, with necessary details, should be given.	• **There is no forest land in the lease area.**	**--**
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.**	**4-26**
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.	• **Replied in Standard ToR point No.16**	**--**
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	• **A detailed study of flora and fauna composition in the core and buffer zone of the project has been made through primary field surveys. The details are furnished in para 3.5, Chapter III.**	**3-38**

	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.	• **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 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).	• **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	• **The mining activities will be carried out within the mine lease area only. The entire mine lease area is a patta land. There is no population within the ML area. Hence, the question of R& R does not arise.**	**7-4**

	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 he 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 shilling 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.	• **The baseline data on micro- meteorology, ambient air quality, Water quality, noise level, soil and flora & fauna are collected during Summer Season (March 2025 to May 2025) and detailed in para 3.3 to 3.5 of Chapter-III.** • **Monitoring stations were selected taking into account, wind direction and location of sensitive receptors.** • **Free silica composition in PM10 sample has been done and the values are found to be Below Detectable Limit (DL 0.05mg/m3) which is well within the prescribed limit.**	**3-13 & 3-38**

23	Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.	• **Air quality modeling details are furnished in para 4.2.2 and its continuous sub paras in Chapter-IV of EIA report.** • **The impact on air quality due to the proposed project is estimated using AERMOD View Gaussian Plume Air Dispersion Model developed by Lakes Environmental Software which is based on steady state Gaussian plume dispersion.** • **The model simulations are done for the air pollutant arising from the mining operations, namely, PM10, PM2.5. Ground Level Concentration (GLC) have been computed using hourly meteorological data.** • **The Isopleths of PM10, PM2.5 concentrations for with control measures scenario have also been drawn and these are given in Figure No.4.1 and 4.2.** • **It can be seen that on individual basis, the resultant added concentrations with baseline figures with respect to PM10 is in the range of 52.2 μg/m3 to 65.7 μg/m3 and with respect to PM2.5 are in the range of 25.6μg/m3 to 40.4 μg/m3 which are within the stipulated statutory limits.**	**4-3**
24	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.	• **The total water requirement for this project will be 8.0 KLD comprising 1.0 KLD for drinking water and domestic use, 5.0 KLD for dust suppression and 2.0 KLD for greenbelt. The water will be sourced initially from outside agencies. Later the rainwater collected in the mine pit sump will be used for this purpose. The water balance diagram for the same is shown in Figure No 4.3.**	**4-12**
25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.	• **Not Applicable.**	**--**
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.	• **The 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 of length 860m will be**	**4-14** **4-15**

		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. The surface runoff management structures diagram is given in Figure No 4.6, Chapter-IV. • **The methods for reducing water consumption and rainwater harvesting is provided in section 4.3.4, Chapter-IV.**	
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.	• **There are no perineal water courses in the lease areas. Seasonal Drainage – adjacenet west 50m safety left, Vaippar River - 1.5km – SE,Cholapuram River - 2.4km – W, Solasseri River - 2.9km – W, Karuva Nadi - 8.7km – SW, Marugal Odai - 1.9km – NE, Nedunkulam Odai - 8.9km - NE** • **The ultimate pit depth of mining is 29m. The ground water table in this area is below this level. Hence, ground water intersection in not envisaged and ground water will not be affected appreciably due to the quarrying operation.**	**3-3**
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 occurrence of groundwater mainly in the porous soil are weathered layers, very negligible amount of groundwater percolated through the poorly fractured layer, after that there is no existence of groundwater. Since the mining area consists of hard compact rock, no major water seepage within the mine is expected from the periphery.** • **The ultimate pit depth of mining is 29m. The ground water table in this area is below this level. Hence, ground water intersection in not envisaged and ground water will not be affected appreciably due to the quarrying operation.** • **Details of hydro geological study are given in Para 3.6.1 Chapter – III.**	**3-53** **3-44**
29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the	• **There are no streams passing through the lease area.**	**--**

	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.	• **The area applied for mining lease is a gentle plain terrain. Part of the lease area has already been mined out. The ultimate pit depth of mining is 29m. The ground water table in this area is below this level.**	**11-8** **11-3**
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. Phasc-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 / Plantation will be carried out to enhance the vegetative growth and aesthetic in the safety zone area. About 1000 trees will be planted in and around the lease area. Details of the same is provided under TableNo.4.21, Chapter-IV.**	**4-28**
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	• **From this proposed quarry the entire output will be transported to the crusher units for producing stone aggregates of different sizes or construction of roads, bridges, buildings and other buyers etc. Details of the traffic is provided under section 4.9, Chapter-IV.**	**4-33**

	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.	• **This is a proposed project. Site services like mine office, first aid room, rest shelters, toilets etc. will be provided as semi-permanent structures.**	**2-20**
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.	• **In the post mining stage, entire 1.16.00Ha of mined out area will be left as water body, 0.01.0 Ha will be the mine infrastructure, 0.03.0 Ha will be the mine roads, 0.36.0 Ha will be covered with vegetation, 0.46.50Ha will be undisturbed area and 0.10.00Ha will be fencing.** • **Entire mined out area will be properly fenced to prevent inadvertent entry of men and animals. In the post mining stage the rainwater harvested in the mined out void shall be utilized in the area.**	**11-13**
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 subsections of Para 4.7, Chapter-IV.**	**4-30**
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	• **Details of the socio economic survey conducted in the buffer zone has been provided in Para 3.2.4, Chapter-III.** • **Public health facilities will be further aimed to be developed through CER activities wherein periodic health checkups, medical camps for the locals will be conducted.**	**3-10**
37	Measures of socio economic significance and influence to the local community proposed to be provided by the Project	• **Towards the socio economic development of the surrounding area, the proponent has earmarked an amount of Rs. 2 Lakhs under Corporate Environmental Responsibility. The**	**4.30**

	Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	**activities identified under CER will be implemented in a phased manner in the nearby Government schools. In consultation with the locals based on the need & priority it will be implemented. Its details are provided in Para 4.6.5, Chapter-IV**	
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.	• **Detailed Environmental Management plan and its implementation, etc., are furnished in Chapter X.**	**10-1**
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.	• **This draft EIA/EMP report will be exposed to public consultation as per mandatory procedures through the District Collector and State Pollution Control Board officials after giving 30 days advance notice in two local newspapers about the scheduled date and time for conduct of the public hearing procedures.** • **The opinions, concerns and objections of stakeholders will be recorded during the public hearing. All the public queries and the replies to the query by the project proponent and officials concerned will be recorded and incorporated in the EIA/EMP report for approval by SEIAA, Tamil Nadu.**	**7-1**
40	Details of litigation pending against the project, if any, with direction /order paced by any Court of Law against the Project should be given.	• **PP informed that there is no litigation pending against the project.**	**--**
41	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.	• **The cost of the project is Rs. 29,25,000** • **The Environment Management Budget of Rs. 18.03 Lakhs is allocated under capital cost and Rs.13.38 Lakhs/annum under recurring cost and the same has been furnished in Table 10.2, Chapter-X. All the recurring cost of maintenance of pollution control measures, environmental monitoring etc., will be met from revenue.**	**2-21** **10-11**
42	A Disaster management Plan shall be prepared and included in the EIA/EMP	• **The disaster management plan has been provided under section 7.3.1, Chapter-VII.**	**7-3**

	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.	• **The proposed Rough Stone Quarry will benefit this region in the fields of employment opportunities, improved per capita income for local people, improved social welfare facilities in respect of education, health, infrastructural etc.** • **Direct employment to 16 people and indirect employment to scores of people.** • **By means of carrying out the socio economic development activities, local community development is expected. Towards the same, the proponent has allocated Rs. 2 Lakhs for various activities under CER. From the CER activities allocated for various social welfare activities, the villages near the lease area will be benefited.**	**2-20**

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CHAPTER 1 INTRODUCTION

1.1 PURPOSE OF THE REPORT:

Thiru. S. Shanmugavel propose to operate Rough Stone and Gravel Quarry at Survey No. 586/11,12,13,14,15,17,18 over an area of 2.12.50 hectares in Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu and has initiated action towards obtaining environmental clearance. Production capacity is 72,710m3 of Rough Stone & 28,248 m3 of Gravel up to depth of 29m for the period of Five years.

Although the individual lease area of this project is less than 5 Ha, the other existing and proposed quarries within the 500m radius cluster along with this subject project works out to >5 Ha. Hence, this proposal is considered under Category – B1 and as per MoEF & CC notification necessitates preparation of EIA/EMP report and public hearing.

This EIA/EMP report for Thiru. S. Shanmugavel is prepared based on standard and additional Terms of Reference issued by SEIAA, Tamil Nadu vide TOR Identification No. TO25B0108TN5835658N dated 08.04.2025 and is in conformance of the generic structure prescribed by MOEF&CC in their notification of September 2006 and the approved mining plan.

1.2 IDENTIFICATION OF PROJECT &PROJECT PROPONENT:

1.2.1 IDENTIFICATION OF THE PROJECT:

Rough stone and Gravel Quarries of Thiru.S. Shanmugavel located in Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil N adu.

Table 1.1: Details of the project

Project Name	Survey No.	Area	Land Type
Rough stone and Gravel Quarry of Thiru. S. Shanmugavel	586/11,12,13,14,15,17,18	2.12.50 Ha	Patta land owned by a applicant

Site vicinity map has been described in Figure 1.1. The rough stone and gravel will be excavated and loaded into tipper and dispatched to needy buyers .

Figure 1.1: Site Vicinity Map

Table 1.2: Identification of project

Project Name	Rough stone and Gravel Quarry of Thiru. S. Shanmugavel
Extent	2.12.50 Ha
Total Production	72,710m3 of Rough Stone & 28,248 m3 of Gravel up to depth of 29m for the period of Five years.
Peak Production	Annual peak production capacity of 20,220 m3 of Rough stone and 10,608 m3 of Gravel.
Ultimate Depth	29m for 5 years (Below ground level)

Source: Approved Mining Plan

Table 1.3:Statutory Clearances

Name	Issuing Authority	Status	Letter number	Date	Reference
Precise Area Communication	Assistant Director, Geology & Mining Virudhunagar	Received	KV1/1029/2023 - dated	10.10.2024.	Annexure-1 of EIAEMP report
Mine Plan Approval	Assistant Director, Geology & Mining Virudhunagar	Approved	KV1/1029/2023 - dated	02.12.2024.	Annexure-2 of EIAEMP report
District survey report	Collector, Assistant Director, Geology & Mining	Authenticated	As per S.O. 3611(E) dated 25.07.2018	2019	-
Details of other leases within 500m radius	Assistant Director, Geology & Mining Virudhunagar	Obtained	KV1/1029/2023 - dated	02.12.2024.	Annexure-3 of EIAEMP report
NOC for features with in 300m radius	VAO	Obtained	-		Annexure-4 of AMP

As per Precise Area Communication letter, LT line which pass through Survey No, 586/11 & 586/12 will be moved before commencement of mining activity, 10m safety has been left for Cart track & 50 safety has been left for Seasonal Drainage.

1.2.2 IDENTIFICATION OF THE PROJECT PROPONENT:

Table 1.4: Identification of Project Proponent

Applicant Name	Thiru. S.Shanmugavel,
Address	Thiru.S.Shanmugavel, No: 300 D5/2, Sankaran Kovil Road, Rajapalayam Town & Taluk, Virudhunagar District.
Contact Number	8012523355
Email-ID	sasthabluemetal@gmail.com

1.3 BRIEF DESCRIPTION OF NATURE, SIZE, LOCATION &PROJECT IMPORTANCE

Table 1.5: Brief Description of Nature of project

Sector	1(a), Non-Coal Mining
Type	Fresh Project
Category	B1
Mineral to be mined	Rough Stone and Gravel
Major/Minor Mineral	Minor
Mining Method	Opencast mechanized method of mining with jackhammer drilling, blasting, excavator, transportation by tippers.

Table 1.6: Location of the project

S.No	Particulars	Details
1	Corner Coordinates	Latitude: 9° 21' 16.29"N to 9° 21' 27.13"N Longitude: 77° 36' 46.01"E to 77° 36' 44.63"E
2	Toposheet Number	58 G/11
3.	Survey No.	586/11,12,13,14,15,17,18

Location details are elaborated in Para **2.3, Chapter-II.**

1.3.1 IMPORTANCE TO THE COUNTRY AND REGION:

Rough stone and Gravel from these quarries will meet the domestic demand. The production and method of mining is planned considering the geological factors, availability of proven technology, demand for the material etc. Safety barriers as per State Government order is left in the planning stage itself. Systematic and scientific mining will be carried out. This project will provide employment opportunities to many people. The proponent will carry out CER activities which will help the surrounding villages to derive socio economic benefits. The activities will be customized based on local needs and prioritized. Hence, livelihood development and employment will arise due to this project.

1.4 SCOPE OF THE STUDY:

Particulars	Details
Proposal no	SIA/TN/MIN/520271/2025, dated: 28.01.2025
File no	11754
Terms of Reference	TO25B0108TN5835658N dated 08.04.2025
Baseline Data Collection	Carried out by Creative Engineers & Consultants , Chennai for Summer Season (March – May 2025)

Based on the terms of reference, data collection, the Environmental Impact Assessment was carried out for the project area (core zone and the buffer zone (10km radius from the core zone) and the following studies were covered:

- Collection of primary and secondary data relevant to the project.
- One-Season baseline monitoring for environmental parameters such as air, water, noise, soil, flora & fauna, etc. Analysis of parameters in in-house laboratory.
- Documentation of EIA/EMP report with inclusion of relevant studies conducted by other bodies into the EIA/EMP report.
- Identification of significant environmental parameters that are prone to get affected due to pollution. Namely, Air, Water, Noise, Soil, Biological and Land Environment.
- Evaluation and determination of suitable mitigation measures to reduce and control the said pollution.
- Prediction of post project concentration (baseline + incremental) with respect to air environment for core zone and buffer zone.(on individual as well as cumulative basis)
- Formulation of an Environmental Management plan including administrative aspects for proposed implementation of mitigative measures in time.

This draft EIA/EMP report will be submitted for public consultation, as per rules and procedures in this respect, as per the EIA notification 2006. The opinions, concerns and objections, if any, of the surrounding public and other stake holders connected, will be taken into consideration and compliance report thereon will be submitted to SEIAA, Tamil Nadu in the final EIA/EMP report.

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CHAPTER 2

PROJECT DESCRIPTION

2.1 TYPE OF PROJECT:

This proposal involves quarrying of Rough stone and Gravel by Thiru. S. Shanmugavel using mechanized opencast method for the lease period of 5 years.

2.2 NEED & JUSTIFICATION FOR THE PROJECT:

There is a huge demand for construction material and the entire material produced from this quarry will be used in the local construction/ infrastructure sector. Considering the following favorable factors it is practically possible to achieve the proposal within the planned period and this proposal is fully justified.

- Availability of good quality proved reserves
- Techno economic viability of the scheme
- Better approachability to the project, availability of logistic facility in proximity to the site
- Economic and Socio Economic Benefits to the region

2.3 LOCATION:

A brief description of the mining area, along with the location, coordinates, accessibility, etc. has been details below in Table No.2.1.

Table 2.1: Mine site description

Project Name	Rough stone and Gravel Quarry of Thiru. S. Shanmugavel
Location	Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu.
Survey No.	586/11,12,13,14,15,17,18
Coordinates	Latitude: 9° 21′ 16.29″N to 9° 21′ 27.13″N Longitude: 77° 36′ 46.01″E to 77° 36′ 44.63″E
Nearest Village	Gopalapuram – 1.3km (NE) side.
Nearest Town	Rajapalayam - 13.0km - NW
Nearest Highway	SH-186 – 4.0Km– NE

Nearest Railway Station	Rajapalayam - 13.0km - NW
Nearest Airport	Madurai -74km -NE
Accessibility	Lease area is approachable from the existing road which is connected to Alangulam to Sivakasi road on the North east.
Topography	The lease area is a plain terrain, Massive formation of Charnokite is clearly visible in the old mined out pit and also the nearby quarry. The slope is gentle towards 'southern side.

Location map is provided in Figure No.2.1.The approachability map is provided in Figure No.2.2. Corner co-ordinates of the lease area and satellite imagery are shown in Figure No. 2.3 & 2.4 respectively. Village map for 500m radius from the lease is shown in Figure No. 2.5.

Figure 2.1: Location Map

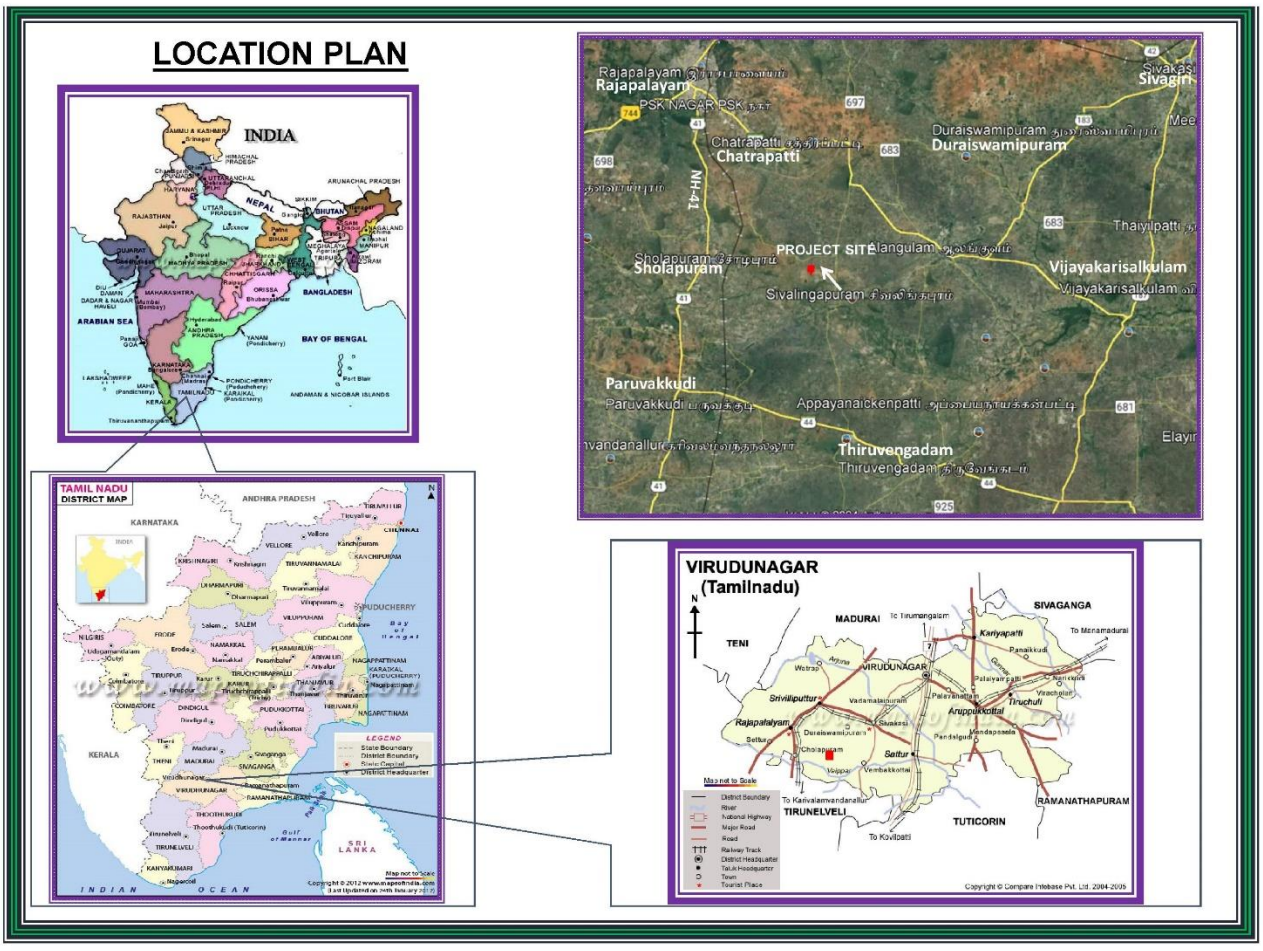


Figure 2.2: Approachability Map

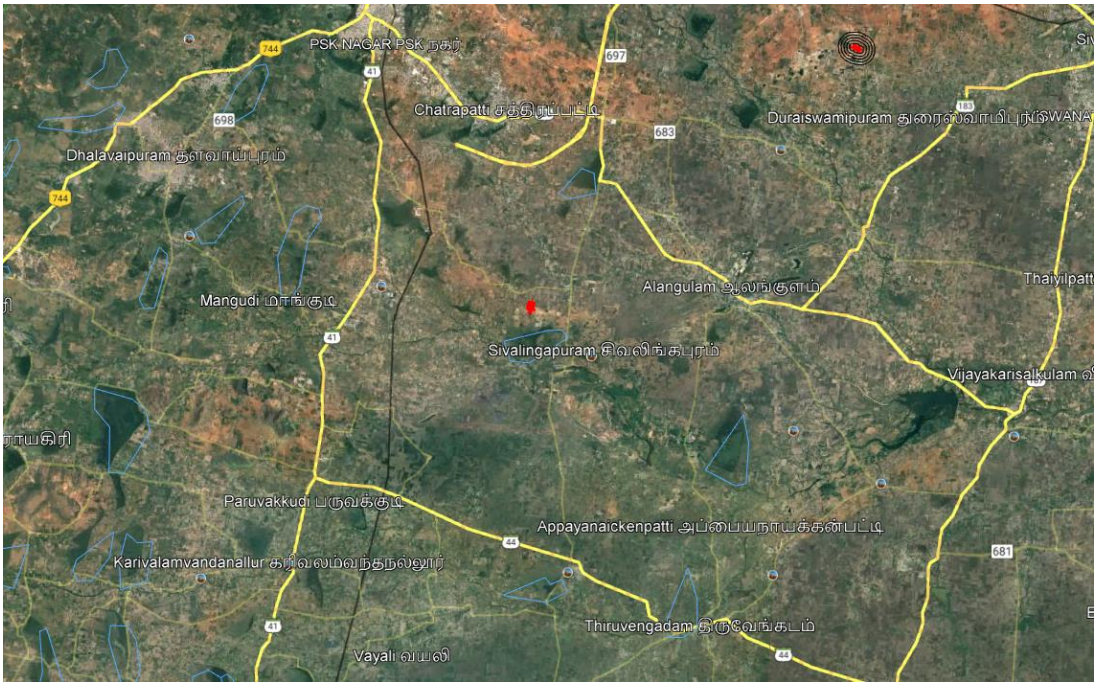


Figure 2.3: Lease Plan

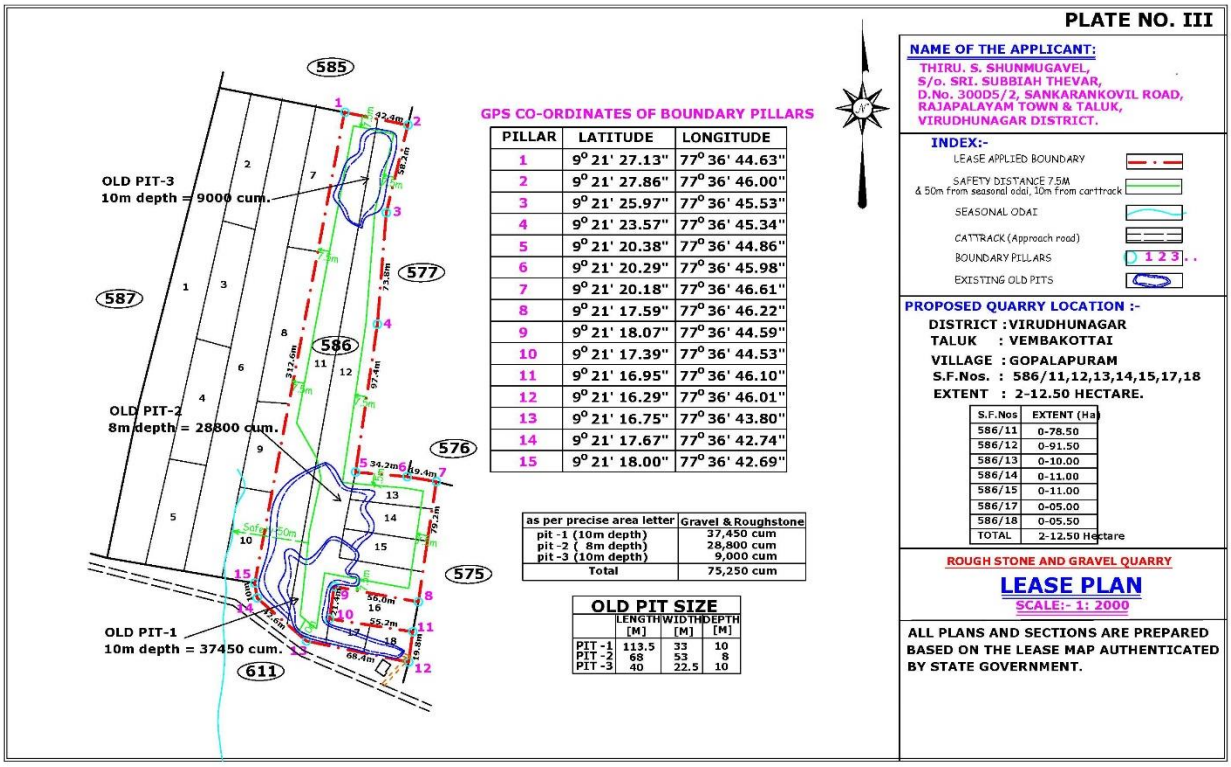
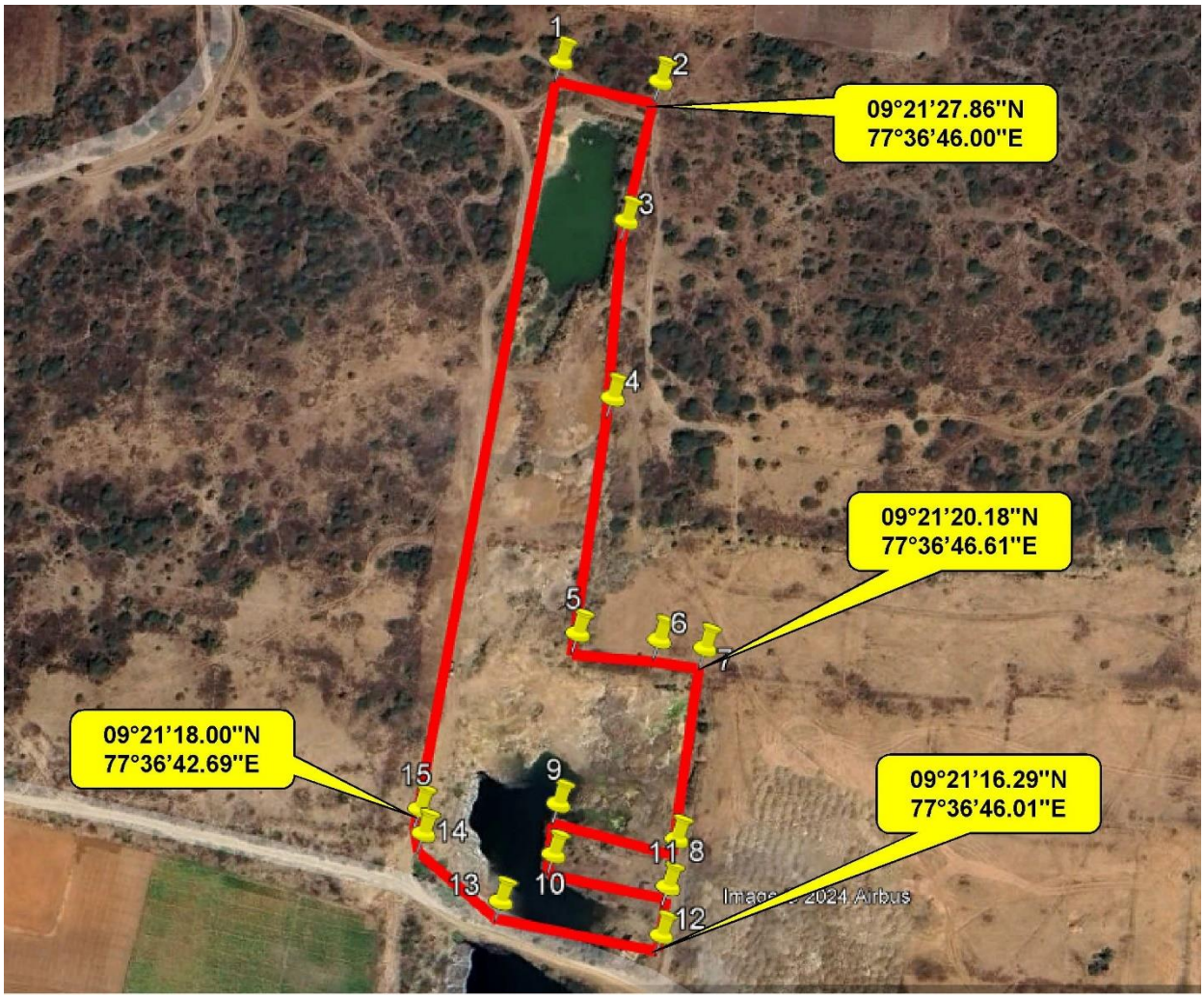


Figure 2.4: Satellite Imagery Showing Corner Co-ordinates



SITE PHOTOGRAPHS

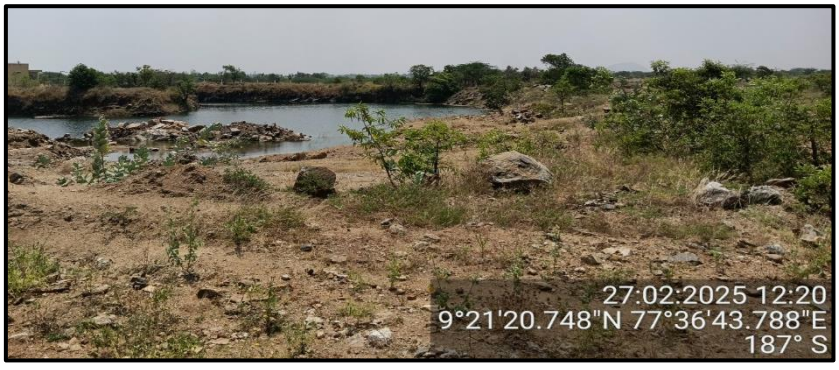


Figure 2.5: Village Map

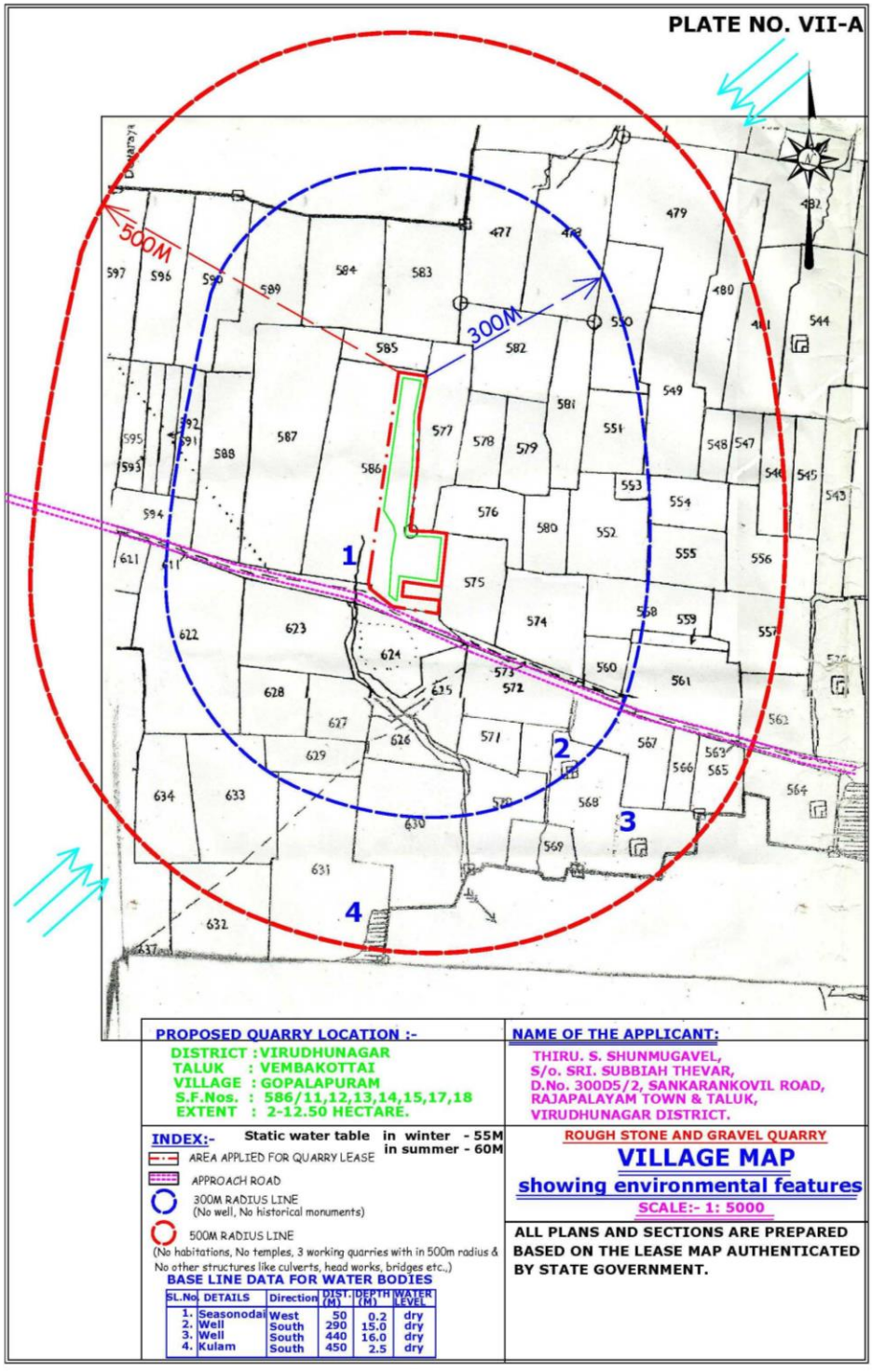
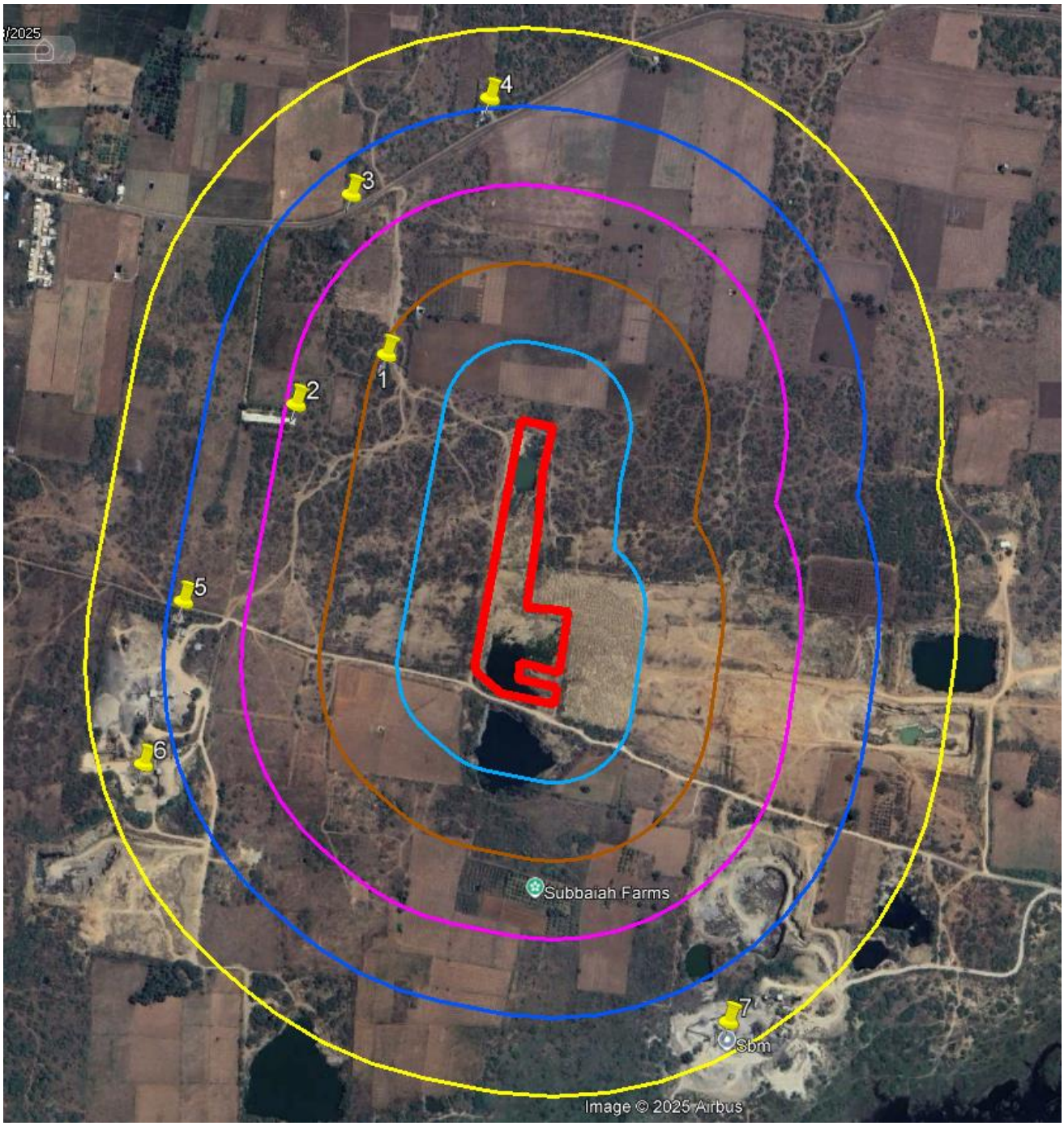


Figure 2.6: Details of features within 500m radius



As per the conditions of the Terms of Reference, the details of structures located within the 300m and 500m radius are provided below.

Table 2.2: Structures within 500m radius

S.No	Features	Distance
1-100 M		
Nil		
101-200 M		
1.	Old unused Shed	185m-NW
201-300 M		
2	Shed	282-NW
301-400		
3	Village Road	355m-NW
4	Shed	390m-NW
5	Crusher	388m-W
401-500		
6	Crusher	439m- W
7	Crusher	459m - SE

2.4 LAND CLASSIFICATION:

The lease area of Rough stone and Gravel is a Patta land owned by a applicant and the details of the same has been provided below:

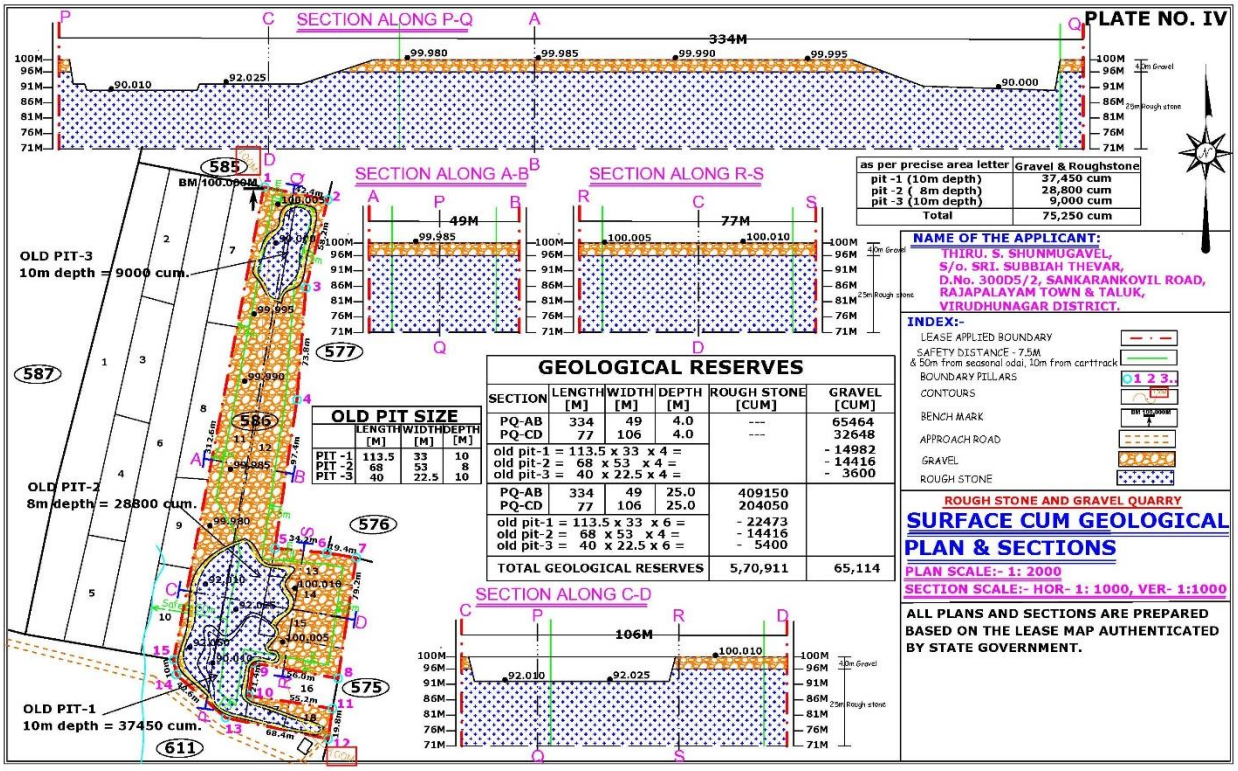
Table 2.3: Survey Number wise Area Breakup

District	Taluk	Village	Survey No	Area in Ha	Ownership
Virudhunagar	Vembakottai	Gopalpuram	586/11,12,13,14,15,17,18	2.12.50	Patta land owned by applicant
Total Area in (Hectares)				**2.12.50**	

2.5 GEOLOGY:

The area is underlined by the wide range of metamorphic rocks of peninsular gneissic complex.. 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 NS with almost vertical dipping.

Figure 2.7: Geological and Surface Plan Cross Section



2.6 SIZE AND MAGNITUDE OF THE OPERATION:

- The proposed mining will be done by open cast semi mechanized mining method.
- Life of mine will be 5 years.
- Production capacity is 72,710m3 of Rough Stone & 28,248 m3 of Gravel up to depth of 29m for the period of Five years.
- There is no waste generation anticipated in this quarry operation since the entire excavated material will be transported directly to buyers.

2.6.1 RESERVES:

Table 2.4: Geological and Mineable Reserves

Type of reserves	Rough stone and Gravel Quarry	
	Rough stone (m^3)	Gravel(m^3)
Geological Resource	**5,70,911**	**65,114**
Mineable reserves	**72,710**	**28,248**

The mineable reserves is arrived after considering the safety distance as per the Precise area letter.

2.6.2 MINING METHOD:

Opencast mechanized mining using jackhammer drilling, blasting, excavation through excavator & mineral transport through tippers will be carried out. The top gravel is soft and can be directly excavated. The rough stone below will be blasted and then excavated. Bench height of 5.0m & 5m width is considered.

Table 2.5: Details ofEquipments

EQUIPMENT	CAPACITY	Rough stone and Gravel Quarry
		REQUIREMENT
Excavator	TATA HITACHI EX200	1
Tipper	10 Tonnes	3
Tractor compressor for drilling	175 CFM	1
Dewatering pump	5 HP Diesel pump	1

2.7 PROPOSED SCHEDULE FOR APPROVAL AND IMPLEMENTATION:

The proponent propose to implement the production immediately after obtaining all the statutory approvals such as CTE, CTO, etc. The proponent will comply with the environmental clearance conditions during mining operations. The schedule of project implementation envisaged for this project is provided below. This is a tentative schedule subject to various factor, hence unforeseen variations may occur.

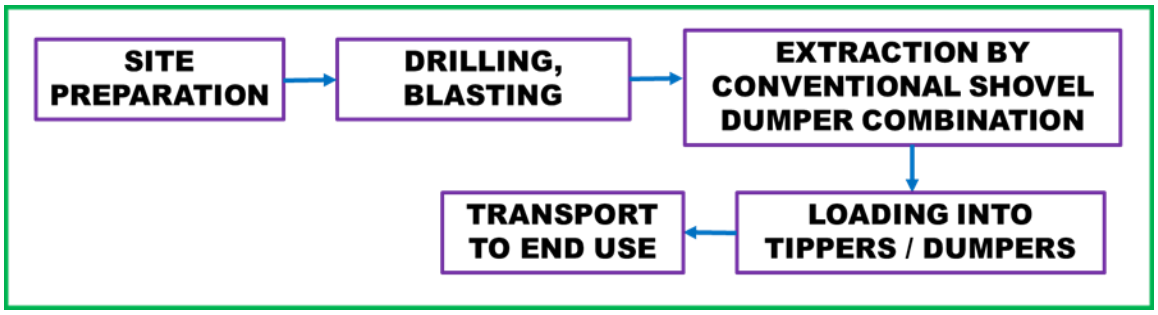
Table 2.6: Proposed Schedule of Implementation

Activities	Months					
	Zero Date	1	2	3	4	5
Obtaining Environmental Clearance						
Obtaining Consent from State Pollution Control Board						
Lease Execution						
Equipment mobilization and Commencement of Mining activity after following all the Statutory Requirements						

2.8 TECHNOLOGY AND PROCESS DESCRIPTION:

The quarry operations involve drilling, blasting, excavation, loading and transportation of rough stone to buyers. The production of Roughs tone in this quarry involves jackhammer drilling and blasting. The primary boulders 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. The process flow diagram of this project is provided below.

Figure 2.8: Process Flow Diagram



2.9 PROJECT DESCRIPTION:

Part of the present proposed quarry was earlier worked by the applicant from 2018 to 2023 by EC Lr.no. DEIAA/VNR/O25/EC.NO.20/2017 Dated 11.08.2017. The pit dimension of the existing pit in the area is given below.

	Length (Max M)	Width (Max M)	Depth (Max M)
Pit 1	**113.5**	**33**	**10**
Pit 2	**68**	**53**	**8**
Pit 3	**40**	**22.5**	**10**

Environmental clearance	Proceedings & Lease Period	Permitted Quantity as per Approved mining plan & EC			Permit issued @ Transported quantity Depth(a)		
		Rough Stone	Gravel	Depth (M)	Rough Stone	Gravel	Depth (M)
EC Lr.no. DEIAA/VNR/O25/EC.NO.20/2017 Dated 11.08.2017	Rc.No,KV1/53243/2013, dated 05.05.2018, 21.05.2018 to 20.05.2023	50021	17660	22	38611	16490	Pit1-10 Pit-8 Pit-10

2.9.1 PLAN PERIOD:

Production capacity for first 5 year is 72,710m3 of Rough Stone & 28,248m3 of Gravel up to depth of 29m for the period of 5 years. The year wise production for the projects has been provided below:

Table 2.7: Production Schedule During Plan Period.

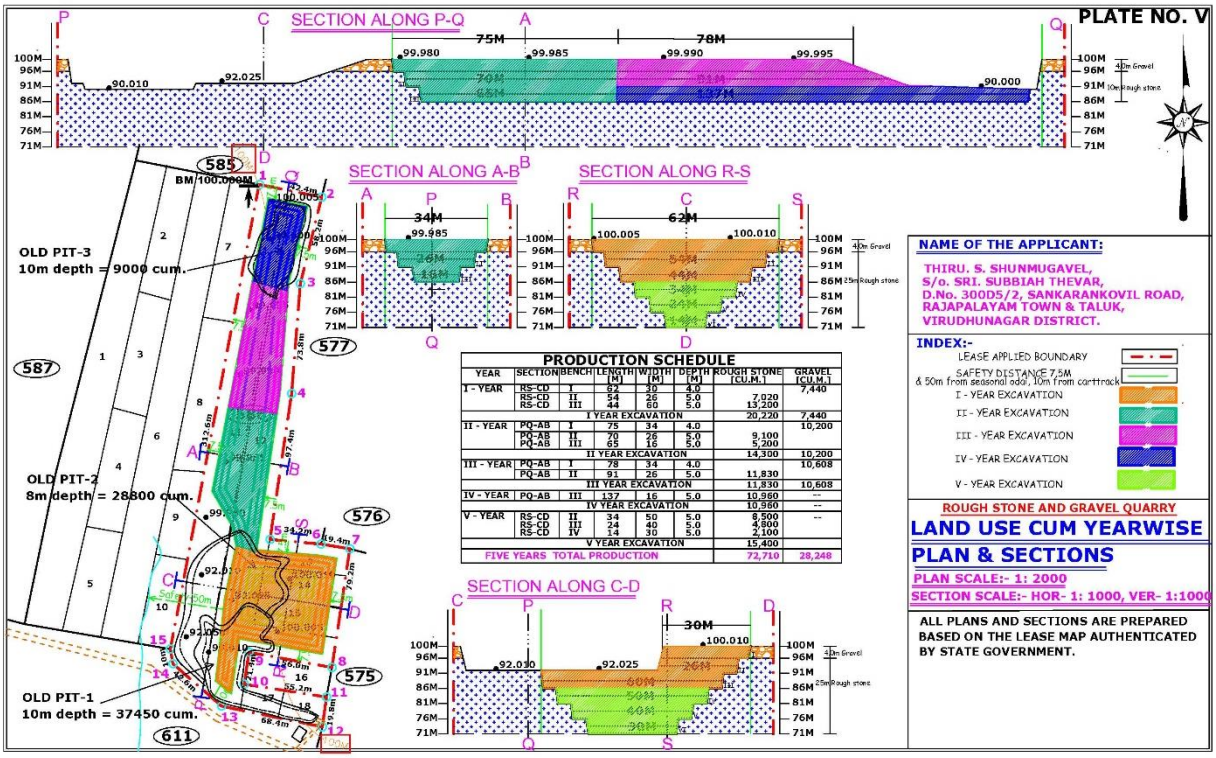
YEAR	ROUGH STONE IN CU.M.	GRAVEL IN CU.M
I	20220	7440
II	14300	10200
III	11830	10608
IV	10960	--
V	15400	--
Total	**72,710**	**28,248**

The applicant has proposed to carry out the Production capacity of 72,710m3 of Rough Stone & 28,248m3 of Gravel up to depth of 29m for the period of Five years.

Waste Disposal during Plan Period:

There is no waste generation anticipated in these quarries since the entire excavated material will be utilized. The top overburden in the form of Gravel and weathered rock will be loaded into tipper and marketed to needy customers on payment of necessary Fees to Government. The excavated rough stone will be excavated and loaded into tipper to the needy buyers for producing crusher aggregates, M Sand.

Figure 2.9: Year wise Plan & Section



YEAR	SECTION	BENCH	LENGTH (M)	WIDTH (M)	DEPTH (M)	ROUGH STONE (CU.M.)	GRAVEL (CU.M.)
I - YEAR	RS-CD	I	92	30	4.0		7,440
	RS-CD	II	54	26	5.0	7,920	
	RS-CD	III	44	60	5.0	13,200	
			I YEAR EXCAVATION			20,220	7,440
II - YEAR	PQ-AB	I	75	34	4.0		10,200
	PQ-AB	II	70	26	5.0	9,100	
	PQ-AB	III	65	16	5.0	5,200	
			II YEAR EXCAVATION			14,300	10,200
III - YEAR	PQ-AB	I	78	34	4.0		10,608
	PQ-AB	II	91	26	5.0	11,830	
			III YEAR EXCAVATION			11,830	10,608
IV - YEAR	PQ-AB	III	137	16	5.0	10,960	---
			IV YEAR EXCAVATION			10,960	---
V - YEAR	RS-CD	II	34	50	5.0	8,500	---
	RS-CD	III	24	40	5.0	4,800	
	RS-CD	IV	14	30	5.0	2,100	
			V YEAR EXCAVATION			15,400	
FIVE YEARS TOTAL PRODUCTION						72,710	28,248

2.9.2 CONCEPTUAL PERIOD:

In the post mining stage, 1.16.00Ha of mined out area will be left as water body, 0.01.0 Ha will be the mine infrastructure, 0.03.0 Ha will be the mine roads, 0.36.0 Ha will be covered with vegetation, 0.46.50Ha will be undisturbed area and 0.10.00Ha will be fencing.

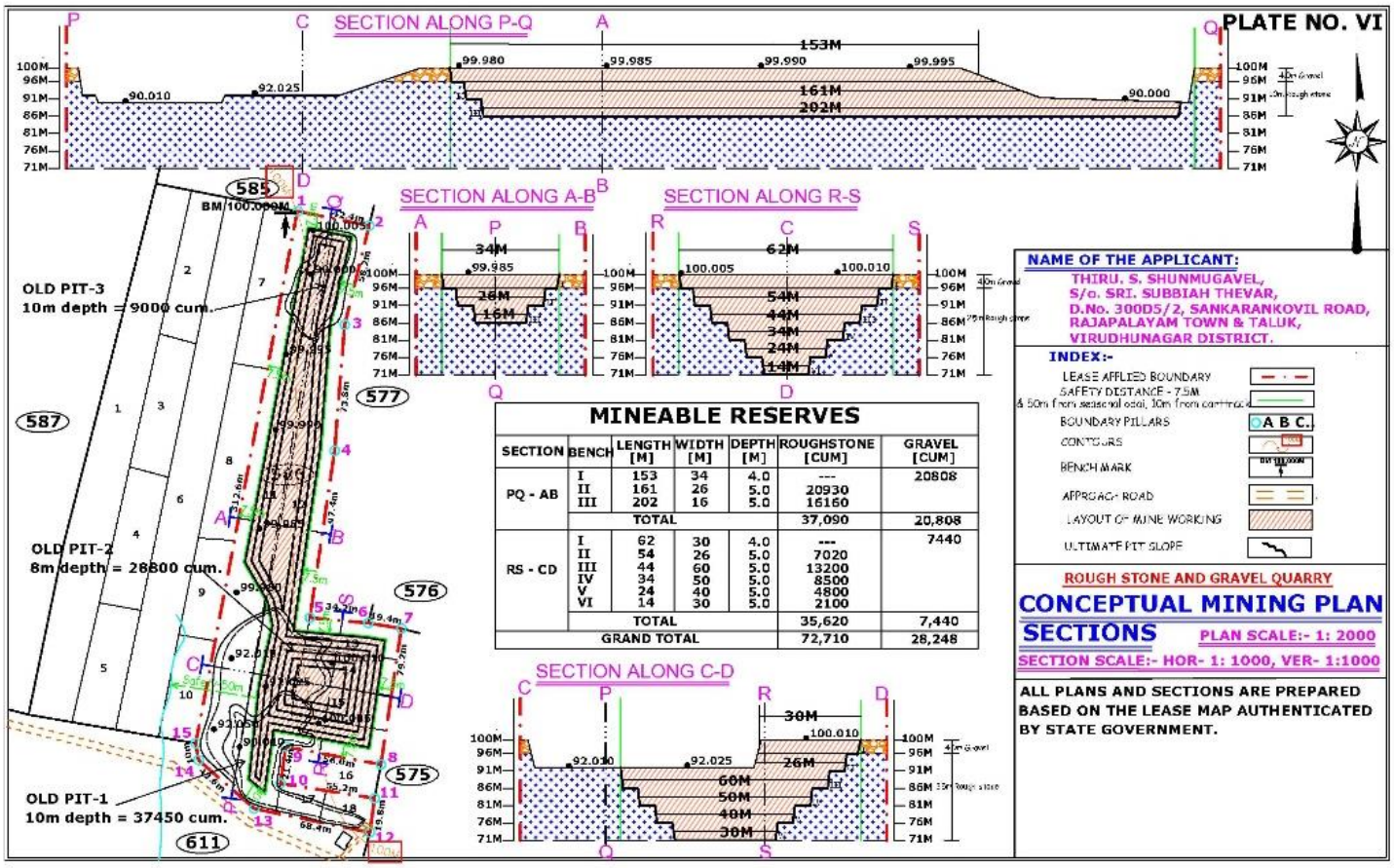
The ground water table on the surface in this area is ranging from 55 to 60m BGL Hence, ground water intersection in not envisaged

Table 2.8: Ultimate Pit Dimensions

ULTIMATE PIT SIZE			
SECTION	**LENGTH(M)**	**WIDTH(M)**	**DEPTH(M)**
PQ – AB	215	34	14
RS - CD	62	69	29

The ground water table on the surface in this area is quite deeper. Hence, ground water intersection in not envisaged. The Conceptual Plan & Cross section are shown below:

Figure 2.10: Conceptual Plan and Section



MINEABLE RESERVES

SECTION	BENCH	LENGTH [M]	WIDTH [M]	DEPTH [M]	ROUGHSTONE [CUM]	GRAVEL [CUM]
PQ - AB	I	153	34	4.0	---	20808
	II	161	26	5.0	20930	
	III	202	16	5.0	16160	
	TOTAL				37,090	20,808
RS - CD	I	62	30	4.0	---	7440
	II	54	26	5.0	7020	
	III	44	60	5.0	13200	
	IV	34	50	5.0	8500	
	V	24	40	5.0	4800	
	VI	14	30	5.0	2100	
	TOTAL				35,620	7,440
GRAND TOTAL					72,710	28,248

2.9.4 LAND DEGRADATION/UTILIZATION:

The land use pattern at present and at the end of the quarrying period has been provided below.

Table 2.9: Land Use

Sl. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1.	Mining	0.82.50	1.16.00
2.	Infrastructure	Nil	0.01.00
3.	Roads	Nil	0.03.00
4	Green Belt	Nil	0.36.00
5	Fencing	Nil	0.10.00
6	Unutilized	1.30.00	0.46.50
Total		**2.12.50**	**2.12.50**

In the post mining stage, 1.16.00 Ha of mined out area will be left as water body, 0.01.0 Ha will be the mine infrastructure, 0.03.0 Ha will be the mine roads, 0.36.0 Ha will be covered with vegetation, 0.46.50Ha will be undisturbed area and 0.10.00Ha will be fencing.

2.9.5 PROJECT REQUIREMENTS:

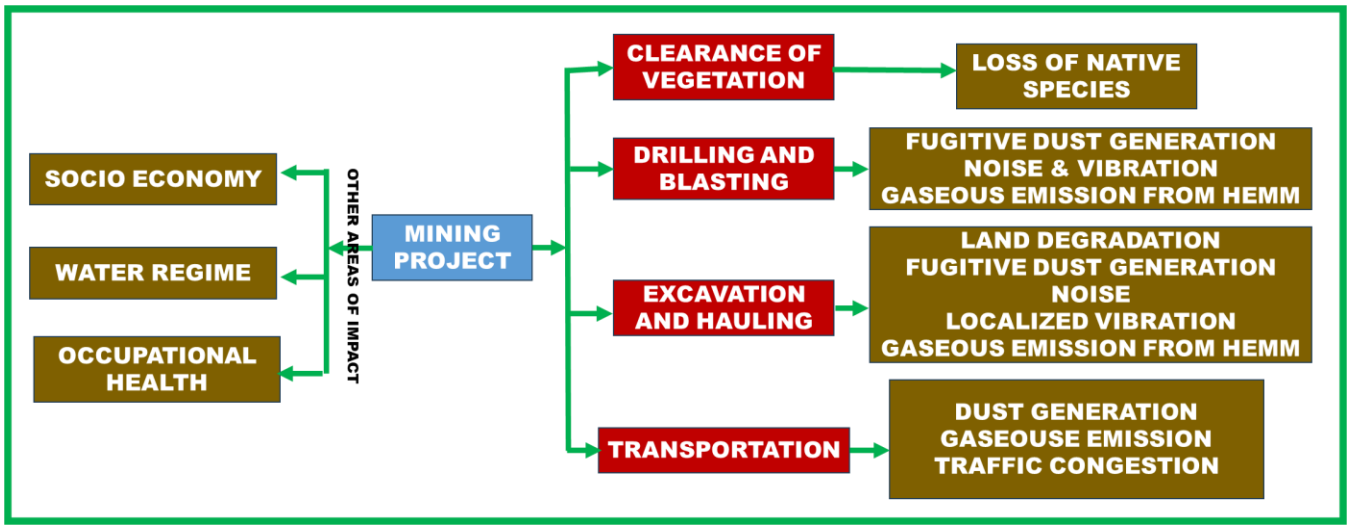
Table 2.10: Project Requirements

<table>
<tr><th>Project Name</th><td>Rough stone and Gravel Quarry</td></tr>
<tr><th>Manpower</th><td>16 persons directly and 50 people indirectly.</td></tr>
<tr><th>Water Requirement and Source</th><td>Water Requirement: 5 KLD
<table>
<tr><th>Details</th><th>Quantity (KLD)</th></tr>
<tr><td>Drinking water and Domestic Use</td><td>1.0 KLD</td></tr>
<tr><td>Dust Suppression</td><td>3.0 KLD</td></tr>
<tr><td>Green belt</td><td>1.0 KLD</td></tr>
<tr><td>Total</td><td>5.0KLD</td></tr>
</table>
Source: The required water will be procured from outside agencies. Rain water harvested in the mine sump shall also be used.</td></tr>
<tr><th>Power Requirement</th><td>No electricity needed for mining operation. The minimum power requirement for office, etc will be met from state grid.</td></tr>
<tr><th>Site Services</th><td>This is a proposed project. Site services like mine office, first aid room, rest shelters, toilets etc. will be provided as semi-permanent structures.</td></tr>
<tr><th>Project Cost</th><td>Rs. 29,25,000</td></tr>
<tr><th>Funds allocated for socio-economic</th><td>Rs.2.0 Lakhs is allocated under CER budget.</td></tr>
</table>

2.10 DESCRIPTION OF MITIGATION MEASURES:

Scientific and systematic development of mines will be carried out by the project authorities for preserving as well as improving the environmental conditions in and around the mining lease area. Elaborate analysis on impacts and mitigation measures to be adopted on implementation of this project and the same has been dealt in Chapter- IV.

Figure 2.11: Schematic Diagram of mining activities and associated impacts



2.11 ASSESSMENT OF NEW & UNTESTED TECHNOLOGY:

There is no new technology that is being implemented. Opencast method of mining which is the proposed method of mining is a proven technology which is technologically and economically viable. No major technological failures are anticipated. A disaster management plan shall be put into place to take care of any unforeseen situation.

2.12 CONCLUSION:

As good environmental preservation is one of the prime motive of the project proponent. It is expected that the project activity will not have any major impact on environmental equilibrium in the study area.

* * * * * * * *

CHAPTER 3

DESCRIPTION OF ENVIRONMENT

3.1 GENERAL:

The existing environmental baseline data for the various environmental components were collected in the study area for the purpose of assessing the impact on present environment due to the project activities.

Monitoring was carried out systematically and meticulously as per relevant IS codes, CPCB, MoEF&CC guidelines during **Summer Season (March 2025 to May 2025)** The details of the study are given in this chapter.

For the purposes of this study, the area has been divided into two zones, namely, core and buffer zones. The cluster area is considered to be the core zone while the buffer zone encompasses a 10km radius from the periphery of the core zone. The details of villages falling in the study area and other features are given in Index Plan in **Figure No - 3.1.** The primary data collection was done by means of field monitoring and the secondary data collection was obtained from published sources and government documents. The details of the baseline data collection which has been elaborated through the course of this chapter has been concised below:

Table 3.1: Type of Baseline Data

S.No	Studies	Parameters / Study	Location
1	Socio Economy	Demographic Data from Census 2011	Core and Buffer Zone
		Sample Survey	Buffer Zone
2	Micro Meteorology	Rainfall Data from IMD, Virudhunagar	Buffer Zone
		Temperature, Humidity, Wind Speed, Wind Direction	1 Representative Location
3	Ambient Air Quality	PM10, PM2.5, SO2, NOx, CO	1 Core Zone, 5 Buffer Zone
4	Water Quality	Physical and Chemical Parameters	1 Core Zone, 5 Buffer Zone
5	Noise Levels	Ambient Noise	1 Core Zone,5 Buffer Zone
6	Soil Quality	Physical and Chemical Parameters	1 Core Zone, 2 Buffer Zone
7	Land Use and Land Cover	Land use pattern within 10km study area using RS Satellite	Buffer Zone
		Land use based on Census 2011	Core and Buffer Zone
8	Biological Environment	Flora and Fauna	Core Zone and Buffer Zone
9	Hydrology & Hydro Geology	Hydrogeological profile of the area	Core Zone and Buffer Zone

Figure 3.1: Study Area Map

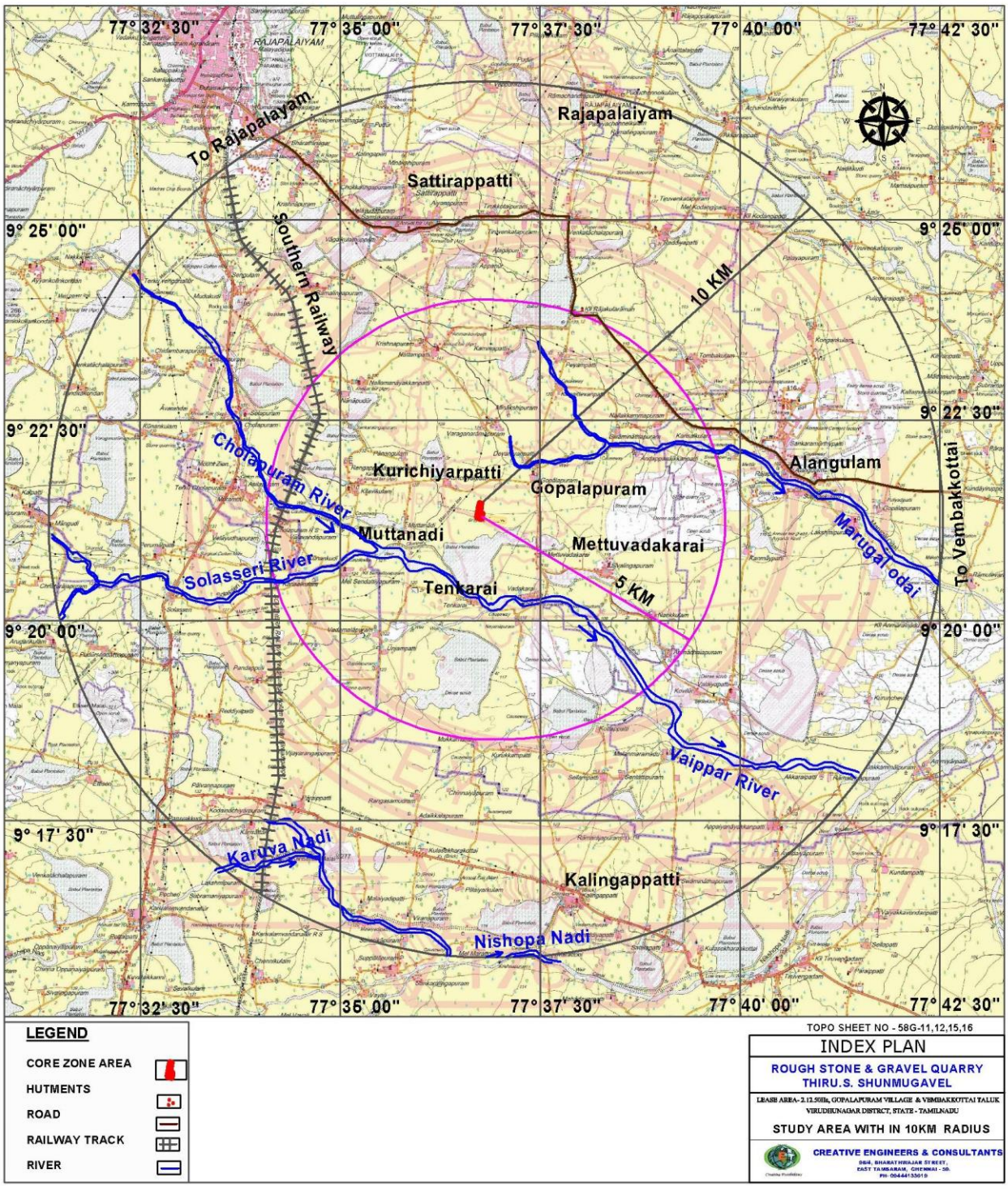


Table 3.2:Environmental Setting of the Study Area

S.No	PARTICULARS	DETAILS
1	Nearest highway	Rajapalayam-Vembakkottai (SH-186)– 4.5km (NE)
2	Nearest Railway station	Rajapalayam RS – 12.2 km - NW
3	Nearest Airport	Madurai – 74 Km – NE
4	Nearest major water bodies	• Seasonal Drainage - Adjacent-50m (W) safety left • Kanmai -450m(S), • Vaippar River - 1.5km – SE • Cholapuram River - 2.4km – W • Solasseri River - 2.9km – W • Karuva Nadi - 8.7km – SW • Marugal Odai - 1.9km – NE • Nedunkulam Odai - 8.9km - NE
5	Nearest town/City	Rajapalayam – 12 km
6	Nearest villages	Gopalapuram – 1.3 km (NE) Kuruchiyarpatti - 1.3 km (NW) Vadagarai – 1.0 Km (SE) Tenkarai – 1.5 Km (S)
7	Hills / valleys	Nil within 10m radius
8	Notified Archaeologically important places, Monuments	Nil within 10m radius
9	Local Places of Historical and Tourism Interest	Nil within 10m radius
10	Environmental sensitive areas, Protected areas as per Wildlife Protection Act, 1972 (Tiger reserve, Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves)	Nil within 10m radius
11	Reserved / Protected Forests	Nil within 10 km radius
12	Defence Installations	Nil within 10 km radius
13	Seismic Zone	Zone – II (Least Active)
14	Other Industries in the study area	Other than crushers, Roughstone quarries, no other major industries are located in the study area.

3.2 SOCIO-ECONOMIC CONFIGURATIONS OF THE AREA:

3.2.1 GENERAL:

The Socio-Economic details of the study area are collected through:

- Identification of villages falling from the study area map with combined Taluk map.
- Collection of primary data through sample survey, village meetings and focused group discussion.
- Collection of the demographic pattern of villages falling in the area through NIC 2011 census data.
- Occupational structure of villages falling in the study area through NIC 2011 census data.
- Details of the amenities available in villages falling in the study area through NIC 2011 census data. The findings of the study are illustrated below:

3.2.2 SECONDARY DATA DESCRIPTION:

The proposed Rough stone, and gravel quarry is located in in Gopalapuram Village, Vembakottai Taluk, Virudhunagar District. Based on 2011 census data, in the 10km radius there are 34 Rural villages from Five Taluks namely Rajapalayam, Srivilliputhur, Sivakasi, Sivagiri, and Sankarankoil and 2 urban areas of Rajapalayam Taluk namely Samusigapuram (CT), Sivakasi Taluk namely Alangulam (CT). The demographic profile of the study area is given below:

Table 3.3: Social, Economic and Demographic Profile of the Study Area

Details	Population	Percentage
A. Gender-wise distribution		
Male Population	89,852	49.90
Female Population	90,208	50.10
Total	**180,060**	**100**
B. Caste-wise population distribution		
Scheduled Caste	41483	23.04
Scheduled Tribes	311	0.17
Other	138,266	76.79

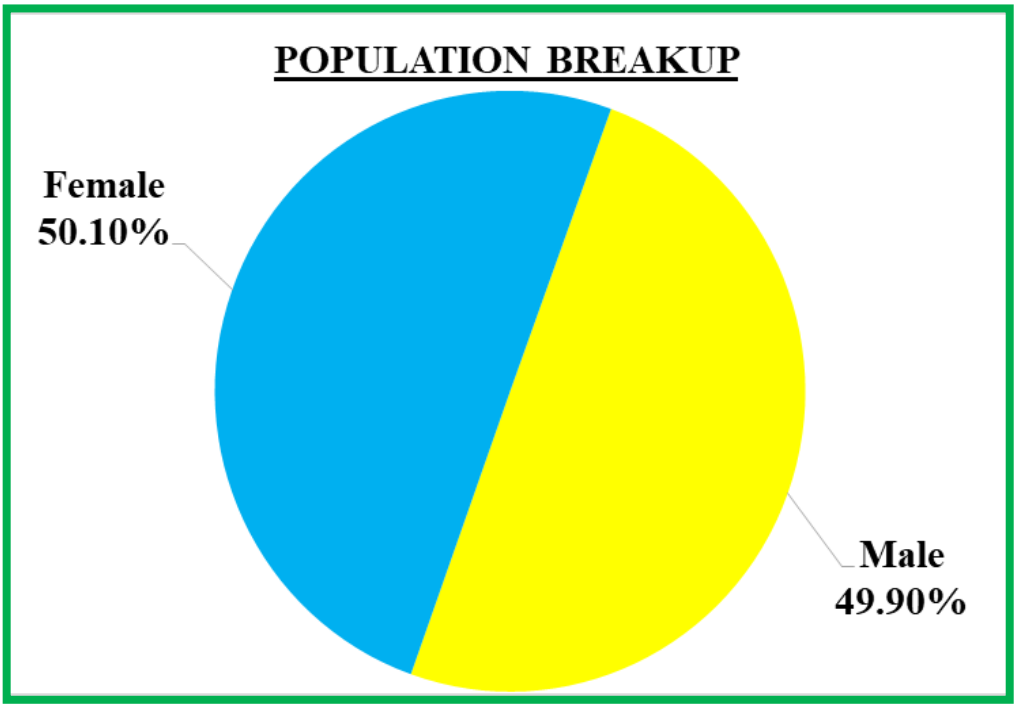
Details	Population	Percentage
Total	**180,060**	**100**
C. Literate and Illiterate population		
Literate Males	70076	38.92
Literate Females	56671	31.47
Total Literate Population	**126747**	**70.39**
Others Males	19776	10.98
Others Females	33537	18.63
Others Population	**53313**	**29.61**
Total	**180,060**	**100**
D. Occupational structure		
Main workers	85582	47.53
Marginal workers	6873	3.82
Total Workers	**92455**	**51.35**
Total Non-workers	**87605**	**48.65**
Total	**180,060**	**100**

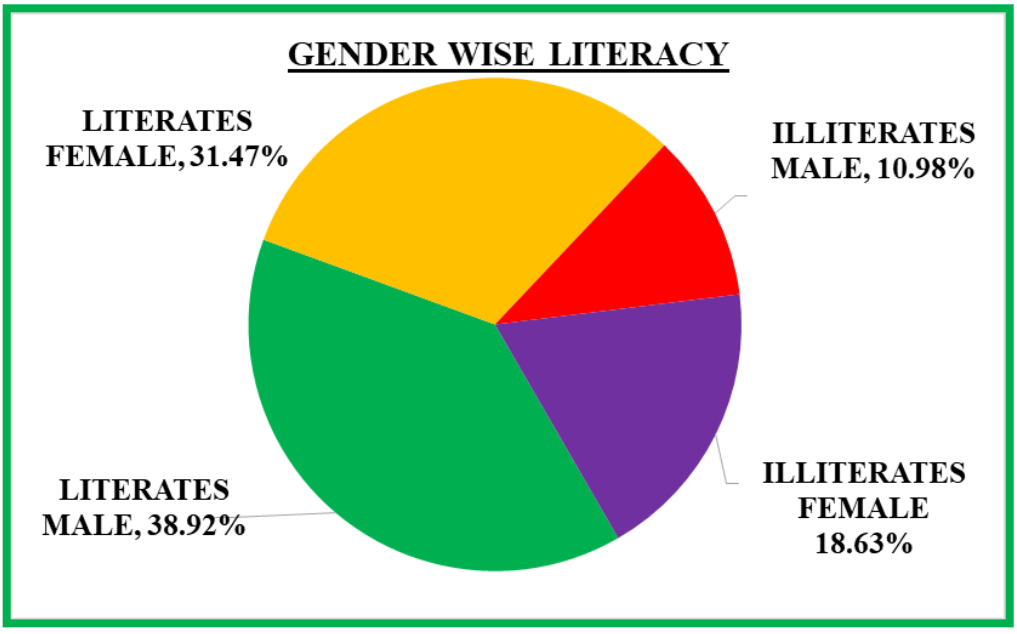
The total population of these 35 rural villages and 2 urban areas is 1,80,060 in which the male population is 89,852 (49.90%) and the female population is 90,208 (50.10%). This shows that the male and female population ratio is almost equal. Among the total population 0.17% belong to Scheduled Tribes, 23.04 % are Scheduled Caste and the balance 76.79 % people belong to other castes. Among the total population, 70.39% of the people are literate.

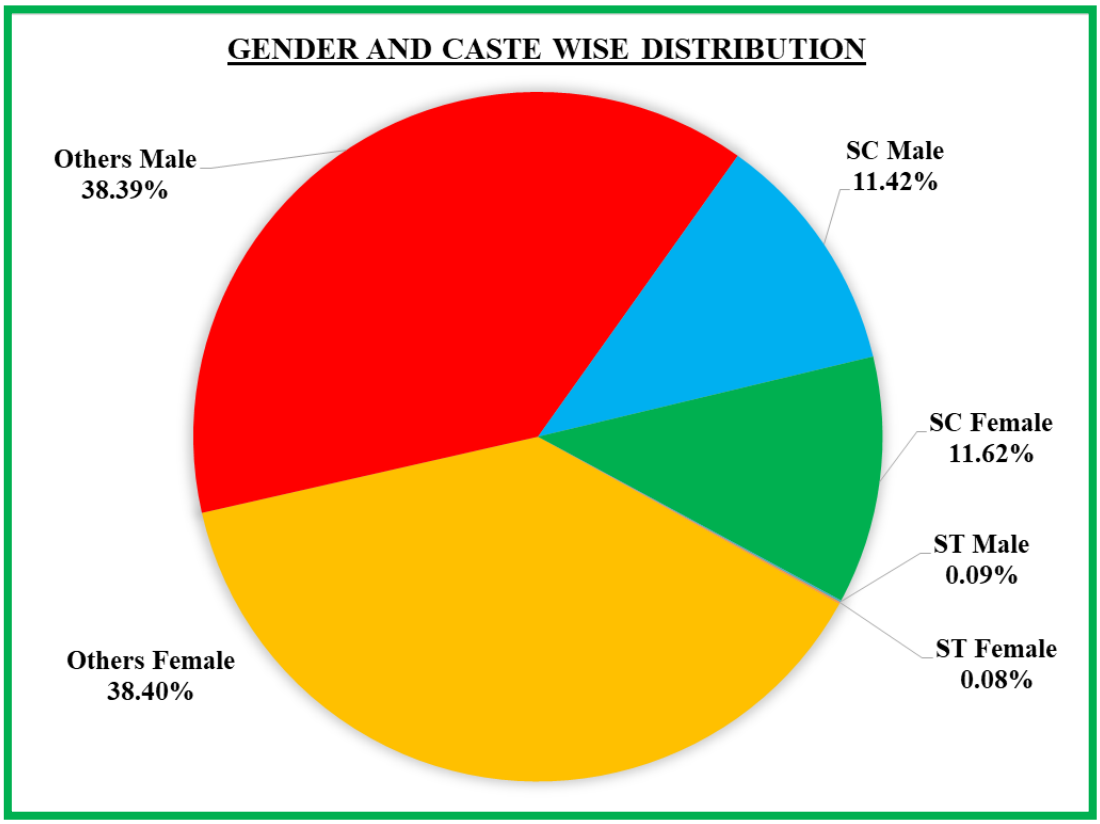
Among the total population, 38.92% are literate males and 31.47% are literate females. This shows that the male literates are slightly more than the female literates. Totally, the illiterate constitute 29.63% of which the female cover 18.63% and the male 10.98%. Illiteracy in women is more than in the male population.

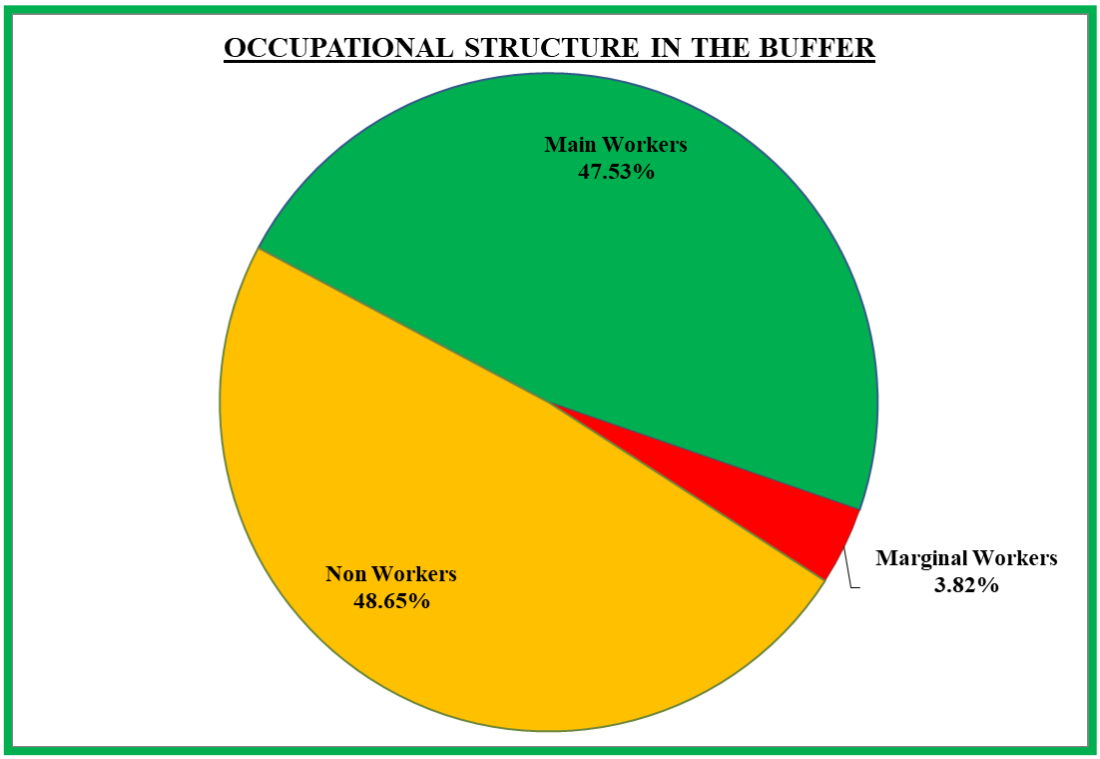
The village wise population, literacy levels and occupational structure details area given in **Annexure-3 and 4.** The demographic structure within the buffer zone is shown diagrammatically in **Figure No – 3.2.**

Figure 3.2: Demographic Structure in Buffer Zone






GENDER AND CASTE WISE DISTRIBUTION
Others Male
38.39%
SC Male
11.42%
SC Female
11.62%
ST Male
0.09%
ST Female
0.08%
Others Female
38.40%


OCCUPATIONAL STRUCTURE IN THE BUFFER
Main Workers
47.53%
Marginal Workers
3.82%
Non Workers
48.65%

3.2.3 DETAILS OF AMENITIES:

Based on 2011 census data, regarding the educational facilities, there are totally 99 Primary Schools functioning in these 34 rural villages. Among them 6 villages have one primary school, 6 villages have 2 primary schools, 8 villages have 3 primary schools, 4 villages have 4 primary schools, 1 villages has 5 primary schools ,1 villages have 6 primary schools, 2 villages have 7 primary schools and 2 villages have 8 primary schools. One village has no primary school.

Table 3.4: Primary Schools in the Buffer Zone Rural Villages

S.No	No of Rural Villages	Number of primary schools	Totals
1	4	0	0
2	6	1	6
3	6	2	12
4	8	3	24
5	4	4	16
6	1	5	5
7	1	6	6
8	2	7	14
9	2	8	16
Total	34		99

Table 3.5: Education Facility Availability

PARTICULARS	Available in village
Govt Primary School	30
Govt Middle School	18
Govt Secondary School	10
Govt Senior Secondary School	7
Govt Arts and Science Degree College	0
Govt Engineering College	0
Govt Medicine College	0
Govt Management Institute	0
Govt Polytechnic	0
Govt Vocational Training School/ITI	0

Better and higher education facilties are available in nearby town like Ramalingapuram (CT) ,Samusigapuram (CT), Alangulam (CT) and Rajapalayam ,Sivakasi city corporation.

Table 3.6: Healthcare Amenities Availability

PARTICULARS	Available in village
Community Health Centre	3
Primary Health Centre	8
Primary Heallth Sub Centre	27
Maternity And Child Welfare Centre	11
TB Clinic	8
Hospital Allopathic	0
Hospiltal Alternative Medicine	0
Dispensary	8
Veterinary Hospital	8
Mobile Health Clinic	0
Family Welfare Centre	8

Better medical facilities are available in Ramalingapuram (CT) ,Samusigapuram (CT), Alangulam (CT) and Rajapalayam ,Sivakasi city corporation.

Table 3.7: Infrastructure Facilities

Particulars	Available in village
Tap Water-Treated	34
Covered Well	12
Hand Pump	18
Tube Wells/Borehole	28
Spring	5
River/Canal	4
Post office	5
bus services	30
Commercial Bank	6
Cooperative bank	10

The details of the educational, medical and infrastructural facilities available in the buffer zone is provided in **Annexures- 5-7.**

3.2.4 SAMPLE SURVEY:

3.2.4.1 OBJECTIVE:

The objective of the study is to understand the present socio-economic condition, availability of existing infrastructure facilities in the area & to know the needs of the people in the project peripheral villages, to provide an implementable future CER proposal pertaining to specific needs addressing local requirements.

3.2.4.2 APPROACH:

Oral interview, and informal discussions were conducted in the villages to capture the overall scenario of the village including their socio-economic problems and the aspirations, desires of the community in overall terms.

Salient details of the study are given below:

Studied villages have different community people which include different religion and different castes.

- Majority of the people are small farmers and others are working in the nearby industries
- Predominantly the study area is seasonal dry, barren land.
- Crops such as red chilli, Paruththi, Valzhai, Agatthi, Kaththari, etc. are cultivated in patches based on water availability.
- Since agriculture is predominantly rainfed and the water is available only for four months, during the rest of the time they have less employment opportunities. Other occupations include construction workers, vendors, etc.
- Other allied activities livestock rearing and poultry farming are also found.
- Reasonably better amenities like approach road bus facility, electricity, mobile phone connectivity, Public Distribution System , banks etc are available.
- Bore well is the main source for drinking water. There are OHT's, Ground level tanks, public taps are available .

VSC Gopalapuram

Water Tank - Gopalapuram

Water Tank - Kurachiyarpatti

3.3 EXISTING ENVIRONMENTAL QUALITY

3.3.1 MICRO-METEOROLOGY

3.3.1.1 General:

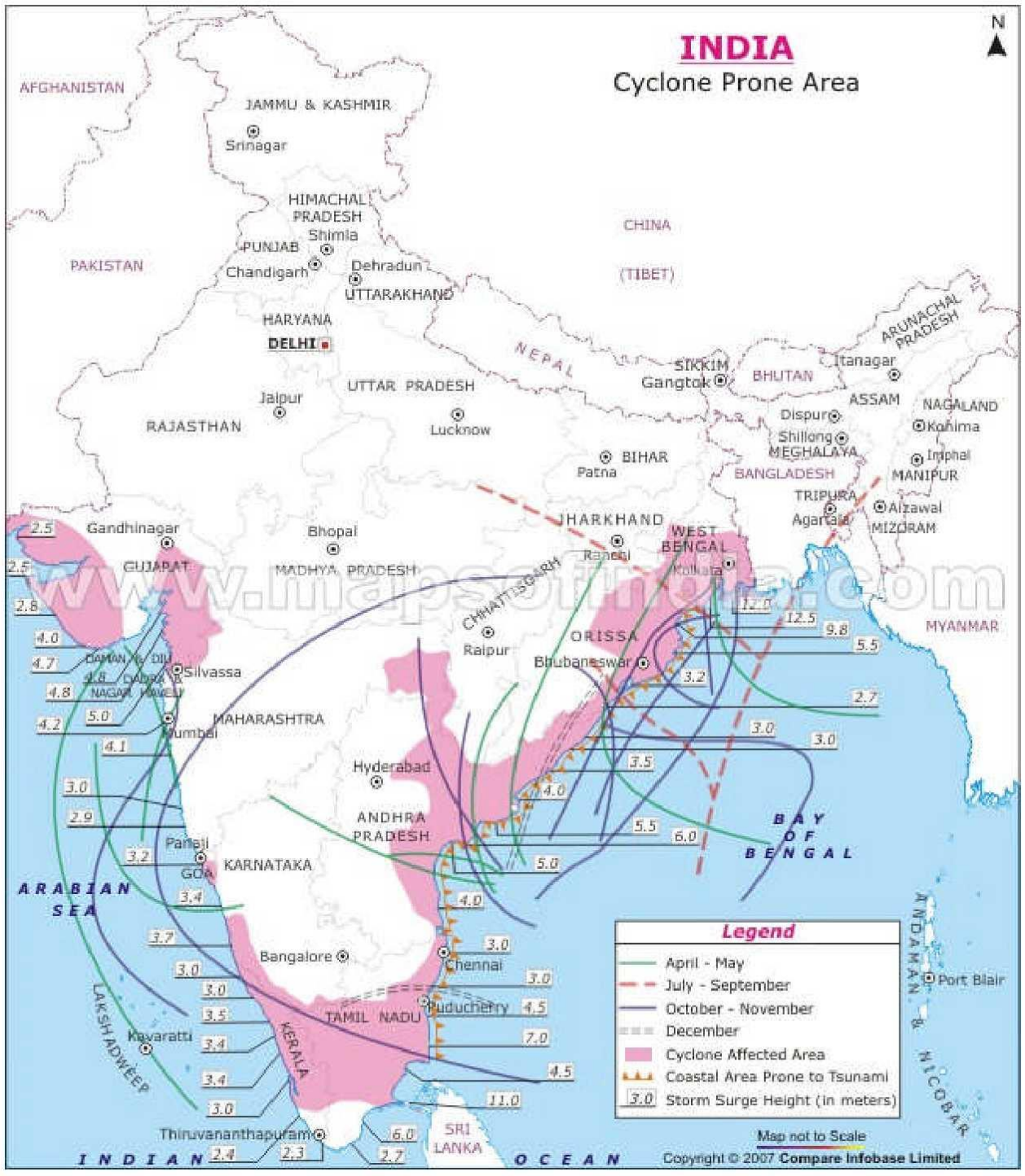
The meteorological conditions in an area regulate the dispersion of air pollutants being released into the atmosphere. The principal variables are horizontal convective transport i.e. wind speed and direction and vertical convective transport, i.e. mixing height, stability class and topography of the area.

3.3.1.2 Historical Meteorological Data:

A. Cyclones And Depressions

Cyclonic storms and depressions in Bay of Bengal affect the East Coast of India. Isolated ones, forming in January to March in the South Bay of Bengal move West-North-westwards and hit Tamil Nadu coast. In April and May, cyclonic storms and depressions form in the South and adjoining Central Bay and move initially to the Northwest, then North and then recurve to the Northeast striking the Arakan coasts in April and Andhra Pradesh (AP)-Orissa-West Bengal (WB) – Bangladesh coasts in May. Most of the monsoon (June – September) storms develop in the central and in the north bay and move west – north - westwards affecting AP – Orissa – WB coasts. Post monsoon (October – December) storms form mostly in the south and central Bay, recurve between 150 and 180 N affecting Tamil Nadu – AP – Orissa – WB – Bangladesh coasts. Figure No - 3.3 depicts the history of cyclonic storms, which have struck the Indian coast during the months of October, November and December during the last 75 years. (Source: Vulnerability Atlas of India series, above figure accessed from www.maps of india.com). East coast is prone to cyclonic storms round the year but mostly these occur prior to SW i.e., in May and after SW monsoon i.e., in October and November.

Figure 3.3: History of Cyclonic Storms



B. SEISMIC DATA

From the seismic zone map of India as depicted in the **Figure No** - **3.4,** it can be seen that the project site and study area falls in the Zone – II and is described as least active zone.

Figure 3.4: Seismic Zone Map of India

C. Climate and Rainfall Data:

Temperature: From the middle of February, temperature increases steadily. The weather is quite hot in May and June and the maximum temperature sometimes reaches 40°Celsius. With the onset of the southwest monsoon by the end of May or beginning of June, there is some drop in temperature.

Cloudiness: During the months of April and May, the skies become heavily clouded and threatening in the afternoons on many days when thunderstorms follow. In the southwest and northeast monsoon seasons, the sky is heavily clouded or overcast.

Winds: Generally light to moderate in strength and NW-SW and vice-versa. Between May and September winds are mainly north westerly or westerly. From October to February winds are mainly north easterly or northerly.

Rainfall: Main rainy season is from October to the middle of January.November is generally the rainiest month. The average annual rainfall data from 2011 – 2020 is given in Table No – 3.8.

Rainfall data collected by Virudhu Nagar , IMD station for the period of 2011 to 2020 is given in **Table No.3.8** Rainfall histograms are presented in **Figure No - 3.5 and 3.6.**

Table 3.8: Average Annual Rainfall Data (2011-2020)

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total Rainfall
2011	85.49	162.8	109.57	201.3	119.75	392.46	313.13	227.99	199.02	146.11	190.62	197.52	**2345.76**
2012	16.29	18.37	76.82	297.85	81.31	192.98	223.09	287.28	155.75	234.49	127.34	14.38	**1725.95**
2013	10.22	43.85	46.9	14.44	27.26	15.48	2.4	115.17	43.3	118.37	68.61	84.27	**590.27**
2014	11.2	2.25	7.42	14.03	187.33	9.68	9	78.69	65.2	217.23	146.17	55.08	**803.28**
2015	4.45	3.43	31.39	95.62	114.89	17.83	28.19	53.96	84.73	103.78	279.24	140.03	**957.54**
2016	0.24	0.03	1.71	5.88	85.2	16.88	69.79	39.75	47.21	66.65	49.6	60.33	**443.27**
2017	20.72	2.81	15.1	3.18	32.84	7.88	27.54	42.11	62.59	40.74	42.35	17	**314.86**
2018	0.74	1.28	11.62	21.13	66.02	14.49	33.67	41.94	47.92	134.91	68.92	7.28	**449.92**
2019	5.08	2.26	3.23	2.33	4.5	17.83	18.5	71.16	163.58	251.1	109.63	88.91	**738.11**
2020	3.87	0.48	0.11	24.2	69.81	32.41	40.51	45.93	94.14	138.83	241.45	139.88	**831.62**
NORMAL	**18.5**	**23.5**	**37.6**	**76.8**	**60.2**	**18.3**	**31.1**	**51.6**	**80.8**	**191**	**175.5**	**64.7**	**829.6**

Source – Virudhunagar District, IMD

Figure 3.5: Total Rainfall

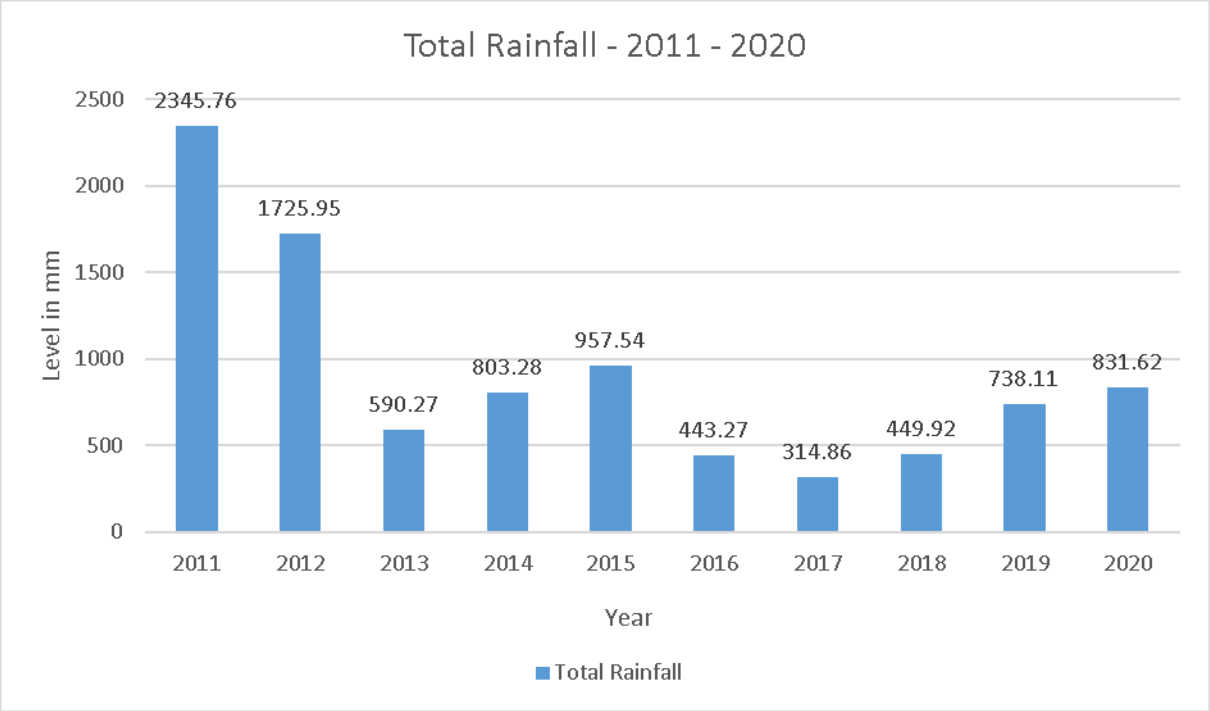
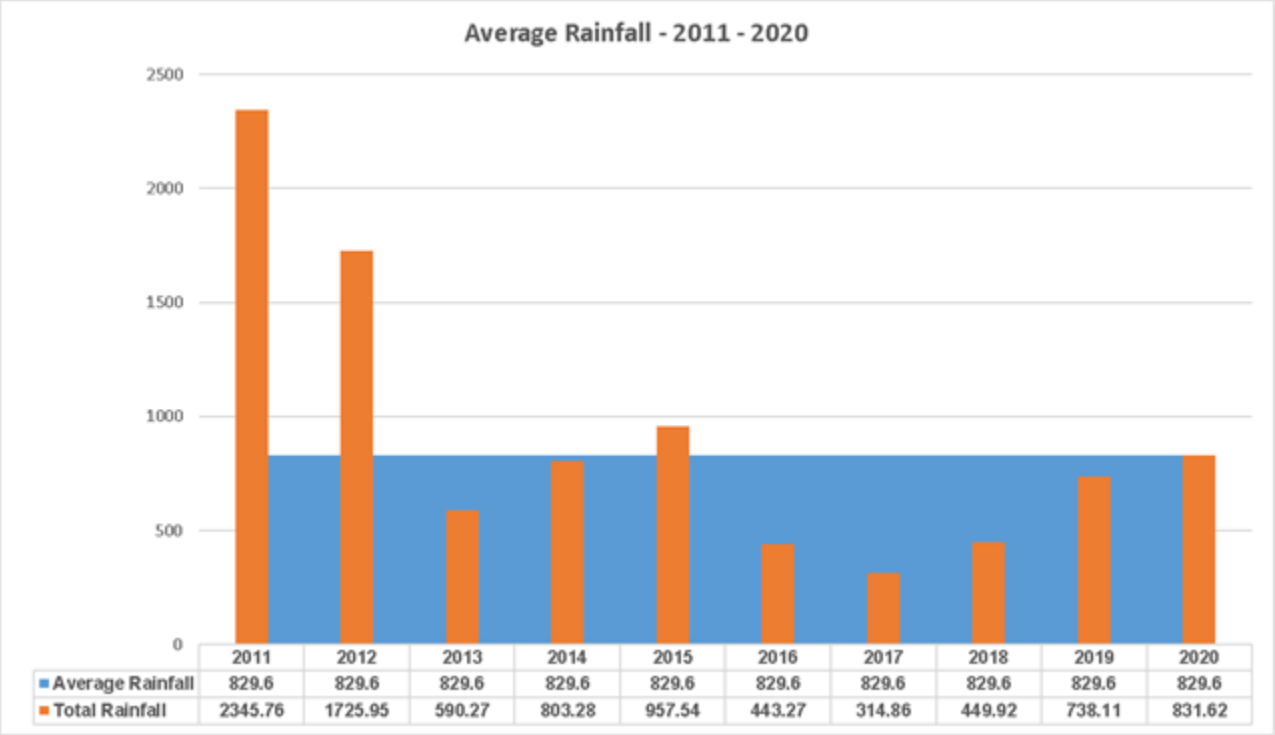


Figure 3.6: Average Annual Rainfall



3.3.1.3 SITE SPECIFIC METEOROLOGICAL DATA:

Micrometeorology and microclimatic parameters were recorded by installing a weather monitoring station near mine lease area. Data of wind velocity, wind direction, ambient temperature, relative humidity, were recorded throughout the monitoring period.

DATA ANALYSIS:

The temperature in the area during the study period ranged from 22.0ºC to 39.0ºC while the relative humidity varied between 19.7 - 97%. The wind speed during the study period ranged from <1.8 to 37.1 km/h. The predominant wind direction is from NE. The meteorological data are presented in **Table no – 3.9.** The average wind rose is depicted in **Figure No - 3.7.**

Table 3.9: Meteorological Data

Season: Summer Season, March 2025 to May 2025)			
S.NO	**PARAMETERS**	**MIN**	**MAX**
1	Temperature In ^{0}c	22.0	39.0
2	Humidity in %	19.7	97.0
3	Wind speed in km/hr	<1.8	37.1
4	Predominant wind direction from	NE	

Figure 3.7: Location of Micro Meteorological Stations

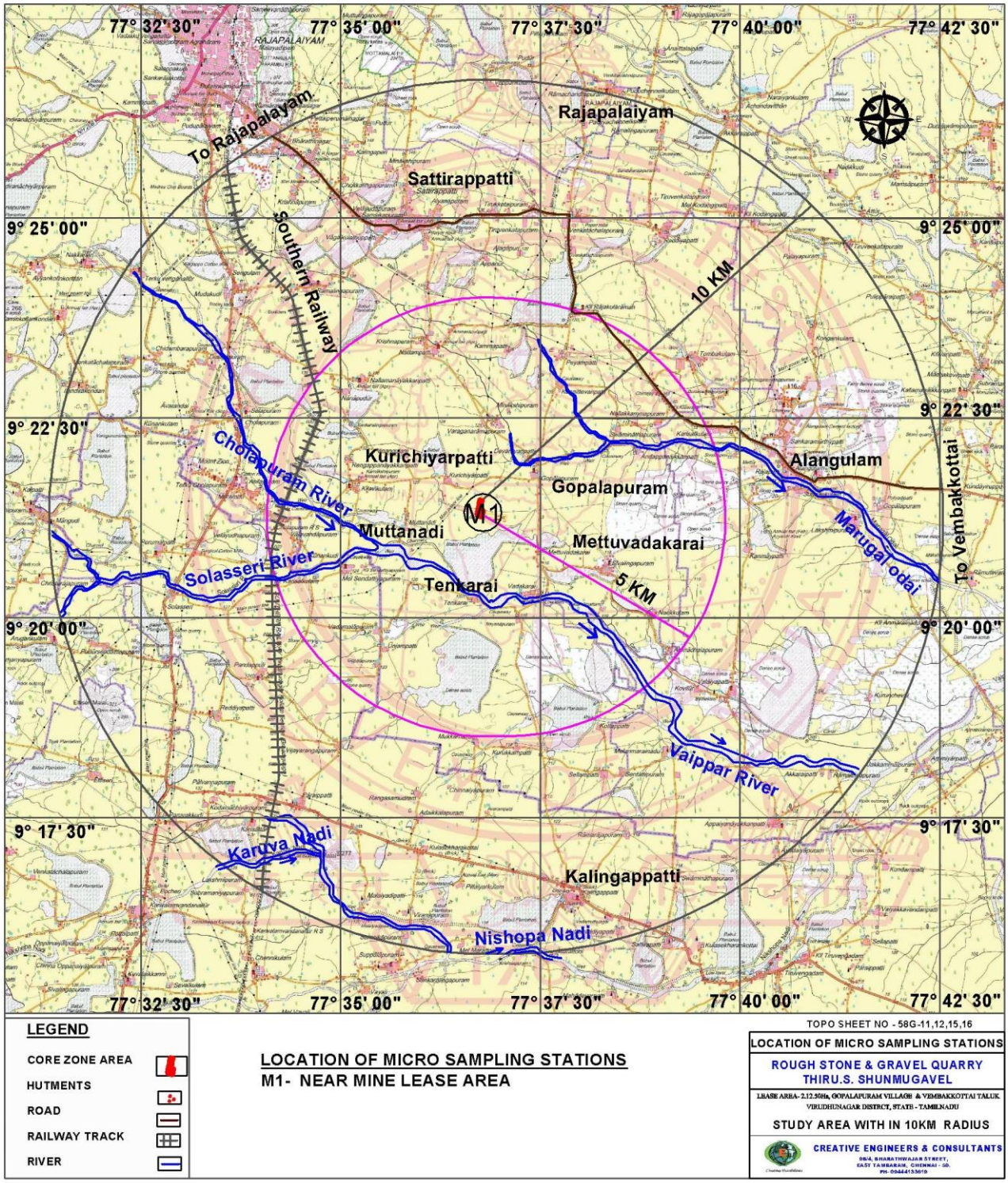
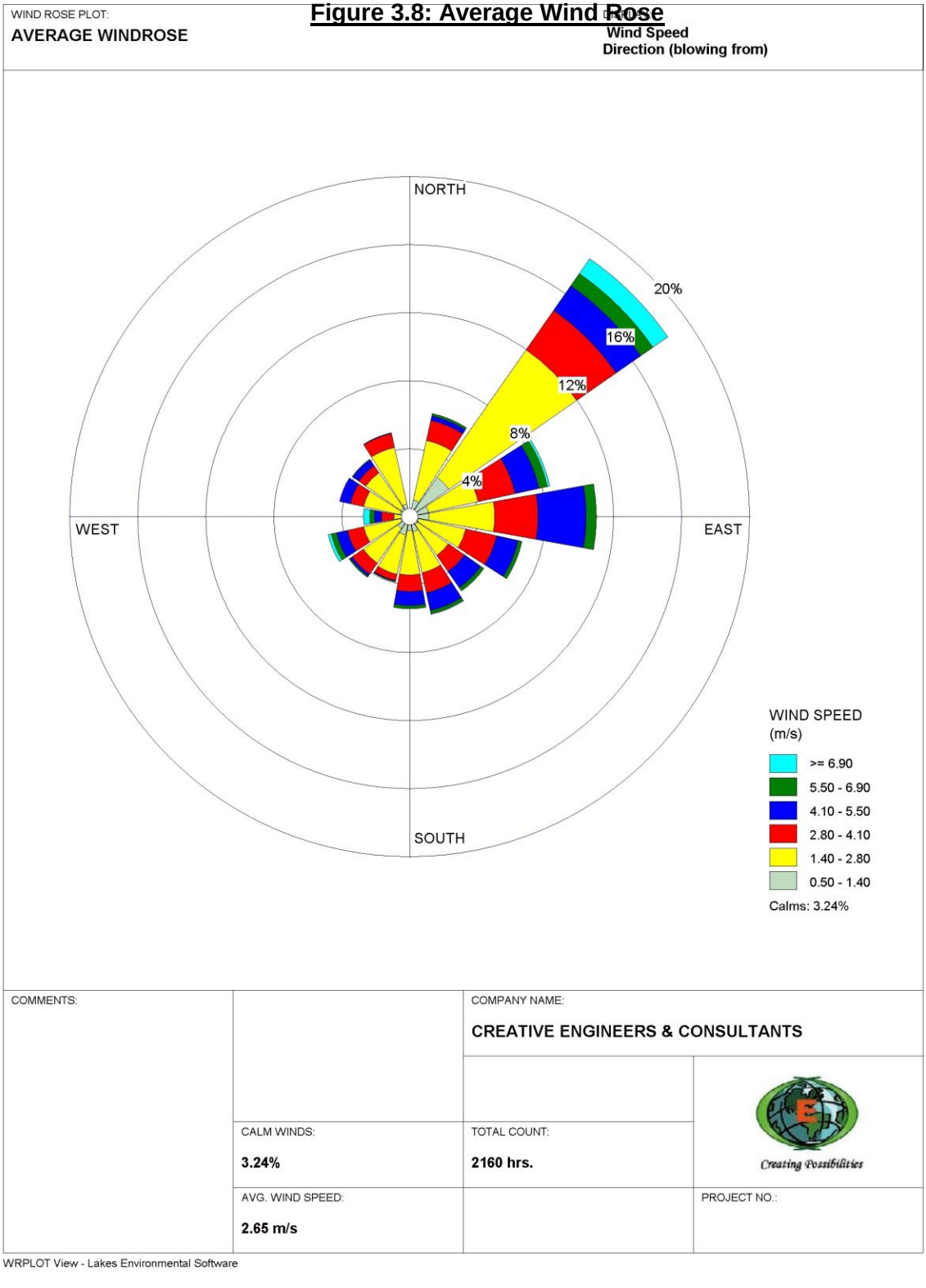


Figure 3.8: Average Wind Rose



3.3.2 AMBIENT AIR QUALITY (AAQ):

Ambient Air quality has been assessed through a network of 6 ambient air quality stations. The following methodology has been considered for design of ambient air quality monitoring network in the area. Based on these criteria, 6 numbers of air sampling stations were selected in the area as shown below in Table No.3.10.

- Topography / terrain of study area.
- Populated areas within study area.
- Residential /sensitive areas within study area.
- Magnitude of surrounding industries.
- Representation of regional background levels.
- Representation of cross sectional distribution in down wind direction.
- Predominant wind direction and wind pattern.

Table 3.10: Air Quality Monitoring

1.	**Monitoring Period**	Summer Season (Mar 2025 – May 2025)
2.	**Monitoring Location**	The location map showing Ambient Air Quality study stations are shown in **Figure No- 3.9.**
3.	**Methodology**	
	Parameter	**Protocol**
	a. Particulate Matter (PM10)	Gravimetric (IS 5182: Part 23:2017)
	b. Particulate Matter PM2.5	Gravimetric (IS 5182: Part 24:2019)
	c. Sulphur Dioxide	Colorimetric (West & Gaeke Method) (IS 5182: Part 02: 2017)
	d. Nitrogen Dioxide	Colorimetric(Modified Jacob & Hocheiser Method) (IS 5182: Part 06:2017)
	e. Carbon Monoxide	CO Monitor
	f. Silica	Colorimetric (Molybdate Method) NIOSH 7601 -2003
4.	**Monitoring Frequency**	2 days in a week, 4 weeks in a month for 3 months in a season.

Table 3.11: Air Quality Monitoring Locations

S.NO	LOCATION CODE	LOCATION	DISTANCE FROM CORE ZONE (KM)	DIRECTION
1	A1	Near Mine Lease Area	-	-
2	A2	Mettu Vadakarai Village	1.6km	SE
3	A3	Tenkarai Village	1.9km	S
4	A4	Kuruchiyarpatti Village	780m	NW
5	A5	Muthanuthi Village	1.7km	SW
6	A6	Gopalapuram Village	1.3km	NE

Figure 3.9: Ambient Air Quality Study Stations

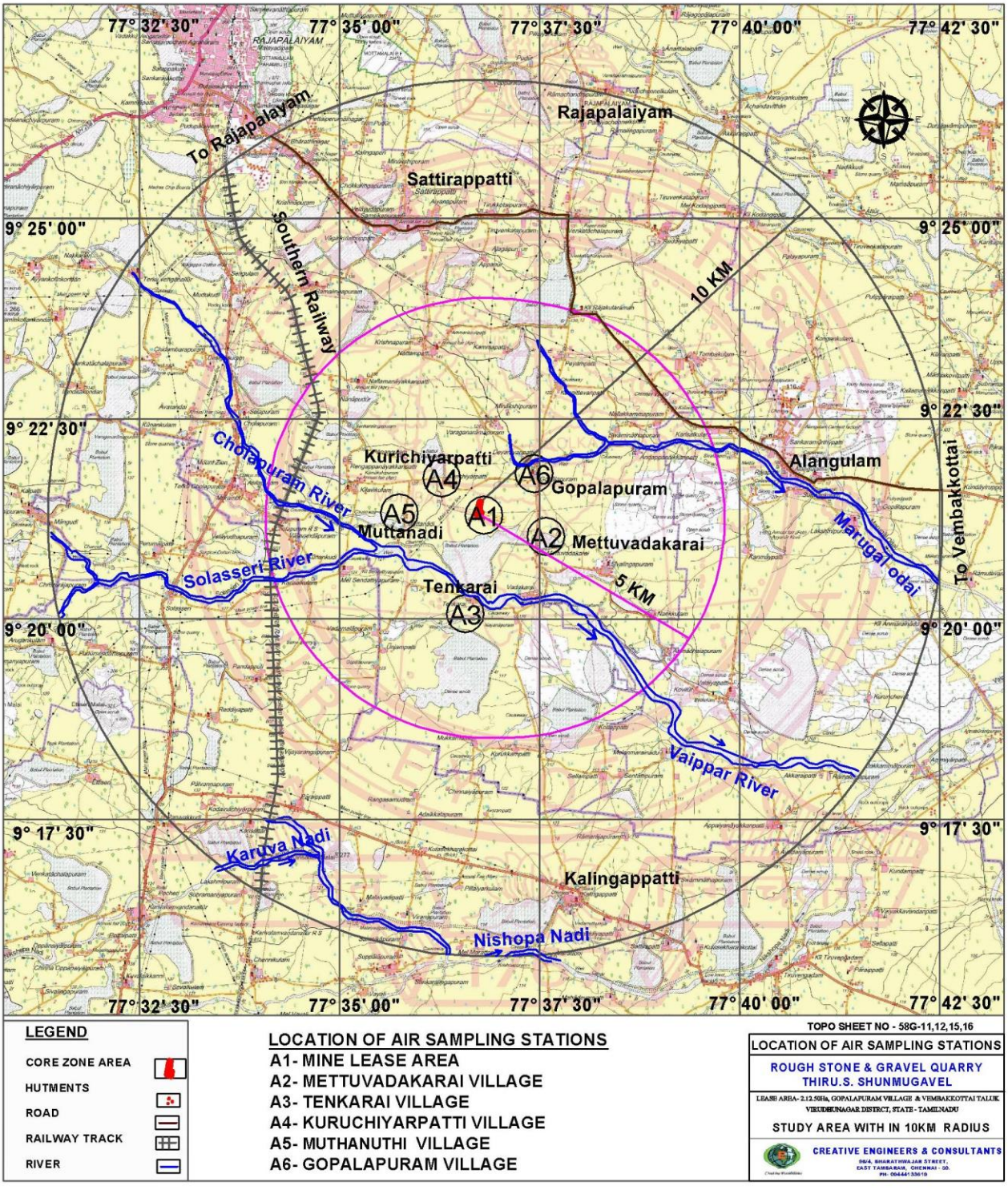


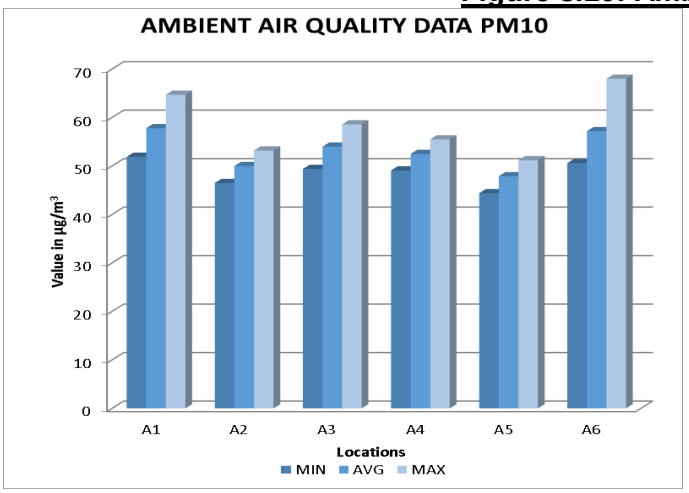
Table 3.12: Ambient Air Quality Data

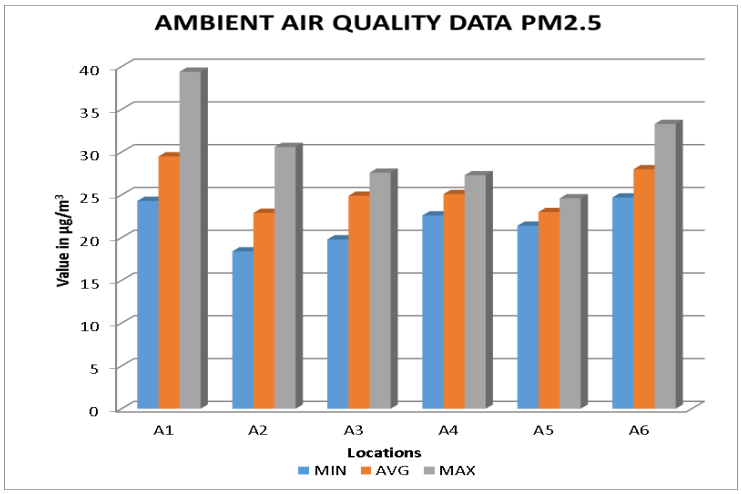
All Value in µg/m³

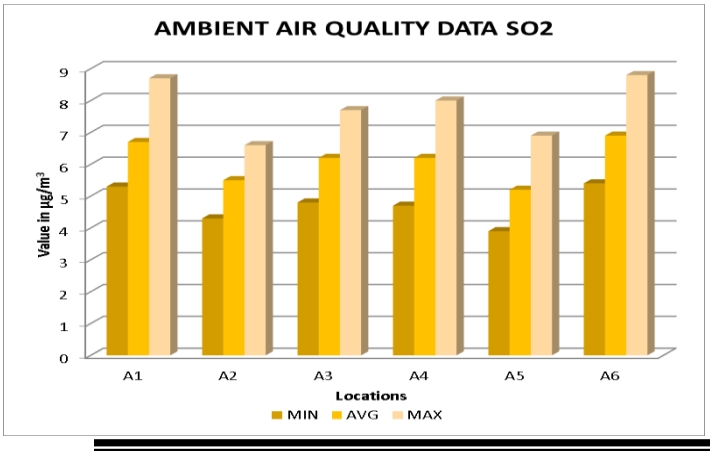
PARAMETERS	Cat.*	PM_{10}			$PM_{2.5}$			SO_2			NO_2		
LOCATIONS		**MIN**	**AVG**	**MAX**	**MIN**	**AVG**	**MAX**	**MIN**	**AVG**	**MAX**	**MIN**	**AVG**	**MAX**
A1-Near Mine Lease Area	I	51.9	57.8	64.7	24.3	29.5	39.4	5.3	6.7	8.7	7.6	9.5	11.3
A2-Mettu Vadakarai Village	R	46.5	50	53.2	18.4	22.9	30.6	4.3	5.5	6.6	6.8	8.1	9.6
A3-Tenkarai Village	R	49.4	54	58.6	19.8	24.9	27.6	4.8	6.2	7.7	7	8.6	10.7
A4-Kuruchiyarpatti Village	R	49.1	52.5	55.5	22.6	25.1	27.3	4.7	6.2	8	7	8.6	10.7
A5-Muthanuthi Village	R	44.4	47.9	51.2	21.4	23	24.6	3.9	5.2	6.9	6.6	7.8	8.9
A6-Gopalapuram Village	R	50.6	57.2	68.0	24.7	28	33.3	5.4	6.9	8.8	7	9.3	11.6
NAAQ Limits		**PM_{10}**			**$PM_{2.5}$**			**SO_2**			**NO_2**		
	*	**100**			**60**			**80**			**80**		
	**	**100**			**60**			**80**			**80**		

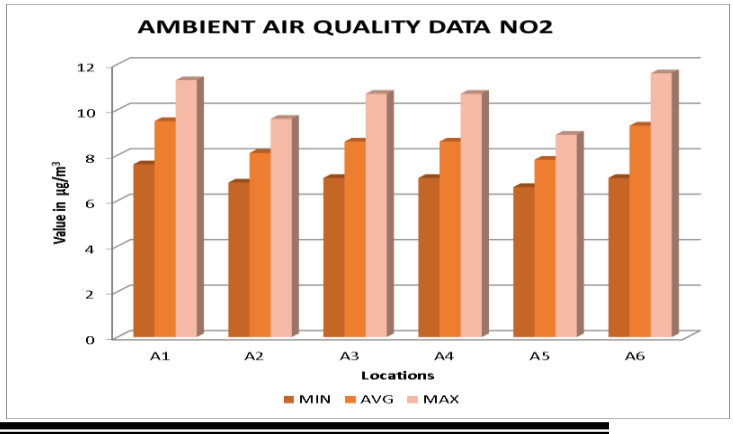
***Note:** Category: * - Industrial, Residential, Rural and other area, ** – Ecologically Sensitive Area (notified by Central Government)*

Figure 3.10: Ambient Air Quality Data









3.3.2.1 Results and Discussion:

The AAQ monitored data for all locations for above parameters are shown in **Table No - 3.12 and** in **Figure No - 3.9.** Ambient Air Quality data during the study period is given in **Annexure – 9.** From the table it is seen that, in the ambient air, the PM_{10} values were in the range of 44.4-68.0 µg/m^3. $PM_{2.5}$ values were in the range of 18.4-39.4 µg/m^3. SO_2 levels were ranging from 3.9– 8.8 µg/m^3. NO_2 levels were ranging from 6.6-11.6 µg/m^3.

The existing Ambient Air Quality levels for PM_{10}, $PM_{2.5}$, SO_2 and NO_2, are within the NAAQ standards prescribed CPCB limits of 100 µg/m^3, 60 µg/m^3, 80 µg/m^3 & 80 µg/m^3. The CO values in all the locations were found to be below detectable limit. Silica values in the study area are found to be below detectable limit. (Detection limit – 0.05 mg/m^3)

3.3.3 WATER ENVIRONMENT:

Assessment of baseline data on water environment includes Identification of water resources, Collection of water samples and Analyzing water samples collected for physico-chemical parameters as per standards. The water sampling was carried out for 6 locations. Details of the same has been provided below:

Table 3.13: Water Quality Monitoring

1.	**Monitoring Period**		Summer Season (Mar 2025 – May 2025)		
2.	**Monitoring Location**		The location map showing water sampling locations are given in **Figure No.3.11.**		
	Code	**Location**	**Sample Type**	**Distance**	**Direction**
	W1	Near Mine Lease Area	**Bore Well**	-	-
	W2	Mettu Vadakarai	Tap Water*	1.6km	SE
	W3	Tenkarai	Borewell	1.9km	S
	W4	Kuruchiyarpatti	Borewell	780m	NW
	W5	Muthanuthi	Borewell	1.7km	SW
	W6	Gopalapuram	Borewell	1.3km	NE
3.	**Methodology**		Sampling - IS 3025 Part - I		
			Analysis – IS 3025 relevant parts / APHA 23rd Edition		

**Since bore well water in mettu vadakara and in some other parts are not directly potable, tap water is also sampled.*

Figure 3.11: Location of Water Sampling Stations

Table 3.14: Summary of Water Quality Data

Season	Summer Season (Mar 2025 – May 2025)	
Monitoring Locations	6 locations	
Parameters	**Range of values**	**Limits***
pH at 25 ˚C	7.24 – 7.72	**6.5-8.5**
Total Dissolved Solids, mg/L	250 – 590	**2000**
Chloride as Cl-, mg/L	22.3 – 102	**1000**
Total Hardness (as CaCO3), mg/L	184 – 312	**600**
Total Alkalinity (as CaCO3), mg/L	125– 292	**600**
Sulphates as SO42-, mg/L	12.1 – 186	**400**
Iron as Fe, mg/L	0.03 – 0.07	**0.3**
Nitrate as NO3, mg/L	2.34 – 7.21	**45**
Fluoride as F, mg/L	0.22 – 0.63	**1.5**

3.3.3.1 Results and Discussion:

The results of the water sample analysis are shown in **Table No - 3.14.** The pH values were ranging in between 7.24 – 7.72 TDS values were in the range of 250 – 590mg/L. Chloride values were ranging from 22.3 – 102mg/L. Iron content was found to be in the range 0.03 – 0.07mg/L. The water quality of ground water is found to be within the prescribed Permissible limits of IS: 10500 Norms in the absence of an alternative source as per Drinking Water Specifications. The water quality data is provided in **Annexure-10.**

3.3.4 NOISE ENVIRONMENT:

Opearional phase of this project may lead to increase noise levels from the existing levels at least in and around the project area. As noise level beyond permissible limits will cause adverse impacts on the environment, it has become imperative to assess the noise levels in and around the mine area. Noise level measurements were taken at the 6 locations during the monitoring period. Details of the same are provided below:

Table 3.15: Noise Level Monitoring

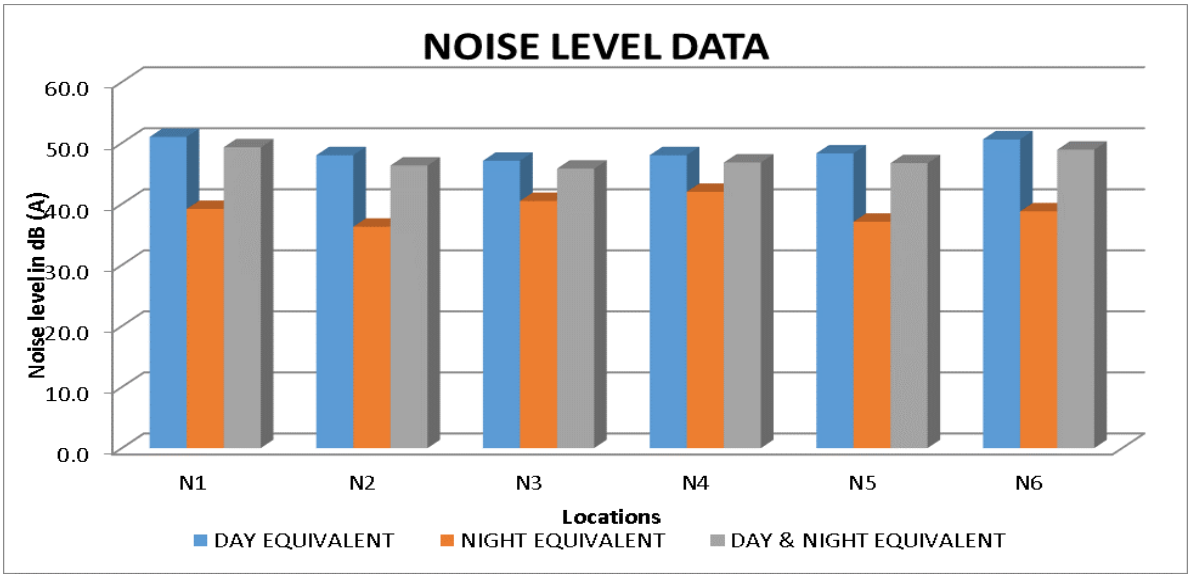
1.	**Monitoring Period**	Summer Season (Mar 2025 – May 2025)		
2.	**Monitoring Location**	The location map showing noise monitoring locations are given in **Figure No.3.12.**		
	Code	**Location**	**Distance**	**Direction**
	N1	Near Mine Lease Area	-	-
	N2	Mettu Vadakarai	1.6km	SE
	N3	Tenkarai	1.9km	S
	N4	Kuruchiyarpatti	780m	NW
	N5	Muthanuthi	1.7km	SW
	N6	Gopalapuram	1.3km	NE
3.	**Methodology**	Noise levels were measured using sound level meter manufactured by (Model No - SL- 4001, Make - Lutron). Sound Pressure Level (SPL) measurements were measured at all locations where ambient air quality monitored; one reading for every hour was taken for 24 hours.		
4.	**Monitoring Frequency**	Once during monitoring period		

Figure 3.12: Location of Noise Sampling Stations

Table No – 3.15: Ambient Noise Level in dB (A)

Date and time of monitoring	N1	N2	N3	N4	N5	N6
Day Equivalent	51.0	48.0	47.1	48.0	48.3	50.6
Night Equivalent	39.2	36.3	40.5	42.0	37.1	38.8
Day & Night Equivalent	49.3	46.3	45.8	46.8	46.7	48.9
Limits: As per CPCB: Work zone Exposure in 8 hr - 90 dB(A) As per MoEF&CC: Residential: Day equivalent - 55 dB(A); Night equivalent - 45 dB(A)						

Figure 3.13: Noise Level Data



3.3.4.1 Results and Discussion:

The results of noise levels for all locations are given in **Table No-3.15**.The noise values for all above locations are shown in a comparative chart given in **Figure No - 3.13.** In the buffer zone, day Equivalent Noise (Leq-d) noise levels were ranging from 47.1 dB(A) to 51.0 dB(A) and night Equivalent Noise (Leq-d) levels ranged between 36.3 dB(A) to 42.0 dB(A). While comparing with the MOEF&CC Norm of 55 dB(A) for day time and 45 dB(A) for night time, the monitored ambient noise levels were within the limit values for Residential areas.

3.3.5 SOIL CHARACTERISTICS:

Soil samples were collected in 3 locations in the core and buffer zone to analyse the physiochemical characteristics of the soil in the area. Elaborate details of the same has been provided below.

Table 3.16: Soil Quality Monitoring

1.	**Monitoring Period**	Summer Season (Mar 2025 – May 2025)		
2.	**Monitoring Location**	The location map showing soil sampling locations are given in **Figure No.3.14.**		
	Code	**Location**	**Distance**	**Direction**
	S1	Near Mine Lease Area	-	-
	S2	Muthanuthi Village	1.7km	SW
	S3	Kuruchiyarpatti Village	780m	NW
3.	**Methodology**	Composite soil samples using sampling augers and field capacity apparatus.		
4.	**Monitoring Frequency**	Once during monitoring period		

Figure 3.14: Location of Soil Sampling Stations

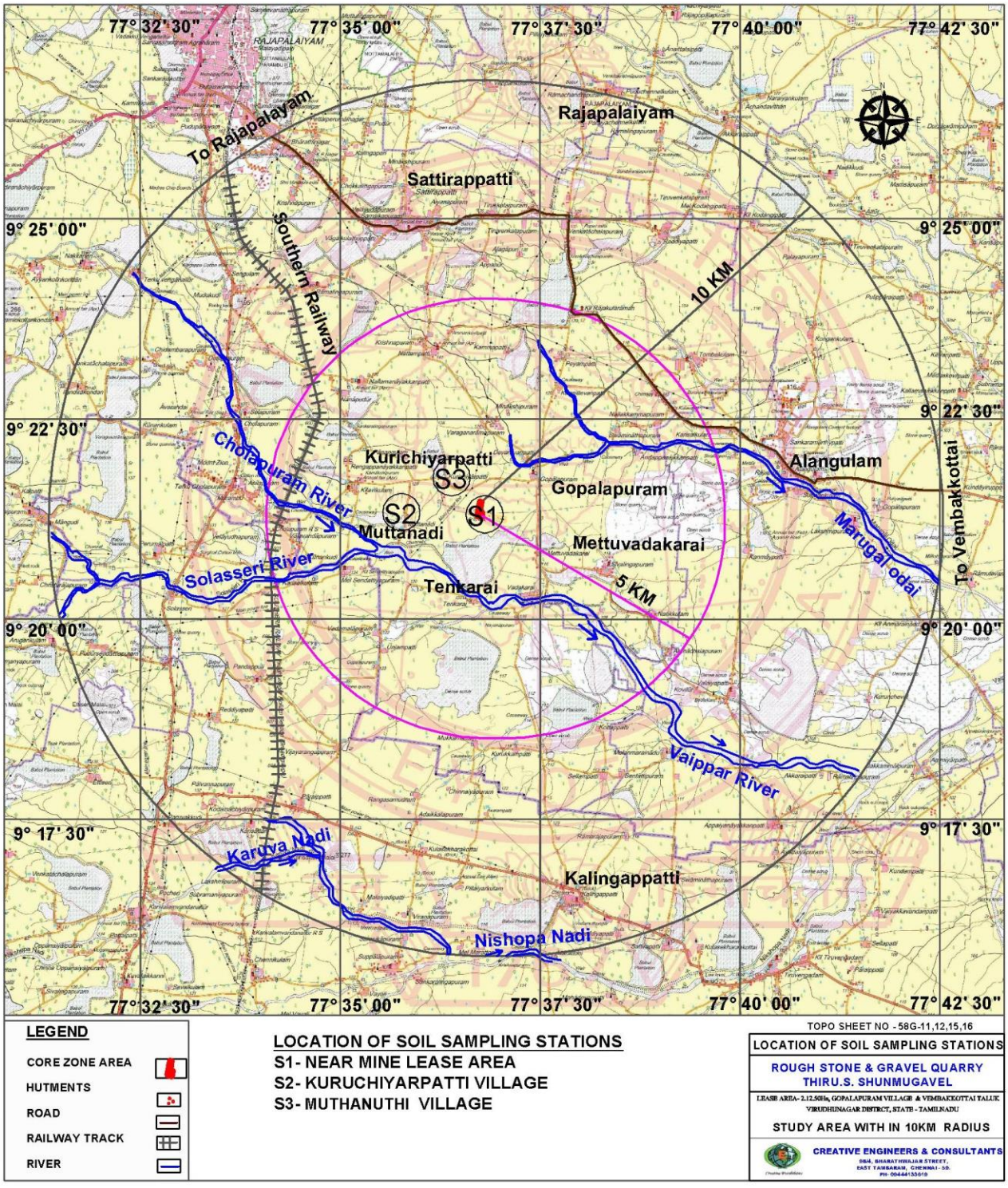


Table 3.17: Soil Quality Data

S.No	Parameters	Unit	S1	S2	S3
1	pH at 25°C	-	6.58	6.71	7.57
2	Electrical Conductivity	(µmhos/cm)	106.5	101.3	89.74
3	Dry matter content	%	97.32	95.86	99.54
4	Water Content	%	2.68	4.14	0.46
5	Organic Matter	%	2.92	2.54	3.12
6	Soil texture	-	Clay Loam	Sandy Clay Loam	Clay Loam
7	Grain Size Distribution i. Sand	%	38.92	48.16	24.78
8	ii. Silt	%	33.54	17.96	43.44
9	iii. Clay	%	27.54	33.88	31.78
10	Phosphorous	µg/g	2.9	3.5	2.2
11	Sodium	mg/kg	1036	765	975
12	Potassium	mg/kg	775	570	665
13	Total Nitrogen	mg/kg	842	606	1125
14	Total Sulphur	%	BDL(D.L - 0.02)	BDL(D.L - 0.02)	BDL(D.L - 0.02)

3.3.5.1 Results and Discussion:

Results of the soil samples show that the pH values were ranging between 6.58 to 7.57 and Electrical Conductivity values were ranging between 89.74 – 106.5 µmhos/cm. Soils are generally silt loam and loam type. Organic matter values were ranging between 2.54 – 3.12 %.

Total Nitrogen values were ranging between 606 - 1125 mg/kg. Phosphorus values were ranging between 2.2 – 3.5µg/g. Potassium values were ranging between 570 -775 mg/kg. Sodium values were ranging between 765 -1036 mg/kg. Total Sulphur values were observed to be BDL. The soil quality data for the 3 samples collected and analyzed are provided in **Table No – 3.16.**

3.4 LAND ENVIRONMENT - LANDUSE & LAND COVER

For preparing an impact statement, aspects of the land conditions are covered under land use. An industrial project / mine can cause changes in land use, soil process in different intensities depending upon the size of the project and distance involved between the industries and the area. Here, land use status for a radius of 10 km has been studied.

3.4.1 DATA USED AND METHODOLOGY

For the present study on land use pattern of buffer area around the proposed stone and gravel quarry, an archived historical data of Landsat 8 data shas been used as base data acquired on May 2025 (Figure No.3.13) has been used to generate the require landuse map showing their spatial pattern within the buffer area. The table showing data used for generation of information on landuse and subsequent GIS analysis is given below

Table 3.18: RS satellite image used for the present study

S.No	Type of Data	Date	Generated Map
1.	Landsat 8	May 2025	Landuse (LU) Map showing 10 Km around the ML area

Interpretation of satellite image requires understanding of relationship between image elements and their respective terrain elements. Since, in the present study, the landuse information is obtained using visual interpretation, an interpretation key is generated. The image elements such as color, tone, texture, size, shape and associated elements have been used to delineate various landuse categories. The landuse categorization and nomenclature used in the present study is based on the national level landuse classification system, which is adopted for the entire country as recommended by NationaL Remote Sensing Centre (NRSC), Department of Space, Government of India.

Figure 3.15 : Landsat 8 Satellite Data of the Study Area

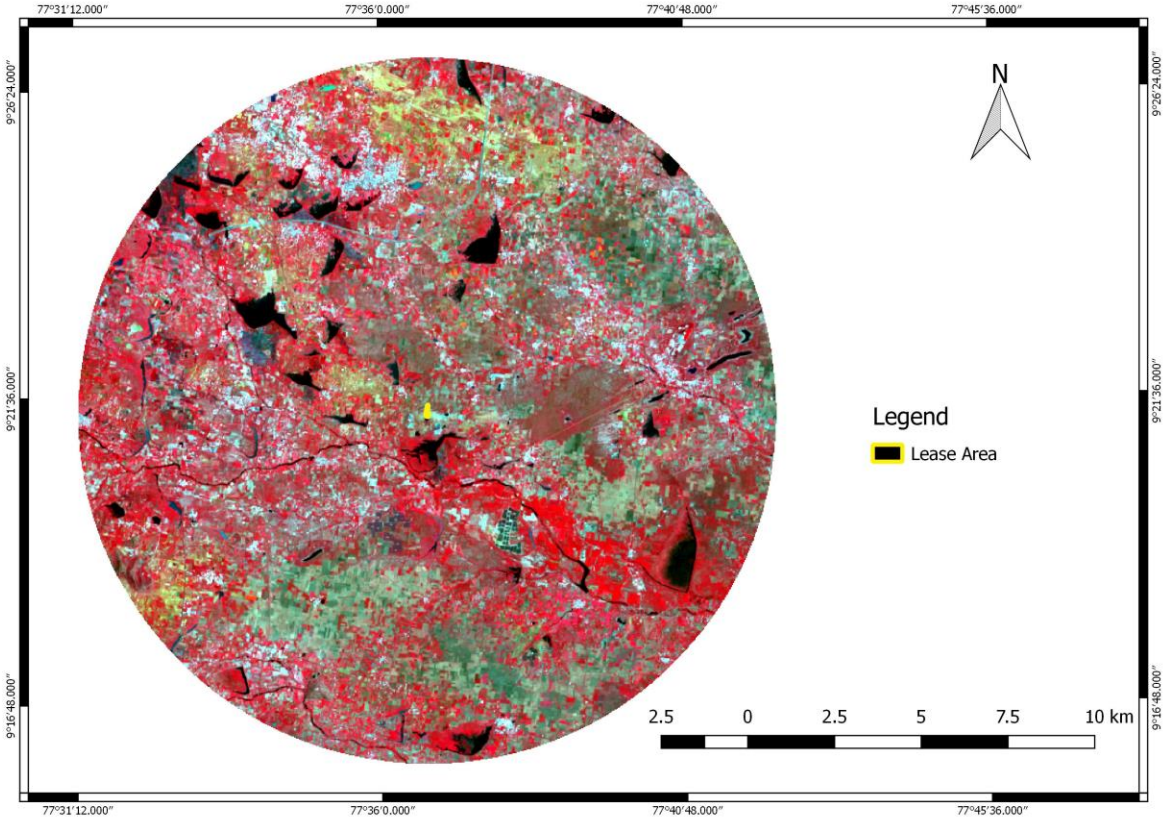


Table 3.19: Major Landuse Units of the Study Area

S.No	Major Category	Landuse unit
1	Built-Up Land	Village, Town, Industrial / Vacant Area
2	Agricultural Land	Crop Land Fallow Land Plantation Farm Land
3	Forest Land	Open Scrub Forest
4	Waste Land Mining Area	Land With Scrub/ Land Without Scrub Barren Rocky/ Stony Waste Quarries / Abandoned Quarries
5	Waterbodies	Tanks/ Rivers / Streams

Such LandUse and Land cover (LULC) categories have been verified using field check and identified sample sites within the buffer area, verified on field and transferred into gis geo-coordinates using observation coordinates received from hand held GPS (global positioning system) instrument. Thus, an interpreted final landuse map has been generated (Figure No. 3.14) using above such elaborate procedure and transformed into GIS environment for its spatial distribution and area estimation. Spatial nature and extent of various landuse categories within the buffer area is discussed is given below:

Figure 3.16: Map Showing Land Use Categories around 10km Buffer

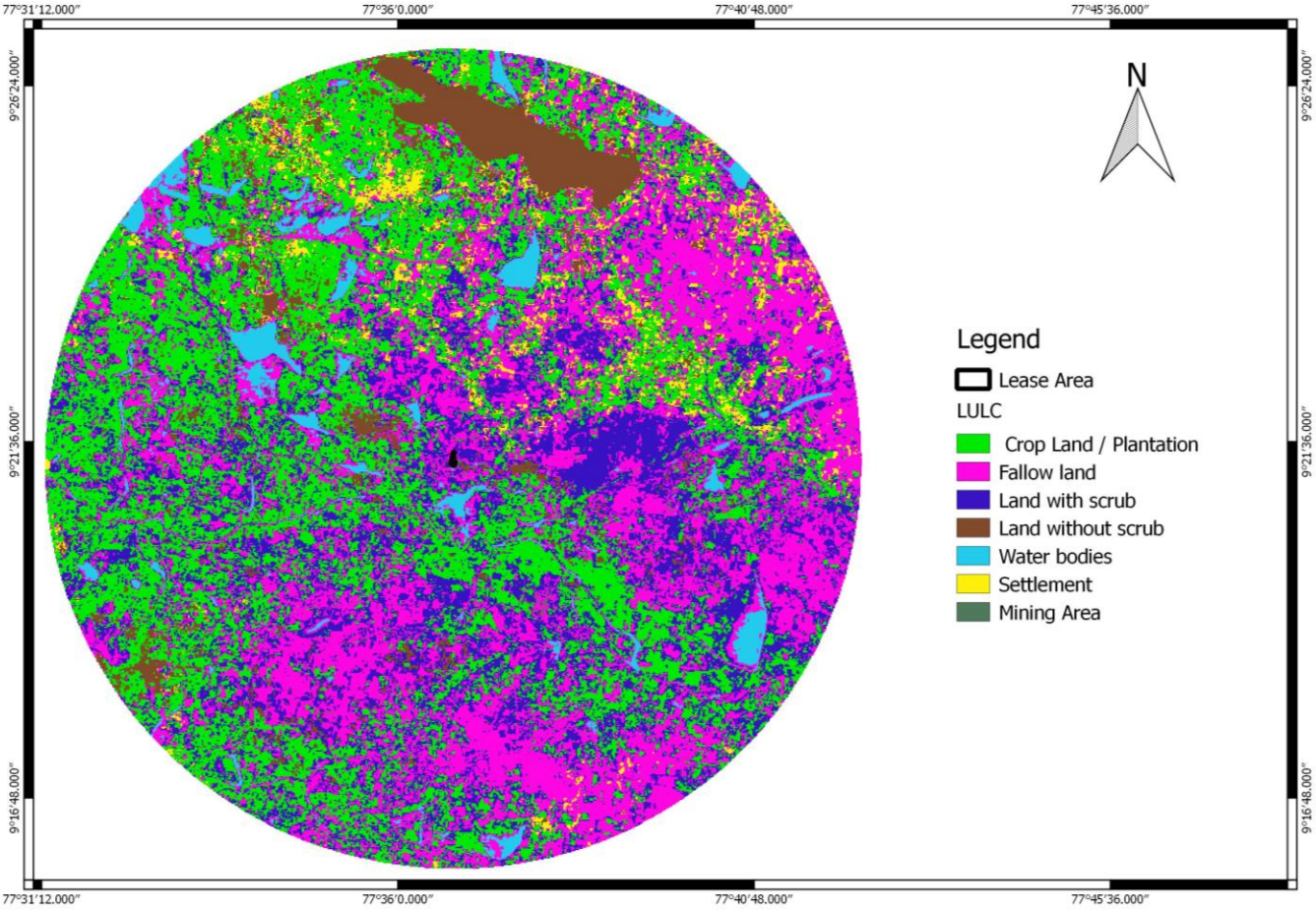


Table 3.20: Area Estimation of Landuse Categories in Buffer Zone

S.No	Landuse Feature	Area (Sq.Km)	Percentage
1	Agriculture/ Plantation	106.23	32.89
2	Fallow Land	97.77	30.27
3	Land With Scrub	76.96	23.83
4	Land Without Scrub	20.06	6.21
5	Water bodies	10.40	3.22
6	Settlement	10.82	3.35
7	Mining Area/ Industries	6.58	0.23
	Total	328.82	100

From the above table it is seen that 32.89 % of the study area is agriculture land and 30.27 % are fallow land. Land with scrub constitutes 23.83 %, lands without scrub constitute 6.21%, and waterbodies constitute 3.22%.

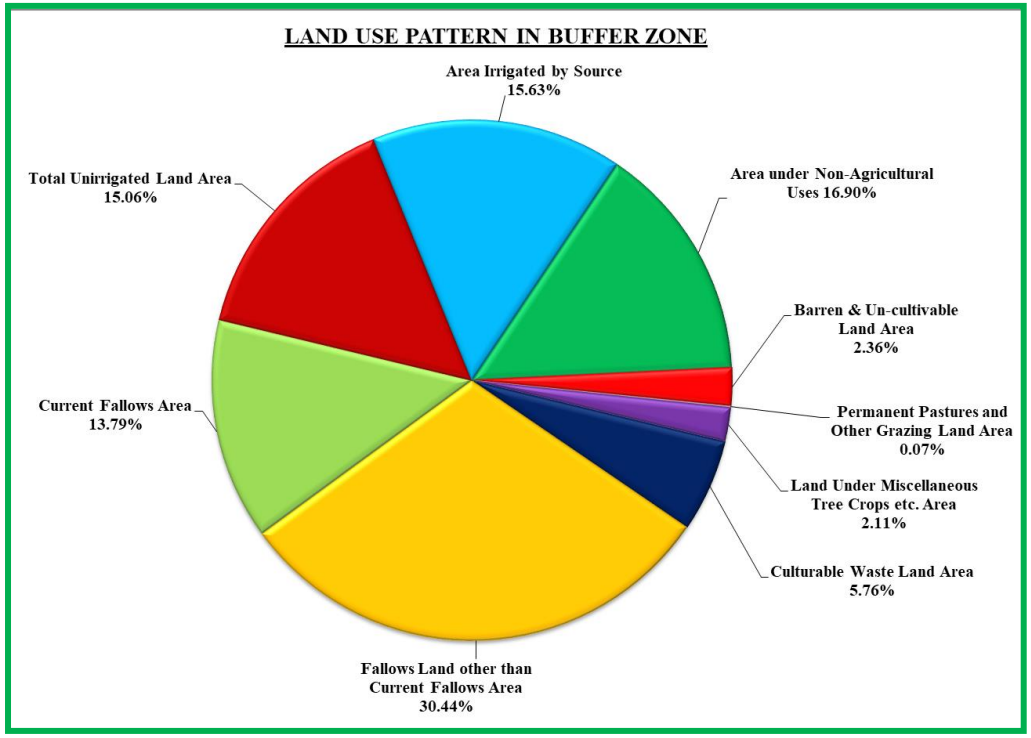
3.4.2 LAND USED BASED ON REVENUE RECORDS:

The lease area falls in Gopalapuram Villae, Vembakottai Taluk, Virudhunagar District, Tamil Nadu state and the study area for the land use pattern (10 km radius) has been divided into four zones viz. Zone-I (0-2 km), Zone-II (2-5 km), Zone-III (5-10 km) and Zone-IV (0-10 km) respectively. The land use pattern of the study area falling within 10 km radius around the proposed project area is presented in Table no - 3.10. Village wise land use pattern is provided in **Annexure-X.**

Table no – 3.10: Land Use Pattern of the Study Area Falling Within 10 Km Area in (Ha)

VILLAGE NAME	Total Geographical Area	Forest Area	Area under Non-Agricultural Uses	Barren & Un-cultivable Land Area	Permanent Pastures and Other Grazing Land Area	Land Under Miscellaneous Tree Crops etc. Area	Culturable Waste Land Area	Fallows Land other than Current Fallows Area	Current Fallows Area	Total Un irrigated Land Area	Area Irrigated by Source
0- 2 KM	1557.5	0	175.38	0	0	265.35	0.94	430.09	237.17	244.13	204.44
2 - 5 KM	4849.13	0	944.55	0.6	0	241.35	2.42	1745.83	366.23	362.44	1185.71
5-10 KM	38229.27	0	5476.18	1052.64	32.43	434.15	2567.41	11411.52	5549.8	6117.47	5587.67
Total	**44635.9**	**0**	**6596.11**	**1053.24**	**32.43**	**940.85**	**2570.77**	**13587.44**	**6153.2**	**6724.04**	**6977.82**

Figure 3.17: Landuse within the Buffer Zone Area



3.5 BIOLOGICAL ENVIRONMENT:

Study of the biological environment of any area comprises of well-planned ecological survey for the floristic and faunal composition of the areas through various scientifically planned techniques. Accordingly the ecological survey for the proposed quarry area including core and buffer zone were carried out to identify various species occurring in the area.

3.5.1 FLORA:

An ecological survey of the study area was conducted with reference to listing of species and assessment of the existing baseline ecological conditions. The objective of the survey is as follows:

- ❖ Generate existing data from field observations of various terrestrial floristic occurrences.
- ❖ Collect secondary data from Government records as well as through discussion with Forest officials, knowledgeable public etc.,
- ❖ Compare the data with authentic past records to identify changes, if any.
- ❖ Identify the impact of project operations on the biological aspects.

To accomplish the above objectives, a general ecological survey covering an area of 10 km radius was conducted. The locations were identified for phyto-sociological aspects to assess the current status.

3.5.1.1 <u>Sampling Methodology:</u>

In order to provide representative ecological status for the study area, the 10-km radius buffer area has been divided into four quartiles for biodiversity sampling, i.e., NE (Q-1), NW (Q-2) SW (Q-3) and SE (Q-4). Each of the quartiles have been examined for representative flora on randomly sampled quadrats for trees (10x10 m), shrubs (5x5 m) and herbs (1x1 m) depending upon prevailing geographical conditions and bio-diversity aspects of study area.

Phyto-sociological Survey: Phyto-sociological parameters, viz., Abundance (i.e., density), average and minimum stems were measured to determine the distribution and ecological aspects of the species. Abundance is a measure of the density of distribution of an individual species within a given area. It is calculated by summed individuals of a species. Average

species number is calculated for all quadrates; similarly, minimum number of individuals represented is recorded at quadrats level. A total of 10 quadrats were laid down in core area and a total of 20 quadrats were laid out in four quartiles (5 each) of buffer area.

Quadrats method for flora : Quadrats of 10 × 10m were laid down randomly within core and 10kms buffer area; each quadrat was laid to assess the trees (>5 cm GBH) and 5 × 5 m sub-quadrat nested within the quadrat for shrubs and two plot 1 × 1 m for herbs . The quadrats were laid at a minimum distance of a kilometer apart to maximize the sampling efforts and minimize the species homogeneity, such as small stream area, trees in agricultural bunds, tank bunds, farm forestry plantations, natural forest area, avenue plantations, house backyards, etc. In each sample quadrate, individuals belonging to tree, shrub and herb species were recorded separately, and have been identified on the field. The prevailing land use and habitat quality has been noted down for each location on the field.

Vegetation Analysis using index: Species diversity will be calculated by using Shannon and Wiener (1963) formula as follows:

$$H' = -\sum_{i=1}^{R} p_i \ln p_i$$

Whereas,

H´ is Shannon index of general diversity,

p_i is often the proportion of individuals belonging to the ith species in the dataset of interest.

Evenness index was calculated as: E = H´/Hmax,

Whereas Hmax = log2 (number of species in the plot)

A.CORE ZONE:

The lease area is a non forest, private land with scrub and thorny bushes. The lease is partly mined out and barren area with shurbs and herbs. The detailed list of plants found in the core zone are given in Table no – 3.21.

Table 3.21: List of Floristic Species in the Core Zone

Sl.No	Species Name	Common Name	Family
Trees			
1	Acacia nilotica	Fabaceae	Karuvelan
2	Azadirachta indica	Meliaceae	Vembu
3	Acacia leucophloea	Fabaceae	Valvelam
Shrubs			
1	Calotropis gigantea	Apocynaceae	Earukku
2	Datura metel	Solanaceae	Umatai
3	Cassia auriculata	Fabaceae	Aavarampoo
Herbs			
1	*Sida acuta*	Palambasi	Malvaceae
2	*Sida cordifolia*	Palambasi	Malvaceae
3	*Achyranthes aspera L.*	Nayuruvi	Amaranthaceae
4	*Tridax procumbens*	Vettukai poondu	Asteraceae
Grasses			
1	*Cyperus rotundus*	Korai pullu	Cyperaceae
2	*Cynodon dactylon*	Arugampillu	Poaceae

B.BUFFER ZONE:

The Dominated species are Azadirachta indica, Albizia lebbeck, Acacia leucophloea, Acacia auriculiformis, Acacia nilotica, Prosopis juliflora, Borassus flabellifer, etc. Patches of coconut and casurina farms are also observed.

Table 3.22: List of Floristic Species in the Buffer Zone

Sl.No	Species Name	Family	Local Name
Trees			
1	Thespesia populnea	Malvaceae	Puvarasu
2	Saraca asoca	Caesalpiniaceae	Asogam
3	Polyalthia longifolia	Annonaceae	Nietilingam
4	Musa paradisiaca	Musaceae	Valzhlai
5	Morinda pubescens	Rubiaceae	Manjanathi
6	Mangifera indica	Anacardiaceae	Maamaram
7	Delonix regia	Fabaceae	Gulmohar
8	Delonix elata	Fabaceae	Perungondrai
9	Casuarina equisetifolia	Casuarinaceae	Savukku
10	Annacordium occidentalae	Anacordiaceae	Munthiri
11	Acacia auriculiformis	Fabaceae	Pencile tree
12	Bobax ceiba	Malvaceae	Ilavu

Sl.No	Species Name	Family	Local Name
13	Terminalia arjuna	Combretaceae	Marudha Maram
14	Psidium guava	Myrtaceae	Koyya
15	Phyllanthus emblica	Euphorbiaceae	Nelli
16	Moringa oleifera	Moringaceae	Murungai
17	Leucaena leucocephala	Fabaceae	Subabul
18	Gmelina arborea	Lamiaceae	Kumalaamaram
19	Carica papaya	Caricaceae	Pappali
20	Bauhinia purpurea	Caesalpiniaceae	Mantharai
21	Albizia amara	Fabaceae	Vagai
23	Acacia nilotica	Fabaceae	Karuvelan
25	Azadirachta indica	Meliaceae	Vembu
28	Annona squamosa	Annonaceae	Siththa
29	Tectona grandis	Verbenaceae	Tekku
40	Samanea saman	Fabaceae	Amaivagai
41	Tamarindus indica	Fabaceae	Puli
42	Prosopis juliflora	Fabaceae	Seemai karuvel
43	Morinda tinctoria	Rubiaceae	Nuna
44	Madhuca longifolia	Sapotaceae	Iluppai
45	Lannea coromandelica	Anacardiaceae	Oti
46	Ficus religiosa	Moraceae	Poarasamaram
47	Ficus benghalensis	Moraceae	Aalamaram
48	Cocus nucifera	Arecaceae	Tennai
49	Caesalpinia pulcherrima	Fabaceae	Mayilkondrai
50	Atalantia monophylla	Rutaceae	Kattu Elumeachi
51	Albizia lebbeck	Fabaceae	Vagai
52	Acacia leucophloea	Fabaceae	Valvelam
53	Aegle marmelos	Rutaceae	Vilvamaran
54	Borassus flabelliformis	Arecaceae	Panna-maram
55	Cassia fistula	Fabaceae	Konrai
56	Citrus limon	Rutaceae	Lemon
57	Ipomoea carnea	Convolvulaceae	Pink morning glory
58	Ficus hispida	Moraceae	Aarasu
59	Manilkara zapota	Sapotaceae	Sappota
60	Mimusops elengi	Sapotaceae	Magizhamboo
61	Murraya koenigii	Rutaceae	Curry leaf
62	Peltophorum pterocarpum	Fabaceae	Kilukiluppai

Sl.No	Species Name	Family	Local Name
63	Pongamia pinnata	Fabaceae	Pungai
64	Pithecellobium dulce	Fabaceae	Kodukkapuli
65	Phoenix sylvestris	Arecaceae	Eeachamaram
66	Sygygium cumuni	Myrtaceae	Naval
67	Senna siamea	Fabaceae	Manjal konrai
Shrubs			
1	Sida cordifolia	Malvaceae	Sida plant
2	Lantana camara	Verbenaceae	Putus
3	Jatropha glandulifera	Euphorbiaceae	Vellaikattukottai
4	Datura metel	Solanaceae	Umatai
5	Cassia auriculata	Fabaceae	Aavarampoo
6	Calotropis gigantea	Apocynaceae	Earukku
7	Aloe vera	Asphodelaceae	Chotthu kathalai
8	Ziziphus jujuba	Rhamnaceae	Elanthai
9	Nerium indicum	Apocynaceae	Arali
10	Hibiscus rosa-sinensis	Malvaceae	Semparuthi
11	Boerhaavia diffusa	Nyctaginaceae	Kagithapoo
12	Plumeria acuminata	Apocyanaceae	Alari
13	Vitex negundo	Verbinaceae	Vanili
14	Tecoma stans	Bignoniaceae	Yellow trumpetbush
15	Ricinus communis	Euphorbiaceae	Amanakku
16	Lawsonia inermis	Lythraceae	Maruthani
17	Justicia adhatoda	Acanthaceae	Adathoda
18	Ixora casei	Rubiaceae	Idlipoo
19	Rosa indica	Rosaceae	Rose
Herbs			
1	Achyranthes aspera	Amaranthaceae	Nayuruvi
2	Tridax procumbens	Asteraceae	Vettukai poondu
3	Solanum xanthocarpum	Solanaceae	Kandangkattari
4	Leucas aspera	Lamiaceae	Thumbai
5	Amaranthus viridis	Amaranthaceae	Creen amaranth
6	Acalypha indica	Amaranthaceae	Kupaimeni keeri
7	Ocimum tenuiflorum	Lamiaceae	Thulasi
8	Sida acuta	Malvaceae	Palambasi
9	Andrographis paniculata	Acanthaceae	Kirayt
10	Sida rhombifolia	Malvaceae	Kurundotti

Sl.No	Species Name	Family	Local Name
11	Solanum nigrum	Solanaceae	Manatthakalli
12	Vinca rosea	Apocynaceae	Nithiyakalyani
13	Acanthospermum hispidum	Asteraceae	Gokul kanta
14	Anisomeles indica	Lamiaceae	marutti
15	Argemone mexicana	Papaveraceae	Mexican poppy
16	Solanum incanum	Solanaceae	Karimulli
17	Anisomeles malabarica	Lamiaceae	Peyimarutti
18	Cleome viscosa	Cleomaceae	Naai velai
19	Parthenium hysterophorus	Asteraceae	Parthenium
20	Phyllanthus niruri	Phyllanthaceae	Keelzhaneeli
Climber			
1	Coccinia indica	Cucubitaceae	Kovai
2	Convolvulus arvensis	Covolvulaceae	Bhoomi Chakra Poondu
3	Cissus quadrangularis	Vitaceae	Pirandai
4	Abrus precatorius	Fabaceae	Kundumani
5	Asparagus racemosus	Asparagaceae	Tannir-vittan
Agricultures Crops			
1	Sesbania grandiflora	Fabaceae	Agati
2	Solanum melongena	Solanaceae	Kaththarii
3	Musa paradisiaca	Musaceae	Valzhai
4	Capsicum annuum	Solanaceae	Red chilli
5	Gossypium hirsutum	Malvaceae	Paruththi
Grasses			
1	Kyllinga nemoralis	Cyperaceae	Velutta nirbasi
2	Cyperus rotundus	Cyperaceae	korai pullu
4	Cynodon dactylon	Poaceae	Arugampillu
5	Chloris barbata	Poaceae	Kodai pullu

3.5.2 FAUNA:

Methodology: Both direct and indirect observation methods were used to survey the fauna. Point Survey Method was used to study the Bird diversity. Besides, discussion with local villagers Collection secondary data from Government records, published reports as well as through discussion with Forest officials, knowledgeable public were used for the study.

Observation: There is no Wild Life Sanctuary or National Park within the study area of 10 km. Domesticated animals are commonly found. The lease and 10 Km buffer zone does not fall in

the Western Ghats ESA boundary. No wild mammalian species was directly sighted during the field survey. There is no Sehedule I animals in the buffer zone area. The list of fauna within the study area is given in Table No – 3.29.

Table 3.23: List of Fauna in the Buffer Zone

S.No	Common Name	Scientific name	IUCN
Mammals			
1	Common Indian Hare	Lepus ruficaudatus	LC
2	Indian Palm squirrel	Funambuus palmarum	LC
3	Indian Grey Mongoose	Herpestes edwardsii	LC
Birds			
1	Black Drongo	Dicrurus macrocercus	LC
2	Cattle Egret	Bubulcus ibis	LC
3	Common Babbler	Turdoides caudatus	LC
4	Common Crow	Corvus splendens	LC
5	Common Kingfisher	Alcedo atthis	LC
6	Common Myna	Acridotheres tristis	LC
7	Common Quail	Coturnix coturnix	LC
8	House Sparrow	Passer domesticus	LC
9	Indian Cuckoo	Cuculus micropterus	LC
10	Little Cormorant	Phalacrocorax niger	LC
11	Little Egret	Egretta garzetta	LC
12	Purple-rumped Sunbird	Nectarinia zeylonica	LC
13	Red-vented Bulbul	Pycnonotus cafer	LC
14	Rose-ringed Parakeet	Psittacula krameri	LC
15	Spotted Dove	Streptopelia chinensis	LC
Reptiles			
1	Common Indian krait	Bungarus caeruleus	LC
2	Rat Snake	Ptyas mucosa	LC
3	Garden Lizard	Calotes versicolar	LC
Amphibians			
1	Common Indian toad	Bufo melanostictus	LC
Butterfly			
1	Lime butterfly	Papilio demoleus	LC
2	Common crow	Euploea core	LC
3	Small grass yellow	Eurema brigitta	LC

3.6 HYDROGEOLOGICAL STUDY:

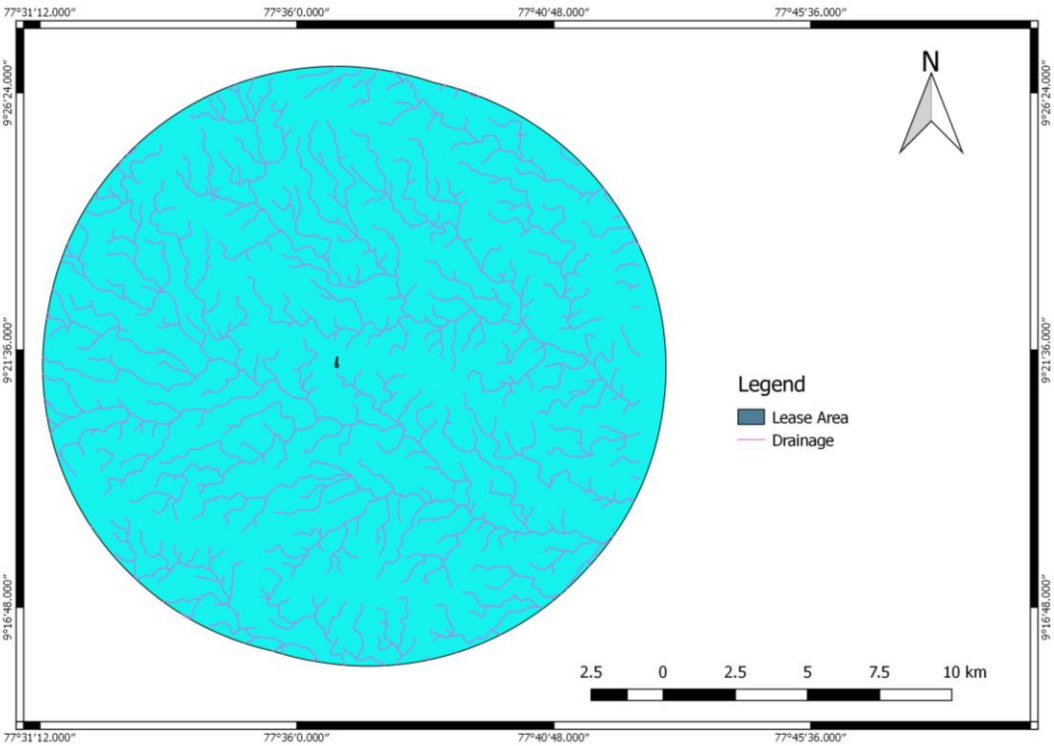
This section delves into the study of the hydrogeological scenario of the study area to evaluate the impact of mining activities on the nearby areas. The study area is located in Gopalapuram village, Vembakottai Taluk is considered to understand the nature of the general hydrogeological conditions of the area.

3.6.1 PHYSIOGRAPHY AND DRAINAGE:

Physiography: The area applied for mining lease is a gentle plain terrain. The area applied for quarry lease is dry lands without any vegetation.

- **Drainage:** There is no major water body in the core zone. There is a Sesonal Drainage in West adjacent to the lease safety distance 50m has been left left, Besides, there is a Kanmai on the south side at a distance of 450m. The drainage map prepared from the survey of India topographic maps shows the presence of few streams running in a dendritic pattern.

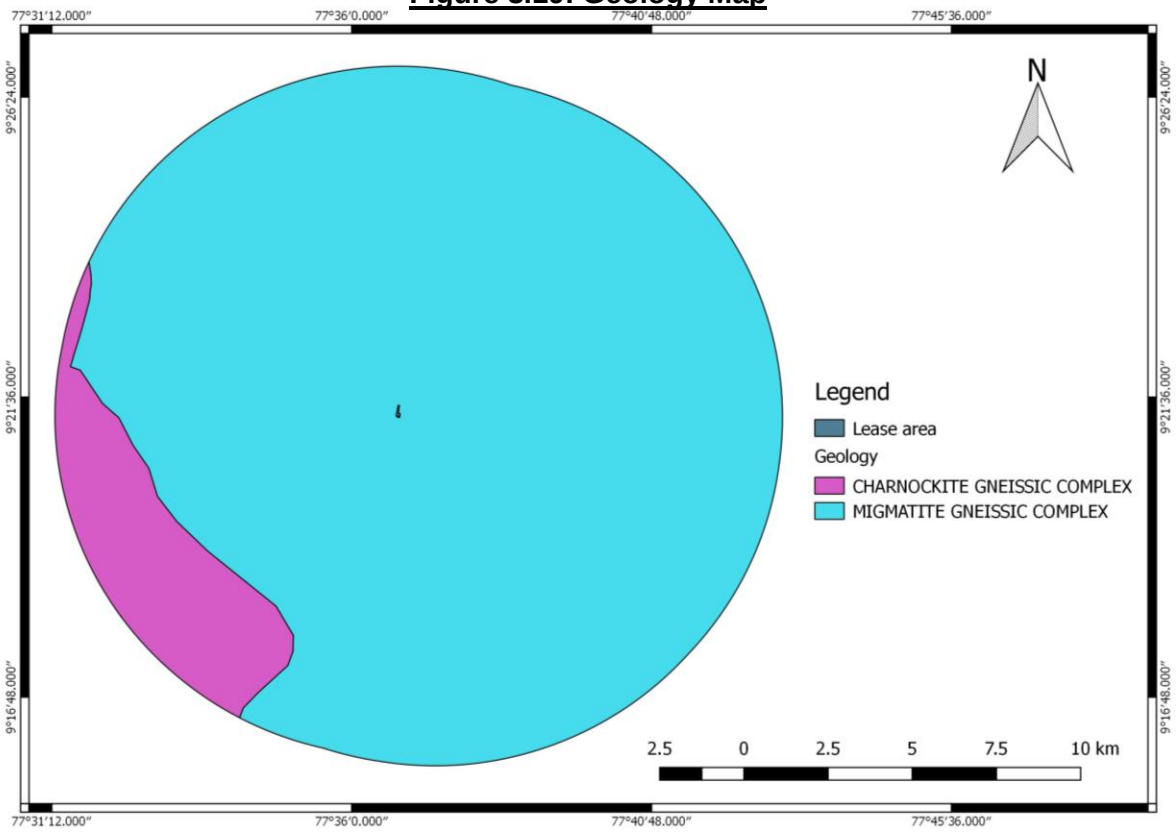
Figure 3.18: Drainage Map



3.6.2 GEOLOGY AND GEOMORPHOLOGY

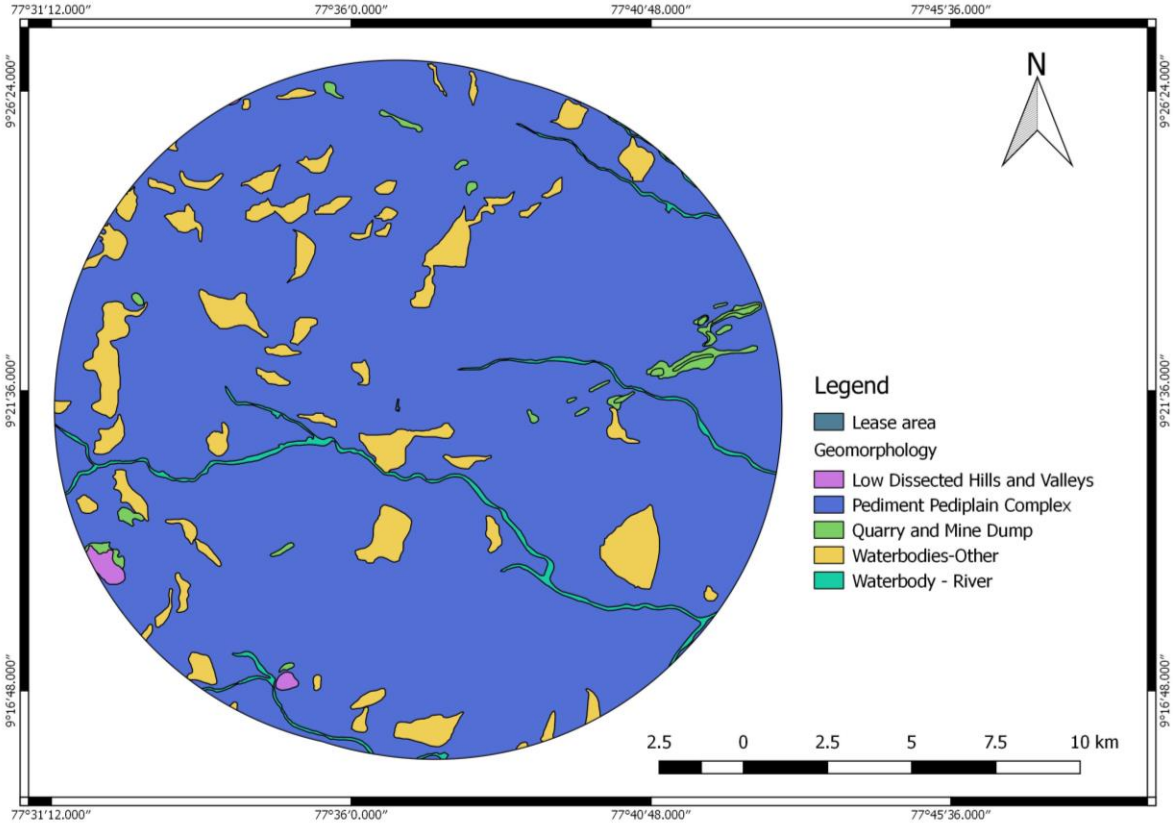
Geology: The type of rock formation in the core and buffered zone is composed majorly of Migtmatite Gneissic complex. The lease area falls under Migtmatite Gneissic complex category.

Figure 3.19: Geology Map



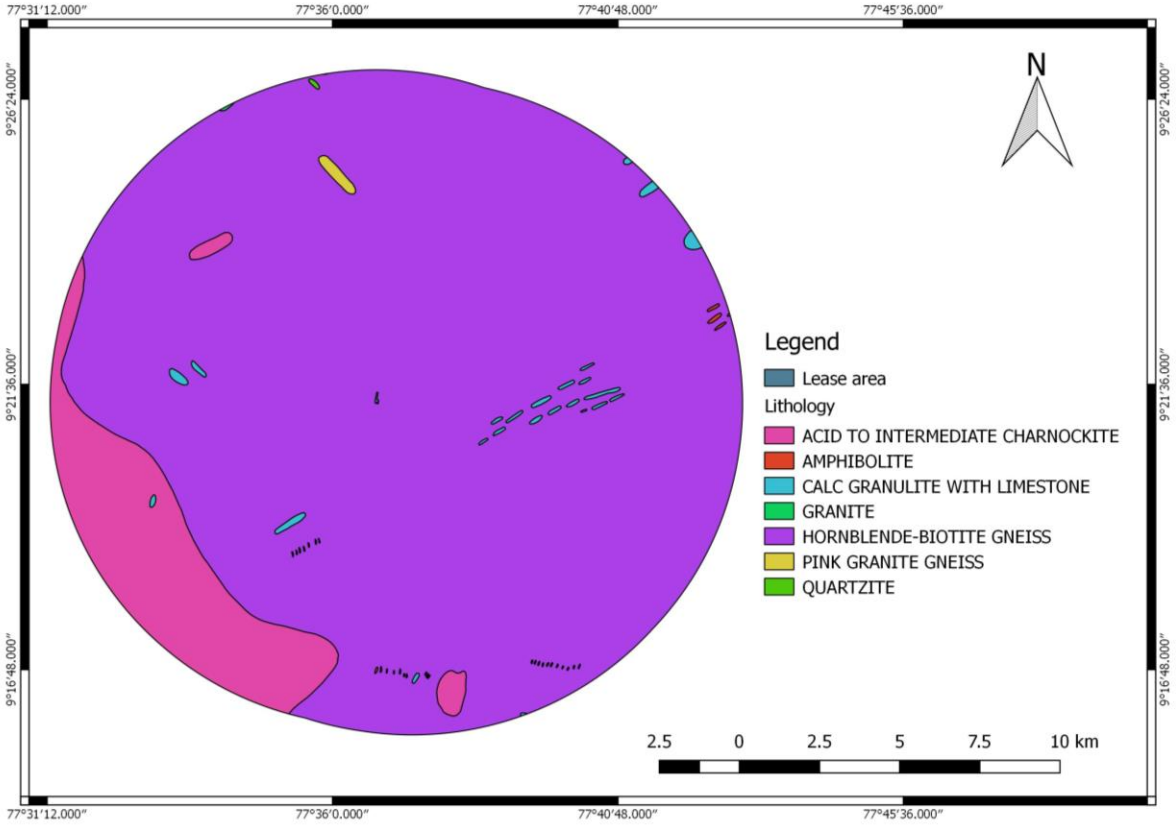
Geomorphology: The geomorphology map of the study derived from the satellite imagery using remote sensing and GIS technique. Predominantly the buffer zone is dominated by Pediment Plain complex, and it is the same catergory that the lease area also falls under.

Figure 3.20: Geomorphology Map



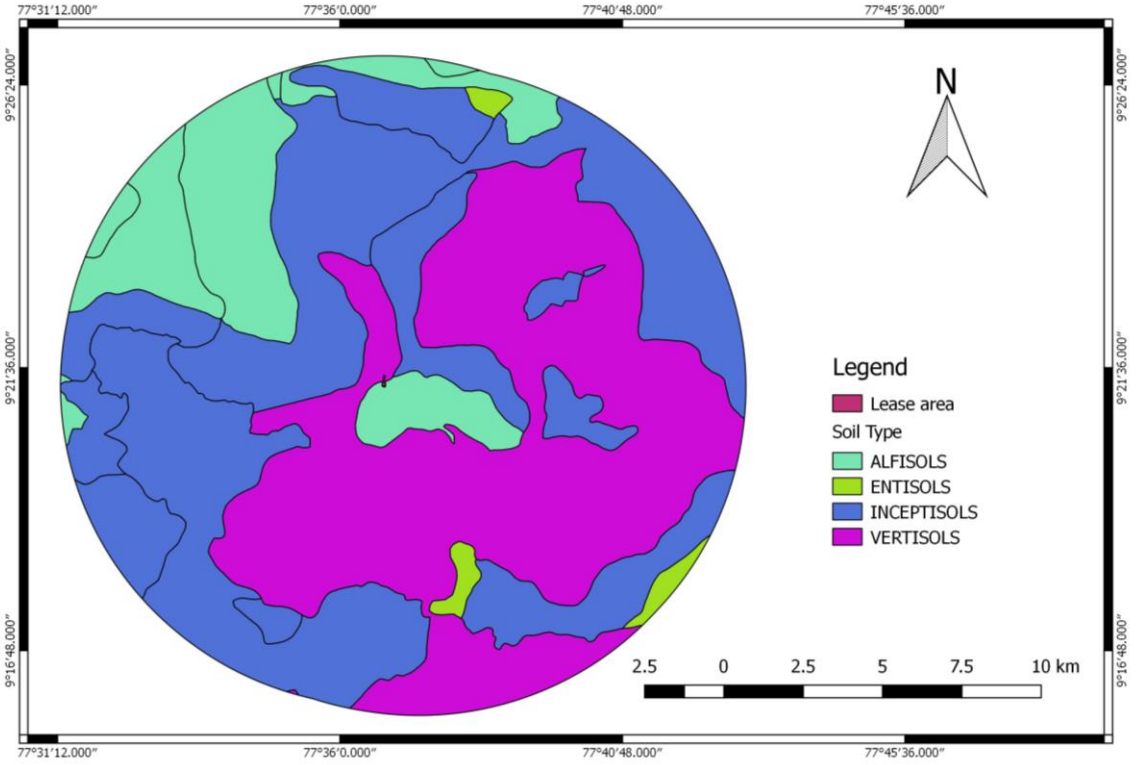
Lithology: The study area is mainly dominated by Hornblende-Biotite Geneiss. The lithology map has been provided below.

Figure 3.21: Lithology Map



Soil: The study area is characterized by Alfisols, Vertisols, Inceptisol and Entisols. The project area is dominated with Alfisols & Vertisols type of soil.

Figure 3.22: Soil Map



3.6.3 WATER TABLE OF THE AREA:

The hydrological regime of the area is studied through various published documents, study of well and borewells in the area and discussion with the locals. Based on the depth to water level data obtained from the India-WRIS, Department of Water Resources, Ministry of Jal Shakti for Vembakottai Block, Viruthunagar District, Tamil Nadu the following is observed.

Table 3.24: General Trend of Depth to Water Level for Vembakottai Block

Year	Depth to Water Level (m bgl)		Wells Monitored	
	Pre-Monsoon	Post-Monsoon	Pre-Monsoon	Post-Monsoon
2015	2.225	4.89	2	2
2016	5.49	8.03	3	3
2017	-	7.09	-	2
2018	7.19	4.7	3	2

The premonsoon and post monsoon water levels are depicted in Figure No.3.29, and 3.30 and they indicate that the depth to water level in project area ranges between 2.0 to 10.0 m bgl

during the pre-monsoon season(April) and 2.0 to 5.0 m bgl during the post monsoon season (November).

Figure 3.23: Pre-Monsoon Water Level

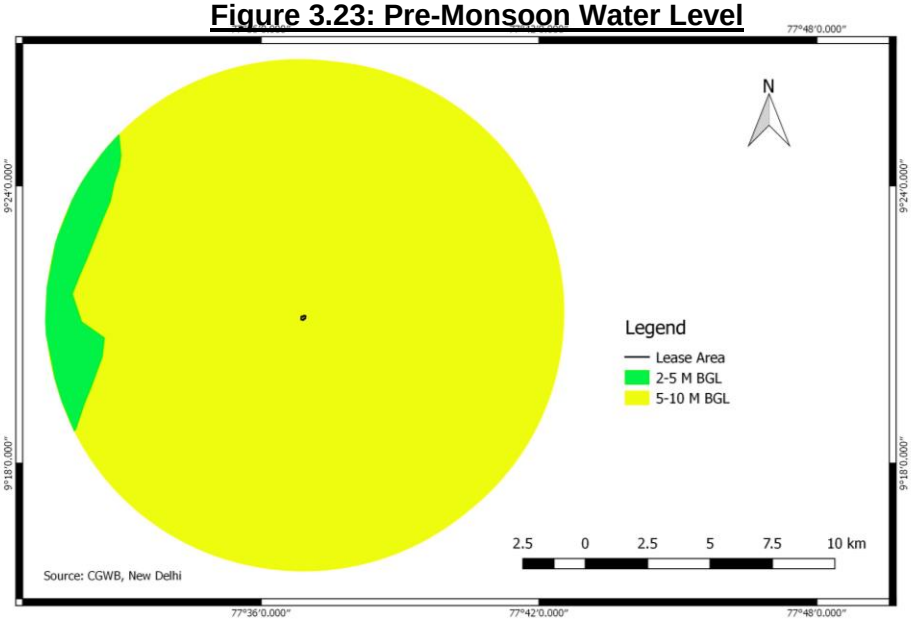
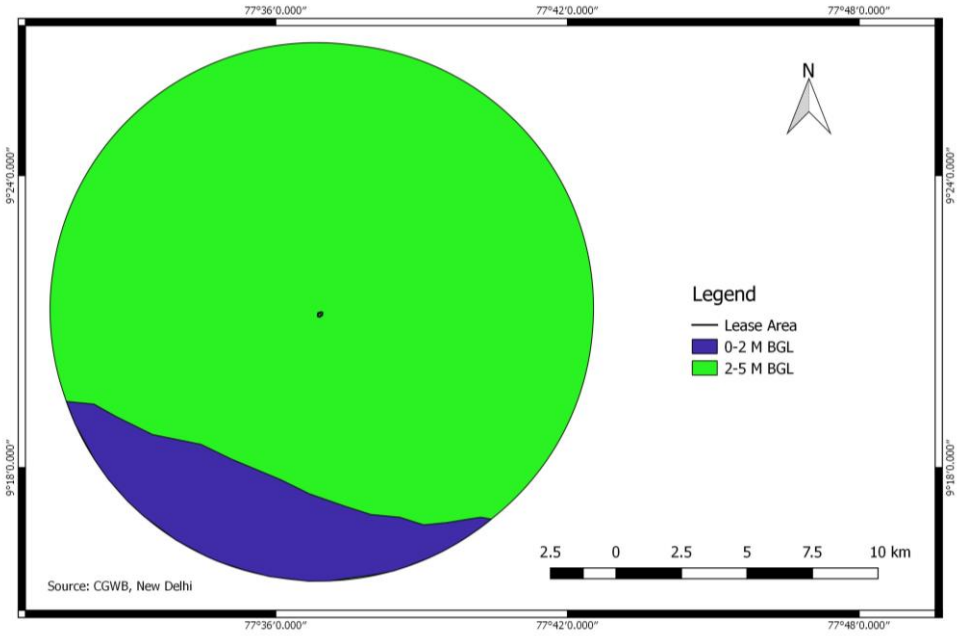


Figure 3.24: Post Monsoon Water Level



Well Inventory Data:

The water levels were studied in a total of 20 locations comprising 2 borewells and 18 wells. The map showing the location of these 20 study locations near the lease area has been depicted below in Figure No.3.30. The details of the depth of these wells and borewells, has been provided below in Table No.3.31.

Figure 3.25: Well Inventory Locations

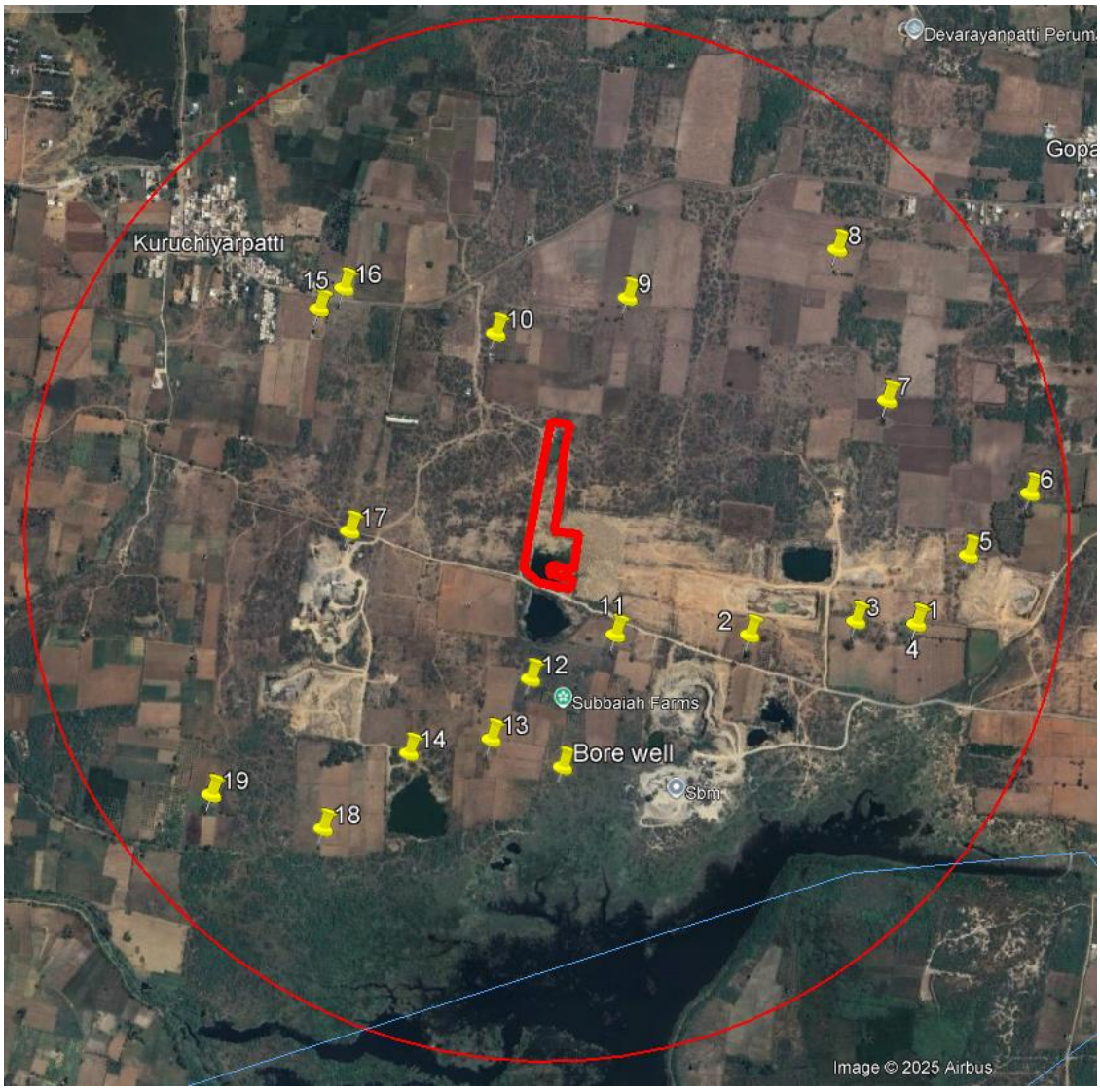


Table 3.25: Well Inventory Data

ID No.	Well/Borewell	Coordinates		Depth of Well / Borewell (ft)
		Latitude	Longitude	
1	Bore Well	9°21'2.66"N	77°36'54.35"E	300
2	Well	9°21'12.72"N	77°37'10.25"E	12
3	Well	9°21'11.92"N	77°36'58.41"E	18
4	Well	9°21'12.88"N	77°37'5.96"E	15
5	Well	9°21'12.69"N	77°37'10.27"E	21
6	Well	9°21'17.50"N	77°37'13.97"E	9
7	Well	9°21'21.86"N	77°37'18.35"E	22
8	Well	9°21'28.37"N	77°37'8.18"E	10
9	Well	9°21'38.96"N	77°37'4.64"E	25
10	Well	9°21'35.56"N	77°36'49.72"E	18
11	Well	9°21'33.06"N	77°36'40.34"E	22
12	Well	9°21'11.94"N	77°36'48.85"	16
13	Well	9°21'8.84"N	77°36'42.81"E	18
14	Well	9°21'4.61"N	77°36'40.01"E	10
15	Well	9°21'3.63"N	77°36'34.16"E	15
16	Well	9°21'34.77"N	77°36'27.76"E	12
17	Well	9°21'36.25"N	77°36'29.54"E	21
18	Bore Well	9°21'19.19"N	77°36'29.95"E	360
19	Well	9°20'58.33"N	77°36'28.05"E	22
20	Well	9°21'0.71"N	77°36'20.10"E	25

In the study area, the shallow aquifer is developed through dug wells and deeper aquifer through tube wells. The groundwater has revealed that potential fractures are encountered at deeper levels. Rain water collected in the tanks in the region acts as a good source of water during post monsoon. The water in the wells are available mainly after post monsoon and it reduces during summer. Bore wells are as deep as 380 ft also and it reflects that the yield is only better at deeper water levels

The occurrence of groundwater mainly in the porous soil are weathered layers, very negligible amount of groundwater percolated through the poorly fractured layer, after that there is no existence of groundwater. Besides, the mining area consists of hard compact rock, no major water seepage within the mine is expected. From the nearby working mines, no such seepage is also observed.

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CHAPTER 4
ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.1 GENERAL

In this project Mechanized Open Cast mining will be carried out to quarry out Rough Stone & Gravel. The identified impacts due to the mining operation in the leases individually as well as cumulatively during mining and associated activities have been studied in relation to various environmental components like Air, water, noise, vibration, land, transport etc., and the details of the same are elaborated in this chapter.

4.2 AIR ENVIRONMENT:

4.2.1 IMPACTS DUE TO PROJECT OPERATION:

The existing ambient air quality in the area has been described in Chapter-III. The proposed mining and allied operations may cause deterioration of air quality due to pollution arising from the project operation if prompt care is not taken. The principal sources of air pollution in general due to mining and allied activities will be:

- Excavation of material.
- Movement of HEMM such as Excavators, tippers etc.
- Loading and unloading operation
- Transportation

Besides, Gas emission will occur as a result of operation of diesel driven mining equipment, compressors, transporting vehicles, etc.

Particulate matter smaller than 10 microns, referred to as PM_{10}, can settle in the bronchi and lungs and cause health problems like Bronchitis, Emphysema, Bronchial Asthma, Irritation of mucus membranes of eyes, etc. Particles smaller than 2.5 micrometers ($PM_{2.5}$), tend to penetrate into the lungs and very small particles (<100 nanometers) may pass through the lungs to affect other organs.

Besides the above mentioned fugitive dust emissions, atmospheric pollution can occur as a result of emission of SO_2, NO_x, CO etc., from diesel driven mining equipment, generator sets, etc. Larger suspended particles are generally filtered in the nose and throat and do not cause

problems. Higher concentration of SO2, NOx, CO may cause some health effect on the human beings exposed to it. In case of this mine, the following measures will be adopted in the quarry to control impact on the air quality due to mining operations in the lease area:

Table 4.1: Impact and Mitigation Measures – Air Environment

S.No	Activity	Consequence	Mitigation Measures
1	Drilling	Dust Emanation	Usage of Drill bits in good condition
			Covering of drill holes with wet cloth
			Usage of sharp drill bits for drilling of holes.
			Provision of dust filters / mask to workers working at highly dust prone and affected areas.
2	Blasting	Instantaneous dust emanation	Well-designed blasting parameter, effective stemming to achieve optimum breakage occurs without generating fines.
			Use of appropriate explosives for blasting and avoiding overcharging of blast holes.
			Avoiding blasting during high wind periods where the fine dust is carried out away easily affecting the ambient air quality.
			Use of controlled blasting techniques with Nonel to keep the dust generation, noise as well as vibration level within the prescribed limits.
3	Excavation and Loading	Dust emanation, Gaseous Emission	HEMM will be operated as per the manufacturer's guidelines
			Enclosures for operator cabin.
			Imparting sufficient training to operators on safety and environmental parameters.
			Proper maintenance of hauling equipments.
			Avoiding overloading of dumpers.
4	Transportation	Dust emanation, Gaseous Emission	Regular wetting of transport road using mobile water tanker.
			Proper maintenance of haul road and other roads
			Setting up of tyre wash facility in the transport road.
			Avoiding overloading of tippers
			Covering of loaded tippers with tarpaulins during transportation
			Vehicular emissions will be controlled through regular and proper preventive maintenance schedules and emissions tests are done with diesel smoke meter equipment to ensure emission values.
5	Others	Dust emanation, Gaseous Emission	Development of greenbelt / barriers around mine in the safety zone and carrying out plantation within the lease area.
			Fencing with green net as necessary will be carried out around the lease periphery on all sides.

Due to adoption of all these measures, no major impact on air quality is envisaged due to the proposed opencast mining operations in the leases.

The impact on air quality due to the proposed projects is estimated using AERMOD View Gaussian Plume Air Dispersion Model developed by Lakes Environmental Software which is based on steady state Gaussian plume dispersion. Details of the modeling study / estimation including the modeling technique and post project air quality values are elaborated in the following paras.

4.2.2 AIR QUALITY IMPACT PREDICTION:

The model simulations are done for the air pollutant arising from the mining operations, namely, PM_{10}, $PM_{2.5}$. Ground Level Concentration (GLC) have been computed using hourly meteorological data.

Table 4.2: Emission Sources

ACTIVITY	SOURCE TYPE
A. Mining operations	Open pit
B. Transportation	Line

4.2.2.1 Emission Factors

Quantification of particulate emissions has been carried out by the emission factor technique. Emission factor is a statistical average of the rate at which a pollutant is released during an activity. This factor when multiplied by the level of that activity in a given situation will give the overall effect. Fugitive emissions have been predicted by using standard equations given and suggested by AP-42, USEPA(1998), Coal S&T Project and for mining & allied activities and other factors. The modeling is done for the peak production to know the worst case scenario on individual basis as well as cumulative basis. The details of the emission factors used for the same is provided below:

Table 4.3: Emission Factors

S.No	Activity	PM10	PM2.5	Unit
1	Ore Loading	1.5×10^{-3}	2.1×10^{-4}	Kg/T
2	OB Loading	1.4×10^{-4}	1.5×10^{-5}	Kg/T
3	Hauling inside lease area	0.19	0.019	g/VKT
4	Drilling	0.1	0.04	Kg/hole

4.2.2.2 Emission Rates:

Based on the emission factors for the peak production capacity, after adopting necessary control measures like dust suppression, Proper maintenance of HEMM, using better quality diesel, using latest equipment, proper maintenance of roads, etc. the expected emission rate due to various operations in this project is calculated and is given below:

Table 4.4: Emission Rate

ACTIVITIES	PM_{10} (g/sec)	$PM_{2.5}$(g/sec)
Excavation	0.01	0.00
Drilling	0.05	0.02
Hauling	0.05	0.01
Total	**0.11**	**0.03**

A. ***Emission Source Coordinates:*** The center of mine was assumed (0, 0) in the mathematical modeling.

B. ***Meteorological Conditions Used In Predictions:*** The hourly meteorological data has been generated for the monitoring period and the same has been used in the predictions.

4.2.2.3 Results and Discussions

Table 4.5: Peak Incremental Concentration

S.No	Parameters	Peak incremental concentration $\mu g/m^3$– Individual basis
1	PM_{10}	0.52
2	$PM_{2.5}$	0.35

It is observed that the peak incremental concentration for PM_{10}, $PM_{2.5}$ occurring very near the source. At away from the source the values are getting reduced due to dispersion effects. The Isopleths of PM_{10}, $PM_{2.5}$ concentrations with control measures scenario have also been drawn and these are given in **Figure No.4.1 and 4.2.** The incremental and predicted concentrations at the locations of ambient air quality have been discussed in the following section.

Figure 4.1: Isopleth of GLC prediction – PM_{10}

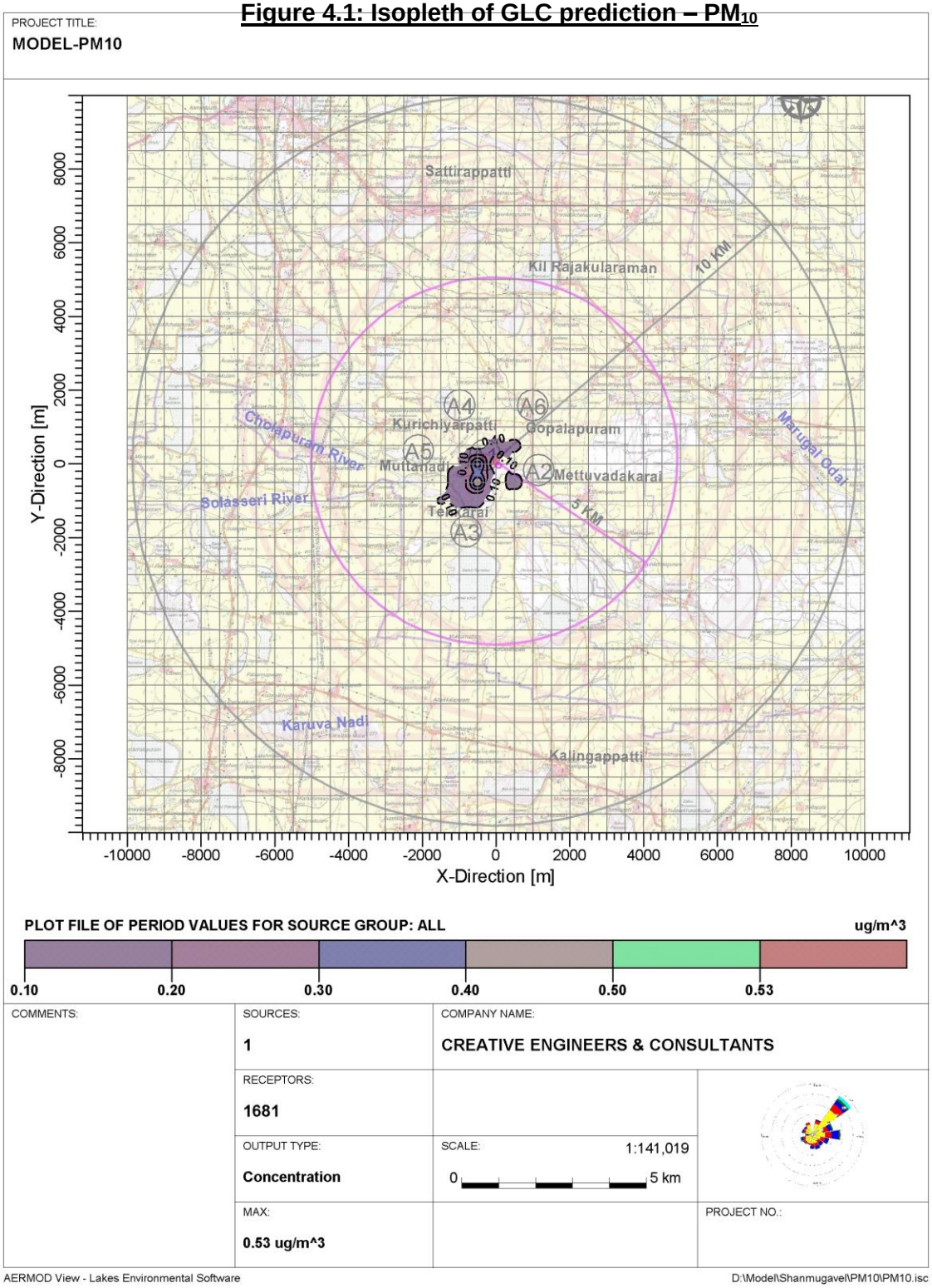
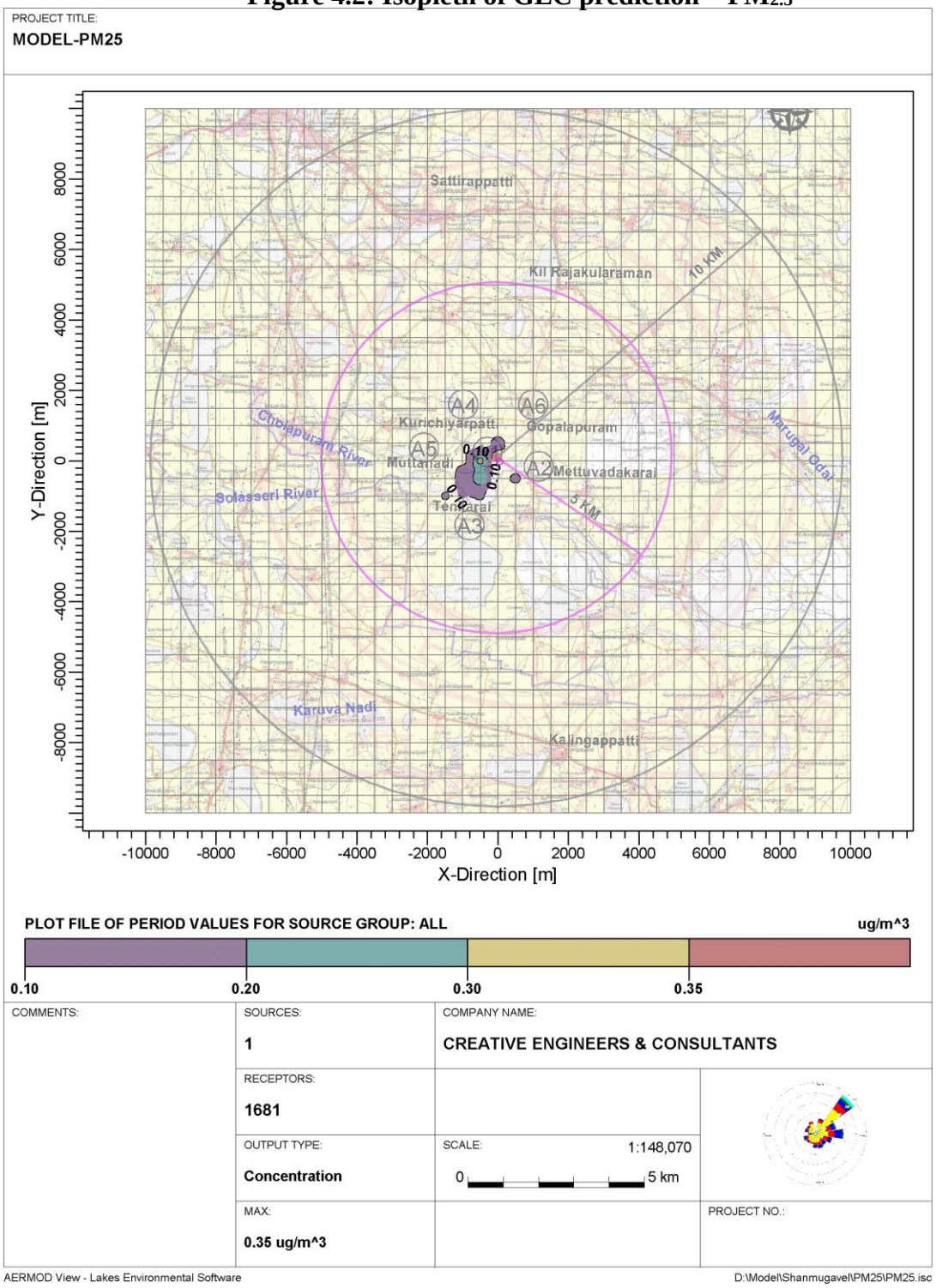


Figure 4.2: Isopleth of GLC prediction – $PM_{2.5}$



Predicted Ambient Air Quality:

Table 4.6: Concentrations Of PM_{10} after Project Implementation

Values in μg/m³

S. No	Location	Background Concentration	Incremental Conc	Post Project Conc	Statutory Limits
1	Near Mine Lease Area	64.7	<1.0	65.7	-
2	Mettu Vadakarai Village	53.2	<1.0	54.2	100
3	Tenkarai Village	58.6	<1.0	59.6	
4	Kuruchiyarpatti Village	55.5	<1.0	56.5	
5	Muthanuthi Village	51.2	<1.0	52.2	
6	Gopalapuram Village	68.0	<1.0	69.0	

Table 4.7: Concentrations Of $PM_{2.5}$ after Project Implementation

Values in μg/m³

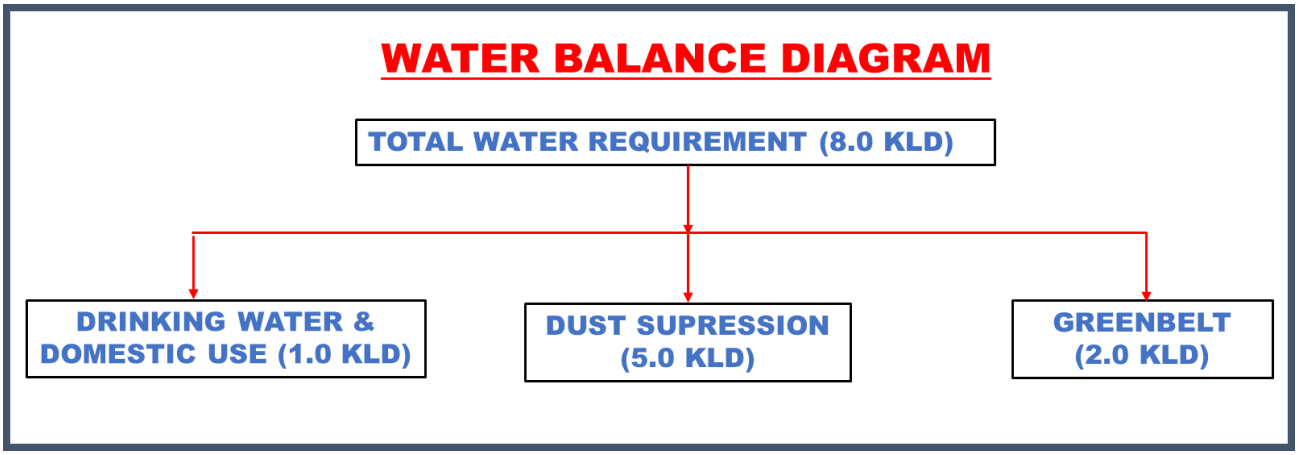
S. No	Location	Background Concentration	Incremental Conc	Post Project Conc	Statutory Limits
1	Near Mine Lease Area	39.4	<1.0	40.4	-
2	Mettu Vadakarai Village	30.6	<1.0	31.6	60
3	Tenkarai Village	27.6	<1.0	28.6	
4	Kuruchiyarpatti Village	27.3	<1.0	28.3	
5	Muthanuthi Village	24.6	<1.0	25.6	
6	Gopalapuram Village	33.3	<1.0	32.3	

It can be seen that, the resultant added concentrations with baseline figures with respect to PM10 is in the range of 52.2 μg/m3 to 65.7 μg/m3 and with respect to PM2.5 are in the range of 25.6μg/m3 to 40.4 μg/m3 which are within the stipulated statutory limits for the project.

4.3 WATER REQUIREMENT:

The water requirement for this project is expected to be 8 KLD comprising 1.0 KLD for drinking water and domestic use, 5.0 KLD for dust suppression and 2.0 KLD for greenbelt. The water will be sourced initially from outside agencies. Later the rainwater collected in the respective mine pit sump will be used for this purpose. The water balance diagram for the same is shown in **Figure No 4.7.**

Figure 4.3: Water Balance Diagram



4.3.1 SOURCES OF WATER POLLUTION:

The existing water environment showing water quality at different sampling stations in the area has been described in Chapter-III.

Direct impact on human beings due to poor water quality consequent to mining operation can lead to various water borne diseases like diarrhea, jaundice, dysentery, typhoid, etc. Besides, the polluted water may not be useful for animal or human consumption, vegetation and may affect aquatic life, if effluents are not properly treated to remove the harmful pollutants. he major sources of water pollution normally associated due to mining and allied operations are:

a. Domestic effluent.
b. Washouts from stockpile if any.
c. Disturbance to drainage course in the project area
d. Generation of mine pit water pumped out from deeper workings if any.

4.3.2 TREATMENT SCHEME:

A. Generation of domestic effluent:

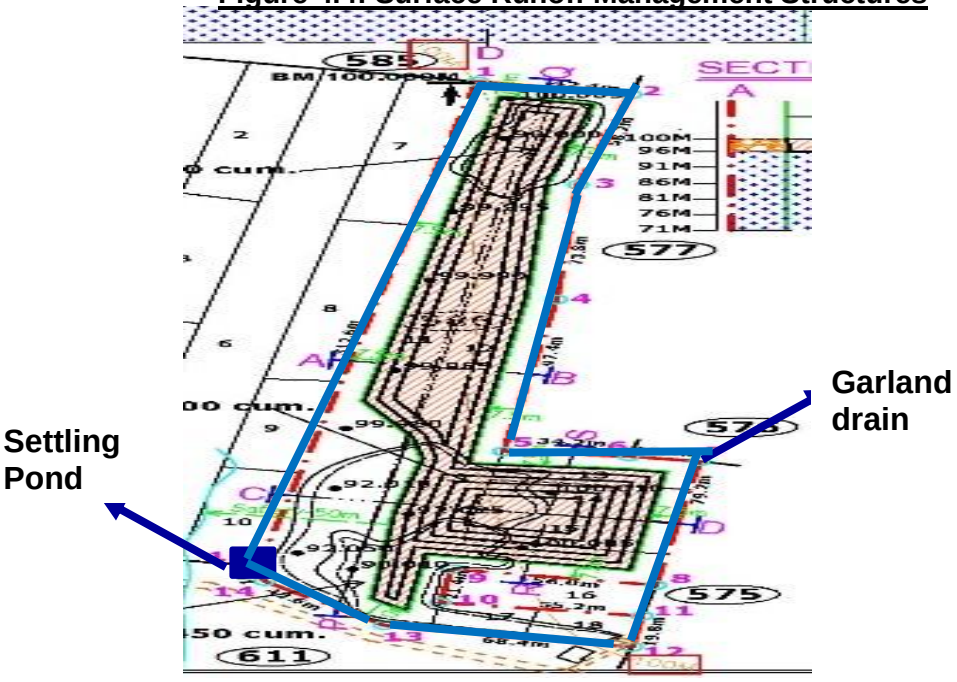
The domestic sewage to be generated from the projects will be collected in respective septic tank with soak pits.

B. Washouts from overburden, ore stockpile, etc.

Since the entire material from the quarry faces will be directly dispatched to the consumers, there will not be any stockpiles. There are no waste dumps in the quarry. As such there will not be any wash out due to stock pile or waste dumps.

The rain water falling in the quarries will be harvested in the sump at the lowest level of the respective 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 of length 860 m will be constructed and will be connected to settling ponds with silt traps. The supernatant clear water from the settling pond will be flow to the downstream users. The surface runoff management structures diagram is given in **Figure No 4.8.**

Figure 4.4: Surface Runoff Management Structures



C. Disturbance to drainage courses

There is a drainage channel originating south west of the lease area for which 50m safety has been left and Kanmai is around 450m in south. Due to scanty rainfall these drainage channels remains dry for most of the year. By proper surface runoff management, the rainwater from the lease periphery will be channelized through the peripheral garland drain all around the lease area and Supernatant clear water will be discharged ensuring proper flow of rainwater for downstream users. There is no proposal to discharge any effluent into this waterbody. As such no major impact is envisaged on the nearby water bodies due to project operations.

D. Generation of mine pit water pumped out from deeper workings if any.

The occurrence and movement of groundwater in hard rock formations are restricted to the porous zones of weathered formations and the open systems of fractures, fissures and joints. Generally, in hard rock regions, occurrence of weathered thickness is discontinuous in space and depth. Hence recharge of groundwater in hard rock formations is influenced by the intensity and depth of weathering. As already mentioned, the lease area is part of a compact rock formation with less intergranular porosity and fractures leading to less permeability and transmissivity values and as such the ground water level in this area is deep from surface. As such hence no major water seepage within the mines is expected from the periphery. The ultimate pit depth of mining is 29 m. The ground water table in this area is below this level. Hence, ground water intersection in not envisaged and ground water will not be affected appreciably due to the quarrying operation. The working nearby quarries also depicts the same scenario. As mentioned earlier, the rainfall will be collected in the mine floor sump and advantageously used. Excess water if any in the sump will be pumped to settling pond for downstream users.

4.3.2.1 STAGE OF GROUNDWATER DEVELOPMENT

Details of hydrological scenario of the study area were given in para 3.6, Chapter – III. The groundwater resource data of Virudhunagar district was obtained from the data provided in the technical report of the Central Ground Water Board, South Eastern Costal Region – 'District groundwater brochure, Virudhunagar District.'

Table 4.8: Ground Water Resources Estimation– VembakottaiTaluk (M.Cum)

Net Groundwater Availability	Existing Gross Draft for Irrigation	Existing Gross Draft for Domestic and industrial water supply	Existing Gross Draft for all uses	Allocation for Domestic and Industrial Requirement supply uptonext 25 years (2029)	Allocation for Domestic and Industrial Requirement supply uptonext 25 years (2029)	Stage of Ground water Development (%)	Category of Block
26.82	13.14	23.7	15.51	24.7	11.22	58	Safe

From the table it is seen that the stage of groundwater development of Vembakottai where the study area falls is 58% and as such this area can be categorized as 'Safe' from ground water development point of view. Thus there is scope for further ground water development.

4.3.3 REDUCING WATER CONSUMPTION OVER THE YEARS:

4.3.3.1 GENERAL METHODS:

Use of water will be monitored and used to the minimum required. Awareness will be spread to the employees about the importance of water conservation. Tap and showers will be turned off immediately after use and any leaks will be monitored and immediately controlled. Water requirement for greenbelt and dust suppression can be reduced by choosing the native plants/trees species with low water requirement and which can sustain in such conditions for greenbelt/ plantation and also optimum usage to the required minimum. While the dust suppression itself is an important method of pollution control for air pollution due to dust, the water consumption will be monitored strictly. The water tanker will be examined for any sources of leaks and if found will be immediately sealed so that water can be utilized for dust suppression effectively without loss.

4.3.3.2 RAINWATER HARVESTING PLAN

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

a) Development of garland drain around the quarry connected to settling tank.

b) Cleaning of drain periodically to prevent siltation

c) The supernatant clear water from the settling pond will drain into the nearby drainage on the western side of the lease.

d) Utilizing the rainwater harvested in the mine pit to meet the water requirement of the project.

e) Excess water, if any in consultation with local villagers and in line with government practices shall be provided to the downstream users.

4.3 NOISE AND VIBRATION:

4.4.1 NOISE ENVIRONMENT:

The ambient noise levels in the study area have been discussed in Chapter - III. The data shows that the existing noise levels are within statutory tolerable limits. The impact prediction and control measure for noise environment due to mining and allied activities is described below:

4.4.1.1 IMPACT PREDICTION DUE TO NOISE:

Noise is one of the inevitable causes of pollution in mining operations, largely due to the extensive mechanization adopted. Besides, other operations such as drilling, blasting, movement of vehicles, etc., also produce noise of considerable magnitude in mining operations. The main sources of noise and expected levels are given below in **Table no – 4.9.**

Table 4.9: Main Sources of Noise

Sl. No.	Source	Inside Cabin	Noise level at dB(A) 10 m. from source
1	Shovel	84-91	59-68
2.	Dumpers/Tippers	87-96	75-85
3.	Drill	88- 95	75-83

Prolonged exposure to a high noise level is harmful to the human auditory system and can create mental fatigue, rebellious attitude, annoyance and carelessness, which may lead to neglect of work and also result in accidents. The impact of noise level as per World Health Organization's 1986 notification is given below in **Table No - 4.10**.

Table 4.10: Impact of Noise Levels

NOISE LEVELS	ADVERSE EFFECTS
90-115 dB	Partial deafness and nervous irritability
> 115 dB	Permanent deafness
Impulsive noise (>90dB)	Frightens livestock grazing in the nearby areas

OSHA (Occupational Safety and Health Administration), USA and other similar organisations stipulate that noise level up to 90 dB(A) is acceptable for eight hours exposure Leq (Equivalent sound level) (8hrs) per day. The Directorate General of Mines Safety, in circular No. DG (Tech)/18 of 1975, has prescribed the noise level in mining occupations (TLV) for workers, in an 8 hour shift period with unprotected ear as 90 dB(A) or less.

The noise will be felt only near the active sources. There will be considerable reduction in the noise level due to the absorption factor, environmental surroundings and other attenuation factors. As far as absorption factor is concerned, If the ground cover is vegetated or has a soft texture, sound will decrease at the rate of 4.5 dB(A) every time the distance between the source and the observer is doubled. Besides, there will be shielding factor, which takes into account the environmental surroundings. With every 30m of dense land scape vegetation, 5 dB(A) of additional attenuation can be obtained up to a maximum of 10 dB(A). As such at away places the effect of noise will not be felt.

Anticipated noise levels resulting from operation of the various machineries like excavator, tippers, drill have been computed using point source model. Computation of cumulative noise levels at the nearby villages is made based on the assumption that there are no attenuation paths between the source and the boundary. Noise modeling is carried out using the following formula:

Lp2 = Lp1 – 20 log R2/R1, Where, Lp1 and Lp2 are sound pressure levels at points located at distances R1 and R2 respectively from the source. The study results are as follows:

Table 4.11: Post Project Noise Levels

Sl.No	Location	Baseline Day Eq.in dB(A)	Post project noise Eq in dB(A)	Limit dB(A) as per MoEF&CC
1	Near Mine Lease Area	51.0	53.6	55
2	Mettu Vadakarai Village	48.0	48.2	55
3	Tenkarai Village	47.1	47.3	55
4	Kuruchiyarpatti Village	48.0	48.2	55
5	Muthanuthi Village	48.3	48.6	55
6	Gopalapuram Village	50.6	50.8	

From the studies, it is found that the predicted Noise Levels due to mining operations at the periphery of the mine lease itself will be less even without considering any attenuation factor. However, practically there will be attenuation due to vegetation etc., and as such there will not be any adverse noise propagation outside the lease boundary. Since the habitations are also away the effect of noise due to mining operations will not be felt at all in the surrounding villages.

4.4.1.2 CONTROL MEASURES FOR NOISE ENVIRONMENT:

Hence, by following mitigative measures for noise control, the impact on noise levels will be insignificant:

- Planting rows of native trees along roads, around mine area and other noise generating centers to act as acoustic barriers.
- Sound proof operator's cabin for equipments like shovel, tippers, etc.
- Proper and regular maintenance of equipments may lead to less noise generation.
- Providing in-built mechanism for reducing sound emissions.
- Providing earplugs to workers exposed to higher noise level.
- Conducting regular health check-up of workers including Audiometry test for the workers engaged in noise prone area.
- Displaying the noise level status of operational machinery on the machines to know the extent of noise level and to control the time to which the worker is exposed to higher noise levels.

Further green belt and afforestation will be planned and executed to abate noise and dust propagation in the area.

4.4.2 GROUND VIBRATION DUE TO BLASTING EFFECTS:

Vibrations due to blasting may cause damage to nearby structures, if appropriate control measures are not adopted. Fly rock is another possible damage causing outcome of blasting.

By adoption of above measures, it will be ensured that the ground level vibration due to blasting are maintained within the limits prescribed by DGMS, Dhanbad at the mining areas vide Circular No. 7 dated 29 -08-1997 as given below

Table 4.12: Permissible Peak Particle Velocity (PPV) In Mining Areas

In mm/sec

Type of structure	Dominant excitation frequency Hz		
	<8 Hz	8-25 Hz	>25 Hz
A. Buildings/structures not belonging to owner			
Domestic houses /structures (Kuchha brick and cement)	5	10	15
Industrial buildings (RCC and framed structures)	10	20	25
Objects of historical importance and sensitive structures.	2	5	10
B. Building belonging to owner with limited span of life			
Domestic houses/structures (Kuchha brick and cement)	10	15	25
Industrial buildings (RCC and framed structures)	15	25	50

Besides, different blasting time for the projects in the vicinity is suggested and the timing is to be mentioned in the display board in the respective mines entrance.

Since the production from this lease is less, the number of holes and total charge to be used is expected to be less and as such the blast induced vibration is easily controllable and no adverse impact on this front is expected.

4.4 LAND ENVIRONMENT:

The present land use pattern, and the post mining land use pattern is shown below:

Table 4.13: Land Use

	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1.	Quarry area	0.82.50	1.16.00
2.	Infrastructure	Nil	0.01.00
3.	Roads	Nil	0.03.00
4	Green Belt	Nil	0.36.00
5	Fencing	Nil	0.10.00
6	Unutilized	1.30.00	0.46.50
Total		Total	2.12.50

4.5.1 LAND RECLAMATION:

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. In the post mining stage, mined out area will be left as water body and the rest will be covered with vegetation.

Table 4.14: Land Use During Post Operational Period

S.No	Description	Land use (Ha.)			
		Plantation	Water body	Others	Total
1	Quarrying Pit	-	1.16.0	-	1.16.0
3	Green Belt	0.36.0	-	-	0.36.0
5	Others	--	-	0.60.50	0.07.0
	TOTAL	0.36.0	1.16.00	0.60.50	2.12.50

In the post mining stage, entire entire 1.16.00Ha of mined out area will be left as water body, 0.01.0 Ha will be the mine infrastructure, 0.03.0 Ha will be the mine roads, 0.36.0 Ha will be covered with vegetation, 0.46.50Ha will be undisturbed area and 0.10.00Ha will be fencing. Entire mined out area will be properly fenced to prevent inadvertent entry of men and animals. In the post mining stage the entire mined out area shall be used as a rainwater harvesting pond.

Mine closure :

At the end of the life of the mine, the following points will be ensured:

- The mine benches will be properly dressed, loose material in the face if any and the mine site will also be cleared.
- Mine Closure activities will be carried out progressively by way of fencing, laying of garland drain around the lease periphery & plantation.
- The peripheral barbed wire fencing, will be strengthened to prevent inadvertent entry of public and animal. surface runoff management arrangements will be improved so as not to disturb the hydrological cycle of the area post mining.
- Besides, to prevent any access to the mined out void, entrance will be secured with tall gate and a blockage bund across the access road.
- No entry / safety board will be erected all around the lease area.
- Benches will be kept intact and haul road accessibility will be maintained.
- Regular checking to prevent inherent entry in to the lease area post mining will be done.
- PP will ensure effective post closure monitoring.

4.6 BIOLOGICAL ENVIRONMENT:

4.6.1 EXISTING FLORA AND FAUNA:

Lease area is barren with grasses and bushes. Details of flora/fauna pattern in core and buffer zones have been described in chapter - III.

4.6.2 IMPACT OF MINING ON BIOLOGICAL ENVIRONMENT:

The significance of impact on biological environment due to mining and allied activities on various fronts is described below:

Table 4.15: Impact on Biological Environment

S.No	ISSUES	OBSERVATIONS
1	Clearance of vegetation due to mining and allied activities	Lease area is partly mined out area and there is no major vegetation is observed. As such there will be no clearance of vegetation is involved in the leases.
2	Retardation of tree growth, tip burning, etc, due to deposition of dust and the Particulate matter generated from the mining operation.	Necessary mitigative measures like dust suppression, proper maintenance of equipment's, roads will be carried out to prevent dust generation.
3	Proximity to national park/ wildlife sanctuary/reserve forest/mangroves/Coastline/estuary/ sea	The mining lease areas 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.
4	Release of effluents into water body that also supplies water to wildlife	There is no proposal to discharge any effluent into nearby water bodies.
5	Proposed project could increase siltation that would affect nearby biodiversity area	Surface runoff management structures like garland drain, settling pond etc. as explained above will be constructed and as such there will not be any appreciable impact on surface water quality which in turn can affect the bio diversity of the area.
6	Activities of the project affects the breeding/nesting sites of birds and animals	In the present ML area, there is no wetland. A migratory bird needs sufficient wetlands with sufficient food, shelter, roosting places and nesting places which is not possible here.
7	Located near an area populated by rare or endangered species	The study area is observed to be not ecologically sensitive and no endangered or endemic species as per IUCN red list is observed.
8	Risk of fall/slip or cause death to wild animals due to project activities	In the post mining stage, barbed wire fencing is proposed all around the mined-out void to prevent falling of animals in the mine pits.
9	Project affects the forest-based livelihood/any specific forest product on which local livelihood depends	Not applicable
10	Project likely to affect migration routes	No migration routes are in the area.
11	Project likely to affect flora of an area, which have medicinal value	No such significantly important medicinal value species within the ML area and its nearby region.
12	The project likely to affect wetlands, fish breeding grounds, marine ecology	There are no any wetlands, fish breeding grounds, marine ecology nearby the ML area which will be affected due to this project.
13	Project affects the Agriculture, Forestry and Traditional Practices	Since the lease area forms part of a vast tract of hard rocky formation , no agricultural activities are possible and practiced in the lease and its nearby areas. Agricultural activities are carried out far away lands irrigated by tanks and wells during monsoon rainfall.

		By adoption of systematic mining adhering to all the environmental mitigation measures as explained earlier, no adverse impact on the far away agricultural or surrounding environs envisaged.
14	Impact on soil health and biodiversity	The lease area is rocky type with very little and poor soil cover.(Photograph of the site attached in Chapter-II). Besides, there is no waste generation, disposal or stacking involved in this project. As such no loss of soil health and Bio-diversity is expected.
15	Climate change leading to droughts, floods,etc.	• No adverse impact on the surrounding environment is envisaged since the number of equipments to be used to achieve this production is less and the magnitude of operation is of very small level. • Besides, as is it a mining project, no adverse generation of heat is envisaged. • Certified vehicles with low carbon emissions will only be used. These equipments will be properly and regularly maintained. Besides, regular vehicular emission tests will be done for the transport vehicles to ensure minimal impact due to carbon emissions. To further mediate the carbon emissions, a good greenbelt and plantation plan has been planned. • Geologically the area in and around the lease area contains charnokite type rock formation containing mostly fallow land. As such there no major vegetation or agricultural activities are observed. • There are no Protected or Eco-Sensitive Zone or forest land nearby wherein it can have an impact. • It will be ensured that mining will be carried out adhering to all the statutory rules and regulations and maintaining the environmental quality within the prescribed standards by effective implementation of varioius mitigative measures. • These mitigative measures will be continued for the entire lease period ensuring no impact on the environment. • As such release of Greenhouse gases (GHG), rise in temperature, affecting livelihood of the local people ,loss of Agriculture, Forestry and Traditional Practices is not envisaged. Such a limited scope will not induce any climatic change leading to droughts, floods etc. • Extensive plantation will be developed in and around the lease area for carbon absorption.
16	Pollution leading to release of greenhouse gases (GHG) rise in temperature (Hydrothermal/Geothermal effect due to destruction in environment, Bio-geochemical processes and its foot prints including environmental stress) and livelihood of local people.	
17	Possibilities of water contamination and impact on aquatic ecosystem health and impact on Sediment geochemistry in the surface streams	• This being a mining project no process effluent will be generated. • Water generation is expected to be due to ✓ Direct rainfall falling within the pit ✓ Rain water draining near the lease area.

		• Direct rain fall will be collected in the mine floor sump. Water from sump will be pumped to settling pond for downstream users. • Rainwater from the mine periphery will be collected through peripheral garland drain. Garland drain will be connected to a settling pond. Supernatant clear water from settling pond confirming to applicable limits will be let out to downstream users for agricultural or other purposes. • Due to above mentioned reasons and absence of perinnial water bodies nearby where in any marine ecosystem is observed, no effect on this front is expected.

There are no migratory corridors, migratory avian-fauna, rare endemic and endangered species. Therefore there shall be no impacts due to mining activity on them. Even though there are no adverse impact on bio diversity and flora/fauna status due to project operations, positive impacts will arise due to well-planned reclamation measures for restoration of land status in the area ultimately to productive land category with elaborately planned green belt development activities.

4.6.3 CONTROL MEASURES FOR BIOLOGICAL ASPECTS:

To reduce the adverse effects on flora/fauna status of the area due to deposition of dust generated from mining operations, mobile water tanker systems will be ensured in all dust prone areas to arrest dust generation. Methodical and well-planned plantation scheme will be carried out depending upon the immediate need, priority and availability of land. The plantation will be done along the lease boundary in a phased manner.

4.6.4 GREEN BELT & PLANTATION:

In the lease area, safety barrier 7.5m around the periphery and 50m safety zone & around the lease area about 1000 trees will be planted.

Table 4.16: Proposed Plantation

Year	No of trees	Name of the species
1-5	200	Pungai, Vagai, Vembu, Manjal konrai, Naval, Puvarasu, etc.,
	200	
	200	
	200	
	200	
Total	**1000**	

In the post mining stage, entire entire 1.16.00Ha of mined out area will be left as water body, 0.01.0 Ha will be the mine infrastructure, 0.03.0 Ha will be the mine roads, 0.36.0 Ha will be covered with vegetation, 0.46.50Ha will be undisturbed area and 0.10.00Ha will be fencing.

.Figure 4.5: Mine Closure Plan

4.6.5 SOCIO ECONOMIC ENVIRONMENT:

The lease areas are in the respective proponent's possession. Hence, there are no habitations or hutments in the core zone area and no rehabilitation or resettlement problems will arise here.

The mining operations in the proposed mines will each employ about 16 persons directly and about 50 persons on indirect basis through allied opportunities in logistics, trading, repairing works etc. good employment potential will arise in this area, which will provide raising income levels and standards of living in the area through various service related activities connected with the project operations as shown under.

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

Besides, there will be improvement in the following aspects due to project operation:

- ❖ Improvement in infrastructural facilities, providing education aids etc. in nearby schools
- ❖ Betterment of drinking water facilities.
- ❖ Benefit to the State and the Central governments through financial revenues by way of royalty, tax, duties, etc from this project directly and also indirectly.

From above details, it is clear that the project operations will have highly beneficial positive impact in the area.

Table 4.17: CER Cost

Project Name	Details
Project Cost (Rs.)	Rs. 29,25,000
CER Cost Requirement (2% of the Project Cost) (Rs.)	Rs. 58,500
CER cost allocated (Rs.)	Rs. 2.0 Lakhs

However, towards the socio-economic development of the surrounding area, Rs.2 Lakhs is allocated. The activities identified under CER will be implemented in a phased manner in provision of facilities in nearby Government School.

4.7 OCCUPATIONAL HEALTH AND SAFETY:

4.8.1 BASELINE STATUS:

Primary data collection through field survey conducted in the study area reveals that there is no reported incident of any occupational diseases in the area. Hazardous jobs like blasting, loading, etc. are planned to be executed safely and with all precautionary measures as prescribed in Metalliferrous Mines Regulations of 1961, so as to minimize hazards and incidences of health problems.

4.8.2 IMPACTS ON OCCUPATIONAL HEALTH DUE TO PROJECT OPERATIONS:

Anticipated occupational illness sequel to mining activities can be as follows:

- Dust related pneumonia
- Tuberculosis
- Rheumatic arthritis
- Segmental vibration
- Miner's Nystagamus

4.8.3 MITIGATIVE MEASURES FOR OCCUPATIONAL HEALTH:

To reduce pollution emanation from the project, following measures are being and will be taken:

- Water sprinkling on haul roads etc.
- Green belt creation to arrest dust and reduce noise propagation.
- Acceptance of good control measures for reducing air pollution, as mentioned earlier in the chapter.
- Control of noise levels through good preventive maintenance of machineries, green belt creation, provision of ear plug to workers, etc.
- In addition to above measures, the following remedial steps are being and will be enforced to ensure minimization of occupational health and safety problems.

- Medical examination of workers by qualified doctors, as per DGMS circulars.
- Regular awareness campaigns amongst staff and workers
- Staff will be provided with PPE to guard against excess noise levels, Dust generation and inhalation, etc., as per standards prescribed by DGMS.

4.8.4 MITIGATIVE MEASURES FOR SAFETY ASPECTS:

The following safety gadgets will be provided to the staff and workers based on their area of operation and work & requirement:

Sl No	Safety Equipment's
1.	Helmets
2.	Shoes
3.	Goggles
4.	Dust Mask
5.	Hand Gloves
6.	Reflective Jackets
7.	Ear Muffs
8.	Signal Lights/Flags

4.8 LOGISTICAL SYSTEM:

From these proposed quarries the entire output will be transported to the crusher units for producing stone aggregates of different sizes or construction of roads, bridges, buildings and other buyers etc.

The lease area can be approached through localized road which is well connected with highway roads. The expected peak transport will be as follows:

Table 4.18: Details of Transportation

Sl.no	Particulars of activity	Details
A	Maximum Rough stone Transported (m3/year)	20220
B	No of days in a year	300
C	Transport hours per day	8
D	Truck capacity in Cum	8.0
E	Trips per hour	1 to 2 Trips/hr

From the above table it is seen that there will be about less 2 trips per hour. The existing road can absorb this traffic due to this project. However, the following mitigative measures are suggested:

- ❖ Water sprinkling on material in the transport vehicles before transporting, so that no dust nuisance during transport will arise.
- ❖ Plantation on either side of the transport road in consultation with the concerned department.
- ❖ Proper maintenance of transport roads
- ❖ Proper maintenance of transport vehicles.
- ❖ Avoiding overloading of material
- ❖ Covering of loaded vehicles with tarpaulins sheet if warranted.
- ❖ Limiting of speed
- ❖ Provision of tyre washing facility at the mine outlet

4.9 WASTE MANAGEMENT:

Solid Waste: Since the entire mined out material will be used there will not be any solid waste generation from these projects.

Liquid waste: There is no process effluent generation from these mines. Hence no liquid waste is generated.

Hazardous waste management: In these projects the following management practices will be followed:

- ➢ Ensuring availability of different colour bins for collection of different types of waste.
- ➢ Storing of Hazardous waste material in a separate storage area with impervious containers for waste oil, oil contaminated clothes, used lead acid batteries, scraps, tyre storage etc.
- ➢ Ensure that there are no leakages/spillages of hazardous wastes.
- ➢ Ensuring that the fire extinguisher system is available at hazardous material storage area.

The hazardous waste if any will be disposed through authorized recyclers or re-processors periodically. The hazardous wastes will be transported in accordance with the provisions of rules. By effective implementation of above said mitigation measures no major impact due to Hazardous waste is expected.

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

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CHAPTER 5

ANALYSIS OF ALTERNATIVES

5.1 ALTERNATE TECHNOLOGY:

In this proposed Rough Stone and Gravel Quarry, Mechanized Open Cast mining will be carried out. It involves jack hammer drilling, blasting, excavation, loading and transportation of Rough stone to the crushing units. As this method is techno economically proven, consideration of an alternate technology is not warranted.

5.2 ALTERNATE SITE:

The mineral deposits are site specific in nature; hence question of seeking alternate site does not arise.

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CHAPTER 6

ENVIRONMENTAL MONITORING PROGRAMME

6.1 GENERAL

In this project, appropriate environmental monitoring programme are framed. Regular, systematic and sustained programme schedules for implementation and monitoring of various control measures are devised with clear cut guidelines of various concerned plans for keeping a continuous surveillance on the various environmental quality parameters in the area.

The monitoring schedules are planned to aim at regular and systematic study of various pollution levels with respect to air and water quality, noise levels etc., to ensure that they conform to the standards laid down by the Environment Protection Act, 1986 and various Central and State Pollution Control Board Limits.

The various methodologies and frequency of studies of all environmental quality parameters will be as per prescribed norms laid down by MOEF&CC and State Pollution Control Board. This being a small quarry operation, the Mines in-charge will take care of all the environmental related works also.

Environmental control measures include components like air, water and soil quality, noise levels, afforestation measures, etc. For monitoring of environment over the life of the mine, a set of stations for study of quality parameters are fixed as per the actual requirements and prevailing conditions of environmental factors, as dictated from time to time, depending on the prevailing pollution levels.

6.2 MONITORING SCHEDULES FOR VARIOUS PARAMETERS

The monitoring schedules are planned for systematic study of various pollution levels with respect to air and water qualities, noise levels, etc. to ensure that they conform to the standards laid down by Environmental Protection Act and various statutory Limits. The monitoring schedules to be adopted in the proposed quarry is given below. However, based on the need and priority it may be suitably modified / improved in consultation with local authorities.

Since there are other leases within the cluster, it is proposed to form a cluster management committee (CMC) and its details are provided under Section 10.2.2, Chapter-X.

Table 6.1: Environmental Monitoring Schedule

S.No	Environmental Parameters	Parameters to be monitored	Monitoring area coverage /locations	Frequency of monitoring
1	Air Quality	Sulphur dioxide (SO_2), Oxides of Nitrogen (NO_2), Respirable Particulate Matter ($PM_{2.5}$ and PM_{10}).	2 locations in the buffer zone and 1 work zone locations.	Once in a year in each location.
2	Water Quality	General, Physical, and chemical parameters	Ground Water samples (around the project area) and Mine Pit water samples	Once in a year
3	Water Table Fluctuations	Water Levels	Nearby wells and Borewells	On yearly basis pre and post monsoon level
4	Noise	Leq. Lmax Lmin, Leq Day & Leq Night dB(A)	Work zone locations and buffer zone villages	Once in a year
5	Vibration	Peak Particle Velocity	Mine periphery	Once to arrive at optimum blasting parameters
6	Socio Economic Environment	Socio Economic Survey, Review of implementation of CER activities proposed	Buffer Zone	Yearly basis
7	Occupational Health	Occupational health survey to detect early incidence of diseases, Audiometry Test for workers in noise prone area and review of safety matters.	Staff and Workers involved in the project	Once in a year
8	Greenbelt	Maintenance	Within & outside the lease area	Regularly

6.3 LEGISLATIVE AND REGULATORY FRAME WORK:

The project will have environmental policy declaring its responsibility and commitment to protect the environment and to ensure public safety. The existing policy will be available with all concerned officials of the plant. The following environmental standards as per methodologies prescribed, by MOEF/CPCB/TNPCB will be enforced in this project:

Table 6.2: Environmental Standards

Standards	Issued By	Reference
National Ambient Air Quality Standards	Central Pollution Control Board	Table No. 6.3
Water quality standards per IS 10500:2012	Bureau of Indian Standards	Table No.6.4
Noise Standards	CPCB / MoEF&CC	Table No.6.5
Permissible Peak Particle Velocity	DGMS, Dhanbad	Table No.6.6

Table 6.3: National Ambient Air Quality Standards

[भाग III—खण्ड 4] भारत का राजपत्र : असाधारण 3

NATIONAL AMBIENT AIR QUALITY STANDARDS
CENTRAL POLLUTION CONTROL BOARD
NOTIFICATION
New Delhi, the 18th November, 2009

No. B-29016/20/90/PCI-L—In exercise of the powers conferred by Sub-section (2) (h) of section 16 of the Air (Prevention and Control of Pollution) Act, 1981 (Act No.14 of 1981), and in supersession of the Notification No(s). S.O. 384(E), dated 11th April, 1994 and S.O. 935(E), dated 14th October, 1998, the Central Pollution Control Board hereby notify the National Ambient Air Quality Standards with immediate effect, namely:-

NATIONAL AMBIENT AIR QUALITY STANDARDS

S. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur Dioxide (SO_2), µg/m³	Annual*	50	20	- Improved West and Gaeke
		24 hours**	80	80	-Ultraviolet fluorescence
2	Nitrogen Dioxide (NO_2), µg/m³	Annual*	40	30	- Modified Jacob & Hochheiser (Na-Arsenite)
		24 hours**	80	80	- Chemiluminescence
3	Particulate Matter (size less than 10µm) or PM_{10} µg/m³	Annual*	60	60	- Gravimetric - TOEM
		24 hours**	100	100	- Beta attenuation
4	Particulate Matter (size less than 2.5µm) or $PM_{2.5}$ µg/m³	Annual*	40	40	- Gravimetric - TOEM
		24 hours**	60	60	- Beta attenuation
5	Ozone (O_3) µg/m³	8 hours**	100	100	- UV photometric - Chemilminescence
		1 hour**	180	180	- Chemical Method
6	Lead (Pb) µg/m³	Annual*	0.50	0.50	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper
		24 hours**	1.0	1.0	- ED-XRF using Teflon filter
7	Carbon Monoxide (CO) mg/m³	8 hours**	02	02	- Non Dispersive Infra Red (NDIR) spectroscopy
		1 hour**	04	04	
8	Ammonia (NH_3) µg/m³	Annual*	100	100	-Chemiluminescence
		24 hours**	400	400	-Indophenol blue method

(1)	(2)	(3)	(4)	(5)	(6)
9	Benzene (C_6H_6) $\mu g/m^3$	Annual*	05	05	- Gas chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10	Benzo(a)Pyrene (BaP) - particulate phase only, ng/m^3	Annual*	01	01	- Solvent extraction followed by HPLC/GC analysis
11	Arsenic (As), ng/m^3	Annual*	06	06	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper
12	Nickel (Ni), ng/m^3	Annual*	20	20	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

Note. — Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.

SANT PRASAD GAUTAM, Chairman
[ADVT-III/4/184/09/Exty.]

Note: The notifications on National Ambient Air Quality Standards were published by the Central Pollution Control Board in the Gazette of India, Extraordinary vide notification No(s). S.O. 384(E), dated 11th April, 1994 and S.O. 935(E), dated 14th October, 1998.

Table 6.4: IS – 10500 :2012 Standards

Table 1 Organoleptic and Physical Parameters
(*Foreword* and *Clause* 4)

Sl No.	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	Method of Test, Ref to Part of IS 3025	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
i)	Colour, Hazen units, *Max*	5	15	Part 4	Extended to 15 only, if toxic substances are not suspected in absence of alternate sources
ii)	Odour	Agreeable	Agreeable	Part 5	a) Test cold and when heated b) Test at several dilutions
iii)	*p*H value	6.5-8.5	No relaxation	Part 11	—
iv)	Taste	Agreeable	Agreeable	Parts 7 and 8	Test to be conducted only after safety has been established
v)	Turbidity, NTU, *Max*	1	5	Part 10	—
vi)	Total dissolved solids, mg/l, *Max*	500	2 000	Part 16	—

NOTE — It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned under 'acceptable' render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicated under 'permissible limit in the absence of alternate source' in col 4, above which the sources will have to be rejected.

Table 2 General Parameters Concerning Substances Undesirable in Excessive Amounts
(*Foreword* and *Clause* 4)

Sl No.	Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	Method of Test, Ref to	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
i)	Aluminium (as Al), mg/l, *Max*	0.03	0.2	IS 3025 (Part 55)	—
ii)	Ammonia (as total ammonia-N), mg/l, *Max*	0.5	No relaxation	IS 3025 (Part 34)	—
iii)	Anionic detergents (as MBAS) mg/l, *Max*	0.2	1.0	Annex K of IS 13428	—
iv)	Barium (as Ba), mg/l, *Max*	0.7	No relaxation	Annex F of IS 13428* or IS 15302	—
v)	Boron (as B), mg/l, *Max*	0.5	1.0	IS 3025 (Part 57)	—
vi)	Calcium (as Ca), mg/l, *Max*	75	200	IS 3025 (Part 40)	—
vii)	Chloramines (as Cl_2), mg/l, *Max*	4.0	No relaxation	IS 3025 (Part 26)* or APHA 4500-Cl G	—
viii)	Chloride (as Cl), mg/l, *Max*	250	1 000	IS 3025 (Part 32)	—
ix)	Copper (as Cu), mg/l, *Max*	0.05	1.5	IS 3025 (Part 42)	—
x)	Fluoride (as F) mg/l, *Max*	1.0	1.5	IS 3025 (Part 60)	—
xi)	Free residual chlorine, mg/l, *Min*	0.2	1	IS 3025 (Part 26)	To be applicable only when water is chlorinated. Tested at consumer end. When protection against viral infection is required, it should be minimum 0.5 mg/l
xii)	Iron (as Fe), mg/l, *Max*	0.3	No relaxation	IS 3025 (Part 53)	Total concentration of manganese (as Mn) and iron (as Fe) shall not exceed 0.3 mg/l
xiii)	Magnesium (as Mg), mg/l, *Max*	30	100	IS 3025 (Part 46)	—
xiv)	Manganese (as Mn), mg/l, *Max*	0.1	0.3	IS 3025 (Part 59)	Total concentration of manganese (as Mn) and iron (as Fe) shall not exceed 0.3 mg/l
xv)	Mineral oil, mg/l, *Max*	0.5	No relaxation	Clause **6** of IS 3025 (Part 39) Infrared partition method	—
xvi)	Nitrate (as NO_3), mg/l, *Max*	45	No relaxation	IS 3025 (Part 34)	—
xvii)	Phenolic compounds (as C_6H_5OH), mg/l, *Max*	0.001	0.002	IS 3025 (Part 43)	—
xviii)	Selenium (as Se), mg/l, *Max*	0.01	No relaxation	IS 3025 (Part 56) or IS 15303*	—
xix)	Silver (as Ag), mg/l, *Max*	0.1	No relaxation	Annex J of IS 13428	—
xx)	Sulphate (as SO_4) mg/l, *Max*	200	400	IS 3025 (Part 24)	May be extended to 400 provided that Magnesium does not exceed 30
xxi)	Sulphide (as H_2S), mg/l, *Max*	0.05	No relaxation	IS 3025 (Part 29)	—
xxii)	Total alkalinity as calcium carbonate, mg/l, *Max*	200	600	IS 3025 (Part 23)	—
xxiii)	Total hardness (as $CaCO_3$), mg/l, *Max*	200	600	IS 3025 (Part 21)	—
xxiv)	Zinc (as Zn), mg/l, *Max*	5	15	IS 3025 (Part 49)	—

NOTES

1 In case of dispute, the method indicated by '*' shall be the referee method.

2 It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned under 'acceptable' render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicated under 'permissible limit in the absence of alternate source' in col 4, above which the sources will have to be rejected.

Table 6.5: Noise Level Standards

Area Code	Category of Area	Limits in dB(A) Leq	
		Day Time	Night Time
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Note :

1. Day time shall mean from 6 a.m. and 10.0 p.m.
2. Night time shall mean from 10.0 p.m. and 6 a.m.
3. Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.
4. Mixed categories of areas may be average as one of the four above mentioned categories by the competent authority.

* dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.

A “decibel” is a unit in which noise is measured.

“A”, in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq: It is energy mean of the noise level over a specified period.

Table 6.6: Permissible Noise For Industrial Workers As Laid Down By CPCB

Exposure time (in hr. per day)	Limit in dB(A)
8	**90**
4	**93**
2	**96**
1	**99**
½	**102**
¼	**105**
1/8	**108**
1/16	**111**
1/32	**114**

Table 6.7: Permissible Peak Particle Velocity (PPV) In Mining Areas

In mm/sec.

Type of structure	Dominant excitation frequency Hz		
	<8 Hz	I 8-25 Hz	I >25 Hz
A. Buildings/structures not belonging to owner			
Domestic houses /structures (Kuchha brick and cement)	5	10	15
Industrial buildings (RCC and framed structures)	10	20	25
Objects of historical importance and sensitive structures.	2	5	10
B. Building belonging to owner with limited span of life			
Domestic houses/structures (Kuchha brick and cement)	10	15	25
Industrial buildings (RCC and framed structures)	15	25	50

The above said monitoring location and the frequency of monitoring shall be suitably modified in consultation with the nodal agency as per the actual requirements and prevailing conditions of the mine and environmental factors, as dictated from time to time, depending on the prevailing pollution levels, if required.

6.4 ENVIRONMENTAL MONITORING COST:

Towards environmental monitoring it is proposed to allocate a budget of Rs. 50,000 per annum. Further details of the capital and recurring cost of environmental management has been provided in in Table No. 10.2, Chapter-X.

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CHAPTER 7
ADDITIONAL STUDIES

7.1 GENERAL:

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

1. Public consultation of the project as per MoEF&CC mandates.
2. Risk Assessment
3. Cumulative Impact Study
4. R&R Plan
5. Mine closure planning

7.2 PUBLIC CONSULTATION:

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

7.3 RISK ASSESSMENT:

For the various risks, likely to arise, detailed analysis of causes and control measures is given in below:

S.No	Factors	Causes of risks	Control measures
1.	Removal of material	a) Bench may slide due to its unconsolidated nature. b) Vibration due to movement of vehicles in the benches.	Overall bench slope angle will be maintained optimally as per DGMS requirement. Working bench width will be more than bench height.
2.	Drilling	a) Due to high pressure of compressed air hoses may	• Periodical preventative maintenance and replacement of worn out accessories in the

S.No	Factors	Causes of risks	Control measures
		burst. b) Down the hole drill rod may break due to improper maintenance of rod.	compressor and drill equipment. • As per manufacturers recommendation rod to be replaced and bits will be changed.
3.	Blasting	a)Fly rock, ground vibration, noise etc. b) Improper charging of explosives	• Burden and spacing will be kept optimum on trial basis. • Explosive charge per delay will be minimized. • Controlled blasting with Nonel will be used.
4.	Excavation	a)Hauling and loading equipment are in such proximity while excavation b)Swinging of bucket over the body of tipper c) Driving of unauthorized person	• Operator shall not operate the machine when person & vehicles are in such proximity. • Shall not swing the bucket over the cab and operator leaves the machine after ensuring the bucket is on ground. • Shall not allow any unauthorized person to operate the machine by effective supervision.
5.	Transportation	a)Operating the vehicle “nose to tail” b) Overloading of material c) While reversal & overtaking of vehicle d) Operator of truck leaving his cabin when it is loaded	• It will be ensured that all these causes will be nullified by giving training to the operators. • No over loading will be done. • Audio visual reverse horn will be provided. • Proper training will be given.
6.	Fire due to electricity and Oil	a)Due to the short circuit of cables & other electrical parts b) Due to the leakage of inflammable liquid like diesel, oil etc.	• Electrical parts shall be cleaned frequently with the help of dry air blower • All fastening parts and places will be tightening. Suitable fire suppression equipment shall be provided.
7.	Natural calamities	Unexpected happenings	The mine management is capable to deal with the situation.

These being small rough stone projects that too working in a safe area, no major disaster is expected.

7.3.1. DISASTER MANAGEMENT PLAN:

In General, following natural/industrial hazards may occur during normal operation.

- Inundation of mine pit due to flood/excessive rains :
- Slope failure of the pit and waste dumps
- Accident due to heavy mining equipment and
- Blasting and use of Explosives

Mining operation in the lease will be carried out under the management control and direction of a qualified mine manager. The DGMS have been issuing a number of standing orders, model standing orders and circulars to be followed by the mine management in case of disaster. All these orders statutory rules and regulations will be followed. Seismically project site and study area falls in the Zone – II and is described as least active zone. There are no perennial water body near the lease area to cause any flooding. As such no disaster due to this project is envisaged.

In order to take care of above hazard / disasters the following control measures have been adopted.

- Checking and regular maintenance of garland drains and earthen bunds to avoid any inflow of surface water in the mine pit.
- Avoiding mining during heavy monsoon period and marching of all the HEMM to the top benches during rainy period.
- Provision of high capacity standby pumps with generator sets with sufficient quantity of diesel for emergency pumping especially during monsoon.
- All safety precautions and provisions of regulations will be strictly followed during all mining operations
- Prohibiting entry of unauthorized persons.
- Provision of Firefighting and first-aid provisions in the mines.

- Provisions of all the safety appliances such as safety boot, helmets, goggles, dust masks, ear plugs and ear muffs etc. are made available to the employees for their use.
- Training and refresher courses for all the employees working in hazardous premises
- Observance of all safety precautions for blasting and storage of explosives as per MMR 1961.
- Working of mine, as per approved plans and regularly updating the mine plans
- Cleaning of mine faces regularly
- Proper storage, usage of explosives through competent persons.
- Regular maintenance and testing of all mining equipment as per manufacturers guidelines
- Suppression of dust on the haulage roads with frequent water sprinkling, etc.
- Increasing the awareness of safety and disaster through competitions, posters and annual safety weeks and environmental weeks, encouraged through suitable rewards and other similar drives.

The management and the EMC will be able to deal with the situations efficiently keeping in view of the likely sources of dangers in the mine.

7.4 REHABILITATION AND RESETTLEMENT (R & R) PLAN:

The mining activities will be carried out within the mine lease areas only. Mine lease areas are Patta lands. There is no population within the ML area. Hence, the question of R& R does not arise.

7.5 MINE CLOSURE PLAN:

In the mine closure stage all necessary measures will be taken as per Act & Rules, There is no proposal for back filling, reclamation and rehabilitation. The quarried pits after the end of life of mine will be properly fenced all around to prevent inherent entry of public and cattle and all the statutory requirements will be fulfilled. As already explained, in the post mining stage the

rainwater harvested in the mined out void shall be utilized for irrigation and domestic needs locally. The mine closure plan is provided in **Figure 4.5.**

7.6 CUMULATIVE IMPACT STUDY:

The lease area is located in Gopalapuram Village, Vembakottai Taluk, Virudhunagar, Tamil Nadu. The details of the other quarries located within the 500m radius of the project considered for cumulative impact study now **(Annexure-3A and 3B)** has been provided below:

Table 7.1: Details of quarries within 500m radius

From that above it is seen that, the other existing and proposed quarries within the 500m radius along with this subject project works out to >5 Ha. As such cluster situation applicable and this EMP is prepared. A map showing the existing and proposed quarries located near the lease area is provided Figure No.7.1 given below:

Sl.No	Quarry detail	Taluk & Village	S.F. No.& Extent (Hect)	Proceedings No. & Lease Period
I	Existing Quarries:			
1.	M/s.Lakshmi Blue Mettals(V. Rajmohan) 540/B, Gopalapuram Main Road, E.B. Sub Office, Nallamanayakkanpatti Post, Rajapalayam Taluk	Gopalapuram Vembakottai	557/1,558/1,2 etc., Extent- Extent - 4.85.00 Hct.,	KV1/232/2021 31.01.2023 Lease period - 01.02.2023 to 31.01.2028
2.	Thiru.S.Murugesan S/o.Sangilikkalai 106/134, Madurai Raja Kadai Street, Rajapalayam Taluk	Gopalapuram / Vembakottai	635/4 and 636 Extent -2.89.00 Hct.,	KV1/170/2019 Dated:01.08.2020 Lease period- 26.08.2020 to 25.08.2025
	Thiru.P.Arumugam Proprietor M/s.Selvakumar Blue Mettals, 761A/15, North Street, Sathirapatti Post, Rajapalayam Taluk	Gopalapuram / Vembakottai	567/2A,2B and 568/1B Extent - Extent - 2.48.50 Hct.,	KV1/159/2021 31.01.2023 Lease period - 01.02.2023 to 31.01.2028

II	Abandoned Quarry :			
1.	Thiru.P.Arumugam, S/o.Paramaguru, Door No. 761/15, North Street,Chatrapatti, Rajapalayam Taluk, Virudhunagar District	Gopalapuram / Vembakottai	568/3(P), 567/2A, 568/1B Extent -2.90.0 Hct.,	KV1/793/2017, dated : 15.07.2019 Lease period - 23.07.2019 to 22.07.2021
2.	Thiru.V.Rajmohan S/o. Venkadapathy No: 4A8/1, INTUC Nagar, Rajapalayam, Virudhunagar.	Gopalapuram / Vembakottai	556/2 Extent -1.14.50 Hct.,	KV1/7392/2016, dated: 09.01.2017 Lease period - 20.01.2017 to 19.01.2022
3.	Thiru.S.Murugesan, S/o.Sanglikalai, Door No. 106/134, Madurai Rajakadai Street, Rajapalayam Town and Taluk, Virudhunagar District.	Gopalapuram / Vembakottai	632 Extent - 1.83.0 Hct.,	KV122276/2014, dated: 21.07.2016 Lease period - 27.07.2016 to 26.07.2021
III	Present Proposed Quarry :			
1.	Thiru.S.Shanmugavel, S/o. Sri.Subbiah Thevar, No: 300 D5/2, Sankaran Kovil Road, Rajapalayam Town 86 Taluk, Virudhunagar District.	Gopalapuram / Vembakottai	586/11,586/12,586/13,586/14, 586/15 , 586/16 , 586/17 85 586/18 Extent -2.12.50 Hectares	

Figure 7.1: Vicinity Map

The baseline monitoring carried out for this project reflects the cumulative impact of the existing quarries. It is observed that by ensuring systematic mining with proper mitigative measures as suggested in the report no adverse impact on the surrounding environment is envisaged. It is also worth mentioning that, these proposed quarry leases are more of a substitute for the recently expired quarry leases and as such cumulatively no additional pollution load may be there.

7.7 PIT SLOPE STABILITY PLAN

- Factors affecting slope stability of the mines are
  - Geological structure comprising dip, intervening shear zone formation, clay intrusion, joints / discontinuities, faults etc.,
  - Lithology of formation
  - slope geometry
  - Ground water availability which may cause increased thrust on the faces
- Site specific analysis
  - Since the formation is of homogeneous rock type probability of slope failure is low and can be avoided if proper measures are adopted.
  - There will be a 7.5m wide barrier zone which will form a ridge which can also take care of the top section and as such no risk is envisaged on this front.
  - During future workings the following measures will be ensured:
    - Pruning of top worked out pit area and adopting proper bench pattern.
    - Regular inspection of the mine faces to be carried out by mines manager for ensuring absence of any structural features like faults, joints, dyke, intrusive material in the rock strata which may affect the slope stability and cleared.
    - No loose material or boulders is to be stacked on the mine top or pit benches.

- Height of the benches should be 5m. Working bench width should be at least 2.5 times the bench height. Ultimate pit bench width will be 5m & slope is kept at 45^{o} to ensure slope stability.
- Haul road formation will be at 1 in 16 slope with adequate road width with benches intact.
- There will be no ground water table intersection.
- No seepage is expected due to formation. Adequate drainage management system comprising peripheral garland drain, settling pond to regulate monsoon water will be created to prevent saturation of compact layers, apparent drainage over the bench slope to avert damages to quarry face and manage the water flow.

The above will ensure safe and stable mine prospects. Slope stability study is site specific and largely dependent on the geological formation of the local strata. As such , carrying out such special studies after commencement of mining operation with exposed rock of sufficient quantity, depth only is expected to deliver the desired results. Besides, during mining , such study will provide to arrive at the optimum bench slope parameters design. As such , scientific study through involving reputed institution will be carried out during the course of mining.

CONCLUSION:

No adverse impact on the surrounding environment is envisaged from these projects due to enforcing all the mitigative measures during mining.

Certified vehicles with low carbon emissions will only be used. These equipment's will be properly and regularly maintained. Besides, regular vehicular emission tests will be done for the transport vehicles to ensure minimal impact due to carbon emissions. To further mediate the carbon emissions, a good greenbelt and plantation plan has been planned.

Geologically the area in and around the lease area contains charnokite type rock formation containing mostly fallow land. As such there no major vegetation or agricultural activities are observed. There are no Protected or Eco-Sensitive Zone or forest land nearby wherein it can have an impact.

It will be ensured that mining will be carried out adhering to all the statutory rules and regulations, appointing statutory personnel's like qualified mines manager, blaster, informing DGMS before commencement of mining operations and maintaining the environmental quality within the prescribed standards by effective implementation of various mitigative measures.

As such release of Greenhouse gases (GHG), rise in temperature, affecting livelihood of the local people, loss of Agriculture, Forestry and Traditional Practices is not envisaged. Such a limited scope will not induce any climatic change leading to droughts, floods etc. Mine closure plan is prepared for the lease period and already included in the approved mine plan.

Hydrological investigation carried out and as given in Para 3.6 of Chapter III & para 4.3 Chapter – IV shows that the all-time ground water table in this area is much below the mining level. Hence, ground water intersection in not envisaged for the entire life of the mine and ground water will not be affected due to the quarrying operation. As such there will not be any adverse impact on the ground water regime. Besides, this being a mining project, there will be not be any process effluent. As mentioned earlier, the rainfall will be collected in the mine floor sump and gainfully used as per CGWA requirement. Excess water if any in the sump will be pumped to settling pond and supernatant clear water let out for downstream users.

It will be ensured that mining will be carried out adhering to all the statutory rules and regulations, appointing statutory personnel's like qualified mines manager, blaster, informing DGMS before commencement of mining operations and maintaining the environmental quality within the prescribed standards by effective implementation of various mitigative measures for the entire lease period.

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CHAPTER 8
PROJECT BENEFITS

The proposed Rough stone and Gravel Quarries will improve physical and social infrastructures in the area like:

- Direct employment.
- Indirect employment to scores of people.
- Financial gains for the governments, through collection of various taxes like royalty, GST, etc.,
- Increase in General Awareness of the People.
- Continual improvements of the local amenities for the local society
- Improvement of the General Living Standard of the People in the Vicinity
- Overall Improvement in HDI (Human Development Index)
- Growth of Allied Industries in the Area.
- Improvement in Per Capita Income.
- Providing certain facilties for the local schools and panchyats

In short, the proposed Rough Stone Quarry will benefit this region in the fields of employment opportunities, improved per capita income for local people, improved social welfare facilities in respect of education, medical systems, infrastructural build-up, etc in its own way.

By means of carrying out the socio-economic development activities, local community development is expected. Towards the same, the proponent have allocated Rs.2.0 Lakhs for various activities under CER. From the CER activities allocated for various social welfare activities, the villages near the lease area will be benefited.

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CHAPTER 9

ENVIRONMENTAL COST BENEFIT ANALYSIS

Appendix-III of the MoEF notification S.O. 1533 dated 14.09.2006, which describes the generic structure of Environmental Impact Assessment document, states that the chapter ' Environmental cost benefit analysis' is applicable if it is recommended during scoping stage.

ToR for Rough stone and Gravel Quarry of was granted by SEIAA vide **TOR Identification TO25B0108TN5835658N dated 08.04.2025**. Environmental cost benefit analysis is not prescribed in the terms of reference. Hence, it is not applicable.

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CHAPTER 10

ENVIRONMENTAL MANAGEMENT PLAN

10.1 INTRODUCTION:

This chapter describes the implementation strategies of the environmental management measures described through the course of this EIA/EMP report for the purpose of mitigating significant impacts due to the proposed mining operations separately in the leases.

10.2 COMPONENTS OF THE ENVIRONMENTAL MANAGEMENT PLAN:

The environmental management plan comprises identification of the major impacts due to project operations and their suitable mitigative measures. (Provided in an elaborate manner in Chapter-IV) Based on the environmental policy of the company, the environmental management cell will oversee the implementation of these mitigative measures. The details of the proponent's environmental policy, environmental management cell and also the budgetary allocation towards various environmental management measures has been elaborated in this chapter.

10.2.1 ENVIRONMENTAL POLICY:

The proponents will frame a well-planned environmental policy. The salient features of this policy will be.

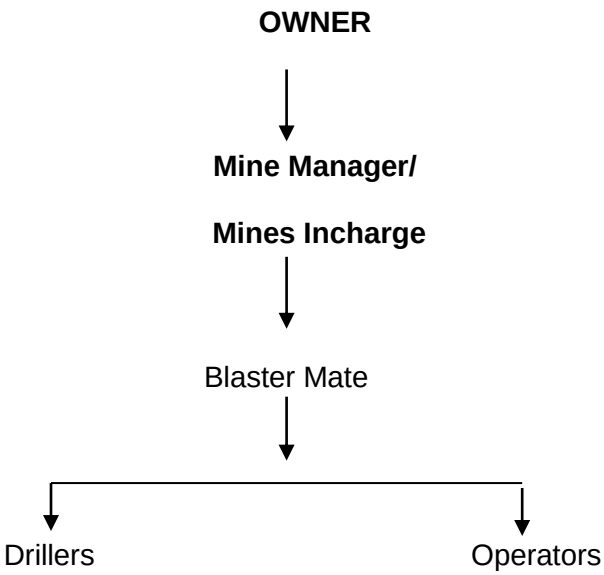
- Ensuring risk-free and safe mining operations by following all rules and conditions prescribed in the Indian mines Act, metalliferrous mining regulation, mineral conservation and development rules, etc,
- Ensuring environmental preservation by adoption of remedial measures for control of air, water quality, noise status, biological improvements, green belt creation, etc,.
- Extending CER activities to cater to the needs of local community for various benefits like improvement of physical and social infrastructures for the welfare of local community.

- Ensuring that all mining operations such as deployment of HEMM, conduct of drilling and blasting operations, etc are strictly conducted keeping with regulatory standards & maintaining safe working environment in the area.
- Providing periodical training on safety, Health, & Environment to all employers.
- Any infringement / violation of any rule or unsafe mining operations should be reported mines manager, should be reported by the foremen/ blaster mate etc, who will take immediate corrective measures for avoiding major disasters. The report will ultimately reach the owner through upwardly hierarchical communicative channels from the lowest level to superior levels in a quick time bound duration.
- The mines manager will exercise overall control over entire mining and connected operations and all infringements / violations on any count pertaining to unsafe operations, environmental degradation, etc, should be brought to the notice of the owner of the quarry. Remedial measures for such violations and deviations should be taken care by the mines manager to avoid any hazards or disasters in the mine and nearby areas. The persons responsible for such violations will be punished through appropriate disciplinarily penal actions.
- The EC conditions and stipulations will be strictly observed by Mines manager of the mine in various issues like prescribed environmental monitoring schedules conducting of vibratory studies due to blasting, creation of green belt, management of mined area, occupational health review, etc.
- Penalty actions will be taken by the proponent in cases of continuous negligence resulting in violations deviations in this respect.
- A time schedule of once in 90 days for review of all operational factors as mentioned above is to be enforced, for proper and quick corrective actions needed in the matter.

10.2.2 ENVIRONMENTAL MANAGEMENT CELL:

The Mines Manager/Mine Incharge of the respective mines will undertake effective monitoring and implementation of various environmental control measures promptly and effectively and to oversee various environmental management schemes for air quality control, water quality status, noise level control, plantation programme, social development schemes, etc in the mine. The organizational chart for the same has been provided below:

Figure 10.1: Organization Chart



The Mines Manager/Mines Incharge in the mine project site will be directly responsible for various environmental activities in the mine. The owner will correlate and oversee the environmental activities and their effective implementation in consonance with the guidelines in the EMP. The Mines Manager/Mines Incharge will oversee the environmental administration at the mine and he will directly supervise all activities of environmental administration on environmental issues. Necessary assistance from sub ordinates, external consultants and laboratories shall be taken.

Environmental control measures will span various factors like land degradation, air, water and soil quality, noise levels, effective land reclamation for excavated areas, afforestation measures, etc. The administrative functions are given below.

- To observe the implementation of environmental control measures.
- To study the effects of project activities on the environment.
- To ensure implementation of Plantation Programme. Regular monitoring of survival rate of plants is carried out to achieve the desired result.
- To keep records of monitoring etc., in a systematic way, so as to facilitate easy access, when needed by statutory agencies, etc. Also send prescribed returns to statutory authorities.
- To ensure that adequate fencing and plantation is carried out in the safety zones.
- Conducting environmental studies and reporting to SPCB.
- To interact and liaise with Government Departments.
- To evaluate the performance of existing pollution control equipment and systems periodically and take timely action to keep the equipment at its optimum performance condition.
- To take immediate preventive action in case of some unforeseen environmental pollution attributable to the project.
- Conducting safety audits and programmes to create safety awareness in workers/ staff.
- Conducting annual health audits to detect any health problems promptly in the workers/staff. This will reduce occupational health problems.
- Imparting training on safety and conduct safety drills to educate employees. Firefighting equipment and system has to be kept in 'ready-to-fight' condition.
- Carrying out socio economic study in the surrounding areas to find out the benefits derived by the society due to the project and also to fulfill the deficiency, if any, immediately.
- Ensuring proper mine closure arrangements

Considering the other mines in the cluster, the Environmental Management Cell of the project will also act as a Cluster Management Committee. The various activities undertaken to be undertaken by this committee are detailed below:

- Effective implementation of the environmental management measures in a holistic manner
- Devising an operation plan for mining and transportation activities.
- Various natural calamities like rain, flooding, evacuation plans etc. will also be deliberated by this committee to form risk management and emergency management plan pertaining to the cluster.
- The environmental policy of the company will be implemented and proper sustainable mining in accordance with statutory regulations will be enforced for the quarries in the cluster.
- Furnishing action plan regarding restoration strategy
- Deliberate on the health of the workers involved in the mining and also the health of the public
- Carrying out detailed study on the impact of mining on:
    - Soil health & biodiversity
    - Climate change leading to droughts, floods, etc.
    - Pollution leading to release of greenhouse gases (GHG) rise in temperature and livelihood of local people
    - Possibilities of water contamination and impact on acquatic ecosystem health.
    - Agriculture, Forestry & Traditional practices.
    - Hydro geothermal /Geothermal effect due to destruction in the Environment.
    - Bio-geochemical process and its footprints including environmental stress.
    - Sediment geochemistry

- Furnishing action plan to achieve sustainable development gals with regards to water, sanitation and safety.
- Furnishing fire safety and evacuation plans in case of fire accidents.
- Implementation of steps to effectively utilize energy.

10.2.3 ENVIRONMENTAL MANAGEMENT PLAN:

10.2.3.1 General:

Systematic monitoring systems and well-conceived and efficient Environment Management Plan will ensure that during the project operations, the various environmental parameters, are well within the statutorily sustainable limits. The environmental control measures proposed to keep various environmental parameters of the project in terms of air, water, noise, land, biological environment, etc. has been described below.

10.2.3.2 Air Quality:

With regards to air quality, to mitigate the fugitive and gaseous emission resulting from mining and allied activities, the following control measures are proposed to be undertaken in quarries:

- Regular water sprinkling in the transport roads using mobile tankers for dust suppression.
- Controlled blasting techniques with NONEL.
- Provision of dust filters / mask to workers working at highly dust prone and affected areas.
- Covering of drill holes with wet cloth, using sharp drill bits
- Avoiding blasting during high wind periods where the fine dust is carried out away easily affecting the ambient air quality.
- Proper maintenance of haul roads, HEMM and dumpers.
- Covering of loaded tippers with tarpaulins during transportation

- Vehicular emissions will be controlled through regular and proper preventive maintenance schedules and emissions tests are done with diesel smoke meter equipment to ensure emission values.
- Besides, there will be good green belt cover will be developed around mine periphery and in safety zone.
- Green netting will be carried out around the lease periphery on all sides.

10.2.3.3 Water Environment:

There will be no process effluent generated from either project. The domestic sewage to be generated will be collected in septic tank with soak pit arrangements. Besides, there will be no waste dumps or stockpiles within the lease areas as the entire material will be directly dispatched to the consumers.

Surface runoff management structures such as garland drain connected to a settling pond will be constructed around the quarries to collect the rain water. The supernatant clear water from the settling pond will be provided to nearby downstream users. Towards rainwater harvesting, the rainwater harvested in the mine will be used to meet the water requirements during mining and excess water in consultation with villagers and in line with government practices will be out in to the nearby stream or shall be distributed to the nearby villages as per their need.

There are no perineal water courses in the leases. There is no proposal to discharge any effluent into either of these water bodies. No major impact is envisaged on the nearby water bodies due to project operations

10.2.3.4 Noise Environment:

During the project operations, various control measures as listed below will be carried out to mitigate adverse impact due to the noise generated due to mining and allied activities:

- Good plantation will be carried out in the safety zone areas
- Noise protectors, insulation of operator cabins, installation of silencers in machineries, etc.
- Proper and regular maintenance of equipments

- Providing earplugs to workers exposed to higher noise level.
- Providing in-built mechanism for reducing sound emissions.
- Conducting regular health check-up of workers including Audiometry test for the workers engaged in noise prone area.
- Displaying the noise level status of operational machinery on the machines to know the extent of noise level and to control the time to which the worker is exposed to higher noise levels.

10.2.3.5 Ground Vibration

During the project operations, various control measures as listed below will be carried out to mitigate adverse impact due to the ground vibration caused due to blasting activities:

- Controlled blasting techniques to maintain the peak particle velocity (PPV) below DGMS prescribed levels.
- Ideally formulating drilling and charging pattern and ensuring using less charge per delay.
- To contain fly rocks, stemming column will not be less than burden of the hole. Blasting area will also be muffled, if necessary, to stop fly rocks propagation.
- Blasting will not be carried out when strong winds are blowing towards the inhabited areas. Blasting will be done during midday time and never at night.
- Proper care and supervision during blasting by a competent and experienced person.
- Besides, different blasting time for the projects in the vicinity is suggested and the timing is to be mentioned in the display board in the respective mines entrance.

Further details regarding the same has been provided under section 4.4.2, Chapter-IV.

10.2.2.6 Biological Environment:

The mining lease area and 10km buffer zone are devoid of declared ecologically sensitive features such as national parks, sanctuaries etc. There is no endangered or endemic species as per IUCN red list is observed. There will be no major clearance of vegetation involved in this project areas are free from major vegetation and contains bushes and shrubs only. However, good greenbelt and plantation programmes are planned within the lease area.

10.2.2.7 Socio-Economic Environment:

The proposed project operations will provide positive impacts in the region on the employment area as well as on physical and social infrastructural status. Many other tangible benefits will be gained by the local people in the surrounding areas due to ancillary units, trading operations, contractual needs, casual labor, green belt development, etc. Towards the socio-economic development of the surrounding area, the proponent have earmarked an amount of Rs.2.0 Lakhs under Corporate Environmental Responsibility. The activities identified under CER will be implemented in a phased manner.

10.3 ENVIRONMENTAL POLLUTION CONTROL COST:

In this proposed quarry Implementation of environmental control measures as stated above involves capital as well as recurring expenses. The probable capital and recurring environmental control cost are calculated and given below

Table 10.1: Environmental Control Cost

Activities	Mitigation Measure	Provision for Implementation	Capital	Recurring
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	Rental Dozer & drainage construction on haul road @ Rs. 10,000/- per hectare; and yearly maintenance @ Rs. 10,000/- per hectare	0.21	0.21
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	Fixed Sprinkler Installation and New Water Tanker Cost for Capital; and Water Sprinkling (thrice a day) Cost for recurring	8.00	0.50
	Muffle blasting – To control fly rocks during blasting	Blasting face will be covered with sand bags / steel mesh / old tyres / used conveyor belts	0.00	0.05
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	Dust extractor @ Rs. 25,000/- per unit deployed as capital & @ Rs. 2500 per unit recurring cost for maintenance	0.25	0.03
	No overloading of trucks/tippers/tractors	Manual Monitoring through Security guard	0.00	0.00

Activities	Mitigation Measure	Provision for Implementation	Capital	Recurring
	Stone carrying trucks will be covered by tarpaulin	Monitoring if trucks will be covered by tarpaulin	0.00	0.10
	Enforcing speed limits of 20 km/hr within ML area	Installation of Speed Governers @ Rs. 5000/- per Tipper/Dumper deployed - 2 Units	0.15	0.02
	Regular monitoring of exhaust fumes as per RTO norms	Monitoring of Exhaust Fumes by Manual Labour	0.00	0.05
	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	Provision for 2 labours @ Rs.10,000/labour (Contractual) per Hectare	0.00	0.43
	Installing wheel wash system near gate of quarry	Installation + Maintenance + Supervision	0.50	0.20
Sub-Total			**9.11**	**1.58**
Noise Environment	Source of noise will be during operation of transportation vehicles, HEMM for this proper maintenance will be done at regular intervals.	Provision made in Operating Cost	-	-
	Oiling & greasing of Transport vehicles and HEMM at regular interval will be done	Provision made in Operating Cost	-	-
	Adequate silencers will be provided in all the diesel engines of vehicles.	Provision made in Operating Cost	-	-
	It will be ensured that all transportation vehicles carry a fitness certificate.	Provision made in Operating Cost	-	-
	Safety tools and implements that are required will be kept adequately near blasting site at the time of charging.	Provision made in OHS part	-	-
	Line Drilling all along the boundary to reduce the PPV from blasting activity and implementing controlled blasting.	Provision made in Operating Cost	-	-
	Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.	Blowing Whistle by Mining Mate / Blaster / Compentent Person	-	-
	Provision for Portable blaster shed	Installation of Portable blasting shelter	0.50	0.20
	NONEL Blasting will be practiced to control Ground vibration and fly rocks	Rs. 30/- per 6 Tonnes of Blasted Material	0.00	1.89
Sub-Total			**0.50**	**2.09**
Waste Management	Waste management (Spent Oil, Grease etc.,)	Provision for domestic waste collection and disposal through authorized agency	0.25	0.20
		Installation of dust bins	0.05	0.00
	Bio toilets will be made available outside mine lease on the land of owner itself	Provision made in Operating Cost	0.00	0.00
Sub-Total			**0.30**	**0.22**
Mine Closure	1. Progressive Closure Activity - Surface Runoff managent	Provision for garland drain @ Rs. 10,000/- per Hectare with maintenance of Rs. 5,000/- per annum	0.21	0.11
	2. Progressive Closure Activity Barbed Wire Fencing to quarry area will be provisioned.	Per Hectare fencing Cost @ Rs. 2,00,000/- with Maintenance of Rs 10,000/- per annum	4.25	0.21

Activities	Mitigation Measure	Provision for Implementation	Capital	Recurring
	3. Progressive Closure Activity Green belt development - 500 trees per one hectare - Proposal for 1000 Trees - 400 Inside Lease Area & 600 Outside Lease Area)	Site clearance, preparation of land, digging of pits / trenches, soil amendments, transplantation of saplings @ 200 per plant (capital) for plantation inside the lease area and @ 30 per plant maintenance (recurring)	0.40	0.12
		Avenue Plantation @ 300 per plant (capital) for plantation outside the lease area and @ 30 per plant maintenance (recurring)	1.05	0.21
	4. Implementation of Final Mine Closure Actity as per Approved Mining Plan on Last Year	Few activities already covered as progressive closure activities as greenbelt development, wire fencing, garland drain. *For Final Closure Activities 15% of the proposed closure cost will be spent during the final mine closure stage - Last Year	0.89	0
	5. Contribution towards Green Fund. As per TNMMCR 1959, Rule 35 A	The Contribution towards Green Funds @ 10% of peak production Seigniorage fee are indicated as part of EMP Budge and not necessarily implemented in the Project Site	1.31	0
Sub-Total			**5.91**	**0.65**
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	Fixed Display Board at the Quarry Entrance as permanent structure mentioning Environmental Conditions	0.10	0.01
	Air, Water, Noise and Soil Quality Sampling every 6 Months for Compliance Report of EC Conditions	Submission of 2 Half Yearly Compliance - Lab Monitoring Report as per CPCB norms	0.00	0.5
	Workers will be provided with Personal Protective Equipment's	Provision of PPE @ Rs. 4000/- per employee with recurring based on wear and tear (say, @ Rs. 1000/- per employee)	0.64	0.16
	Slope stability action plan	Slope stability action plan in the end of fourth year plan period	0.00	0.16
	Health check up for workers will be provisioned	IME & PME Health check up @ Rs. 1000/- per employee	0.00	0.04
	First aid facility will be provided	Provision of 2 Kits per Hectare @ Rs. 2000/-	0.00	0
	Mine will have safety precaution signages, boards.	Provision for signages and boards made	0.1	0.02
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles /HEMMs. Flaggers will be deployed for traffic management	Parking area with shelter and flags @ Rs. 50,000/- per hectare project and Rs. 10,000/- as maintenance cost	1.06	0.10
	Installation of CCTV cameras in the mines and mine entrance	Camera 4 Nos, DVR, Monitor with internet facility	0.3	0.05
	Implementation as per Mining Plan and ensure safe quarry working	Mines Manager (1st Class / 2nd Class / Mine Foreman) under regulation 34 / 34 (6) of MMR, 1961 and Mining Mate under regulation 116 of	0	7.8

Activities	Mitigation Measure	Provision for Implementation	Capital	Recurring
		MMR,1961 @ 40,000/- for Manager & @ 25,000/- for Foreman / Mate		
Sub-Total			**2.20**	**8.84**
TOTAL			18.03	13.03

Towards EMP measures, Rs.18.03 Lakhs is allocated under capital cost and Rs.13.03 Lakhs per annum will be spent under recurring cost. All the recurring cost of maintenance of pollution control measures, environmental monitoring etc., will be met from revenue and will be spent for the entire lease period.

10.4 CONCLUSION:

Since the production from this lease area is less, the number of equipments to be used, magnitude of operation and consequent impact on the surrounding environment is expected to be less and as such no significant impact on environment is envisaged. With meticulously well planned Environmental Management Plan, with various programme schedules and timely execution objectives, as above, it will be ensured that the future environmental quality in the area is well maintained within statutory limits. The environmental management strategy as explained above will prove that industrial growth, if properly planned with all environmental concerns and appropriate remedial measures can go a long way to improve life pattern and living conditions of the local community around the project.

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CHAPTER 11

SUMMARY & CONCLUSION

11.1 INTRODUCTION:

Thiru. S. Shanmugavel propose to operate Rough Stone and Gravel Quarry at Survey No. 586/11,12,13,14,15,17,18 over an area of 2.12.50 hectares in Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu and has initiated action towards obtaining environmental clearance. Production capacity is 72,710m3 of Rough Stone & 28,248 m3 of Gravel up to depth of 29m for the period of Five years. Its details are as follows:

Table 11.1: Basic details of the project

1	**Project Name**	Rough stone and Gravel Quarry of S. Shanmugavel
2	**Survey No.**	586/11,12,13,14,15,17,18
3	**Extent**	2.12.50 Ha
4	**Production**	The Proposed Production capacity is 72,710m3 of Rough Stone & 28,248 m3 of Gravel up to depth of 29m for the period of Five years.
5	**Land ownership**	Patta land in the name of applicant

Although the individual lease area of this project is less than 5 Ha, the other existing and proposed quarries within the 500m radius cluster along with this subject project works out to >5 Ha. Hence, this proposal is considered under Category – B1 and as per MoEF & CC notification necessitates preparation of EIA/EMP report and public hearing. This EIA/EMP report for Thiru. S. Shanmugavel is prepared based on standard and additional Terms of Reference issued by SEIAA, Tamil Nadu vide TOR Identification No. TO25B0108TN5835658N dated 08.04.2025 and is in conformance of the generic structure prescribed by MOEF&CC in their notification of September 2006 and the approved mining plan.

11.2 SALIENT DETAILS OF THE PROJECT:

Table 11.2: Salient details of the projects

Details	
A.Statutory Clearances	
Precise Area Communication	Issued by Department of Geology & Mining vide KV1/1029/2023, Dated: 10.10.2024. **(Annexure-1)**
Mining Plan Approval	Approved Department of Geology & Mining vide Roc. KV1/1029/2023, dated 02.12.2024 **(Annexure-2)**
Details of Quarries within 500m radius	Approved Department of Geology & Mining vide Roc. KV1/1029/2023, dated 02.12.2024 **(Annexure-3A)**
B. Application for Environmental Clearance	
Terms of Reference	TO25B0108TN5835658N dated 08.04.2025
Baseline Data Collection	Carried out by Creative Engineers & Consultants , Chennai for Summer Season (Mar 2025 – May 2025)
C.Site Details	
Location	Gopalapuram Village, Vembakottai Taluk, Virudhunagar District
Coordinates	Latitude: 9° 21' 16.29"N to 9° 21' 27.13"N Longitude: 77° 36' 46.01"E to 77° 36' 44.63"E
Nearest Village	Gopalapuram – 1.3 km (NE)
Nearest Town	Rajapalayam – 12 km
Nearest Railway Station	Rajapalayam RS – 12.2 km - NW
Nearest Airport	Madurai – 74 Km – NE
Accessibility	Lease area is approachable from the existing road which is connected to Alangulam to Sivakasi road on the North east.
Topography	The lease area is a plain terrain, Massive formation of Charnokite is clearly visible in the mined out pit and also the nearby quarry. The slope is gentle towards 'southern side.
D. Environmental Setting of the Study Area	
Nearest Water Bodies	Drainage - Adjacent-50m (W) safety left, Kanmai -450m(S), Vaippar River - 1.5km – SE, Cholapuram River - 2.4km – W, Solasseri River - 2.9km – W, Karuva Nadi - 8.7km – SW, Marugal Odai - 1.9km – NE, Nedunkulam Odai - 8.9km - NE
Nearest Reserve Forests	Nil within 10 km radius
Notified Archaeologically important places, Monuments	Nil within 10km radius
Local Places of Historical and Tourism Interest	Nil within 10 km radius
Environmental sensitive areas, Protected areas as per Wildlife Protection Act, 1972*	Nil within 10km radius
Other industries	Other than crushers, Rough stone quarries no other major industries are located in the study area.

E. Technical Description	
Past production details	Part of the present proposed quarry was earlier worked by the applicant from 2018 to 2023 by EC Lr.no. DEIAA/VNR/O25/EC.NO.20/2017 Dated 11.08.2017.
Geological Reserves	**5,70,911** m^3 of rough stone & **65,114** m^3 of gravel
Mineable Reserves	Rough stone - **72,710** m3 Gravel - **28,248** m3
Mining Method	Opencast mechanized mining using jackhammer drilling, blasting, excavation through excavator & mineral transport through tippers will be carried out.
Production	Production capacity of 72,710m3 of Rough Stone & 28,248 m3 of Gravel up to depth of 29m for the period of Five years.
Waste Generation and Management	There is no waste generation anticipated in these quarries since the entire excavated material will be utilized.
Ultimate Depth	29 m
F. Project Requirements	
Manpower	16 persons directly and 50 people indirectly.
Water Requirement and Source	Water Requirement: 8 KLD Source: The required water will be procured initially from outside agencies. Later Rain water harvested in the mine sump can also be used.
Power Requirement	No electricity needed for mining operation. The minimum power requirement for office, etc will be met from state grid.
Site Services	This is a proposed project. Site services like mine office, first aid room, rest shelters, toilets etc. will be provided as semi-permanent structures.
Project Cost	Rs. **29,25,000/-**

Mining and its associated activities are only observed within 300m radius.

11.3 EXISTING ENVIRONMENTAL SCENARIO:

11.3.1 GENERAL:

The studies and data collection have been carried out systematically and meticulously as per relevant IS codes, CPCB and MoEF&CC guidelines and as per approved ToR during **Summer Season (Mar 2025 to May 2025)** For the purpose of this study, the area has been divided into two zones, namely, core and buffer zones. The lease area is considered to be the core zone while the buffer zone encompasses a 10km radius from the periphery of the core zone.

11.3.2 SOCIO-ECONOMIC STATUS:

The proposed Rough stone and gravel quarries are located in in Gopalapuram Village, Vembakottai Taluk, Virudhunagar District. Based on 2011 census data, in the 10km radius there are 34 Rural villages from Five Taluks namely Rajapalayam, Srivilliputhur, Sivakasi, Sivagiri, and Sankarankoil and 2 urban areas of Rajapalayam Taluk namely Samusigapuram (CT), Sivakasi Taluk namely Alangulam (CT). The demographic profile of the study area is given below:

Table 11.3: Social, Economic And Demographic Profile of the Study Area

Details	Population	Percentage
A. Gender-wise distribution		
Male Population	89,852	49.90
Female Population	90,208	50.10
Total	**180,060**	**100**
B. Caste-wise population distribution		
Scheduled Caste	41483	23.04
Scheduled Tribes	311	0.17
Other	138,266	76.79
Total	**180,060**	**100**
C. Literate and Illiterate population		
Literate Males	70076	38.92
Literate Females	56671	31.47
Total Literate Population	**126747**	**70.39**
Others Males	19776	10.98

Details	Population	Percentage
Others Females	33537	18.63
Others Population	**53313**	**29.61**
Total	**180,060**	**100**
D. Occupational structure		
Main workers	85582	47.53
Marginal workers	6873	3.82
Total Workers	**92455**	**51.35**
Total Non-workers	**87605**	**48.65**
Total	**180,060**	**100**

11.3.2.1 SAMPLE SURVEY:

Nearby villages were visited for conducting sample Village survey on all socio-economic aspects and requirements of the people. The existing socio-economic scenario is studied and CER activities are also suggested to the proponent. The study details are given in **Para 3.2.4, Chapter – III**.

11.3.3 EXISTING ENVIRONMENTAL QUALITY:

Table 11.4: Baseline Data

A. Meteorological Data			
Parameters	**Minimum**	**Maximum**	
Temperature In ^{0}c	22.0	39.0	
Humidity in %	19.7	97.0	
Wind speed in km/hr	<1.8	37.1	
Predominant wind direction from	NE		
B. Ambient Air Quality Data – 6 Locations			
Parameters	**Core Zone**	**Buffer Zone**	**Limits**
Particulate Matter (Size <10 µm)	51.9 – 64.7	44.4 – 68.0	100
Particulate Matter (Size <2.5 µm)	24.3 – 39.4	18.4 – 33.3	60
Sulphur Dioxide (as SO_2)	5.3 – 8.7	3.9 – 8.8	80
Nitrogen Dioxide (as NO_2)	7.6 – 11.3	6.6 – 11.6	80
Conclusion: The existing Ambient Air Quality levels for PM10, PM2.5, SO2 and NO2, are within the NAAQ standards prescribed CPCB limits. The CO values in all the locations were found to be below detectable limit. Silica values in the study area are found to be below detectable limit. (Detection limit – 0.05 mg/m3)			

C. Water Quality – 6 Locations		
pH at 25 ˚C	7.24 – 7.72	**6.5-8.5**
Total Dissolved Solids, mg/L	250 – 590	**2000**
Chloride as Cl-, mg/L	22.3 – 102	**1000**
Total Hardness (as CaCO3), mg/L	184 – 312	**600**
Total Alkalinity (as CaCO3), mg/L	125– 292	**600**
Sulphates as SO42-, mg/L	12.1 – 186	**400**
Iron as Fe, mg/L	0.03 – 0.07	**0.3**
Nitrate as NO3, mg/L	2.34 – 7.21	**45**
Fluoride as F, mg/L	0.22 – 0.63	**1.5**
Conclusion: The water quality of ground water is found to be within the prescribed Permissible limits of IS: 10500 Norms in the absence of an alternative source as per Drinking Water Specifications.		

D. Noise Levels – 6 Locations			
Parameter	**Core Zone**	**Buffer Zone**	**Limit**
Day Equivalent	51.0	47.1 – 50.6	55
Night Equivalent	39.2	36.3 – 42.0	45
Comparing with the MOEF&CC Norm of 55 dB(A) for day time and 45 dB(A) for night time, the monitored ambient noise levels were within the limit values for Residential areas.			

E. Soil Quality – 3 Locations	
Parameter	**Buffer Zone**
pH	6.58 – 7.57
Electrical Conductivity (µmho/cm)	89.74 – 106.5
Organic matter (%)	2.54 – 3.12
Total Nitrogen (mg/kg)	606 - 1125
Phosphorus (mg/kg)	2.2 – 3.5
Sodium (mg/kg)	765 – 1036
Potassium (mg/kg)	570-775
Soil is of Clay loam type.	

F. Land Environment:

For the present study on land use pattern in the study area, remote sensing satellite data have been used. The area estimated of land use categories around the 10km buffer zone is provided below:

Table 11.5: Land Use in 10Km Buffer Zone

S.No	Land use Feature	Area (Sq.Km)	Percentage
1	Agriculture/ Plantation	106.23	32.89
2	Fallow Land	97.77	30.27
3	Land With Scrub	76.96	23.83
4	Land Without Scrub	20.06	6.21
5	Water bodies	10.40	3.22
6	Settlement	10.82	3.35
7	Mining Area/ Industries	6.58	0.23
	Total	328.82	100

From the above table it is seen that 32.89 % of the study area is agriculture land and 30.27 % are fallow land. Land with scrub constitutes 23.83 %, lands without scrub constitute 6.21%, and waterbodies constitute 3.22%.

.Biological Environment:

Flora: The lease area is a non forest, private land & partly mined with thorny bushes only.

Buffer Zone comprise of agricultural land, rocky waste land, barren land and mined out pits. The Dominated species in the buffer zone Borassus flabellifer, Sygygium cumuni, Azadirachta indica Acacia auriculiformis, Albizia lebbeck, Prosopis juliflora, etc. The list of flora in the core and buffer zone is provided in Table No.3.24 and 25, Chapter-III.

Fauna: There is no Wild Life Sanctuary or National Park within the study area of 10 km. Domesticated animals are commonly found. The lease and 10 Km buffer zone does not fall in the Western Ghats ESA boundary. From the study it observed that the area in general consists of species of least concern only. The area does not form the migratory path of the birds also. List of fauna within the study area is given in Table No – 3.26, Chapter-III.

H) HYDROLOGICAL STUDY:

The area applied for mining lease is a gentle plain terrain. There are no perineal water courses in the lease areas. In the study area, the shallow aquifer is developed through dug wells and deeper aquifer through tube wells. The groundwater has revealed that potential fractures are encountered at deeper levels. Rain water collected in the tanks in the region acts as a good source of water during post monsoon. The water in the wells are available mainly after post monsoon and it reduces during summer. Bore wells are as deep as 400 ft also and it reflects that the yield is only better at deeper water levels

The occurrence of groundwater mainly in the porous soil are weathered layers, very negligible amount of groundwater percolated through the poorly fractured layer, after that there is no existence of groundwater. Besides, the mining area consists of hard compact rock, no major water seepage within the mine is expected. From the nearby working mines, no such seepage is also observed. The stage of groundwater development of Vembakottai where the study area falls is 58%. In view of this, this area can be categorized as 'Safe' from ground water development point of view.

11.4 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES:

11.4.1 GENERAL:

The identified impacts due to the mining operation of the leases individually as well as cumulatively during mining and associated activities have been studied in relation to various environmental components like Air, water, noise, vibration, land, transport etc.,

11.4.2 AIR ENVIRONMENT:

The principal sources of air pollution in the area due to mining and allied activities are dust generation in the mine due to various activities such as excavation of material, movement of HEMM, loading, unloading and transportation operations.. Besides, Gas emission also occur as a result of emission of SO2, NOx, CO etc., from diesel driven mining equipment, compressors, generator sets, etc. The following measures will be adopted to control impact on the air quality due to mining operations in the lease area:

Table 11.6: Mitigation Measures – Air Environment

S.No	Activity	Mitigation Measures
1	Drilling	Usage of Drill bits in good condition
		Covering of drill holes with wet cloth
		Usage of sharp drill bits for drilling of holes.
		Provision of dust filters / mask to workers working at highly dust prone and affected areas.
2	Blasting	Well-designed blasting parameter, effective stemming to achieve optimum breakage occurs without generating fines.
		Use of appropriate explosives for blasting and avoiding overcharging of blast holes.
		Avoiding blasting during high wind periods where the fine dust is carried out away easily affecting the ambient air quality.
		Use of controlled blasting techniques with Nonel to keep the dust generation, noise as well as vibration level within the prescribed limits.
3	Excavation and Loading	Proper maintenance of HEMM
		Enclosures for operator cabin.
		Imparting sufficient training to operators on safety and environmental parameters.
		Proper maintenance of hauling equipments.
		Avoiding overloading of dumpers.
4	Transportation	Regular wetting of transport road using mobile water tanker.
		Proper maintenance of haul road and other roads
		Setting up of tyre wash facility in the transport road.
		Avoiding overloading of tippers
		Covering of loaded tippers with tarpaulins during transportation
		Vehicular emissions will be controlled through regular and proper preventive maintenance schedules and emissions tests are done with diesel smoke meter equipment to ensure emission values.
5	Others	Development of greenbelt / barriers around mine in the safety zone and carrying out plantation within the lease area.
		Fencing with green net as necessary will be carried out around the lease periphery on all sides

Due to adoption of all these measures, no major impact on air quality is envisaged due to this proposed opencast mining operation.

The impact on air quality through model simulations are done using AERMOD View Gaussian Plume Air Dispersion Model for the air pollutant arising from the mining operations, namely, PM_{10}, $PM_{2.5}$. **Ground Level Concentration** (GLC) have been computed .

It can be seen, the resultant added concentrations with baseline figures with respect to PM10 is in the range of 52.2 μg/m3 to 65.7 μg/m3 and with respect to PM2.5 are in the range of 25.6μg/m3 to 40.4 μg/m3, which are within the stipulated statutory limits for the projects.

For preservation of environment in this mine strict enforcement of management schemes will be undertaken for taking corrective actions, as needed. By adopting the effective implementation of all the mitigative measures, no adverse impact on Air quality due to the mining operation in this lease area is expected.

11.4.3 WATER ENVIRONMENT:

The water requirement for this project is expected to be 8 KLD comprising 1.0 KLD for drinking water and domestic use, 5.0 KLD for dust suppression and 2.0 KLD for greenbelt. The water will be sourced initially from outside agencies. Later the rainwater collected in the respective mine pit sump will be used for this purpose.

The activity / source of pollution, its impact / consequence, proposed control measures are explained below:

Table 11.7: Mitigation Measures – Water Pollution

S.No	Source	Consequence	Mitigation Measures
A	Domestic use	Generation of waste water	The domestic sewage to be generated from the project will be collected in septic tank with soak pits.
B	Rainfall	Runoff from waste dump and stack	Towards surface runoff management, a garland drain of length 860m 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 flow to the downstream users.
		Rainwater Harvesting	The 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 if any.

C	Drainage Course	Disturbance to drainage course	There is a seasonal drainage originating adjacent west of the lease area for which 50m safety has been left and Kanmai is around 450m in south. Due to scanty rainfall these drainage channels remains dry for most of the year. Lease area is at an higher elevation and it does not farm as a water catchment area. It is of shallow depth with rock exposure and bushes and it remains dry for the most of the year. By proper surface runoff management, ensuring proper flow of rainwater for downstream users will be ensured. There is no proposal to discharge any effluent into this waterbody. As such no major impact is envisaged on the nearby water bodies due to project operations.

Stage of Groundwater Development: The groundwater resource data of Virudhunagar district was obtained from the data provided in the technical report of the Central Ground Water Board, South Eastern Costal Region – 'District groundwater brochure, Virudhunagar District.' Based on the report it is seen that that the stage of groundwater development of Vembakottai where the study area falls is 58% and as such this area can be categorized as 'Safe' from ground water development point of view. Thus there is scope for further ground water development.

- **Generation of mine pit water:** The occurrence and movement of groundwater in hard rock formations are restricted to the porous zones of weathered formations and the open systems of fractures, fissures and joints. Generally, in hard rock regions, occurrence of weathered thickness is discontinuous both in space and depth. Hence recharge of groundwater in hard rock formations is influenced by the intensity and depth of weathering. In the nearby region, the formations are compact with less intergranular porosity and fractures leading to less permeability and transmissivity values and as such the ground water level in this area is deep from surface. The mining area consists of hard compact rock, hence no major water seepage within the mine is expected from the periphery. Besides, the ground water potential in the region is low. The ultimate pit depth of mining is 29m. The ground water table in this area is below this level. Hence, ground water intersection in not envisaged and ground water will not be affected appreciably due to the quarrying operation.

11.4.4 NOISE ENVIRONMENT:

Anticipated noise levels resulting from operation of the various machineries like excavator, tippers, drill have been computed using point source model. Computation of cumulative noise levels at the nearby villages is made based on the assumption that there are no attenuation paths between the source and the boundary. From the studies, it is found that the predicted Noise Levels due to mining operations at the periphery of the mine lease itself will be less even without considering any attenuation factor. However, practically there will be attenuation due to vegetation etc., and as such there will not be any adverse noise propagation outside the lease boundary. Since the habitations are also away the effect of noise due to mining operations will not be felt at all in the surrounding village. Hence, by implementing the following mitigative measures for noise control, the impact on noise levels will continue to be insignificant:

- Planting rows of native trees along roads, around mine area and other noise generating centres to act as acoustic barriers.
- Sound proof operator's cabin for equipments like shovel, tippers, etc.
- Proper and regular maintenance of equipments may lead to less noise generation.
- Providing in-built mechanism for reducing sound emissions.
- Providing earplugs to workers exposed to higher noise level.
- Conducting regular health check-up of workers including Audiometry test for the workers engaged in noise prone area.

Further green belt and afforestation will be planned and executed to abate noise and dust propagation in the area.

11.4.5. VIBRATION:

Since the production from this lease is less, the number of holes and total charge to be used is expected to be less and as such the blast induced vibration is easily controllable and by ensuring the following control measures, no adverse impact on this front is expected:

1) Carrying out controlled blasting using Nonel delay detonator.
2) Optimum design for burden and spacing.

3) Reducing explosive charge per delay to minimum.

4) The peak particle velocity (PPV) of ground vibration will be kept very low through optimally controlled blasting techniques, after necessary field trials.

5) To contain fly rocks, stemming column to be less than burden of the hole. Blasting area will also be muffled, if necessary, to stop fly rocks propagation.

6) Blasting will not be carried out when strong winds are. Blasting will be done during midday time.

7) Controlled blasting to avoid tension cracks which may endanger the stability of bench slopes in the mine.

8) Proper care and supervision during blasting by a competent and experienced person to be carried out.

9) Adopting different blast timing for the leases in the cluster

By adoption of above measures, it will be ensured that the ground level vibration due to blasting are maintained within the limits prescribed by DGMS, Dhanbad at the mining areas vide Circular No. 7 dated 29 -08-1997. Elaborate details regarding the same are provided under section 4.4.2, Chapter-IV.

11.4.6 IMPACT ON LAND ENVIRONMENT:

There is no waste generation anticipated in these quarry operations since the entire excavated material will be utilized. Hence, there is no external overburden dump involved. Plantation will be carried out in this safety zone area. In the post mining stage, entire 1.16.00Ha of mined out area will be left as water body, 0.01.0 Ha will be the mine infrastructure, 0.03.0 Ha will be the mine roads, 0.36.0 Ha will be covered with vegetation, 0.46.50Ha will be undisturbed area and 0.10.00Ha will be fencing. Entire mined out area will be properly fenced to prevent inadvertent entry of men and animals. In the post mining stage the rainwater harvested in the mined out void shall be utilized.

11.4.7 BIOLOGICAL ENVIRONMENT:

Leased and its nearby area is of dry rocky type with very little vegetation. Necessary mitigative measures like dust suppression, proper maintenance of equipment's, greenbelt and plantation etc., will be carried out to prevent dust generation & any further impact on the vegetation. About 1000 trees will be planted in and around the lease area.

11.4.8 SOCIO ECONOMIC ENVIRONMENT:

The entire lease area is a private patta land. Hence, there are no habitations or hutments in the core zone area and no rehabilitation or resettlement is involved. The mining operations in the proposed mines will each employ about 16 persons directly and about 50 persons. Besides through allied opportunities in logistics, trading, repairing works etc. good employment potential will arise in this area, which will provide raising income levels and standards of living in the area through various service-related activities connected with the project operations.

Towards the socio-economic development of the surrounding area, Rs.2.0 Lakhs is allocated for each project. The activities identified under CER will be implemented in a phased manner in provision of facilities in nearby Government School.

11.4.9 OCCUPATIONAL HEALTH AND SAFETY ASPECTS:

In order to ensure minimisation of occupational health and safety problems in the project operation, the following preventive remedial measures will be effectively exercised in the project operations, so as to comply with applicable standards.

- Medical examination of workers at pre-entry level stage of workers, etc., by qualified doctors, with periodical examination of all workers/staff at least once a year, as per DGMS circulars.
- Regular awareness campaigns amongst staff and workers
- Staff will be provided with PPE to guard against excess noise levels, Dust generation and inhalation, etc., as per standards prescribed by DGMS.

11.4.10 IMPACT ON LOCAL LOGISTICAL SYSTEM DUE TO PROJECT:

From this proposed quarry the entire output will be transported to the consumers like external crusher units for producing stone aggregates of different sizes or construction of roads, bridges, buildings and other buyers etc. Since the productivity is less, there will be about 1 to 2 trips per hour. The transport route can absorb this negligible traffic due to this project. The following mitigative measures are suggested for mitigation of adverse impacts on the logistical aspect of the project:

- Water sprinkling on material in the transport vehicles before transporting, so that no dust nuisance during transport will arise.
- Plantation on either side of the transport road in consultation with the concerned department.
- Proper maintenance of transport roads and vehicles
- Avoiding overloading of material
- Covering of loaded vehicles with tarpaulins sheet if warranted.
- Installation of barriers at vulnerable locations
- Provision of tyre washing facility at the mine outlet

11.4.11 WASTE MANAGEMENT:

Since the entire mined out material will be used there will not be any solid waste generation from this project. There is no process effluent generation from the mines. Hence no liquid waste is generated.

The hazardous waste generated will be stored in a separate storage area with impervious containers for waste oil, oil contaminated clothes, used lead acid batteries, scraps, tyre storage etc. It will be disposed through authorized recyclers or re-processors periodically. The hazardous wastes will be transported in accordance with the provisions of rules. By effective implementation of above said mitigation measures no major impact due to Hazardous waste is expected.

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.

11.5 ENVIRONMENTAL MONITORING PROGRAMME:

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

Monitoring location and the frequency of monitoring shall be suitably modified in consultation with the nodal agency as per the actual requirements and prevailing conditions of the mine and environmental factors, as dictated from time to time, depending on the prevailing pollution levels, if required.

Towards EMP measures, Rs. 18.03 Lakhs is allocated under capital cost and Rs. 13.03 Lakhs per annum will be spent under recurring cost. All the recurring cost of maintenance of pollution control measures, environmental monitoring etc., will be met from revenue and will be spent for the entire lease period.

Further details of the capital and recurring cost of environmental management have been provided in in Table No. 10.2, Chapter-X.

11.6 ADDITIONAL STUDIES:

This draft EIA/EMP report will be submitted for public hearing as per mandatory procedures through the District Collector and State Pollution Control Board officials after giving 30 days advance notice in two local newspapers about the scheduled date and time for conduct of the public hearing procedures. The opinions, concerns and objections of stakeholders will be recorded during the public hearing. All the public queries and the replies to the query by the project proponent and officials concerned will be recorded and incorporated in the EIA/EMP report for approval by SEIAA, Tamil Nadu. Elaborate description in respect of Risk Assessment and Mine closure plan are given in **Chapter - VII**.

11.7 CONCLUSION:

Since the production from this lease area is less, the number of equipment's to be used, magnitude of operation and consequent impact on the surrounding environment is expected to be less and as such no significant impact on environment is envisaged. With meticulously well planned Environmental Management Plan, with various programme schedules and timely execution objectives, as above, it will be ensured that the future environmental quality in the area is well maintained within statutory limits. The environmental management strategy as explained above will prove that industrial growth, if properly planned with all environmental concerns and appropriate remedial measures can go a long way to improve life pattern and living conditions of the local community around the project.

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CHAPTER 12

DISCLOSURE OF CONSULTANTS ENGAGED

Creative engineers & consultants, Chennai is an **NABL** accredited testing laboratory and NABET accredited EIA consultancy. Established over 25 years ago, this company has steadily made good strides in the environmental impact assessment fields, and is also one of the first companies to get accredited by NABET as an accredited consultant organization as early as 2011. Creative engineers & consultants has to its credit, successful completion of numerous EIA/EMP reports, grant of environmental clearances and periodic environmental monitoring works. Presently, the company has been accredited by NABET as a 'Category-A' organization for the sectors of mining of minerals (opencast only), thermal power plants, mineral beneficiation and cement plants with the accreditation valid upto 23.12.2026. The team of experienced professionals that are a part of this organization has been detailed below.

Figure 12.1: disclosure of consultants engaged

Expert name	Qualification	Position	Experience
Mr. P. Giri	AMIE (mining)	EIA coordinator & Functional area expert (AP,NV,HW),	Over 30 years of experience in eia/emp report, mine plan preparation, including modeling
Mr. K. Shankar	M.sc (geology). Pgmemg	Functional area expert (GEO, HG, SHW, RH) & IBM approved RQP.	Over 25 years of experience in eia/emp report, mine plan, hydrological report preparation
Mr.S.S.rajendran	M.sc. (pharmaceutical chemistry)	Lab head	More than 9 years of experience in environmental laboratory.
Mr. R. Babu raj	M.a (sociology), B.com(y.l&cost), Iti, advance diploma in computer application	Functional area expert (socio economy)	Over 13 years of experience in dispersion modeling, computer applications. Specialized in cad and computer software, applications. 5years experience in the field of socio economy

Expert name	Qualification	Position	Experience
			and its allied report preparation.
Mr. B. Govindaraman	B.sc.	Field technician	Over 20 years of field monitoring & data collection experience
Dr.B.Swamynathan	M.Sc (Ecology & Environmental Sciences), M.Phill (Botany), Ph.D (Ecology & Environmental Sciences)	EIA Coordinator & Functional area expert (EB,SC,LU&AP)	More than 14 years of experience in environment and allied fields.
Ms. G. Sandhya	B. Tech chemical engineering M.tech environmental engineering	EIA Coordinator & Functional area expert (AQ&WP)	Over 6 years experience in preparation of eia/emp reports

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புவியியல் மற்றும் சுரங்கத்துறை

[redacted]

[redacted]
[redacted]
[redacted]

நாள்:10.10.2024

குறிப்பாணை

பொருள்: கனிமங்களும் சுரங்கங்களும் - விருதுநகர் மாவட்டம் - வெம்பக்கோட்டை வட்டம் - கோபாலபுரம் கிராமம் - பட்டா புல எண்கள்: 586/11 (0.78.50), 586/12 (0.91.50), 586/13 (0.10.00), 586/14 (0.11.00), 586/15 (0.11.00), 586/17 (0.05.00), 586/18 (0.05.50) மொத்தப்பரப்பு 2.12.50 ஹெக்டேர் - ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்கல்- சரியான பரப்பு (Precise Area) தேர்வு செய்யப்பட்டது - சுரங்கத்திட்டம் மற்றும் மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்க கோருவது - தொடர்பாக.

பார்வை:

1. திரு. சண்முகவேல், த/பெ.சுப்பையா தேவர், க.எண்.300/D5/2, சங்கரன் கோவில் ரோடு, இராஜபாளையம் விண்ணப்ப நாள்.இல்லை. (இவ்வலுவலகத்தில் கிடைக்கப்பெற்ற நாள்.31.08.2023).
2. இவ்வலுவலக கடிதம் எண் ந.க.கேவி3/1029/2023, நாள்: 07.09.2023 (வருவாய் கோட்டாட்சியர், சாத்தூர் அவர்களுக்கு முகவரியிட்டது).
3. சாத்தூர் வருவாய் கோட்டாட்சியர் கடித எண்.ந.க.எண்.மூ.மு.அ2/4615/2023, நாள்:28.08.2024.
4. உதவி புவியியலாளர், புவியியல் மற்றும் சுரங்கத்துறை அவர்களின் புலத்தணிக்கை அறிக்கை நாள்.28.09.2024.
5. 1959 -ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 41 மற்றும் 42.
6. அரசாணை எண்.169 தொழில் (எம்.எம்.சி.1) துறை, நாள்: 04.08.2020.
7. அரசாணை எண்.208, தொழில் (எம்.எம்.சி.1) துறை, நாள்: 21.09.2020.
8. தொடர்புடைய ஆவணங்கள்.

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விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம், பட்டா புல எண்கள்: 586/11 (0.78.50), 586/12 (0.91.50), 586/13 (0.10.00), 586/14 (0.11.00), 586/15 (0.11.00), 586/17 (0.05.00), 586/18 (0.05.50) மொத்தப்பரப்பு 2.12.50 ஹெக்டேரில் 5 வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் வழங்கக்கோரி விருதுநகர் மாவட்டம், இராஜபாளையம் வட்டம், க.எண்.300, டி5/2, சங்கரன்கோவில் ரோடு என்ற முகவரியில் குடியிருந்து வரும் திரு.சு.சண்முகவேல்,

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[illegible] எதிரான மனுவை 1-ம் எதிரியும் விண்ணப்பத்தினை [illegible]

[illegible] மனுவாய் கேள்வி மனுவில் [illegible] கூறுகையில், [illegible] அதிகாரம் கிடைக்கும் நிபந்தனைகளுக்குட்பட்டு மேற்கண்ட புலங்களில் உள்ள கல், கிராவல் குவாரி குத்தகை உரிமம் [illegible] வழங்க பரிந்துரை செய்துள்ளனர்.

மனுதாரர் குவாரி உரிமம் கோரும் புலங்களில் புலத்தணிக்கை செய்யப்பட்டதில், சுமார் 300 மீட்டர் சுற்றளவில் குடியிருப்பு பகுதிகளோ, பள்ளி மற்றும் கல்லூரிகளோ ஏதுமில்லை. மேற்படி குவாரி குத்தகை உரிமம் கோரும் கூட்டுப்புலத்திற்கு தெற்கே சுமார் 10 மீட்டர் அருகில் புல எண்.624-ல் கிராமக் கணக்கின்படி "நீர்வை ஏற்படாத தரிசு" வகைப்பாடுடைய நிலத்தில் முடிவடைந்த அரசு குவாரி ஒன்று செயல்படாத நிலையில் உள்ளது. கிழக்கே புல எண்கள்.557/1, 558/1, 558/2, 559, 574 மற்றும் 557/2 ஆகியவற்றில் ராஜ்மோகன், த/பெ. வெங்கிடபதி என்பவருக்கு சொந்தமான குவாரி ஒன்று ந.க.கே.வி1/232/2023, நாள்: 31.01.2023-ன்படி செயல்பட்டு வருகிறது. இது சுமார் 350 மீட்டர் தொலைவில் உள்ளது. புல எண். 556/2-ல் திரு.ராஜ்மோகன் என்பவருக்கு சொந்தமான செயல்படாத குவாரி ஒன்றும் சுமார் 430 மீட்டர் தொலைவில் உள்ளது. தென்கிழக்கில் புல எண்.567/2ஏ, 567/2பி மற்றும் 568/1பி ஆகியவற்றில் ஆறுமுகம், த/பெ.பரமகுரு என்பவருக்குச் சொந்தமான குவாரி (ந.க.கே.வி1/159/2021, நாள்: 31.01.2023-படி சுமார் 230 மீட்டர் தொலைவில் இயங்கி வருகிறது. புல எண்.565/2-ல் மேற்படி நபருக்கு முடிவடைந்த செயல்படாத குவாரி ஒன்றும் உள்ளது. தென்மேற்கில் புல எண்.635/4 மற்றும் 636 ஆகியவற்றில் முருகேசன், த/பெ. சங்கிலிக்காளை என்பவருக்கு சொந்தமான குவாரி ஒன்று (ந.க.கேவி1/170/2019, நாள்: 01.08.2020) சுமார் 220 மீட்டர் தொலைவில் இயங்கி வருகிறது எனவும்,

மனுதாரரால் குவாரி குத்தகை உரிமம் கோரப்படும் புல எண்களில் 586/11 மற்றும் 586/12 ஆகிய புலங்களின் குறுக்கே கிழமேலாக மும்முனை மின்சாரக் கம்பிகள் செல்கிறது. இதனை அகற்றித்தரக் கோரி மின்சார வாரிய அலுவலகத்தில் மனு அளித்துள்ளதாக மனுதாரர் தெரிவிக்கிறார். மேற்படி குவாரி குத்தகை உரிமம் கோரும் புலங்களைச் சுற்றிலும் 50 மீட்டர் சுற்றளவிற்குள் சாலைகளோ, இரயில் இருப்பு பாதைகளோ, கோவில்களோ, புராதானச் சின்னங்களோ, நீர்நிலைகளோ மற்றும் வேறு நிரந்தர அமைப்புகள் எதுவும் இல்லை. மனுதாரர் உடைகல் மற்றும் கிராவல் குவாரி செய்வதால், அருகில் உள்ள நிலங்களுக்கு பாதிப்பு ஏதும் ஏற்படுவதற்கான வாய்ப்புகள் ஏதும் இல்லை. மனுதாரர் குவாரிசெய்ய உரிமம் கோரும் நிலத்திற்கு தெற்கே புல எண்.624-ல் செயல்படாத அரசுக் குவாரியின் மேல்பக்கம் ஒரு சிறிய ஓடை ஒன்று உள்ளது. மனுதாரர் குவாரி செய்வதால் மேற்படி ஓடைக்கு பாதிப்பு ஏதும் இல்லை. உரிமம் கோரிய இடத்தில் ஏற்கனவே குவாரி செய்யப்பட்டு இருப்பது புலத்தணிக்கையில் தெரியவருகிறது. இந்த குவாரிப் புலத்திற்கான பாதையானது குவாரிப் புலத்தினை ஒட்டி

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தென்பகுதியில் புல எண்.611-ல் உள்ளது. இது கிராமக் கணக்கின்படி "பாதை" என உள்ளது எனவும்,

பாதுகாப்பு அலுவலர் எண்முகவேல், த/பெ. சுப்பையாத்தேவர் என்பவர் மேற்படி புலங்களில் குவாரி உரிமம் கோரி விண்ணப்பித்துள்ள விபரம் குறித்து கோபாலபுரம் கிராம பொது மக்களுக்கு "அ1" நோட்டீஸ் விளம்பரம் செய்யப்பட்டதில் மேற்படி குவாரி அமைப்பதற்கு பொது மக்களிடம் இருந்து ஆட்சேபனை ஏதும் வரப்பெறவில்லை. மேற்படி குவாரி அமையவுள்ள நிலமானது கோபாலபுரம் ஊராட்சி, இராஜபாளையம் ஊராட்சி ஒன்றியத்தைச் சேர்ந்தது எனவும்,

நான்குமால் விபரம்:-

வடக்கு - புல எண். 585 - எம்.டி.கண்ணன்,

தெற்கு - புல எண்.611 - கிழமேல் பாதை,

கிழக்கு - புல எண்.575 - சுப்புராமன் மற்றும் ராஜ்மோகன் நிலம்,

புல எண்.577/1 - வெங்கிடபதி (ம) சுப்புராமன்,

மேற்கு -புல எண்.586/7-பாலன் நிலம், 586/8,10-வெங்கிடபதி நிலம், 586/9 - அச்சம்மாள் நிலம்,

மேலும், உரிமம் கோரும் புல எண்ணில் தெற்கிலிருந்து வடக்கே கற்கள் எடுக்கப்பட்டுள்ளது. ஒருசில பகுதிகளில் கிராவல் எடுக்கப்பட்டுள்ளது எனவும்,

மேற்படி குவாரி உரிமம் கோரும் புல எண்களில் தெற்கிலிருந்து வடக்காக கற்கள் எடுக்கப்பட்ட விபரம் புல எண்கள் முறையே 586/11, 586/12-ல் 37450 க.மீ (10 மீ ஆழம்), 586/11, 586/12, 586/14, 586/15-ல் 28800 க.மீ (8 மீ ஆழம்), 586/11, 586/12, 9000 க.மீ (10 மீ ஆழம்) கிராவல் கற்கள் வெட்டி எடுக்கப்பட்டுள்ளது எனவும்,

விண்ணப்பிக்கப்பட்ட புலங்கள் புஞ்சை வகைப்பாடுடைய தரிசு நிலங்களாகும். புலங்களின் மேற்பரப்பு சமதளமாகவும், விவசாய பணிகள் ஏதுமின்றி தரிசாக உள்ளது. புலங்களின் மேற்பரப்பில் காணப்படும் மண், சிதைந்த பாறைகளை (Weathered Rock), தொடர்ந்து சார்னகைட் (Charnockite) எனப்படும் கடின பாறைகள் (Hard rock) உள்ளது அருகில் உள்ள குவாரியில் ஆய்வு செய்ததில் தெரியவருகிறது. கடின பாறைகளில் காணப்படும் வேறுபட்ட நிறங்கள் (Different in colours), இணைப்புகள் (Joints), பிளவுகள், கீரல்கள் (Cracks) வெடிப்புகள் மற்றும் மாறுபட்ட அளவு கொண்ட கனிமங்கள் காரணமாக இப்பாறைகளில் மெருகேற்றக் கூடிய வண்ண கற்களை (Polished Granite / Blocks) உற்பத்தி செய்ய இயலாது. இவ்வகை பாறைகளில் இருந்து கட்டிடப்பணிகள் மற்றும் சாலை / இரயில்வே பணிகளுக்கு தேவைப்படும் கற்கள், ஜல்லிகள் மற்றும் எம்-சாண்ட் ஆகியவற்றை உற்பத்தி செய்ய இயலும் எனவும் தெரிவித்துள்ளனர்.

எனவே, வருவாய் கோட்டாட்சியர்-சாத்தூர் மற்றும் உதவி புவியியலாளர், புவியியல் மற்றும் சுரங்கத்துறை அவர்களின் பரிந்துரையினை ஏற்றும் கீழ்கண்ட நிபந்தனைகளுக்கு உட்பட்டும், விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம், புல எண்கள். 586/11 (0.78.50), 586/12 (0.91.50), 586/13 (0.10.00), 586/14 (0.11.00), 586/15

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(0.11.00), 586/17 (0.05.00), 586/18 (0.05.50) மொத்த பரப்பு 2.12.50 ஹெக்டேர் நிலத்திற்கு1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதி எண்: 19 மற்றும் 20-ன்படி ஐந்து வருட காலத்திற்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்க தகுதி வாய்ந்த நிலப்பரப்பாக (Precise area) கருதப்படுகிறது.

தமிழ்நாடு சிறுகனிம சலுகை விதிகள்-1959 விதி எண்:41ன்படி குவாரி பணி மேற்கொள்வது' தொடர்பாக வரைவு சுரங்கத் திட்டத்தினை (Mining Plan) 90 தினங்களுக்குள் சமர்ப்பிக்குமாறும், விதி எண்: 42-ன்படி மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (State Level Environmental Impact Assessment Authority) இசைவினைப் பெற்று சமர்ப்பிக்குமாறும் மனுதாரர் திரு.சு.சண்முகவேல் கேட்டுக் கொள்ளப்படுகிறார்.

நிபந்தனைகள்

1) அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீ பாதுகாப்பு இடைவெளி விடுத்து குவாரி செய்தல் வேண்டும்.

2) குத்தகை உரிமம் கோரப்படும் புல எண்களில் 586/11 மற்றும் 586/12 ஆகிய புலங்களின் குறுக்கே கிழமேலாக மும்முனை மின்சாரக் கம்பிகள் செல்கிறது. மின்சாரக் கம்பியினை அகற்றிய பின்ன்ரே குவாரிப்பணி மேற்கொள்ள வேண்டும்.

3) குவ்ாரி குத்தகை உரிமம் கோரும் புல எண்களுக்கு அருகில் செயல்படும் மற்றும் செயல்படாத குவாரிகளுக்கு எவ்வித பாதிப்பும் ஏற்படாத வகையில் குவாரிப்பணி மேற்கொள்ள வேண்டும்.

4) மனுதாரர் குவாரி உரிமம் கோரும் நிலத்திற்கு தெற்கே புல எண்.624-ல் செயல்படாத அரசுக் குவாரியின் மேல்பக்கம் ஒரு சிறிய ஓடை ஒன்று செல்கிறது. எனவே, ஓடைக்கு எவ்வித பாதிப்பும் ஏற்படாத வகையில் குவாரிப்பணி மேற்கொள்ள வேண்டும்.

5) புல எண்.586/6-ல் செல்லும் ஓடைக்கு 50 மீட்டர் மற்றும் 586/11 & 586/12 ல் தெற்கில் செல்லும் வண்டிப்பாதைக்கு 10 மீட்டர் இடைவெளி அளித்து குவாரிப்பணி மேற்கொள்ள வேண்டும்.

6) மனுதாரர் குவாரிசெய்ய உரிமம் கோரும் நிலத்திற்கு தெற்கே புல எண்.624-ல் செயல்படாத அரசுக் குவாரியின் மேல்பக்கம் ஒரு சிறிய ஓடை ஒன்று செல்கிறது. எனவே, ஓடைக்கு எவ்வித பாதிப்பும் ஏற்படாத வகையில் குவ்ாரிப்பணி மேற்கொள்ள் வேண்டும்.

7) பொதுமக்கள் / விவசாய நிலங்களுக்கு பாதிப்பு ஏற்படாத வகையில் தகுதி வாய்ந்த அங்கீகரிக்கப்பட்ட நபர்கள் மூலம் வெடிமருந்துகள் சேமிக்கப்பட்டு குவாரியில் வெடித்தல் வேண்டும்.

8) குத்தகைதாரர், தமக்கு வழங்கப்பட்ட குத்தகை பகுதிக்கு அருகில் உள்ள விவசாய நிலங்களுக்கும் மற்றும் கிராம பொது மக்களுக்கும், சாலைகளுக்கும் மற்றும் ஓடைகளுக்கும் பாதிப்பு ஏற்படாத வகையில் குவாரிப்பணி மேற்கொள்ள வேண்டும்.

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9) சுரங்கத்திட்டம் மற்றும் சுற்றுச்சூழல் தடையில்லாச் சான்று குத்தகை உரிமம் வழங்குவதற்கு முன் சமர்ப்பிக்க வேண்டும்.

10) குவாரியில் வேலை செய்யும் தொழிலாளர்கள் தொழிலாளர் நலவாரியம் மற்றும் காப்பீடு திட்டத்தில் பதிவு செய்து தொழிலாளர் நலன் பேணபட வேண்டும்.

11) குழந்தை தொழிலாளர்களை குவாரி பணியில் அமர்த்தக் கூடாது.

12) கனிமங்களை வாகனங்களில் கொண்டு செல்லும் போது பாதசாரிகள், பொது மக்கள் பாதிக்காதவண்ணம் தார்பாய்கள் கொண்டு மூடி எடுத்துச் செல்ல வேண்டும்.

உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
விருதுநகர்

பெறுநர்

திரு.சு.சண்முகவேல்,
த/பெ.சுப்பையாத்தேவர்,
க.எண்.300,டி5/2, சங்கரன்கோவில் ரோடு,
இராஜபாளையம்,
விருதுநகர் மாவட்டம்.

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

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From
Dr.S.Suhatharahima, M.Sc.,Ph.D.,
Assistant Director,
Geology and Mining,
Virudhunagar.

To
Thiru.S.Shanmugavel,
S/o. Sri.Subbiah Thevar,
No: 300 D5/2, Sankaran Kovil Road,
Rajapalayam Town & Taluk,
Virudhunagar District.

Roc.No:KV1/1029/2024, Dated:02.12.2024.

Sir,

Sub: Mines and Minerals - Minor Mineral - Virudhunagar District – Vembakottai Taluk – Gopalapuram Village – Patta Land - S.F.Nos: 586/11,586/12,586/13,586/14, 586/15 , 586/16 , 586/17 & 586/18 Extent 2.12.50 Hectares – Quarry lease application preferred by Thiru.S.Shanmugavel, S/o Sri.Subbiah for quarrying Rough Stone and Gravel - Approval of Mining Plan - Regarding.

Ref:
1. The Assistant Director, Geology and Mining, Virudhunagar Rc.No.KV1/53243/2013, Dated: 05.05.2018.
2. Quarry lease application received from Thiru.S.Shanmugavel dated:31.08.2023.
3. The Assistant Director, Geology and Mining, Virudhunagar Rc.No.KV1/1029/2024, Dated: 10.10.2024.
4. Thiru.S.Shanmugavel , S/o.Sri.Subbiah letter, dated: 11.11.2024.

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In the reference first cited, a quarry lease has been granted to Thiru.S.Shanmugavel S/o Sri Subbiah for quarrying Rough stone and Gravel, over an extent of 2.12.50 Hect, in S.F.Nos: 586/11,586/12,586/13,586/14, 586/15 , 586/16 , 586/17 & 586/18 of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District for a period of Five years valid from 21/05/2018 to 20/05/2024 under the Tamil Nadu Minor Mineral concession Rule (TNMMCR) -1959. The Environmental Clearance had been Granted by District Level Environmental Impact Assessment Authority Virudhunagar District Vide letter Lr.No.DEIAA/VNR/025/EC.No.020/2017,Dated: 11.08.2017, above said validity period and EC Approved quantity was 50,021 cbm of Roughstone & 17,660 cbm of Gravel and actual

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quantum of mineral transported was 38,611 cbm of Rough stone and 16,490 cbm of Gravel as per Assistant Director, Department of Geology and Mining Virudhunagar office records.

2) In the reference Second cited Thiru S.Shanmugavel S/o Sri Subbiah has preferred an renewal application for the grant of quarrying Rough stone and Gravel, over an extent of 2.12.50 Hect, in S.F.Nos: 586/11, 586/12, 586/13, 586/14, 586/15 , 586/16 , 586/17 & 586/18 of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District for a period of 05 (Five) Years Under Rule 19 of Tamil Nadu Minor Mineral Concession Rules 1959.

3) The application was scrutinized and precise area has been communicated to quarry Rough Stone and Gravel over an extent of 2.12.50Hectares of Patta Land in S.F.No: 586/11,586/12,586/13,586/14, 586/15, 586/16 , 586/17 & 586/18 for a period of 05 (Five) years under Rule 19 and 20 of Tamilnadu Minor Mineral Concession Rules, 1959.

4) In the reference 4th cited, the applicant has submitted the Mining Plan, prepared as per the guidelines issued by the Commissioner of Geology and Mining and as per the Rules and Acts. The Geological reserves, Mineable reserves and yearwise production are discussed in Table 3 of the mining plan. The Geological reserves is estimated as 5,70,911 cbm Roughstone and 65,114 cbm of Gravel. The mineable reserves is estimated as 72,710cbm of Roughstone and 28,248 cbm of Gravel upto a depth of 29 m below ground level for the period of Five years.

The yearwise production of roughstone and gravel are furnished in Part A of the mining plan as detailed below.

Yearwise production and Development

Table 3

Section	Bench	Length	Width	Height	Roughstone Voume (m^3)	Gravel Volume(m^3)
RS-CD	I	62	30	4	-	7,440
	II	54	26	5	7,020	
	III	44	60	5	13,200	
I YEAR EXCAVATION					**20,220**	**7,440**

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PQ-AB	I	75	34	4	-	10,200
	II	70	26	5	9,100	
	III	65	16	5	5,200	
II YEAR EXCAVATION					**14,300**	**10,200**
PQ-AB	I	78	34	4	-	10,608
	II	91	26	5	11,830	
III YEAR EXCAVATION					**11,830**	**10,608**
PQ-AB	I	137	16	5	10,960	
IV YEAR EXCAVATION					**10,960**	--
PQ-AB	IV	34	50	5	8,500	
	V	24	40	5	4,800	
	VI	14	30	5	2,100	
V Year Excavation					**15,400**	--
Total Five Years Production					**72,710**	**28,248**

The Environmental Management Plan and Mine Closure plan are discussed in Part – B (11.0) and all conditions have been incorporated in the Mining Plan as laid down by the authorities.

5) In view of the above, in exercise of the powers delegated under Rule 41 of Tamil Nadu Minor Mineral Concession Rules, 1959, I hereby approve the Mining Plan submitted by Thiru.S.Shanmugavel, S/o.Sri.Subbiah for quarrying Rough Stone and Gravel over an extent of 2.12.50Hectares of Patta Land in S.F.Nos: 586/11,586/12,586/13,586/14, 586/15 , 586/16 , 586/17 & 586/18 of Gopalapuram Village, Vembakottai Taluk & Virudhunagar District for a period of 05 (Five) to obtain Environment Clearance from SEIAA, Chennai subject to the following conditions:

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

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3. The Mining Plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.
4. The approval of the Mining Plan does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development and Regulation) Amendment Act, 2015 or any other connected Laws including, Environment Protection.
5. Act, 1986, and the Rules made there under in Tamil Nadu Minor Mineral Concession Rules, 1959.

Encl: Two copies of Mining Plan.

Assistant Director,
Geology and Mining,
Virudhunagar.

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

From

Dr.S.Suhatharahima, M.Sc.,Ph.D.,
Assistant Director,
Geology and Mining,
Virudhunagar.

To

Thiru.S.Shanmugavel,
S/o.Sri.Subbiah ,
No.81/3B, D D Road,
NGGO Colony,
Srivilliputhur Taluk,
Virudhunagar District – 626 125.

Roc. No: KV1/1029/2024, Dated: 02.12.2024

Sir,

Sub: Mines and Minerals - Minor Mineral - Virudhunagar District – Vembakottai Taluk – Gopalapuram Village – Patta Land - S.F.Nos: 586/11,586/12,586/13,586/14, 586/15 , 586/16 , 586/17 & 586/18 Extent 2.12.50 Hectares – Quarry lease application preferred by Thiru.S.Shanmugavel, S/o.Sri.Subbiah for quarrying Rough Stone and Gravel - Details of quarries in 500 meter radius - Regarding.

Ref:

1. The Assistant Director, Geology and Mining, Virudhunagar Rc.No.KV1/53243/2013, Dated: 05.05.2018.
2. Quarry lease application received from Thiru.S.Shanmugavel dated:31.08.2023.
3. The Assistant Director, Geology and Mining, Virudhunagar Rc.No.KV1/1029/2024, Dated: 10.10.2024.
4. Thiru.S.Shanmugavel , S/o.Sri.Subbiah letter, dated: 11.11.2024.

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In the reference first cited, a quarry lease has been granted to Thiru.S.Shanmugavel, S/o Sri Subbiah for quarrying Rough stone and Gravel, over an extent of 2.12.50 Hect, in S.F.Nos: 586/11,586/12,586/13,586/14, 586/15 , 586/16 , 586/17 & 586/18 of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District for a period of Five years valid from 21/05/2018 to 20/05/2024 under the Tamil Nadu Minor Mineral concession Rule (TNMMCR) -1959. The Environmental Clearance had been Granted by District Level Environmental Impact Assessment Authority Virudhunagar District Vide letter Lr.No.DEIAA/VNR/025/EC.No.020/2017,Dated: 11.08.2017, above said validity period and EC Approved quantity was 50,021 cbm of Roughstone & 17,660 cbm of Gravel and actual

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quantum of mineral transported was 38,611 cbm of Rough stone and 16,490 cbm of Gravel as per Assistant Director, Department of Geology and Mining Virudhunagar office records.

2) In the reference Second cited Thiru S.Shanmugavel S/o Sri Subbiah has preferred an renewal application for the grant of quarrying Rough stone and Gravel, over an extent of 2.12.50 Hect, in S.F.Nos: 586/11,586/12,586/13,586/14, 586/15 , 586/16 , 586/17 & 586/18 of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District for a period of 05 (Five) Years Under Rule 19 of Tamil Nadu Minor Mineral Concession Rules 1959.

3) The application was scrutinized and precise area has been communicated to quarry Rough Stone and Gravel over an extent of 2.12.50Hectares of Patta Land in S.F.No: 586/11,586/12,586/13,586/14, 586/15 , 586/16 , 586/17 & 586/18 for a period of 05 (Five) years subject to produce Mining Plan for approval and to obtain Environment Clearance from SEIAA in the reference 3rd cited.

4) The applicant Thiru.S.Shanmugavel, S/o.Sri.Subbiah in the reference 4th cited has requested to furnish details of quarries situated within 500 m radial distance from the applied area.

5) As per his request the details of quarry situated within 500 meter radius from the proposed area for obtaining Environmental Clearance as detailed below:

Details of quarry situated within 500 meters radius from the applied area

S. No	Quarry detail	Taluk & Village	S.F. No.& Extent (Hect)	Proceedings No. & Lease Period
I	**Existing Quarries:**			
1.	M/s.Lakshmi Blue Mettals (V. Rajmohan) 540/B, Gopalapuram Main Road, E.B. Sub Office, Nallamanayakkanpatti Post, Rajapalayam Taluk	Gopalapuram / Vembakottai	557/1,558/1,2 etc., Extent-Extent - 4.85.00 Hct.,	KV1/232/2021 31.01.2023 Lease period - 01.02.2023 to 31.01.2028

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S. No	Quarry detail	Taluk & Village	S.F. No.& Extent (Hect)	Proceedings No. & Lease Period
2.	Thiru.S.Murugesan S/o.Sangilikkalai 106/134, Madurai Raja Kadai Street, Rajapalayam Taluk	Gopalapuram / Vembakottai	635/4 and 636 Extent -2.89.00 Hct.,	KV1/170/2019 Dated:01.08.2020 Lease period - 26.08.2020 to 25.08.2025
3.	Thiru.P.Arumugam Proprietor M/s.Selvakumar Blue Mettals, 761A/15, North Street, Sathirapatti Post, Rajapalayam Taluk	Gopalapuram / Vembakottai	567/2A,2B and 568/1B Extent – Extent - 2.48.50 Hct.,	KV1/159/2021 31.01.2023 Lease period - 01.02.2023 to 31.01.2028
II	**Abandoned Quarry :**			
1.	Thiru.P.Arumugam, S/o.Paramaguru, Door No. 761/15, North Street,Chatrapatti, Rajapalayam Taluk, Virudhunagar District	Gopalapuram / Vembakottai	568/3(P), 567/2A, 568/1B Extent -2.90.0 Hct.,	KV1/793/2017, dated : 15.07.2019 Lease period - 23.07.2019 to 22.07.2021
2.	Thiru.V.Rajmohan S/o. Venkadapathy No: 4A8/1, INTUC Nagar, Rajapalayam, Virudhunagar.	Gopalapuram / Vembakottai	556/2 Extent -1.14.50 Hct.,	KV1/7392/2016, dated: 09.01.2017 Lease period - 20.01.2017 to 19.01.2022
3.	Thiru.S.Murugesan, S/o.Sanglikalai, Door No. 106/134, Madurai Rajakadai Street, Rajapalayam Town and Taluk, Virudhunagar District.	Gopalapuram / Vembakottai	632 Extent – 1.83.0 Hct.,	KV122276/2014, dated: 21.07.2016 Lease period - 27.07.2016 to 26.07.2021
III	**Present Proposed Quarry :**			
1.	Thiru.S.Shanmugavel, S/o. Sri.Subbiah Thevar, No: 300 D5/2, Sankaran Kovil Road, Rajapalayam Town & Taluk, Virudhunagar District.	Gopalapuram / Vembakottai	586/11,586/12,586/13,586/14, 586/15 , 586/16 , 586/17 & 586/18 Extent - 2.12.50 Hectares	–
		TOTAL	**18.22.50 Hectares**	

2) The dimension of the existing pit in the area applied for leases is given below.

	Length (Max) (M)	Width (Max) (M)	Depth (Max) (M)
Pit-I	113.5	33	10
Pit-II	68	53	8
Pit-III	40	22.5	10

3) The Excavation Details (cbm)

Environmental Clearance	Proceedings & Lease Period	Permitted Quantity as per Approved Mining Plan & EC		Permit issued & Transported Quantity		Depth (a)
		Rough Stone	Top Soil & Gravel	Rough Stone	Top Soil & Gravel	
Lr.No.DEIAA/ VNR/ 025/EC.No.20/ 2017, Dated: 11.08.2017.	Rc.No.KV1/5 3243/2013, Dated: 05.05.2018 21/05/2018 to 20/05/2023	50,021 cbm	17,660 cbm	38,611 cbm	16,490 cbm	Pit I- 10m Pit II-8m Pit III - 10m

02/10/24

Assistant Director,
Geology and Mining,
Virudhunagar.

Copy to :
State Level Environmental Impact Assessment Authority,
Panagal Maligai,
No. I Jeenis Road,
Saidapet, Chennai-15.

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ANNEXURE -V

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை

MINES LAND PHOTO

விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம் பட்டா புலஎண்கள். 586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18 ஆக மொத்தம் 2-12.50 ஹெக்டேரில் மட்டும் 5 வருடங்களுக்கு உதவிஇயக்குனர், புவியியல் மற்றும் சுரங்கத்துறை, விருதுநகர் மாவட்ட ஆட்சியர் அலுவலக வளாகம், விருதுநகர் அவர்களின் செயல்முறை ஆணை எண். கே.வி.1/1029/2023 நாள் 10.10.2024ன் படி திரு. சு. சண்முகவேல், த/பெ. சுப்பையாத் தேவர் அவர்கள் மனு செய்துள்ளார்கள். மேற்படி இடம் உடைகல் மற்றும் கிராவல் வெட்டி எடுப்பதற்கு அங்கீகரிக்கப்பட்ட இடம் என்பதை இதன் முலம் சான்றளிக்கிறேன்.

இடம்: கோபாலபுரம்

நாள்: 04.11.2024

மனுதாரர் கையெப்பம்

04/11/2024

கிராம நிர்வாக அலுவலர்.

கிராம நிர்வாக அலுவலர்
கோபாலபுரம் கிராமம்
வெம்பக்கோட்டை வட்டம்

S. சண்முகவேல்

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை

கிராம நிர்வாக அலுவலரின் சான்று

விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம் பட்டா புலஎண்கள். 586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18 ஆக மொத்தம் 2-12.50 ஹெக்டேரில் மட்டும் 5 வருடங்களுக்கு உதவிஇயக்குனர், புவியியல் மற்றும் சுரங்கத்துறை, விருதுநகர் மாவட்ட ஆட்சியர் அலுவலக வளாகம், விருதுநகர் அவர்களின் செயல்முறை ஆணை எண். கே.வி.1/1029/2023 நாள் 10.10.2024ன் படி திரு. சு. சண்முகவேல், த/பெ. சுப்பையாத் தேவர் அவர்கள் மனு செய்துள்ளார்கள். இவர்கள் ஆரம்பிக்க உள்ள உடைகல் மற்றும் கிராவல் குவாரி நிலத்தை சுற்றி 300மீட்டர் சுற்றளவில் குடியிருப்புகள், கோயில்கள், பள்ளிக்கூடம் ஏதும் இல்லை.

மேற்படி புல எண்கள். மேற்படி கிராம கணக்கு தடை ஆணை புத்தகத்தில் இடம் பெறவில்லை. மேற்படி சான்று கனிமவளத்துறைக்கு அளிக்கும் வகைக்காக வழங்கப்படுகிறது.

04/11/2024

கிராம நிர்வாக அலுவலர்.

கிராம நிர்வாக அலுவலர்
கோபாலபுரம் கிராமம்
வெம்பக்கோட்டை வட்டம்

S' சண்முகவேல்

POPULATION BREAKUP & LITERACY LEVEL IN THE BUFFER ZONE

Sl.No	Name of village	Rural / urban	HOUSE HOLDS	POPULATION			POPULATION BELOW 6 AGE GROUP			SCHEDULE CASTE			SCHEDULE TRIBE			LITRERATES			OTHERS		
				TOTAL	MALE	F.MALE	TOTAL	MALE	F.MALE	TOTAL	MALE	F.MALE	TOTAL	MALE	F. MALE	TOTAL	MALE	F.MALE	TOTAL	MALE	F.MALE
0-2 km,Rajapalayam Sub-District, Virudhunagar District																					
1	Varagunaramapuram	**Rural**	385	1357	696	661	142	67	75	97	44	53	0	0	0	823	489	334	534	207	327
2	Gopalapuram	**Rural**	423	1461	708	753	128	61	67	385	189	196	0	0	0	1051	572	479	410	136	274
3	Kuruchiyarpatti	**Rural**	205	741	361	380	62	30	32	115	51	64	0	0	0	588	315	273	153	46	107
	Sub total (A)		**1013**	**3559**	**1765**	**1794**	**332**	**158**	**174**	**597**	**284**	**313**	**0**	**0**	**0**	**2462**	**1376**	**1086**	**1097**	**389**	**708**
2-5 km,Rajapalayam Sub-District, Virudhunagar District																					
4	Sholapuram	**Rural**	3248	11607	5830	5777	1147	610	537	3283	1640	1643	0	0	0	8147	4493	3654	3460	1337	2123
5	Nathampatti	**Rural**	590	2143	1093	1050	209	117	92	467	227	240	0	0	0	1460	853	607	683	240	443
6	Vadagarai	**Rural**	992	3454	1720	1734	316	156	160	91	42	49	0	0	0	2539	1413	1126	915	307	608
7	Tenkarai	**Rural**	272	918	454	464	93	49	44	296	140	156	0	0	0	683	363	320	235	91	144
Rajapalayam Sub-District, Virudhunagar District																					
8	Ramalingapuram (CT)	**Urban**	1391	4505	2252	2253	477	240	237	416	213	203	0	0	0	3233	1810	1423	1272	442	830
	Sub total (B)		**6493**	**22627**	**11349**	**11278**	**2242**	**1172**	**1070**	**4553**	**2262**	**2291**	**0**	**0**	**0**	**16062**	**8932**	**7130**	**6565**	**2417**	**4148**
5-10 km,Rajapalayam Sub-District, Virudhunagar District																					
9	Arasiyarpatti	**Rural**	1050	3784	1872	1912	388	223	165	1296	662	634	0	0	0	2600	1393	1207	1184	479	705
10	Keelrajakularaman	**Rural**	2575	8986	4487	4499	817	413	404	2319	1160	1159	40	23	17	6302	3459	2843	2684	1028	1656
11	Melarajakularaman (Part)	**Rural**	5238	16652	8394	8258	1617	843	774	2978	1502	1476	96	46	50	12060	6744	5316	4592	1650	2942
12	Pudupalaiyam	**Rural**	2241	7922	4015	3907	811	405	406	677	332	345	0	0	0	6016	3267	2749	1906	748	1158
13	Kollankondan	**Rural**	1996	6811	3389	3422	725	376	349	2602	1281	1321	0	0	0	4734	2567	2167	2077	822	1255
14	Ilandiraikondan	**Rural**	959	3422	1690	1732	390	208	182	1091	522	569	0	0	0	2080	1191	889	1342	499	843
15	Nallamangalam	**Rural**	1094	3962	2021	1941	425	212	213	59	26	33	0	0	0	3016	1674	1342	946	347	599
16	Puthur	**Rural**	2306	8230	4162	4068	875	448	427	1794	884	910	137	70	67	5764	3237	2527	2466	925	1541
17	Korukkampatti	**Rural**	521	1935	997	938	196	103	93	1470	761	709	0	0	0	1156	663	493	779	334	445
Srivilliputhur Sub-District, Virudhunagar District																					
18	Pillaiyarkulam (part)	**Rural**	1913	6271	3119	3152	649	329	320	928	461	467	0	0	0	4325	2391	1934	1946	728	1218
19	Achchandavilthan	**Rural**	1881	6365	3190	3175	622	317	305	1419	703	716	0	0	0	4234	2370	1864	2131	820	1311
Sivakasi Sub-District, Virudhunagar District																					
20	Nadukkudi	**Rural**	1348	4797	2383	2414	575	296	279	2439	1231	1208	0	0	0	3122	1717	1405	1675	666	1009
21	Kongankulam	**Rural**	318	1050	507	543	87	44	43	138	64	74	0	0	0	761	409	352	289	98	191
22	Alangulam (Part)	**Rural**	508	1924	1004	920	164	95	69	480	247	233	0	0	0	1473	812	661	451	192	259
23	Kilanmarinadu	**Rural**	637	2388	1190	1198	252	116	136	525	261	264	0	0	0	1614	914	700	774	276	498
24	Lakshmipuram	**Rural**	1603	5610	2771	2839	577	251	326	1327	652	675	5	3	2	3847	2156	1691	1763	615	1148
25	Appanayakkanpatti	**Rural**	1017	4594	2135	2459	379	202	177	1086	529	557	0	0	0	3291	1620	1671	1303	515	788
Sivagiri Sub-District,Tirunelveli District																					
26	Thenmalai	**Rural**	3060	10283	4983	5300	1002	478	524	1889	893	996	0	0	0	6724	3793	2931	3559	1190	2369
Sankarankoil Sub-District,Tirunelveli District																					
27	Perumalpatti	**Rural**	1456	5175	2608	2567	567	269	298	512	251	261	0	0	0	3749	2128	1621	1426	480	946
28	Valavandapuram	**Rural**	317	1045	518	527	122	59	63	92	43	49	4	3	1	818	439	379	227	79	148
29	Pandappuli	**Rural**	1585	5954	2950	3004	540	278	262	2306	1150	1156	0	0	0	4351	2378	1973	1603	572	1031
30	Rengasamudram	**Rural**	119	388	192	196	36	24	12	14	6	8	0	0	0	182	97	85	206	95	111
31	Kalingappatti	**Rural**	1775	6537	3242	3295	641	330	311	1573	784	789	24	12	12	4347	2429	1918	2190	813	1377
32	Chattrappatti	**Rural**	403	1420	699	721	151	69	82	800	395	405	0	0	0	1020	562	458	400	137	263
33	Kulasekarapperi	**Rural**	171	645	327	318	53	25	28	0	0	0	0	0	0	416	239	177	229	88	141
34	Karisattan	**Rural**	1409	5032	2499	2533	562	291	271	1420	689	731	4	2	2	3397	1889	1508	1635	610	1025
35	Paruvakkudi	**Rural**	919	3161	1578	1583	288	137	151	1061	524	537	0	0	0	2063	1176	887	1098	402	696
Rajapalayam Sub-District, Virudhunagar District																					
36	Samusigapuram (CT)	**Urban**	4329	14601	7341	7260	1324	695	629	3231	1604	1627	0	0	0	10952	6002	4950	3649	1339	2310
Sivakasi Sub-District, Virudhunagar District																					
37	Alangulam (CT)	**Urban**	1364	4930	2475	2455	456	236	220	807	398	409	1	1	0	3809	2052	1757	1121	423	698
	Sub total (C)		**44112**	**153874**	**76738**	**77136**	**15291**	**7772**	**7519**	**36333**	**18015**	**18318**	**311**	**160**	**151**	**108223**	**59768**	**48455**	**45651**	**16970**	**28681**
	Grand Total (A+B+C)		**51618**	**180060**	**89852**	**90208**	**17865**	**9102**	**8763**	**41483**	**20561**	**20922**	**311**	**160**	**151**	**126747**	**70076**	**56671**	**53313**	**19776**	**33537**

**Source: District Primary Census Abstract, Virudhunagar and Tirunelveli District of Tamilnadu State-2011*

OCCUPATIONAL STRUCTURE IN THE BUFFER ZONE

Sl.No	Name of village	Rural / urban	MAIN WORKERS		CULTIVATORS		AGRI LABOURS		HOUSE HOLD		OTHERS		MARGINAL WORKERS		NON WORKERS	
			MALE	F.MALE	MALE	F.MALE	MALE	F.MALE	MALE	F.MALE	MALE	F.MALE	MALE	F.MALE	MALE	F.MALE
0-2 km,Rajapalayam Sub-District, Virudhunagar District																
1	Varagunaramapuram	**Rural**	451	330	62	23	74	183	1	8	314	116	1	5	244	326
2	Gopalapuram	**Rural**	271	99	35	14	11	9	9	8	216	68	186	250	251	404
3	Kuruchiyarpatti	**Rural**	198	182	25	12	35	44	1	2	137	124	14	19	149	179
	Sub total (A)		**920**	**611**	**122**	**49**	**120**	**236**	**11**	**18**	**667**	**308**	**201**	**274**	**644**	**909**
2-5 km,Rajapalayam Sub-District, Virudhunagar District																
4	Sholapuram	**Rural**	3266	2126	370	258	709	728	46	46	2141	1094	155	253	2409	3398
5	Nathampatti	**Rural**	545	328	34	8	112	196	1	4	398	120	97	48	451	674
6	Vadagarai	**Rural**	1006	704	214	91	304	366	14	20	474	227	17	22	697	1008
7	Tenkarai	**Rural**	300	267	49	5	54	134	1	3	196	125	3	2	151	195
Rajapalayam Sub-District, Virudhunagar District																
8	Ramalingapuram (CT)	**Urban**	1327	754	33	9	70	110	7	10	1217	625	35	54	890	1445
	Sub total (B)		**6444**	**4179**	**700**	**371**	**1249**	**1534**	**69**	**83**	**4426**	**2191**	**307**	**379**	**4598**	**6720**
5-10 km,Rajapalayam Sub-District, Virudhunagar District																
9	Arasiyarpatti	**Rural**	893	507	80	80	135	164	8	12	670	251	162	218	817	1187
10	Keelrajakularaman	**Rural**	2521	1357	293	120	610	622	12	13	1606	602	167	261	1799	2881
11	Melarajakularaman (Part)	**Rural**	5173	3317	246	186	417	550	158	277	4352	2304	130	325	3091	4616
12	Pudupalaiyam	**Rural**	2369	1002	20	9	43	40	69	53	2237	900	63	64	1583	2841
13	Kollankondan	**Rural**	1895	1381	85	29	470	527	114	231	1226	594	54	101	1440	1940
14	Ilandiraikondan	**Rural**	992	905	41	24	284	455	47	36	620	390	12	18	686	809
15	Nallamangalam	**Rural**	1237	993	79	40	233	316	14	16	911	621	11	6	773	942
16	Puthur	**Rural**	1755	1133	144	60	405	417	29	35	1177	621	343	355	2064	2580
17	Korukkampatti	**Rural**	582	482	110	88	102	255	2	3	368	136	10	26	405	430
Srivilliputhur Sub-District, Virudhunagar District																
18	Pillaiyarkulam (part)	**Rural**	1577	780	42	22	256	237	17	19	1262	502	237	394	1305	1978
19	Achchandavilthan	**Rural**	1866	1380	285	177	408	653	54	59	1119	491	84	163	1240	1632
Sivakasi Sub-District, Virudhunagar District																
20	Nadukkudi	**Rural**	1327	1156	109	69	154	164	9	23	1055	900	117	152	939	1106
21	Kongankulam	**Rural**	320	271	11	7	197	222	1	0	111	42	3	1	184	271
22	Alangulam (Part)	**Rural**	547	340	21	6	42	58	9	14	475	262	9	9	448	571
23	Kilanmarinadu	**Rural**	648	417	38	21	53	141	8	14	549	241	75	86	467	695
24	Lakshmipuram	**Rural**	1570	1198	128	123	507	607	21	26	914	442	119	61	1082	1580
25	Appanayakkanpatti	**Rural**	1125	1097	85	99	307	499	28	19	705	480	54	106	956	1256
Sivagiri Sub-District,Tirunelveli District																
26	Thenmalai	**Rural**	3009	2513	368	189	1282	1522	49	144	1310	658	88	167	1886	2620
Sankarankoil Sub-District,Tirunelveli District																
27	Perumalpatti	**Rural**	1433	1090	111	38	473	522	97	139	752	391	127	166	1048	1311
28	Valavandapuram	**Rural**	272	216	22	1	67	87	2	0	181	128	14	21	232	290
29	Pandappuli	**Rural**	1720	1349	279	167	912	931	13	4	516	247	78	152	1152	1503
30	Rengasamudram	**Rural**	106	116	1	1	60	102	1	0	44	13	1	2	85	78
31	Kalingappatti	**Rural**	1751	1297	165	79	1078	1037	24	18	484	163	164	162	1327	1836
32	Chattrappatti	**Rural**	436	410	11	3	359	384	0	0	66	23	0	0	263	311
33	Kulasekarapperi	**Rural**	196	193	16	1	151	27	0	144	29	21	6	6	125	119
34	Karisattan	**Rural**	1495	1246	82	64	495	603	154	171	764	408	39	53	965	1234
35	Paruvakkudi	**Rural**	949	814	133	71	561	613	0	1	255	129	10	26	619	743
Rajapalayam Sub-District, Virudhunagar District																
36	Samusigapuram (CT)	**Urban**	4359	2377	21	5	533	555	54	66	3751	1751	113	106	2869	4777
Sivakasi Sub-District, Virudhunagar District																
37	Alangulam (CT)	**Urban**	1350	618	98	11	191	232	61	24	1000	351	103	112	1022	1725
	Sub total (C)		**43473**	**29955**	**3124**	**1790**	**10785**	**12542**	**1055**	**1561**	**28509**	**14062**	**2393**	**3319**	**30872**	**43862**
	Grand Total (A+B+C)		**50837**	**34745**	**3946**	**2210**	**12154**	**14312**	**1135**	**1662**	**33602**	**16561**	**2901**	**3972**	**36114**	**51491**

**Source: District Primary Cencus Abstract, Virudhunagar and Tirunelveli District of Tamilnadu State-2011*

EDUCATIONAL FACILITIES IN THE STUDY AREA

Sl.No	Name of village	Educational Facilities (A(1)/ NA(2))	Govt Pre - Primary School (Nursery/LKG/UKG) (Numbers)	Govt Primary School (Numbers)	Govt Middle School (Numbers)	Govt Secondary School (Numbers)	Govt Senior Secondary School (Numbers)	Govt Arts and Science Degree College (Numbers)	Govt Engineering College (Numbers)	Govt Medicine College (Numbers)	Govt Management Institute (Numbers)	Govt Polytechnic (Numbers)	Govt Vocational Training School/ITI (Numbers)	Government Non Formal Training Centre (Numbers)	Government School For Disabled (Numbers)
0-2 km,Rajapalayam Sub-District, Virudhunagar District															
1	Varagunaramapuram	**1**	1	2	0	0	0	0	0	0	0	0	0	2	0
2	Gopalapuram	**1**	1	2	1	0	0	0	0	0	0	0	0	2	0
3	Kuruchiyarpatti	**1**	1	0	0	0	0	0	0	0	0	0	0	1	0
	Sub - Total (A)		**3**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**
2-5 km,Rajapalayam Sub-District, Virudhunagar District															
4	Sholapuram	**1**	4	4	2	0	0	0	0	0	0	0	0	5	0
5	Nathampatti	**1**	2	2	1	1	1	0	0	0	0	0	0	2	0
6	Vadagarai	**1**	3	2	1	1	0	0	0	0	0	0	0	3	0
7	Tenkarai	**1**	3	3	1	1	0	0	0	0	0	0	0	3	0
	Sub - Total (B)		**12**	**11**	**5**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**
5-10 km,Rajapalayam Sub-District, Virudhunagar District															
8	Arasiyarpatti	**1**	2	3	0	0	0	0	0	0	0	0	0	3	0
9	Keelrajakularaman	**1**	8	8	4	2	1	0	0	0	0	0	0	8	0
10	Melarajakularaman (Part)	**1**	12	7	2	2	2	0	0	0	0	0	0	7	0
11	Pudupalaiyam	**1**	2	0	0	0	0	0	0	0	0	0	0	1	0
12	Kollankondan	**1**	3	1	0	0	0	0	0	0	0	0	0	1	0
13	Ilandiraikondan	**1**	3	3	2	0	0	0	0	0	0	0	0	2	0
14	Nallamangalam	**1**	3	2	1	1	0	0	0	0	0	0	0	2	0
15	Puthur	**1**	5	7	3	2	2	0	0	0	0	0	0	7	0
16	Korukkampatti	**1**	5	3	0	0	0	0	0	0	0	0	0	3	0
Srivilliputhur Sub-District, Virudhunagar District															
17	Pillaiyarkulam (part)	**1**	3	3	0	0	0	0	0	0	0	0	0	3	0
18	Achchandavilthan	**1**	2	5	1	0	0	0	0	0	0	0	0	5	0
Sivakasi Sub-District, Virudhunagar District															
19	Nadukkudi	**1**	3	3	1	0	0	0	0	0	0	0	0	3	0
20	Kongankulam	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0
21	Alangulam (Part)	**1**	5	3	3	2	2	0	0	0	0	0	0	3	0
22	Kilanmarinadu	**1**	2	1	0	0	0	0	0	0	0	0	0	1	0
23	Lakshmipuram	**1**	4	4	0	0	0	0	0	0	0	0	0	4	0
24	Appanayakkanpatti	**1**	2	0	0	0	0	0	0	0	0	0	0	0	0
Sivagiri Sub-District,Tirunelveli District															
25	Thenmalai	**1**	3	8	2	1	1	0	0	0	0	0	0	1	0
Sankarankoil Sub-District,Tirunelveli District															
26	Perumalpatti	**1**	4	2	1	0	0	0	0	0	0	0	0	1	0
27	Valavandapuram	**1**	1	1	0	0	0	0	0	0	0	0	0	1	0
28	Pandappuli	**1**	8	6	0	0	0	0	0	0	0	0	0	1	0
29	Rengasamudram	**1**	1	1	0	0	0	0	0	0	0	0	0	1	0
30	Kalingappatti	**1**	2	4	1	1	1	0	0	0	0	0	0	1	0
32	Chattrappatti	**1**	2	3	1	0	0	0	0	0	0	0	0	1	0
33	Kulasekarapperi	**1**	1	1	1	0	0	0	0	0	0	0	0	1	0
34	Karisattan	**1**	5	1	0	0	0	0	0	0	0	0	0	1	0
35	Paruvakkudi	**1**	4	4	0	0	0	0	0	0	0	0	0	1	0
	Sub - Total (C)		**96**	**84**	**23**	**11**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**63**	**0**
	Grand Total (A+B+C)		**111**	**99**	**29**	**14**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**81**	**0**

**Source: District Primary Cences Absract, Virudhunagar and Tirunelveli District of Tamilnadu State-2011*

MEDICAL FACILITIES WITHIN THE STUDY AREA

Sl.No	Name of village	Medical Facilities (A(1)/NA(2))	Community Health Centre (Numbers)	Primary Health Centre (Numbers)	Primary Heallth Sub Centre (Numbers)	Maternity And Child Welfare Centre (Numbers)	TB Clinic (Numbers)	Hospital Allopathic (Numbers)	Hospiltal Alternative Medicine (Numbers)	Dispensary (Numbers)	Veterinary Hospital (Numbers)	Mobile Health Clinic (Numbers)	Family Welfare Centre (Numbers)
0-2 km,Rajapalayam Sub-District, Virudhunagar District													
1	Varagunaramapuram	**1**	0	0	1	0	0	0	0	0	0	0	0
2	Gopalapuram	**2**	0	0	0	0	0	0	0	0	0	0	0
3	Kuruchiyarpatti	**1**	0	0	0	0	0	0	0	0	1	0	0
	total (A)		**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**
2-5 km,Rajapalayam Sub-District, Virudhunagar District													
4	Sholapuram	**1**	0	2	2	2	2	0	0	2	0	0	2
5	Nathampatti	**1**	0	1	1	1	1	0	0	1	0	0	1
6	Vadagarai	**1**	0	0	1	1	0	0	0	0	0	0	0
7	Tenkarai	**2**	0	0	0	0	0	0	0	0	0	0	0
	total (B)		**0**	**3**	**4**	**4**	**3**	**0**	**0**	**3**	**0**	**0**	**3**
5-10 km,Rajapalayam Sub-District, Virudhunagar District													
8	Arasiyarpatti	**1**	0	0	1	0	0	0	0	0	0	0	0
9	Keelrajakularaman	**1**	1	1	1	1	1	0	0	1	1	0	1
10	Melarajakularaman (Part)	**1**	0	1	3	1	1	0	0	1	1	0	1
11	Pudupalaiyam	**1**	0	0	3	0	0	0	0	0	0	0	0
12	Kollankondan	**1**	1	1	1	1	1	0	0	1	1	0	1
13	Ilandiraikondan	**1**	0	0	1	0	0	0	0	0	0	0	0
14	Nallamangalam	**1**	0	0	1	0	0	0	0	0	1	0	0
15	Puthur	**1**	0	0	2	0	0	0	0	0	2	0	0
16	Korukkampatti	**2**	0	0	0	0	0	0	0	0	0	0	0
Srivilliputhur Sub-District, Virudhunagar District													
17	Pillaiyarkulam (part)	**1**	0	0	1	1	0	0	0	0	0	0	0
18	Achchandavilthan	**1**	0	0	1	1	0	0	0	0	0	0	0
Sivakasi Sub-District, Virudhunagar District													
19	Nadukkudi	**1**	0	0	1	0	0	0	0	0	0	0	0
20	Kongankulam	**1**	0	0	1	0	0	0	0	0	0	0	0
21	Alangulam (Part)	**1**	1	1	1	1	1	0	0	1	1	0	1
22	Kilanmarinadu	**1**	0	0	1	0	0	0	0	0	0	0	0
23	Lakshmipuram	**1**	0	0	1	0	0	0	0	0	0	0	0
24	Appanayakkanpatti	**1**	0	0	1	0	0	0	0	0	0	0	0
Sivagiri Sub-District,Tirunelveli District													
25	Thenmalai	**1**	0	2	1	2	2	0	0	2	0	0	2
Sankarankoil Sub-District,Tirunelveli District													
26	Perumalpatti	**1**	0	0	1	0	0	0	0	0	0	0	0
27	Valavandapuram	**2**	0	0	0	0	0	0	0	0	0	0	0
28	Pandappuli	**1**	0	0	2	0	0	0	0	0	0	0	0
29	Rengasamudram	**2**	0	0	0	0	0	0	0	0	0	0	0
30	Kalingappatti	**1**	0	1	1	1	1	0	0	1	1	0	1
31	Chattrappatti	**1**	0	0	1	0	0	0	0	0	0	0	0
32	Kulasekarapperi	**2**	0	0	0	0	0	0	0	0	0	0	0
33	Karisattan	**1**	0	0	1	0	0	0	0	0	0	0	0
34	Paruvakkudi	**1**	0	0	1	0	0	0	0	0	0	0	0
	total (C)		**3**	**7**	**29**	**9**	**7**	**0**	**0**	**7**	**8**	**0**	**7**
	Grand Total (A+B+C)		**3**	**10**	**34**	**13**	**10**	**0**	**0**	**10**	**9**	**0**	**10**

**Source: District Primary Census Abstract, Virudhunagar and Tirunelveli District of Tamil Nadu State-2011*

Note : A: Available, NA- Not Available

INFRASTRUCTURAL FACILITIES IN THE STUDY AREA

Sl.No	Name of village	Tap Water-Treated	Covered Well	Hand Pump	Tube Wells/Borehole	Spring	River/Canal	Tank/Pond/Lake	Post Office	Sub Post Office	Post And Telegraph Office	Telephone (landlines)	Mobile Phone Coverage	Public Bus Service	Railway Station	Commercial Bank	Cooperative Bank	Agricultural Credit Societies
0-2 km,Rajapalayam Sub-District, Virudhunagar District																		
1	Varagunaramapuram	1	2	1	1	2	2	2	2	2	2	1	1	1	2	2	2	2
2	Gopalapuram	1	2	2	2	2	2	2	2	1	2	1	1	1	2	1	2	2
3	Kuruchiyarpatti	1	2	1	1	2	2	2	2	2	2	1	1	1	2	2	1	1
2-5 km,Rajapalayam Sub-District, Virudhunagar District																		
4	Sholapuram	1	2	1	1	2	2	2	1	1	1	1	1	1	2	1	2	1
5	Nathampatti	1	2	2	1	2	2	2	2	1	2	1	1	1	2	2	2	2
6	Vadagarai	1	2	2	1	2	2	2	2	1	2	1	1	1	2	2	1	1
7	Tenkarai	1	2	1	1	2	2	2	2	2	2	1	1	1	2	2	2	2
5-10 km,Rajapalayam Sub-District, Virudhunagar District																		
8	Arasiyarpatti	1	2	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
9	Keelrajakularaman	1	2	1	1	2	2	2	1	1	1	1	1	1	2	2	1	1
10	Melarajakularaman (Part)	1	1	1	1	1	2	2	2	1	2	1	1	1	2	1	1	1
11	Pudupalaiyam	1	2	1	1	2	2	2	2	2	2	1	1	2	2	2	2	2
12	Kollankondan	1	1	2	2	2	2	2	1	1	1	1	1	1	2	2	2	2
13	Ilandiraikondan	1	2	2	1	2	1	2	2	2	2	1	1	1	2	2	2	2
14	Nallamangalam	1	1	1	1	2	2	2	2	1	2	1	1	1	2	2	2	2
15	Puthur	1	1	1	1	2	2	2	2	1	2	1	1	1	2	2	2	2
16	Korukkampatti	1	2	2	2	1	1	2	2	2	2	1	1	2	2	2	2	2
Srivilliputhur Sub-District, Virudhunagar District																		
17	Pillaiyarkulam (part)	1	1	1	1	2	2	2	1	2	1	1	1	1	2	2	1	1
18	Achchandavilthan	1	2	1	1	2	2	2	2	1	2	1	1	1	2	2	1	1
Sivakasi Sub-District, Virudhunagar District																		
19	Nadukkudi	1	2	1	2	1	2	2	2	1	2	1	1	1	2	2	1	1
20	Kongankulam	1	2	1	1	2	1	2	2	2	2	1	1	1	2	2	2	1
21	Alangulam (Part)	1	1	1	1	2	2	2	1	1	1	1	1	1	2	1	1	1
22	Kilanmarinadu	1	2	1	1	2	2	2	2	2	2	1	1	1	2	2	2	1
23	Lakshmipuram	1	1	1	1	2	2	2	2	1	2	1	1	1	2	2	2	1
24	Appanayakkanpatti	1	2	2	1	2	2	2	2	1	2	1	1	1	2	2	1	1
Sivagiri Sub-District,Tirunelveli District																		
25	Thenmalai	1	1	1	1	1	2	2	2	1	2	1	1	1	2	1	1	1
Sankarankoil Sub-District,Tirunelveli District																		
26	Perumalpatti	1	2	2	1	2	2	2	2	1	2	1	1	1	2	2	2	2
27	Valavandapuram	1	2	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
28	Pandappuli	1	1	2	1	2	2	2	2	1	2	1	1	1	2	2	2	2
29	Rengasamudram	1	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	2
30	Kalingappatti	1	1	1	1	2	2	2	2	1	2	1	1	2	2	1	2	1
31	Chattrappatti	1	1	2	1	2	2	2	2	1	2	1	1	1	2	2	2	2
32	Kulasekarapperi	1	2	2	2	2	2	2	2	1	2	1	1	1	2	2	2	2
33	Karisattan	1	2	2	1	2	1	2	2	1	2	1	1	1	2	2	2	2
34	Paruvakkudi	1	1	2	1	1	2	2	2	2	2	1	1	1	2	2	2	2

**Source: District Primary Cences Absract, Virudhunagar and Tirunelveli District of Tamilnadu State-2011*

Note : A: Available, NA- Not Available

Status: A(1)/NA(2)

CREATIVE ENGINEERS & CONSULTANTS

(NABET ACCREDITED, NABL ACCREDITED TESTING LABORATORY,
DEPARTMENT OF INDUSTRIES AND COMMERCE REGISTERED COMPANY

AMBIENT AIR QUALITY

Project	:	**Rough Stone and Gravel Quarry Of Thiru. S. Shunmugavel**
Name of the Location	:	**Near Mine Lease Area**
Station Code	:	**A1**

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	3/4/2025	56.9	27.9	6.3	9.5
2	3/5/2025	54.4	26.3	5.8	8.6
3	3/15/2025	61.4	32.0	7.9	10.5
4	3/16/2025	58.0	28.6	6.5	9.7
5	3/18/2025	55.8	27.5	6.2	9.3
6	3/19/2025	52.9	25.4	5.5	8.0
7	3/29/2025	51.9	24.3	5.3	7.6
8	3/30/2025	53.4	25.7	5.6	8.1
9	4/1/2025	57.4	28.3	6.4	9.6
10	4/2/2025	59.9	29.4	7.3	10.0
11	4/12/2025	52.5	25.0	5.4	7.8
12	4/13/2025	56.4	27.7	6.2	9.4
13	4/15/2025	58.5	28.7	6.7	9.8
14	4/16/2025	54.0	26.0	5.7	8.4
15	4/26/2025	62.9	37.8	8.3	10.9
16	4/27/2025	60.8	31.7	7.7	10.3
17	4/29/2025	58.9	28.9	6.9	9.9
18	4/30/2025	55.0	26.7	5.9	8.8
19	5/10/2025	64.7	39.4	8.7	11.3
20	5/11/2025	60.5	29.7	7.5	10.1
21	5/13/2025	59.4	29.1	7.2	10.0
22	5/14/2025	55.6	27.0	6.0	9.0
23	5/24/2025	61.9	37.4	8.2	10.7
24	5/25/2025	63.5	38.3	8.5	11.1
	MIN	**51.9**	**24.3**	**5.3**	**7.6**
	AVE	**57.8**	**29.5**	**6.7**	**9.5**
	MAX	**64.7**	**39.4**	**8.7**	**11.3**

Note: BDL – Below Detectable Limit, DL: Detectable Limit.

Prepared by

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CREATIVE ENGINEERS & CONSULTANTS

(NABET ACCREDITED, NABL ACCREDITED TESTING LABORATORY,
DEPARTMENT OF INDUSTRIES AND COMMERCE REGISTERED COMPANY

AMBIENT AIR QUALITY

Project	:	**Rough Stone and Gravel Quarry Of Thiru. S. Shunmugavel**
Name of the Location	:	**Mettu Vadakarai Village**
Station Code	:	**A2**

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	3/4/2025	48.4	20.1	4.9	7.5
2	3/5/2025	46.8	18.6	4.4	6.9
3	3/15/2025	49.8	19.8	5.4	8.0
4	3/16/2025	47.7	18.9	4.7	7.3
5	3/18/2025	46.5	18.4	4.3	6.8
6	3/19/2025	48.0	19.0	4.8	7.4
7	3/29/2025	49.5	19.6	5.3	7.9
8	3/30/2025	52.2	25.6	6.1	8.8
9	4/1/2025	49.1	19.5	5.2	7.8
10	4/2/2025	52.5	28.8	6.2	8.9
11	4/12/2025	48.9	19.4	5.1	7.7
12	4/13/2025	51.6	25.3	5.9	8.6
13	4/15/2025	52.9	30.4	6.5	9.3
14	4/16/2025	47.1	18.7	4.5	7.0
15	4/26/2025	50.7	24.9	5.7	8.4
16	4/27/2025	52.6	29.4	6.3	9.0
17	4/29/2025	50.1	19.9	5.5	8.1
18	4/30/2025	48.6	19.4	5.0	7.6
19	5/10/2025	47.4	18.8	4.6	7.1
20	5/11/2025	50.4	24.7	5.6	8.3
21	5/13/2025	53.2	30.6	6.6	9.6
22	5/14/2025	51.9	25.5	6.0	8.7
23	5/24/2025	52.7	30.1	6.4	9.1
24	5/25/2025	51.0	25.0	5.8	8.5
	MIN	**46.5**	**18.4**	**4.3**	**6.8**
	AVE	**50.0**	**22.9**	**5.5**	**8.1**
	MAX	**53.2**	**30.6**	**6.6**	**9.6**

Note: BDL – Below Detectable Limit, DL: Detectable Limit.

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AMBIENT AIR QUALITY

Project	**:**	**Rough Stone and Gravel Quarry Of Thiru. S. Shunmugavel**
Name of the Location	**:**	**Tenkarai Village**
Station Code	**:**	**A3**

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	3/6/2025	52.6	24.8	5.8	7.9
2	3/7/2025	49.8	20.0	5.0	7.1
3	3/13/2025	55.5	26.1	6.6	9.1
4	3/14/2025	53.0	24.9	5.9	8.0
5	3/20/2025	49.4	19.8	4.8	7.0
6	3/21/2025	51.8	24.4	5.6	7.7
7	3/27/2025	50.2	20.3	5.2	7.3
8	3/28/2025	51.4	24.4	5.5	7.6
9	4/3/2025	57.4	27.0	7.2	10.1
10	4/4/2025	53.8	25.3	6.2	8.3
11	4/10/2025	52.1	24.5	5.7	7.8
12	4/11/2025	55.0	25.9	6.5	8.9
13	4/17/2025	57.8	27.4	7.3	10.3
14	4/18/2025	54.1	25.6	6.4	8.5
15	4/24/2025	56.2	26.5	6.8	9.5
16	4/25/2025	50.6	21.4	5.3	7.4
17	5/1/2025	56.7	26.7	6.9	9.7
18	5/2/2025	50.9	24.0	5.4	7.5
19	5/8/2025	58.6	27.6	7.7	10.7
20	5/9/2025	57.1	26.9	7.0	9.9
21	5/15/2025	54.6	25.7	6.4	8.7
22	5/16/2025	53.4	25.3	6.0	8.1
23	5/22/2025	58.2	27.4	7.5	10.5
24	5/23/2025	55.8	26.5	6.7	9.3
	MIN	**49.4**	**19.8**	**4.8**	**7.0**
	AVE	**54.0**	**24.9**	**6.2**	**8.6**
	MAX	**58.6**	**27.6**	**7.7**	**10.7**

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AMBIENT AIR QUALITY

Project	:	**Rough Stone and Gravel Quarry Of Thiru. S. Shunmugavel**
Name of the Location	:	**Kuruchiyarpatti Village**
Station Code	:	**A4**

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	3/6/2025	49.4	22.8	4.8	7.1
2	3/7/2025	50.9	23.5	5.3	7.6
3	3/13/2025	54.6	26.8	7.6	10.1
4	3/14/2025	52.7	25.1	5.9	8.3
5	3/20/2025	53.2	25.7	6.2	8.7
6	3/21/2025	54.4	26.7	7.4	9.9
7	3/27/2025	49.1	22.6	4.7	7.0
8	3/28/2025	50.6	23.3	5.2	7.5
9	4/3/2025	54.8	26.9	7.8	10.3
10	4/4/2025	52.4	24.7	5.8	8.1
11	4/10/2025	52.1	24.5	5.7	8.0
12	4/11/2025	53.4	26.0	6.4	8.9
13	4/17/2025	55.0	27.0	7.9	10.5
14	4/18/2025	53.6	26.3	6.6	9.1
15	4/24/2025	49.7	23.0	4.9	7.3
16	4/25/2025	51.2	23.6	5.4	7.7
17	5/1/2025	53.0	25.3	6.0	8.5
18	5/2/2025	53.8	26.4	6.8	9.3
19	5/8/2025	50.0	23.1	5.0	7.4
20	5/9/2025	51.8	24.4	5.6	7.9
21	5/15/2025	55.5	27.3	8.0	10.7
22	5/16/2025	54.0	26.5	7.0	9.5
23	5/22/2025	51.5	23.8	5.5	7.8
24	5/23/2025	54.2	26.6	7.2	9.7
	MIN	**49.1**	**22.6**	**4.7**	**7.0**
	AVE	**52.5**	**25.1**	**6.2**	**8.6**
	MAX	**55.5**	**27.3**	**8.0**	**10.7**

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AMBIENT AIR QUALITY

Project	**:**	**Rough Stone and Gravel Quarry Of Thiru. S. Shunmugavel**
Name of the Location	**:**	**Muthanuthi Village**
Station Code	**:**	**A5**

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	3/8/2025	44.7	21.5	4.0	6.7
2	3/9/2025	46.5	22.4	4.7	7.3
3	3/11/2025	48.9	23.5	5.6	8.1
4	3/12/2025	50.4	24.2	6.2	8.6
5	3/22/2025	44.4	21.4	3.9	6.6
6	3/23/2025	46.2	22.2	4.6	7.2
7	3/25/2025	48.6	23.4	5.5	8.0
8	3/26/2025	46.8	22.5	4.8	7.4
9	4/5/2025	50.7	24.4	6.4	8.7
10	4/6/2025	47.1	22.7	4.9	7.5
11	4/8/2025	47.7	23.0	5.2	7.7
12	4/9/2025	45.0	21.7	4.2	6.8
13	4/19/2025	50.1	24.1	6.0	8.5
14	4/20/2025	45.4	21.8	4.3	6.9
15	4/22/2025	49.8	24.0	5.9	8.4
16	4/23/2025	47.4	22.8	5.0	7.6
17	5/3/2025	51.0	24.5	6.6	8.8
18	5/4/2025	49.5	23.8	5.8	8.3
19	5/6/2025	48.0	23.1	5.3	7.8
20	5/7/2025	45.6	21.9	4.4	7.0
21	5/17/2025	51.2	24.6	6.9	8.9
22	5/18/2025	49.2	23.7	5.7	8.2
23	5/20/2025	45.9	22.1	4.5	7.1
24	5/21/2025	48.4	23.3	5.4	7.9
	MIN	**44.4**	**21.4**	**3.9**	**6.6**
	AVE	**47.9**	**23.0**	**5.2**	**7.8**
	MAX	**51.2**	**24.6**	**6.9**	**8.9**

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AMBIENT AIR QUALITY

Project	**:**	**Rough Stone and Gravel Quarry Of Thiru. S. Shunmugavel**
Name of the Location	**:**	**Gopalapuram Village**
Station Code	**:**	**A6**

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	3/8/2025	62.4	30.5	8.0	10.9
2	3/9/2025	54.0	26.4	6.2	8.4
3	3/11/2025	50.6	24.7	5.4	7.0
4	3/12/2025	55.0	26.9	6.4	8.9
5	3/22/2025	53.5	26.2	6.1	8.2
6	3/23/2025	52.1	25.5	5.7	7.6
7	3/25/2025	57.9	28.3	7.2	10.0
8	3/26/2025	53.0	25.9	6.0	8.0
9	4/5/2025	55.6	27.2	6.5	9.0
10	4/6/2025	61.3	30.0	7.8	10.6
11	4/8/2025	64.6	31.6	8.4	11.2
12	4/9/2025	56.5	27.6	6.7	9.4
13	4/19/2025	51.0	24.9	5.5	7.2
14	4/20/2025	54.3	26.6	6.3	8.6
15	4/22/2025	63.4	31.0	8.2	11.0
16	4/23/2025	57.6	28.2	7.0	9.9
17	5/3/2025	51.4	25.1	5.6	7.4
18	5/4/2025	57.0	27.9	6.8	9.6
19	5/6/2025	68.0	33.3	8.8	11.6
20	5/7/2025	60.2	29.4	7.6	10.4
21	5/17/2025	56.0	27.4	6.6	9.2
22	5/18/2025	52.5	25.7	5.8	7.9
23	5/20/2025	59.1	28.9	7.4	10.2
24	5/21/2025	66.8	32.7	8.6	11.4
	MIN	**50.6**	**24.7**	**5.4**	**7.0**
	AVE	**57.2**	**28.0**	**6.9**	**9.3**
	MAX	**68.0**	**33.3**	**8.8**	**11.6**

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WATER QUALITY DATA

Project Name	:	**Rough Stone and Gravel Quarry Of Thiru. S. Shunmugavel**
Location Name	:	

Location Code	Location Name
W1	Near Mine Lease Area
W2	Mettu Vadakarai Village
W3	Tenkarai Village
W4	Kuruchiyarpatti Village
W5	Muthanuthi Village
W6	Gopalapuram Village

S. No.	Parameter	Unit	W1	W 2	W 3	W 4	W 5	W 6	*Permissible Limits
1	pH	-	**7.58**	**7.32**	**7.29**	**7.56**	**7.24**	**7.72**	**6.5-8.5**
2	Electrical Conductivity	µmhos/ cm	**982.5**	**410.2**	**556.5**	**703.2**	**665.2**	**480.5**	**-**
3	Odor	-	**AGREEABLE**	**AGREEABLE**	**AGREEABLE**	**AGREEABLE**	**AGREEABLE**	**AGREEABLE**	**AGREEABLE**
4	Turbidity	NTU	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**5.0**
5	Total Hardness as $CaCO_3$	mg/L	**312**	**194**	**201**	**264**	**251**	**184**	**600**
6	Calcium Hardness $CaCO_3$	mg/L	**175**	**102**	**67.9**	**140**	**146**	**96.5**	**-**
7	Magnesium Hardness $CaCO_3$	mg/L	**137**	**92**	**133.1**	**124**	**105**	**87.5**	**-**
8	Calcium Ca	mg/L	**70.0**	**40.8**	**27.2**	**56.0**	**58.4**	**38.6**	**200**
9	Magnesium	mg/L	**32.9**	**22.1**	**31.9**	**29.8**	**25.2**	**21.0**	**100**

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S. No.	Parameter	Unit	W1	W 2	W 3	W 4	W 5	W 6	*Permissible Limits
	Mg								
10	Alkalinity $CaCO_3$	mg/L	292	125	256	292	280	274	600
11	Chloride Cl^-	mg/L	77.3	56.4	25.2	102	98.6	22.3	1000
12	Sulphate SO_4^{2}	mg/L	186	12.1	17.6	20.8	17.3	14.5	400
13	Iron Fe	mg/L	0.07	0.04	0.03	0.04	0.05	BDL(D.L - 0.01)	0.3
14	Nitrate NO_3	mg/L	7.21	2.56	2.34	2.47	3.54	BDL(D.L – 1.0)	45
15	Fluoride F	mg/L	0.63	0.35	0.22	0.31	0.45	BDL(D.L – 0.1)	1.5
16	Total Dissolved Solids	mg/L	590	250	336	425	402	290	2000
17	Free Residual Chlorine Cl^-	mg/L	BDL (D.L-0.2)	BDL (D.L-0.2)	BDL (D.L-0.2)	BDL(D.L-0.2)	BDL(D.L-0.2)	BDL(D.L-0.2)	1.0
18	Manganese Mn	mg/L	BDL (D.L-0.05)	BDL (D.L-0.05)	BDL (D.L-0.05)	BDL (D.L-0.05)	BDL (D.L-0.05)	BDL (D.L-0.05)	0.3

Note: * The water quality of the collected ground water samples were found to be within the prescribed permissible limits of IS: 10500:2012 Norms for Drinking in the absence of an alternative source.

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LAND USE PATTERN OF THE STUDY AREA WITHIN 10 KM RADIUS AROUND THE PROPOSED PROJECT AREA

Sl.No	Name of village	Total Geographical Area (in Hectares)	Forest Area (in Hectares)	Area under Non-Agricultural Uses (in Hectares)	Barren & Un-cultivable Land Area (in Hectares)	Permanent Pastures and Other Grazing Land Area (in Hectares)	Land Under Miscellaneous Tree Crops etc. Area (in Hectares)	Culturable Waste Land Area (in Hectares)	Fallows Land other than Current Fallows Area (in Hectares)	Current Fallows Area (in Hectares)	Total Unirrigated Land Area (in Hectares)	Area Irrigated by Source (in Hectares)
0-2 km,Rajapalayam Sub-District, Virudhunagar District												
1	Varagunaramapuram	278.34	0	75.67	0	0	0	0	109.47	10.58	62.82	19.8
2	Gopalapuram	1088.78	0	57.46	0	0	265.35	0.94	262.91	190.15	163.72	148.25
3	Kuruchiyarpatti	190.38	0	42.25	0	0	0	0	57.71	36.44	17.59	36.39
	total (A)	**1557.5**	**0**	**175.38**	**0**	**0**	**265.35**	**0.94**	**430.09**	**237.17**	**244.13**	**204.44**
2-5 km,Rajapalayam Sub-District, Virudhunagar District												
4	Sholapuram	2227.19	0	396.68	0.6	0	241.35	0	674.25	226.34	260.26	427.71
5	Nathampatti	326.97	0	106.02	0	0	0	0	80.91	0	44.38	95.66
6	Vadagarai	929.81	0	246.54	0	0	0	0.06	275.33	139.89	28.14	239.85
7	Tenkarai	1365.16	0	195.31	0	0	0	2.36	715.34	0	29.66	422.49
	total (B)	**4849.13**	**0**	**944.55**	**0.6**	**0**	**241.35**	**2.42**	**1745.83**	**366.23**	**362.44**	**1185.71**
5-10 km,Rajapalayam Sub-District, Virudhunagar District												
8	Arasiyarpatti	775.58	0	133.33	93.66	0	0.69	0.27	277.24	47.28	38.32	184.79
9	Keelrajakularaman	2394.68	0	308.98	0	0	0.2	1.18	1248.11	83.48	217	535.73
10	Melarajakularaman (Part)	2016.59	0	332.29	2.27	0	165.24	0	994.33	0	24.59	497.87
11	Pudupalaiyam	1067.53	0	53.35	25	0	0	311.43	305.67	0	187.36	184.72
12	Kollankondan	583.84	0	149.13	0.27	0	0	1.03	149.2	0	35.3	248.91
13	Ilandiraikondan	906.64	0	12.67	2.3	0.86	0	451.68	184.07	0	205.01	50.05
14	Nallamangalam	184.13	0	61.35	0	0	0	0	46.01	0.12	1.07	75.58
15	Puthur	1805.21	0	27.43	396.39	1.22	0	939.2	22.6	0	63.27	355.1
16	Korukkampatti	1081.33	0	147.6	0	0	0	1.82	454.78	53.03	323.46	100.64
Srivilliputhur Sub-District, Virudhunagar District												
17	Pillaiyarkulam (part)	1694.33	0	357.47	82	6.96	0	0	0	945.66	29.54	272.7
18	Achchandavilthan	1947.63	0	27.25	4.86	3.81	0	5.6	306.27	879.98	669.28	50.58
Sivakasi Sub-District, Virudhunagar District												
19	Nadukkudi	2384.77	0	353.28	0	4.1	114.9	4.93	1071.64	273.41	373.85	188.66
20	Kongankulam	128.59	0	5.81	0	0	0.01	0.51	16.29	27.43	65.95	12.59
21	Alangulam (Part)	1491.2	0	102.14	20	3.4	38.05	5.21	944.23	157.45	196.89	23.83
22	Kilanmarinadu	2765	0	586.05	0	6	20	5.8	1764.53	76.3	277.7	28.62
23	Lakshmipuram	2000.71	0	200.63	85.04	1.9	39.66	3.5	1229.55	61.7	314.18	64.55
24	Appanayakkanpatti	1582.78	0	206.49	14.57	4.18	0	3.88	0	633.33	416.45	303.88
Sivagiri Sub-District,Tirunelveli District												
25	Thenmalai	3549.95	0	585.22	191.41	0	0	508.73	273.03	983.31	319.73	688.52
Sankarankoil Sub-District,Tirunelveli District												
26	Perumalpatti	1252.09	0	304.31	0	0	0.17	18.14	628.85	60.97	7.11	232.54
27	Valavandapuram	144.46	0	60.8	0	0	0.2	0	21.59	0	0.42	61.45
28	Pandappuli	2040.01	0	398.71	0	0	0.31	35.85	744.82	59.6	448.37	352.35
29	Rengasamudram	230.44	0	9.08	0	0	0	0	0.92	8.98	207.06	4.4
30	Kalingappatti	2766.17	0	249.47	0	0	14.72	145.2	10.25	989.89	1221.11	135.53
31	Subbiahpuram	22.72	0	0.62	0	0	0	0	0	0.07	22.03	0
32	Chattrappatti	599.1	0	134.35	0	0	0	0	172.47	11.61	35.48	245.19
33	Kulasekarapperi	28.49	0	5.72	0	0	0	0	4.04	0.74	17.99	0
34	Karisattan	1537.72	0	275.66	1.56	0	20	123	281.55	112.82	327.56	395.57
35	Paruvakkudi	1247.58	0	386.99	133.31	0	20	0.45	259.48	82.64	71.39	293.32
	total (C)	**38229.27**	**0**	**5476.18**	**1052.64**	**32.43**	**434.15**	**2567.41**	**11411.52**	**5549.8**	**6117.47**	**5587.67**
	Grand Total (A+B+C)	**44635.9**	**0**	**6596.11**	**1053.24**	**32.43**	**940.85**	**2570.77**	**13587.44**	**6153.2**	**6724.04**	**6977.82**

**Source: District Primary Cences Absract, Virudhunagar and Tirunelveli District of Tamilnadu State-2011*

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
விஜிலன்ஸ் & சுரங்கத்துறை

MINING PLAN AND ENVIRONMENT MANAGEMENT PLAN FOR QUARRYING ROUGHSTONE & GRAVEL

PREPARED UNDER RULE19 (1)& 20and as per Amendment under rule No. 41 & 42
TAMILNADU MINOR MINERAL CONCESSION RULES, 1959

For Obtaining Environmental Clearance

from

State Level Environment Impact Assessment Authority

(Lease Period – Five years)
IN
LOCATION OF THE QUARRY LEASE APPLIED AREA

EXTENT	:	**2.12.50Hectares**
SURVEY Nos.	:	**586/11, 586/12, 586/13, 586/14 586/15, 586/17 & 586/18**
VILLAGE	:	**GOPALAPURAM**
TALUK	:	**VEMBAKOTTAI**
DISTRICT	:	**VIRUDHUNAGAR**

FOR APPLICANT :
S. SHUNMUGAVEL,
S/o Shri. Subbiah Thevar,
No.300D5/2, Sankarankovil Road,
Rajapalayam Town & Taluk,
Virudhunagar District.

PREPARED BY
M.DHARMALINGAM, M.Sc.,(Geol.),FCC(Mining)
Recogonised Qualified Person
Registration No. **RQP/MAS/260/2014/A,**
No.28, Polpettai,
Thoothukudi – 628002. Cell: 9952808328

S. சண்முகவேல்

S. SHUNMUGAVEL,
S/o Shri. Subbiah Thevar,
No.300D5/2, Sankarankovil Road,
Rajapalayam Town & Taluk,
Virudhunagar District.
Mobile No. 80125 23355

19 NOV 2024

CONSENT LETTER FROM THE APPLICANT

I, hereby give my consent to prepare the Mining Plan for the quarry lease approval of **Rough stone & Gravel** over an total extent of **2.12.50 Hectares** in **S.F.Nos: 586/11,12,13,14,15,17,18** of **Gopalapuram Village, Vembakottai Taluk, Virudhunagar District,** vide **The Assistant Director, Geology and Mining, Virudhunagar, Letter No. KV1/1029/2023 - dated 10.10.2024** and submit by **Sri. M. Dharmalingam, M.Sc(Geol.), FCC(Mining), Recognized Qualified Person,.**

I request the Assistant director, Geology & Mining, Virudhunagar to make further correspondence regarding the modification of the Mining Plan with said Recognized Qualified Person at his following address :

Shri. M. Dharmalingam, M.Sc.,(Geol.), FCC(Mining),
No.28, Pol Pettai,
Thoothukudi – 628002.
Cell : 9952808328

I hereby undertake that all the modifications, if any made in the mining plan by the Recognized Qualified Person may be deemed to have been made with my knowledge and consent and shall be acceptable to me and binding on me all respect.

Place : Virudhunagar
Date : 11-11-2024

Signature of the Applicant.

S. சண்முகவேல்

(S. Shunmugavel)

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S. சண்முகவேல்

S. SHUNMUGAVEL,
S/o Shri. Subbiah Thevar,
No.300D5/2, Sankarankovil Road,
Rajapalayam Town & Taluk,
Virudhunagar District.
Mobile No. 80125 23355

DECLARATION OF THE APPLICANT

The Mining Plan in respect of the quarry lease approval of **Rough stone & Gravel** over an total extent of **2.12.50 Hectares** in **S.F.Nos: 586/11,12,13,14,15,17,18 of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District,** has been prepared in full consultation with me.

I have understood its contents and agree to implement the same in accordance with Laws, Rules and Act applicable to quarry.

Place : Virudhunagar
Date : 11-11-2024

Signature of the Applicant.

S. சண்முகவேல்
(S. Shunmugavel)

This Mining is approved based on guidelines/ instructions issued in the GOM ... No. 3568/LC/2012 dated 10-11-2012 ... particulars specified in the ... KVI-1029-2024 ... 19.11.24 ... Deputy Director of ... and subject to ... laid down under rule ... Tamil Nadu ... Concession Rules 1959

19/11/24
Assistant Director of Geology & Mining
Virudhunagar

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

KVI-1029-2024
Letter Roc. No. Dated 19.11.24

S. சண்முகவேல்

Shri. M. DHARMALINGAM, M.Sc.,(Geol.), FCC(Mining),
Recognized Qualified Person,
Reg. No. RQP/MAS/260/2014/A
No.28, Pol Pettai,
Thoothukudi – 628 002.
Cell : 99528 08328

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CERTIFICATE FROM THE RECOGNIZED QUALIFIED PERSON

This is to certify that the provisions of the Mines Act, Rules and Regulations, Minor Mineral Conservation and Development Rules, 2010 & as per Amendment Rules under Tamil Nadu Minor Mineral Concession Rules, 1959etc., made there under have been observed in the preparation of Mining Plan for Rough stone and Gravel quarry for **Thiru. S. Shunmugavel, S/o. Shri. Subbiah Thevar** over an extent of **2-12.50 Hectares** in **S.F.Nos: 586/11,12,13,14,15,17,18 of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District.**

Where ever the necessary permissions / exemptions / relaxations and approvals are required, the applicant would approach the concerned authorities of State and Central Governments for granting such permissions etc..

Place : Thoothukudi
Date : 24/11/2024

M. Dharmalingam, M.Sc.,(Geol.), FCC(Mining),
Recognized Qualified Person

M. DHARMALINGAM
M.Sc.,(Geol.) FCC.,(Mining)
Recognised Qualified Person
RQP / MAS / 260 / 2014 / A

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விருதுநகர் மாவட்டம்
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புவியியல் & சுரங்கத்துறை

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S. தண்டபாணி

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S. தண்முகவேல்

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MINING PLAN INCLUDING ENVIRONMENT MANAGEMENT PLAN FOR ROUGH STONE & GRAVEL QUARRY OVER AN EXTENT OF 2-12.50 Ha IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMILNADU

(Prepared Under Rule 19 (1) and as per Amendment under rule no 41& 42 Tamilnadu Minor Mineral Concession Rules, 1959)

1.0 Introduction and Executive Summary:

1. The present mining plan is prepared for **Thiru. S. Shunmugavel, S/o. Shri. Subbiah Thevar**, residing at D.No. 300D5/2, Sankarankovil Road, Rajapalayam Town & Taluk, Virudhunagar District.

2. The application was processed by The Assistant Director, Department of Geology and Mining, Virudhunagar, **Letter. No. KV1/1029/2023 - dated 10.10.2024** directing the applicant to produce approved Mining Plan and Environmental Clearance certificate from the State Level Environmental Impact Assessment Authority (SEIAA) for the grant of quarry lease to quarry **Rough Stone & Gravel** over an extent **2.12.50 Hectares** of patta lands in **S.F.Nos. 586/11,12,13,14,15,17,18 of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District** of Tamil Nadu State for a period of **Five** years.

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S. சண்முகவேல்

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3. Accordingly, Mining Plan is prepared under the provisions of rule 19(1) &41, 42 as per the amendments under TamilNadu Minor Mineral Concession Rules, 1959 by incorporating the conditions imposed in the precise area communication letter.

4. Geological Resources is estimated at **5,70,911m^3** of Rough Stone, **65,114m^3** Gravel and Mineable Reserves is estimated at **72,710m^3** of **Rough Stone** and **28,248m^3** of **Gravel** after leaving necessary safety distance from the lease boundary as indicated in the precise area letter and relevant mining laws in force.

5. Production Schedule is proposed for the **five year** mining plan about **72,710m^3** of **Rough Stone** and **28,248m^3** of **Gravel**.

6. Environmental parameters,

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

   ii) There is no interstate boundary around 10Kms radius.

   iii) There is no wild life animal sanctuary within 1 Kms radius form the project site area under the Wildlife (Protection) Act, 1972.

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

S. தண்முக வேல்

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7. 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 tact 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.

S. சுப்பிரமணி

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திருத்துறைப்பூண்டி
- 8 NOV 2024
சுரங்கத் துறை

EXECUTIVE SUMMARY:

a.	Name of the Village Panchayat	:	Gopalapuram
b.	**Name of the Panchayat Union**	:	Vembakottai
c.	The proposed total Mineable Reserves	:	**72,710**m^3 **of Rough Stone and 28,248**m^3 **of Gravel**
d.	The proposed quantity of reserves (level of production) for five years to be mined is (Recoverable reserves)	:	**72,710**m^3 **of Rough Stone and 28,248**m^3 **of Gravel**
e.	Total extent of the area	:	**2-12.50Ha**
f.	Proposed Period of mining	:	**Five years**
g.	Existing depth	:	Previous workings in some places from 8 to 10mtrs shown in the plan
h.	**Proposed Depth of mining**	:	29m Below Ground Level
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. 2,25,000/- Rs. 24,00,000/- Rs. 3,00,000/- Total Project cost (A+B+C)= Rs. 29,25,000/-

S. அன்புவேல்

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1. The area applied for lease is bounded by fifteen corners and the coordinates are clearly marked in plate no III.

Corners	Co- ordinates		Distance between the corners
	Latitude	Longitude	
1	9°21'28.13"N	77°36'44.63"E	1-2= 42.4m
2	9°21'27.86"N	77°36'46.00"E	2-3 = 58.2m
3	9°21'25.97"N	77°36'45.53"E	3-4= 73.8m
4	9°21'23.57"N	77°36'45.34"E	4-5= 97.4m
5	9°21'20.38"N	77°36'44.86"E	5-6= 34.2m
6	9°21'20.29"N	77°36'45.98"E	6-7= 19.4m
7	9°21'20.18"N	77°36'46.61"E	7-8= 79.2m
8	9°21'17.59"N	77°36'46.22"E	8-9 = 56.0m
9	9°21'18.07"N	77°36'44.59"E	9-10= 21.4m
10	9°21'17.39"N	77°36'44.53"E	10-11= 55.2m
11	9°21'16.95"N	77°36'46.10"E	11-12= 19.8m
12	9°21'16.29"N	77°36'46.01"E	12-13= 68.4m
13	9°21'16.75"N	77°36'43.80"E	13-14 = 42.6m
14	9°21'17.67"N	77°36'42.74"E	14-15= 10.0m
15	9°21'18.00"N	77°36'42.69"E	15-1= 312.6m

S. சண்முக வேல்

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2.0 General Information:

2.1	a.	Name of the Applicant	:	Thiru. S. Shunmugavel
	b.	Address of the Applicant with phone No and e-mail id if any	:	S. Shunmugavel, S/o. Shri. Subbiah Thever, 300D5/2,Sankarankovil Road, Rajapalayam Town & Taluk, Virudhunagar District. Mobile No.:
	c.	Status of the Applicant	:	Individual
2.2	a.	Mineral Which the applicant intends to mine	:	Rough Stone & Gravel.
	b.	Precise area communication letter No.	:	Precise area communication letter received from The Assistant Director, Geology and Miningletterwide No. KV1/1029/2023 - dated 10.10.2024.
	c.	Period of permission / lease granted	:	The grant of lease period is Five years.
	d.	Name and Address of the RQP preparing Mining Plan	:	Shri. M. DHARMALINGAM, M.Sc.,(Geol.), FCC(Mining), Recognized Qualified Person, Reg. No. RQP/MAS/260/2014/A No.28, Pol Pettai, Thoothukudi – 628 002. Cell :99528 08328

S. தர்மலிங்கம்

உதவி இயக்குநர் அலுவலகம்
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3.LOCATION:

a. Details of the Area:

State	*District*	*Taluk*	*Village*	*S.F.No*	*Extent in hectares*
Tamil Nadu	*Virudhunagar*	*Vembakottai*	*Gopalapuram*	*586/11,* *586/12,* *586/13,* *586/14,* *586/15,* *586/17,* *586/18*	*0-78.50* *0-91.50* *0-10.00* *0-11.00* *0-11.00* *0-05.00* *0-05.50*
				Total	*2-12.50*

b.	Classification of the Area (Ryotwari/poramboke/others	:	Patta land
c.	**Ownership / Occupancy of the Applied area (Surface rights)**	:	**Applicant own patta lands**
d.	Toposheet No. with Latitude and Longitude	: : :	Topo Sheet No: **58G/11** Latitude: **09°21'16.29"N to 09°21'27.13"N** Longitude:**77°36'46.01"E to 77°36'44.63"E**
e.	Existence of Public Road / Railway line if any nearby the area and approximate distance	:	The area applied for quarry lease lies in western side of the Gopalapuram to Mettuvadagarai **Village road. The road from the quarry to main road is already existence, the same road will be** maintained and utilised for transportation. The **nearest Rail head is at Rajapalayam at a distance of 12Km. The nearest airport is at** Madurai in 100Km distance..

S. அண்ணாதுரை

19 NOV

PART – A

4.0 Geology and Mineral Reserves:

4.1	a.	Topography	:	The lease area is a plain terrain, which is covered by 4 M of gravel, The massive formation of Charnokite is clearly visible in old pits of the quarry. The slope is gentle towards southern side. The age of the rock formations is Archean age. The general geological sequences of the rocks in this area are given below. **AGE** **FORMATION** Recent - Quaternary weathered Rock Formation .....Unconformity ..... Archaean - Charnockite Peninsular Gneiss complex. No major river is found nearby the applied area. Water table is found at a depth of 60 M in summer and 55 M in rainy seasons. Temperature of the area is reported to be 18^0C to a maximum of 35^0C during summer. Rainfall of this area is about 700mm to 800mm during the both NE & SW monsoons.

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	b.	General Geology of the Area	:	The area is underlined by the wide range of metamorphic rocks of peninsular gneissic complex.. 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 NS with almost vertical dipping.
4.2		Details of Exploration already carried out if any	:	Three old pits are noted in this area, the rough stone formation are studied from the old pits and clearly visible massive rock formation.
4.3	a.	Estimation of Reserves	:	The Geological and Recoverable reserves are estimated by cross sectional method on below Ground Level. Totally four sections have been drawn, two sections drawn length wise as (P-Q), (R-S) and another two sections drawn width wise as (A-B), (C-D) to cover maximum area considered for lease. The Plans and Sections have been drawn with a scale of 1:2000. Please refer plate no. IV.

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a. Geological Resources

The quarrying is estimated up to a depth of 29m below ground level of resources is given below.

Table No-1

SECTION	LENGTH (M)	WIDTH (M)	HEIGHT (M)	ROUGH STONE VOLUME (M^3)	GRAVEL VOLUME (M^3)
PQ –AB	334	49	4	-	65,464
RS - CD	77	106	4	-	32,648
	Total				**98,112**
	Deduct old pit-1= 113.5 x 33 x 4 =				- 14,982
	Deduct old pit-2= 68 x 53 x 4 =				-14,416
	Deduct old pit-3= 40 x 22.5 x 4=				- 3,600
	Total				**- 32,998**
PQ –AB	334	49	25	4,09,150	-
RS - CD	77	106	25	2,04,050	
	Total			**6,13,200**	
	Deduct old pit-1= 113.5 x 33 x 6 =			-22,473	
	Deduct old pit-2= 68 x 53 x 4 =			-14,416	
	Deduct old pit-3= 40 x 22.5 x 6=			- 5,400	
	Total			**- 42,289**	
TOTAL GEOLOGICAL RESERVES				**5,70,911**	**65,114**

The Geological Resources have been computed as **5,70,911**m^3 of rough stone,**65,114**m^3 gravel up to depth of 29 m from the below ground level.

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b. MineableReserve

The available mineable reserves are calculated entire life of the mine by leaving safety distance of 50m from western side seasonal odai, 10m from southern side cart track & 7.5 m from all remaining sides of applied lease area and bench loss.

Table No.-2

SECTION	BENCH	LENGTH (M)	WIDTH (M)	HEIGHT (M)	ROUGH STONE VOLUME (M^3)	GRAVEL VOLUME (M^3)
PQ-AB	I	153	34	4	-	20,808
	II	161	26	5	20,930	
	III	202	16	5	16,160	
	Total				**37,090**	**20.808**
RS-CD	I	62	30	4	-	7,440
	II	54	26	5	7,020	
	III	44	60	5	13,200	
	IV	34	50	5	8,500	
	V	24	40	5	4,800	
	VI	14	30	5	2,100	
	Total				**35,620**	**7,440**
Grand Total Minable reserves					**72,710**	**28,248**

The mineable reserve is computed as **72,710m^3** of **Rough Stone** and **28,248m^3** of **Gravel** for the below ground level up to a depth of 29 M.

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5.0 Mining:

5.1	Method of Mining	:	1. Opencast method of semi mechanized mining with 5.0m height bench and width of the bench is not less than bench height. 2. However, as far as the quarrying of Rough stone is concerned, observance of the provisions of Regulation106(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 and 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 crusher/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 nearby the crusher unit and /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.

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5.3	Proposed bench height & Width	:	Quarrying of Rough Stone is proposed bench height of 5m and bench width of not less than 5m.
5.4	Details of Overburden / Mineral Production proposed for the 5 years.	:	The overburden and rough stone production has estimated for this Five years plan period,

The Yearwise Production and Development

Table No 3

Five year workings (I to V Year)

SECTION	BENCH	LENGTH (M)	WIDTH (M)	HEIGHT (M)	ROUGH STONE VOLUME(M^3)	GRAVEL VOLUME(M^3)
RS-CD	I	62	30	4	-	7,440
	II	54	26	5	7,020	
	III	44	60	5	13,200	
I YEAR EXCAVATION					20,220	7,440
PQ-AB	I	75	34	4	-	10,200
	II	70	26	5	9,100	
	III	65	16	5	5,200	
II YEAR EXCAVATION					14,300	10,200
PQ-AB	I	78	34	4	-	10,608
	II	91	26	5	11,830	
III YEAR EXCAVATION					11,830	10,608
PQ-AB	IV	137	16	5	10,960	
IV YEAR EXCAVATION					10,960	-
PQ-AB	IV	34	50	5	8,500	
	V	24	40	5	4,800	
	VI	14	30	5	2,100	
V YEAR EXCAVATION					15,400	-
TOTAL FIVE YEARS PRODUCTION					72,710	28,248

The applicant has proposed to carry out **72,710m^3 of Rough Stone and 28,248m^3 Gravel** up to a depth of 29 M below ground level for the period of Five years.

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5.5		Machineries to be used		
	a.	Mining	:	It is proposed to use following machineries for quarrying rough stone 1) Tractor mounted compressor with jack hammer 2) Excavator of 1m^3 bucket capacity (with Rock breaker attachment).
	b.	Loading	:	Excavator of 1m^3 bucket capacity (with Rock breaker attachment).
	c.	Transportation	:	Tipper 3Nos 5/10Ts capacity
5.6		Disposal of Overburden	:	The entire overburden anticipated during rough stone quarrying operation has been sold out.
5.7		Brief Note on Conceptual Mining Plan for the entire lease period	:	Conceptual Mining Plan is prepared with an object of five years of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructures etc. Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc. Ultimate Pit dimension is given as under,

Description End of the lease period	Length (Max) (m)	Width (Max) (m)	Depth (m)
PQ – AB	215	34	14
RS - CD	62	69	29

Afforestation has been proposed on all along the boundary barrier by planting trees.

All the baseline information studies like

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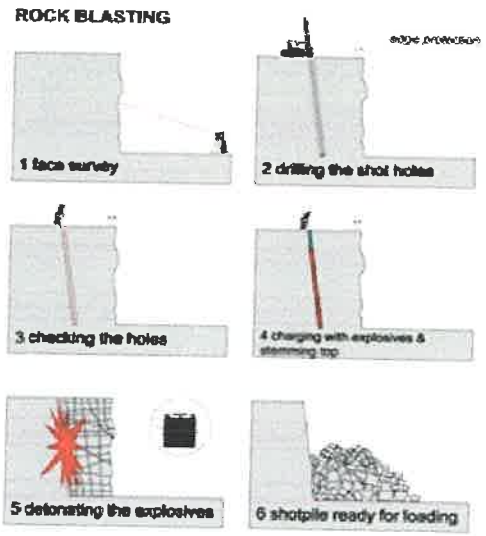
				Air Quality monitoring, Noise and Vibration monitoring, Water Analysis studies will be carried out every year as per the MOEF norms

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	:	32-36 mm
Spacing	:	0.6m
Depth	:	1 to 1.5m
Burden for hole	:	0.6m
Pattern of hole	:	ZigZag
Inclination of hole	:	70^0 from the horizontal.



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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.
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. (Agreement with explosive dealer for blasting is enclosed).

Number of holes	:	50
Powder factor	:	6Ts/Kg of explosives
Totalexplosive required	:	25Kg slurry explosives
Charge / hole	:	0.5Kg
Blasting time	:	12-2 Pm

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7.0 Mine Drainage:

7.1	Depth of Water table	:	The quarry operation is up to a depth of 29m below the ground level. The water table is at 55m BGL in rainy season and 60m BGL in summer season which is observed from the nearby wells and the data obtained from existing Government and private boreholes. Hence the ground water will not be affected in any manner due to the quarrying operation during the entire life period.
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 300 lpm and it shall be pumped about periodically by a stand by diesel powered Centrifugal pump motivated with 7.5 H.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.

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8.0 Other Permanent Structures:

8.1	Habitations / Village	:	There are no habitations within a radius of 300 m
8.2	Power lines (HT/LT)	:	There are no LT/HT power lines within a radius of 50m.
8.3	Water bodies (River, Pond, Lake, Odai, Channel etc)	:	There are no water bodies with in 50 m radius.
8.4	Archeological / Historical Monuments	:	There are no Archeological / Historical Monuments within a radius of 500m.
8.5	Road (NH, SH, Village Road etc)	:	The National High way of Kollam-Thirumangalam which is about 15 Km on the western 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 are no Reserved Forest / Forest / Social Forest / Wild Life Sanctuary etc within a radius of 10 km.
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 10km.
8.9	Any Other Structures	:	Nil

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9.0 Employmcnt Potential & Welfare Measures:

9.1		Employment Potential (Management & Supervisory personal)	:	1.	Skilled	Operator	2No.
						Mechanic	1 No.
						Mines manager /Mate	1 No.
				2.	Semi – skilled	Driver	3 No
				3.	Unskilled	Muzdoor / Labours	4 Nos
						Total =	11 Nos

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

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 being 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.

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	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, 1925 separately for males and females. Washing facilities shall also be arranged as per rule (36) of the Mines Rules, 1925.
	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 in Kilavikulam at distance of 3km. 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 applicants own cost.
	e.	Precautionary safety measures to the Labourers	:	Safety provisions like helmet, goggles, safety shoes, Dust mask, Ear muffs etc will be provided as per the circulars and amendments made for Mine labours under the guidance of DGMS being a semi-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 quarrying operation.

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PART – B

10.0 Environmental Management Plan:

10.1	Existing Land Use Pattern	:	1. The lease applied area is plain terrain covered by massive rough stone formation. 2. Quarrying is proposed for up to a depth of 29m below ground level. 3. Fluctuation of Water table in this area is in between 55m and 60m during a year. 4. This region receives the average annual rainfall of 700mm to 800mm. The surrounding area is practiced by the seasonal cultivation. The existing land use pattern is given as under.
10.2	Water Regime	:	Water table in this area is noticed at a depth of 55m to 60m and presently, the quarrying of Rough Stone quarry is proposed up to a depth of 29m below ground level and hence, it will not affect the ground water depletion of this area.

Table No-5

Sl. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1.	Future Mining	0.82.50	1.16.00
2.	Infrastructure	Nil	0.01.00
3.	Roads	Nil	0.03.00
4.	Green Belt	Nil	0.36.00
5.	Fencing	Nil	0.10.00
6.	Unutilized	1.30.00	0.46.50
	Total =	**2.12.50**	**2.12.50**

10.3	Flora and Fauna	:	Except Acacia bushes, no other valuable trees are noticed in the applied area. Further, neither flora of botanical interest nor fauna of zoological interest is noticed in this area.
10.4	Climatic conditions	:	Generally subtropical climatic condition prevails throughout the year and there is no sharp variation in climate. This District receives rain both in south west and north east monsoon. The average rainfall is about 700mm to 800mm and the temperature ranges from 18^0C during winter and to a maximum of 42^0C during the summer.
10.5	Human Settlement	:	The nearest habitations with the population is given as underTable No-6
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 equipments like mask, ear plug, helmet, gloves etc., as per the Mines Act.

DIRECTION	VILLAGE	POPU-LATION	DISTANCE
North East	Gopalapuram	700	1.10 Km
North West	Kurichiyarpatti	500	0.65 Km
South East	Mettu Vadagarai	500	1.40 Km
South West	Muthanathi	400	1.50 Km

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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. It is B2 category mine. For the average production of 18,000 cum to 20,000 cum/year is planned. Besides **three working quarries** and No villages in the surrounding radius of 500 meters.

Details of quarries around 500m radius of proposed quarry

Quarries	Sl. no	Name	Village	s.f.no.	Extent (Ha)	Distance (m)
Existing workings	**1.**	**Rajmohan**	**Gopalapuram**	**557/1,558etc.**	**4.85.00**	**95**
	2.	**Murugesan**	**Gopalapuram**	**635/4 & 636**	**2.89.00**	**405**
	3.	**Arumugam**	**Gopalapuram**	**567/2A.2Betc**	**2.48.50**	**245**
Abandoned	**4.**	**Arumugam**	**Gopalapuram**	**565/2**	**Prior-2012**	**15**
	5.	**Rajmohan**	**Gopalapuram**	**556/2**	**Prior-2018**	**430**
	6.	**Govt.pit**	**Gopalapuram**	**624**	**Prior-2012**	**460**
	7.	**Murugesan**	**Gopalapuram**	**632**	**Prior-2021**	**465**
Present proposed	**8.**	**Shunmugavel**	**Gopalapuram**	**586/11-15 &17,18**	**2.12.50**	**Applied**
		Total extent in Hectares			**12.35.00**	

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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 only a maximum depth of 29m below ground level and has been envisaged as workable depth for safe & economic mining during the lease period. Hence, after quarry reaches ultimate pit limit (for this mining plan period) of 29m 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 néem trees will be planted in a phased manner as described below. Table – 7

Year	No. of trees proposed to be planted	Survival %	Area to be covered Sq.m	Name of the species	No. of trees expected to be grown
I	20	80%	720	Neem	18
II	20	80%	720	Neem	18
III	20	80%	720	Neem	18
IV	20	80%	720	Neem	18
V	20	80%	720	Neem	18

Nearly 7200 Sqm area is proposed to use under afforestation by planting 200 nos. of Neem trees during every year with an anticipated survival rate of 80%. The Quarry land use, layout and afforestation plan is shown in Plate No.V,VIII.

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10.12 **Proposed Financial Estimate / Budget for (EMP) Environment Management**

Sl. no.	Details	All Figures are in Rs.
1.	**LAND INVESTMENT COST** Total Applied SF Nos. 586/11,12,13,14,15,17,18 = 2-12.50 Ha. (own patta land previously quarrying) =	-nil-
2.	**FIXED INVESTMENT COST**	
i)	Labour shed (already constructed) (Maintance cost)	Rs. 25,000
ii)	First aid room and accessories	Rs. 50,000
iii)	Toilet room with septic tank Facility construction & sanitary facility	Rs. 50,000
iv)	Drinking water for staffs &Labour from water vendors	Rs. 1,00,000
	TOTAL FIXED INVESTMENT COST =	**Rs. 2,25,000**
3.	**OPERATIONAL COST** (Seniarage fee, DMF, & Green Fund per unit for transport permit to be paid to state government at the time of marketing will be paid by Purchaser only.)	
	Machinery to be used for Hired basis	
	Total Number of Excavator = 1Nos (Rs.13,00,000/1No.)	Rs. 13,00,000
	Tractor Mounted Jack Hammer =1 No. (Rs 4,00,000)	Rs. 4,00,000
	Compressor with Drilling used for hired basis	
	Total Number of compressor with Drilling Machine used for quarrying = 1Nos (Rs.7,00,000 /1No.) =	Rs. 7,00,000
	TOTAL OPERATIONAL COST =	**Rs.24,00,000**

4.	EMP COST			
Sl.no.	**Details**	**Cost per Month (Rs.)**	**Total Cost per Year (Rs.)**	**Total cost for 5 years lease period (Rs.)**
i)	Greenbelt development (plantation & maintenance)	500	6,000	30,000
ii)	Fencing arrangements & wind net arrester	-	-	1,20,000
iii)	Occupational health safety kits (mask, helmet, sanitizer, gloves, etc.,)	500	6,000	30,000
iv)	Water sprinkling using own tractor for the area (Control of Dust suppression)	1000	12,000	60,000
v)	Environmental parameters testing expenses fees for every six months a. Ambient Air monitoring b. Water analysis c. Noise Monitoring d. Soil testing e. Ground Vibration Monitering	6,000 (bi-annual)	12,000	60,000
Total EMP Cost=				**Rs. 3,00,000**

1.	**Land Investment Cost**	**-Nil-**
2.	**Fixed Investment Cost**	**Rs. 2,25,000**
3.	**Operational Cost**	**Rs. 24,00,000**
4.	**EMP Cost**	**Rs. 3,00,000**
TOTAL PROJECT COST		**Rs. 29,25,000**
CER @ 2% Project cost Carrying out provisons of Drinking water with dispenserations Toilet/sanitary especially for girls students in Kilavikulam Government School, Vembakottai Taluk, Virudhunagar District.		**Rs. 58,500**

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11.0 Mine Closure Plan:

11.1	Steps proposed for phased restoration, reclamation of already mined out area.	:	There is no proposal for back filling, reclamation and rehabilitation. The quarried pits after the end of the life of lease will be fenced to prevent inherent entry of public and cattle.
11.2	Measures to be under taken on mine closure as per Act & Rules	:	Measures will be taken as per the Acts and Rules. The quarried pit will be fenced by using Barbed wire fencing to prevent inherent entry of public and cattle.
11.3	Mitigation measures to be undertaken for safety and restoration/ reclamation of the already mined out area	:	Mitigation measures: Drilling will be carried out by wet drilling mode to control the dust propagation into the air. Blasting will be carried out on limited scale. Mist Water spraying on haul road is proposed to prevent the dust propagation into the air.

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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 and Gravel from the Proposed Lease Area.

(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.

Place : Thoothukudi
Date : 4/11/2024

Prepared by

M. Dharmalingam, M.Sc.,(Geol.), FCC (Mining)
Recognized Qualified Person

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M.Sc.,(Geol.) FCC.,(Mining)
Recognised Qualified Person
ROP / MAS / 260 / 2014 / A

ANNEXURE-1

விருதுநகர் மாவட்ட ஆட்சியர் அவர்களின் செயல்முறை ஆணைகள்
முன்னிலை: திரு. அ. சிவஞானம், இ.ஆ.ப.,

ந.க.கேவி1/53243/2013 நாள்: 05.05.2018

பொருள்: கனிமங்களும் குவாரிகளும் - விருதுநகர் மாவட்டம் - இராஜபாளையம் வட்டம் - கோபாலபுரம் கிராமம் - பட்டா புலஎண்கள்.586/11 (78.50), 586/12 (91.50), 586/13 (10.00), 586/14 (11.00), 586/15 (11.00), 586/17 (5.00), 586/18 (5.50)-ல் மொத்தம் 2.12.5 ஹெக்டேர் பரப்பில் ஐந்து வருடங்களுக்கு கற்குவாரி உரிமம் வழங்கக் கோரியுள்ளது ___ தொடர்பாக.

பார்வை :

1. திரு.சு.சண்முகவேல் த.பெ.சுப்பையா தேவர், 300D5/2, சங்கரன்கோவில் ரோடு, இராஜபாளையம், விருதுநகர் மாவட்டம் என்பவரது மனு நாள் : 30.12.2013
2. இவ்வலுவலகக் கடித எண்.ந.க.கேவி1/53243/2013 நாள்:31.12.2013
3. இராஜபாளையம் ஊராட்சி ஒன்றிய ஆணையாளர் கடித எண் ந.க.அ2/505/2014 நாள்: 21.02.2014
4. இராஜபாளையம் வருவாய் வட்டாட்சியர் கடித எண.ந.க.அ6/2063/2014 நாள்:12.03.2014
5. துணை இயக்குநர் (கனிமம்), தனித்துணை வட்டாட்சியர் (கனிமம்) மற்றும் தனி வருவாய் ஆய்வாளர் (கனிமம்) விருதுநகர் புலத்தணிக்கை அறிக்கை நாள் : 10.05.2014
6. இவ்வலுவலகக் கடித எண்.ந.க.கேவி1/53243/2013 நாள்:19.05.2014
7. மாவட்ட சுற்றுச்சூழல் பாதிப்பு மதிப்பீட்டு ஆணையம், விருதுநகர் கடிதஎண்:DEIAA/VNR/025/EC. No:020/2017 நாள் : 11.08.2017
8. தினச்சூரியன் மற்றும் மாலைமலர் ஆகிய இரு நாளிதழ்களில் வெளியிடப்பட்ட பொது அறிவிப்பு நாள் : 23.08.2017
9. மாவட்ட சுற்றுச்சூழல் பொறியாளர், தமிழ்நாடு மாசுக்கட்டுப்பாட்டு வாரியம், விருதுநகர் அவர்களின் செயல்முறைகள் எண்.1805210546798, 1805110546798 நாள்:25.01.2018
10. தொடர்புடைய ஆவணங்கள்.

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ஆணை:

விருதுநகர் மாவட்டம், இராஜபாளையம் வட்டம், 300D5/2, சங்கரன்கோவில் ரோடு, இராஜபாளையம் என்ற முகவரியைச்

S. சண்முகவேல்

உதவி இயக்குநர் அலுவலகம் விருதுநகர் மாவட்டம் 19 NOV புவியியல் & சுரங்கம்

சேர்ந்த திரு.சு.சண்முகவேல் த.பெ.சுப்பையாதேவர் என்பவர், விருதுநகர் மாவட்டம், இராஜபாளையம் வட்டம், கோபாலபுரம் கிராமம் பட்டா புலஎண்கள்.586/11 (78.50), 586/12 (91.50), 586/13 (10.00), 586/14 (11.00), 586/15 (11.00), 586/17 (5.00), 586/18 (5.50)-ல் மொத்தம் 2.12.5 ஹெக்டேர் பரப்பில் ஐந்து வருடங்களுக்கு உடைகல், ஜல்லி மற்றும் கிராவல் உரிமம் பணி செய்ய அனுமதி வழங்க பார்வை 1-ல் காணும் மனுவில் அனுமதி கோரியுள்ளார்.

விண்ணப்பதாரர் தனது விண்ணப்பத்துடன் கீழ்கண்ட ஆவணங்களை சமர்ப்பித்துள்ளார்.

1. விண்ணப்பக் கட்டணம் ரூ.1500/-ஐ விருதுநகர் பாரத வங்கியில் 27.12.2013 அன்று செலுத்தியதற்கான அசல் சலான்.
2. விண்ணப்பிக்கப்பட்ட புலங்களுக்குரிய வருவாய் துறை ஆவணங்கள்.
3. வருமான வரி பாக்கியில்லை என்பதற்கான உறுதிச் சான்று.
4. கனிம வரி தொகை பாக்கியில்லை என்பதற்கான உறுதிச் சான்று.
5. ஏ1 நோட்டீஸ்.
6. புல வரைபடம்.

மேற்படி அனுமதி வழங்குவது தொடர்பாக விண்ணப்பதாரர் பெயரிலோ அவரது குடும்ப உறுப்பினர்கள் பெயரிலோ அரசுக்கு செலுத்தவேண்டிய பாக்கித்தொகை ஏதேனும் நிலுவையில் உள்ளதா? என்பது குறித்த அறிக்கை சமர்ப்பிக்கும்படி இராஜபாளையம், ஊராட்சி ஒன்றியம் ஆணையாளர் விண்ணப்பிக்கப்பட்ட புலங்களை புலத்தணிக்கை செய்து அறிக்கை சமர்ப்பிக்குமாறு பார்வை 2-ல் காணும் இவ்வலுவலக கடிதங்களின்படி கேட்டுக்கொள்ளப்பட்டது.

பார்வை 4-ல் காணும் இராஜபாளையம் வட்டாட்சியரின் கடிதத்தில், மனுதாரர் பட்டா வழங்கக் கோரியுள்ள கோபாலபுரம் கிராம புல எண். கீழ்காணும் விவரப்படி கிராமக் கணக்கில் தாக்கல் ஆகியுள்ளன என்றும்,

புல எண்.	நிலம்	விஸ்தீரணம்	பட்டா எண்.	பட்டாதாரர் பெயர்
586/11	புன்செய்	78.50	956	சுப்பையாத் தேவர் மகன் சண்முகவேல்
586/12	புன்செய்	91.50	956	
586/13	புன்செய்	10.00	956	
586/14	புன்செய்	11.00	956	
586/15	புன்செய்	11.00	956	
586/17	புன்செய்	5.00	956	
586/18	புன்செய்	5.00	956	

மனுதாரர் திரு.சு.சண்முகவேல் என்பவர் மேற்கண்ட நிலங்களில் கற்குவாரி செய்துகொள்ள ரூ.1500/-ஐ விண்ணப்பக் கட்டணம் இராஜபாளையம் பாரத வங்கியில் 27.12.2013 அன்று செலுத்தியுள்ளார் என்றும், கற்குவாரி அமைய உள்ள இடத்தினை புலத்தணிக்கை செய்ததில் 300 மீட்டர் சுற்றளவுக்குப்பின் குடியிருப்புகள் மற்றும் 50 மீட்டர் சுற்றளவுக்குள் சாலைகள் இரயில் இருப்புப்பாதைகள், கோவில்கள் மற்றும் புராதனச் சின்னங்கள், உயர் அழுத்த மின்கம்பிகள், நிரந்தர அமைப்புகள் ஏதும் இல்லை என்றும், கற்குவாரி செயல்படுவதால் ஓடைகளுக்கு பாதிப்பு

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உதவி இயக்குநர் அலுவலகம் விருதுநகர் மாவட்டம்

ஏதுமில்லை என்றும், கற்குவாரி அமைப்பது தொடர்பாக அ9 நோட்டீஸ் கிராமத்தில் விளம்பரம் செய்ததில் பொதுமக்களிடம் இருந்து ஆட்சேபணை ஏதும் வரப்பெறவில்லை என்றும், குத்தகை வழங்கக் கோரிய நிலங்களின் மீது அரசுக்கு செலுத்தவேண்டிய வரிபாக்கியும் ஏதும் இல்லை என்றும், மேலும் மனுதாரர் சு.சண்முகவேல் என்பவர் பெயரிலோ அல்லது அவரது குடும்பத்தில் உள்ளபடி நபர்கள் பெயரிலோ அரசுக்கு செலுத்த வேண்டிய பாக்கித்தொகை எதுவும் நிலுவையில் இல்லை என்றும், கனிம வரிபாக்கி ஏதும் இல்லை என்பது குறித்தும் வருமானவரி செலுத்துபவர் இல்லை என்பது குறித்தும் Notary Public மூலம் உறுதிமொழி பத்திரம் சமர்ப்பித்துள்ளார் எனவும், இராஜபாளையம் வட்டம், கோபாலபுரம் கிராம புல எண்கள் 586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18-ல் மொத்தம் 2.12.5 ஹெக்டேர் பரப்பளவில் உள்ள நிலங்களில் மனுதாரர் திரு.சுப்பையாத்தேவர் மகன் சு.சண்முகவேல் என்பவர் பெயரில் 5 வருடங்களுக்கு சாதாரண கற்கள், ஜல்லி மற்றும் கிராவல் எடுத்துக்கொள்ள குத்தகை உரிமம் வழங்கலாம் என பரிந்துரை செய்துள்ளார்.

பார்வை 5-ல் காணும் துணைஇயக்குநர் (கனிமம்), தனித்துணை வட்டாட்சியர் (கனிமம்) மற்றும் தனிவருவாய் ஆய்வாளர் ஆகியோரது கூட்டுப்புலத்தணிக்கை அறிக்கையில், மேற்படி கற்குவாரி அனுமதி வழங்குவது தொடர்பாக 10.05.2014 அன்று புலத்தணிக்கை செய்யப்பட்டது என்றும், மனுதாரர் திரு.சு.சண்முகவேல் த/பெ.சுப்பையாத்தேவர் என்பவர் 5 வருடங்களுக்கு சாதாரண கற்கள், ஜல்லி மற்றும் கிராவல் பணி செய்ய 5 வருடங்களுக்கு கற்குவாரி உரிமம் வழங்கக் கோரியுள்ள புல எண்கள் 586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18-ல் மொத்தம் 2.12.5 ஹெக்டேர்ஸ் நிலங்கள் கிராமக் கணக்குகளில் பட்டா எண். 956-ல் மனுதாரர் சண்முகவேல் த/பெ.சுப்பையாத்தேவர் பெயரில் தாக்கலாகியுள்ளது என்றும், மேற்கண்ட புல எண்ணுக்கு நான்குமால்கள் விபரம் பின்வருமாறு உள்ளது எனத் தெரிவித்துள்ளனர்.

வ. எண்	புல எண்/ உட்பிரிவு எண்	விஸ்தீரணம்	வடக்கு	தெற்கு	மேற்கு	கிழக்கு
1.	586/11	0.78.5	585	611	586/8,9	586/12
2.	586/12	0.91.5	585	611	586/11	575, 576
3.	586/13	0.10.0	577, 576	586/14	586/12	575
4.	586/14	0.11.0	586/13	586/15	586/12	575
5.	586/15	0.11.0	586/14	586/12	586/12	575
6.	586/17	0.05.0	586/16	611	586/12	586/18
7.	586/18	0.05.0	586/16	611	586/17	575
	மொத்தம்	**2.12.5**				

மேலும், மேற்கண்ட புல எண்களைச் சுற்றி 300 மீட்டர் சுற்றளவில் குடியிருப்புகள் ஏதுமில்லை என்றும், 50 மீட்டர் சுற்றளவில் சாலைகள், இரயில் இருப்புப் பாதைகள், கோவில்கள் மற்றும் புராதனச் சின்னங்கள், உயர்அழுத்தமின்கம்பிகள், வேறு நிரந்தர அமைப்புகள் ஏதுமில்லை எனத்

S/ சண்முக வேல்

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தெரிவித்து, இராஜபாளையம் வட்டம், கோபாலபுரம் கிராமம், புல எண்கள் 586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18-ல் மொத்தம் 2.12.5 ஹெக்டேர்ஸ் பரப்பளவில் மனுதாரர் திரு.சு.சண்முகவேல், த/பெ.சுப்பையாத்தேவர் என்பவருக்கு 5 வருடங்களுக்கு சாதாரண கற்கள், ஜல்லி மற்றும் கிராவல் எடுத்துக்கொள்ள கீழ்க்காணும் நிபந்தனைக்குட்பட்டும் தமிழ்நாடு சிறுகனிம சலுகைகள் விதி எண். 19 மற்றும் 20-ன்படி கற்குவாரி உரிமம் வழங்கலாம் என பரிந்துரை செய்துள்ளனர்.

1. அருகிலுள்ள நிலங்களுக்கு 7.5 மீ பாதுகாப்பு இடைவெளி தூரம் கடைப்பிடித்து குவாரிப்பணி மேற்கொள்ள வேண்டும்.

பார்வை 6-ல் காணும் கடிதத்தில் விருதுநகர் மாவட்டம், இராஜபாளையம் வட்டம், கோபாலபுரம் பட்டா எண்.956 புல எண்கள் 586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18-ல் மொத்தம் 2.12.5 ஹெக்டேர் பரப்பில் ஐந்து வருடங்களுக்கு உடைகல், ஜல்லி மற்றும் கிராவல் எடுத்துக்கொள்ள சுரங்கத்திட்ட அறிக்கை ஒப்புதலுக்கும் மற்றும் மாவட்ட சுற்றுச்சூழல் பாதிப்பு மதிப்பீட்டு ஆணைத்தின் பரிந்துரை பெற்று வரும்படி விண்ணப்பதாரரை கேட்டுக்கொள்ளப்பட்டது.

பார்வை 7-ல் காணும் மாவட்ட சுற்றுச்சூழல் பாதிப்பு மதிப்பீட்டு ஆணைத்தின் உத்தரவில் மேற்படி விண்ணப்பதாரருக்கு, விருதுநகர் மாவட்டம், இராஜபாளையம் வட்டம், கோபாலபுரம் பட்டா எண்.956 புல எண்கள்.586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18-ல் மொத்தம் 2.12.5 ஹெக்டேர் பரப்பில் ஐந்து வருடங்களுக்கு உடைகல், ஜல்லி மற்றும் கிராவல் எடுத்துக்கொள்ள அனுமதி வழங்கப்பட்டுள்ளது.

பார்வை 8-ல் காணும் தினச்சூரியன் மற்றும் மாலைமலர் ஆகிய இரு நாளிதழ்களில் 23.08.2017-ல் மேற்படி புல எண்களில் உடைகல், ஜல்லி மற்றும் கிராவல் எடுத்துக்கொள்ளும் பணி மேற்கொள்வது தொடர்பாக விண்ணப்பதாரர் பொது அறிவிப்பு செய்துள்ளார்.

மனுதாரர் பார்வை 9-ல் காணும் கடிதத்தில் விருதுநகர் மாவட்டம், இராஜபாளையம் வட்டம், கோபாலபுரம் பட்டா எண்.956 புல எண்கள்.586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18-ல் மொத்தம் 2.12.5 ஹெக்டேர் பரப்பில் ஐந்து வருடங்களுக்கு உடைகல், ஜல்லி மற்றும் கிராவல் எடுத்துக்கொள்ள சம்மதம் தெரிவித்தும், விருதுநகர் மாவட்ட மாசுக்கட்டுப்பாட்டு வாரியத்திடமிருந்து அனுமதி வழங்கப்பட்டுள்ளது.

எனவே, இராஜபாளையம் ஊராட்சி ஒன்றிய ஆணையாளர் மற்றும் துணை இயக்குநர் (கனிமம்) ஆகியோர்களின் பரிந்துரையினை ஏற்றும், நிபந்தனைகளுக்குட்பட்டும், விண்ணப்பதாரர் திரு.சு.சண்முகவேல் என்பவருக்கு இராஜபாளையம் வட்டம், கோபாலபுரம் பட்டா எண்.956 புல எண்கள்.586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18-ல் மொத்தம் 2.12.5 ஹெக்டேர் பரப்பளவு நிலங்களில் தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 விதி எண்.19 மற்றும் 20-ன்படி உடைகல், ஜல்லி மற்றும் கிராவல் எடுத்துக்கொள்ள விண்ணப்பதாரர் திரு.சு.சண்முகவேல் என்பவர் மாவட்ட ஆட்சியருடன் குத்தகை ஒப்பந்தப் பத்திரம் நிறைவேற்றும் நாளிலிருந்து ஐந்து வருடங்களுக்கு கீழ்கண்ட நிபந்தனைகளுக்குப்பட்டு குவாரி உரிமம் வழங்கி உத்தரவிடப்படுகிறது.

S/சண்முகவேல்

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உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
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நிபந்தனைகள்

1. குத்தகைதாரர் இந்த உத்தரவு கிடைக்கப் பெற்றவுடன் குத்தகை காலம் ஐந்து (5) வருடங்களுக்கான பரப்புவரித் தொகை ரூ. 1600/-ஐ சலான் மூலம்வங்கியில் செலுத்தி அசல் சலானையும், காப்புத் தொகை ரூ.10000/-ஐ கீழ்க்குறிப்பிட்டுள்ள கணக்குத் தலைப்பில் செலுத்தி அசல் செலானையும் ஆஜர்படுத்த வேண்டும்.

   காப்புத்தொகை செலுத்தவேண்டிய கணக்குத் தலைப்பு

   8443 Civil Deposits
   103 Security Deposits
   D.P.Code 8443-00-103-AA-0005

2. மேலும், 1959ம் ஆண்டு தமிழ்நாடு சிறுகனிம சலுகை விதிகள் அனுபந்தம் 5ல் கண்ட நமுனாவில் ரூ. ரூ. 35500/- முத்திரைத்தாளில் குத்தகை ஒப்பந்த பத்திரம் நிறைவேற்றி அதனை அவரது சொந்த செலவில் பதிவு செய்து கொடுக்க வேண்டும்.

3. சரியான முறையில் குறிப்பிட்ட படிவத்தில் கணக்குகள் பராமரிக்க வேண்டும் தினந்தோறும் வெட்டி எடுத்துக் கொண்டு செல்லப்பட்ட கனிம அளவைக் குறித்த பதிவேடுகள் வைத்திருக்க வேண்டும். அவைகளை தணிக்கை செய்யும் அதிகாரிகளுக்கு தவறாமல் காண்பிக்க வேண்டும்.

4. சொந்த செலவிலேயே குறிப்பிட்ட படிவத்தில் நடைச்சீட்டு அச்சிட்டு நடைச்சீட்டில் துணை இயக்குநர் (புவியியல் மற்றும் சுரங்கத்துறை) விருதுநகர் அலுவலக முத்திரையுடன் கையொப்பமும் பெறவேண்டும். குவாரியில் இருந்து கனிமம் ஏற்றிச் செல்லும் ஒவ்வொரு வாகனத்திற்கும் நடைச்சீட்டு வாங்கப்பட வேண்டும். சோதனையின்போது நடைச்சீட்டு இல்லையென்று கண்டுபிடிக்கப்பட்டால் வாகனங்கள் பறிமுதல் செய்யப்படுவதோடு குவாரி குத்தகைதாரர் மீது நடவடிக்கையும் எடுக்கப்படும்.

5. குவாரி செய்ய அனுமதிக்கப்பட்ட குறிப்பிட்ட புல எண் மற்றும் குறிப்பிட்ட விஸ்தீரணத்திற்குள் தான் குவாரி செய்ய வேண்டும்.

6. குத்தகைதாரர் குவாரியை வேறு யாருக்கும் உள் குத்தகைக்கு விடலாகாது.

7. ஒப்பந்தப் பத்திரத்தில் கண்டுள்ள நிபந்தனைகளுக்கு அவர் கட்டுப்பட்டு நடக்க வேண்டும்.

8. பிரதிமாதமும் 5ம் தேதிக்குள் முந்தைய மாதத்தில் குவாரி செய்து எடுக்கப்பட்ட கனிம அளவு வெளியில் அனுப்பப்பட்ட கனிம அளவு குவாரியில் வேலை செய்யவும் கூலி ஆட்களின் எண்ணிக்கை முதலிய விபரங்களை விருதுநகர் மாவட்ட புவியியல் மற்றும் சுரங்கத்துறை துணை இயக்குநருக்கு அனுப்பி வைக்க வேண்டும்.

9. குத்தகை ஒப்பந்தப் பத்திரம் நிறைவேற்றப்பட்ட பின்புதான் குவாரியில் வேலை செய்யத் தொடங்க வேண்டும்.

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10. குத்தகை பற்றிய முழு விபரங்கள் அடங்கிய தகவல் பலகை ஒன்று குவாரியில் கண்டிப்பாக வைத்திருக்க வேண்டும்.

11. சொந்த செலவிலும் முயற்சியாலும் குவாரிக்குச் செல்லும் சாலைகள் மற்றும் பாதைகள் மற்றும் வசதிகள் அமைத்துக் கொள்ள வேண்டும்.

12. தன் சொந்த செலவிலேயே குவாரியில் குத்தகை வழங்கப்பட்ட விஸ்தீரணத்தை வட்ட அளவர் மூலம் அளந்து நான்கு எல்லைக்கும் கல்தூண்கள் நட்டு அமைத்துப் பராமரித்து வர வேண்டும்.

13. குவாரிக்குரிய நடைச்சீட்டுகளை கண்டிப்பாக குவாரியில் இருந்துதான் வழங்க வேண்டும். நடைச்சீட்டுக்களின் அடிக்கட்டைகளை குவாரியில் வைத்திருக்க வேண்டும்.

14. குவாரிக்கு அருகில் வீடுகள், சாலைகள், பாதைகள், மின்சாரக்கம்பிகள், மின்சார டிரான்ஸ்பார்மர்கள் கோவில், ஓடை, குடிநீர் ஆதாரங்கள் மற்றும் சரித்திரப் புகழ் பெற்ற ஸ்தலங்கள் போன்றவை அமைந்திருந்தால் அவைகளுக்கு சேதம் ஏற்படாதவாறு தேவையான அளவு பாதுகாப்பு இடைவெளி விட்டு குவாரி செய்ய வேண்டும்.

15. குவாரியில் வேலை செய்யும் தொழிலாளர்களின் நலன் பேணப்படவேண்டும். குழந்தைத் தொழிலாளர்களை குவாரிப் பணியில் ஈடுபடுத்தக்கூடாது.

16. அனுமதிதார்ர் புராதனச் சின்னங்களுக்கோ, அரசாங்க சொத்துக்களுக்கோ எவ்வித சேதமும் இன்றி குவாரி செய்ய வேண்டும். அருகாமையில் உள்ள பட்டா நிலங்களுக்கு எவ்வித சேதமுமின்றி குவாரி செய்ய வேண்டும்.

17. அருகில் அமைந்துள்ள விவசாய நிலங்களுக்கு எவ்வித பாதிப்பும் இல்லாத வகையில் குவாரிப்பணி மேற்கொள்ள வேண்டும்.

18. அருகில் உள்ள நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி தூரம் கடைப்பிடிக்க வேண்டும்.

19. மாவட்ட சுற்றுச்சூழல் பாதிப்பு மதிப்பீட்டு ஆணையம், விருதுநகர் கடித எண்.DEIAA/VNR/025/EC.No:020/2017 நாள் : 11.08.2017, தெரிவிக்கப்பட்டுள்ள அனைத்து நிபந்தனைகளையும் தவறாது கடைப்பிடிக்க வேண்டும்.

20. சுரங்க திட்டத்தில் (Mining Plan) குறிப்பிட்டுள்ள விபரங்களின்படி குவாரிப் பணி மேற்கொள்ள வேண்டும்.

21. காலை 7 மணி முதல் மாலை 5 மணி வரை குவாரிப் பணி மேற்கொள்ள வேண்டும்.

22. குவாரியில் வெடிபொருட்கள் பயன்படுத்தும்போது முன்னெச்சரிக்கை நடவடிக்கை மேற்கொள்ளப்பட வேண்டும்.

23. கனிமம் எடுத்து செல்லும் வாகனங்களால் பொது மக்களுக்கு எந்த ஒரு பாதிப்பும் இல்லாமல் தார்பாய் போட்டு மூடி எடுத்துச் செல்ல வேண்டும்.

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24. அருகிலுள்ள பட்டா புலங்களுக்கு இடையூறு ஏதுமின்றி குவாரிப்பணி செய்யவேண்டும்.

(ஒம்) அ. சிவஞானம்,
மாவட்ட ஆட்சியர்
விருதுநகர்

ஆணைப்படி/அனுப்பப்படுகிறது

மாவட்ட ஆட்சியருக்காக
விருதுநகர்.

பெறுநர்
திரு.சு.சண்முகவேல்
த.பெ.சுப்பையா தேவர்,
300D5/2, சங்கரன்கோவில் ரோடு,
இராஜபாளையம்,
விருதுநகர் மாவட்டம்.

நகல் : ஊராட்சி ஒன்றிய ஆணையாளர், இராஜபாளையம்
நகல் : வருவாய் வட்டாட்சியர், இராஜபாளையம்
நகல் கிராம நிர்வாக அலுவலர், கோபாலபுரம்.
நகல் கேவி 1 இருக்கைக்கு

ANNEXURE - II

19 NOV 2024

भारत सरकार / GOVERNMENT OF INDIA
खान मंत्रालय / MINISTRY OF MINES
भारतीय खान ब्यूरो / INDIAN BUREAU OF MINES

M. Dharmalingam

अर्हता प्राप्त यक्ति के रुप में मान्यता प्रमाण पत्र
(खनिज रियायत नियमावली, 1960 के नियम 22सी के तहत)

CERTIFICATE OF RECOGNITION AS QUALIFIED PERSON
(Under Rule 22C of Mineral Concession Rules, 1960)

श्री एम. धरमलिंगम, नं.28, पोलपट्टी, टूटीकोरिन– 628 002, तमिलनाडू, जिनका फोटो और हस्ताक्षर ऊपर दिया हुआ है, तथा जिनहोंने अपनी अर्हता और अनुभव का संतोषजनक साक्ष्य दिया है, को खनन योजना तैयार करने हेतु खनि जरियायत नियमावली 1960 के नियम 22सी के तहत अर्हता प्राप्त व्यक्ति के रूप में मान्यता प्रदान की जाती है ।

Shri M. Dharmalingam, No.28, Polpettai, Tuticorin – 628 002, Tamilnadu State, whose **Photograph and signature** is affixed herein above, having given satisfactory evidence of his qualifications & experience is hereby **RECOGNISED** under Rule 22C of the Mineral Concession Rule, 1960 as a Qualified Person to prepare Mining Plans.

उनकीपंजीयनसंख्या है
His registration number is **RQP /MAS/ 260/2014/A**

यहमान्यता 10 वर्षों की अवधि के लिए मान्यताहैजोदिनांक13.11.2024 कोसमाप्तहोगी।
This recognition is valid for a period of 10 years ending on 13.11.2024

उनके द्वारा प्रस्तुत खनन योजना में गलत जानकारी / दस्तावेज पाए जाने की स्थिती में यह प्रमाण पत्र वापस लिया जाएगा / निरस्त किया जाएगा।

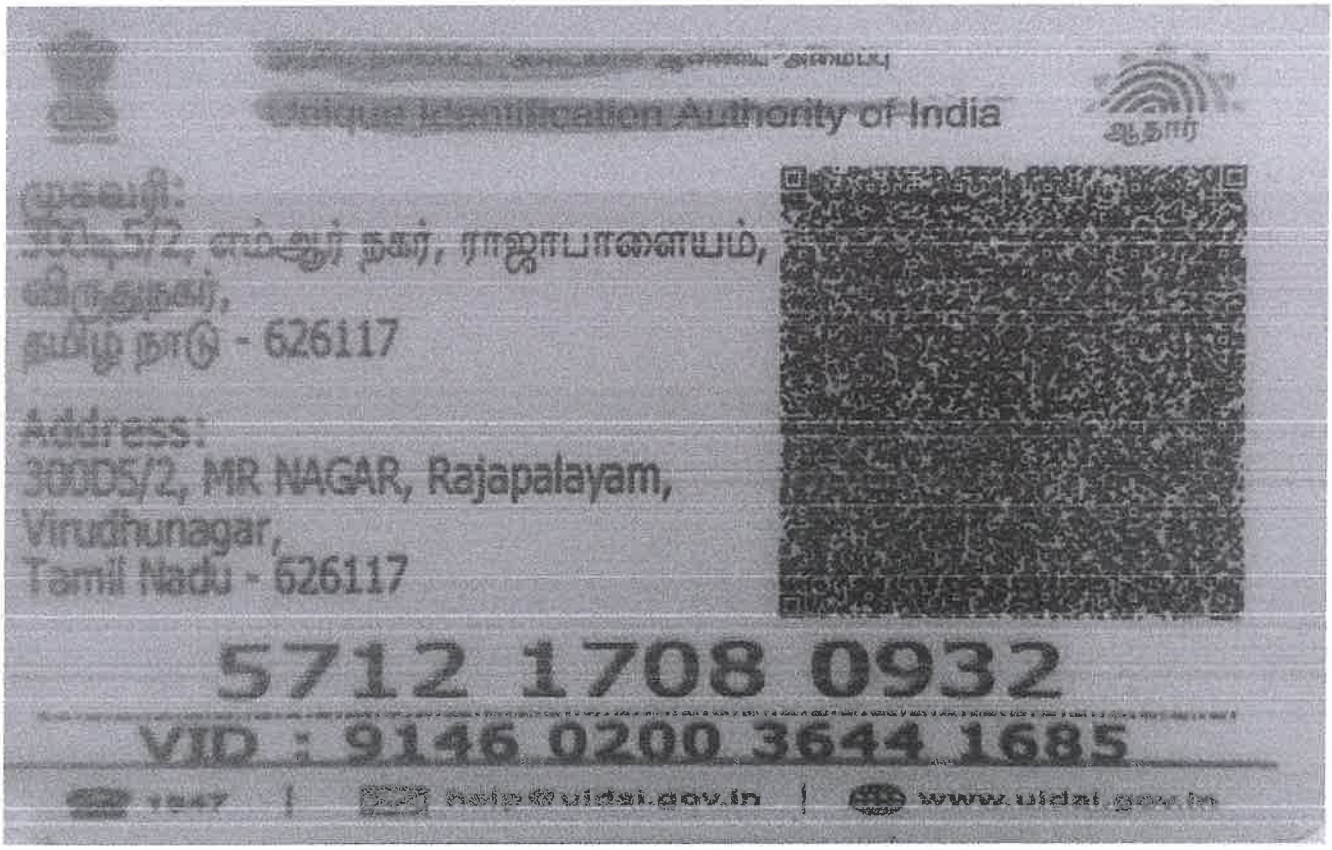
This certificate will liable to be withdrawn / cancelled in the event of furnishing the wrong information / documents in the Mining Plan submitted by him.

स्थान/ Place : Chennai
दिनांक/ Date : 14.11.2014

M. Dharmalingam 14/11/24
M. DHARMALINGAM
M.Sc.,(Geol.) FCC.,(Mining)
Recognised Qualified Person
RQP / MAS / 260 / 2014 / A

क्षेत्रीय खाननियंत्रक / Regional Controller of Mines
भारतीय खानब्यूरो/ Indian Bureau of Mines
चेन्नई क्षेत्र / Chennai Region

ANNEXURE - III



ANNEXURE - IV

மாவட்டம்:- விருதுநகர்

தாலுகா:- ஸ்ரீவில்லிபுத்தூர்

கிராமம் { எண். 35

பெயர்: கோபாலபுரம்

புல எண். 586

பரப்பு: ஹெக்டேர் 5. ஏர். 98.0

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
புவியியல் & சுரங்கத்துறை
விருதுநகர்

585

577

587

576

575

611

A

B

C

D

E

F

		A		
		315.2		
7	3.0	103.4		
		F		
		208.6	16.0 (old)	
		111.8	10.6	6
		107.2	7.2	5
		64.6	49.8	9
4	8.4	68.0		
		61.6	30.4	8
		E		
		C		
		229.4		
		226.4	34.0	3
		130.2	19.6	2
		57.0	13.8	1
		B		

LEASE AREA.

M. DHARMALINGAM
M.Sc.,(Geol.) FCC.,(Mining)
Recognised Qualified Person
RQP / MAS / 260 / 2014 / A

கிராம நிர்வாக அலுவலர்
கோபாலபுரம் கிராமம்
சிவகாசி வட்டம்

சிறப்பு நிலஅளவர்
ஸ்ரீவில்லிபுத்தூர்
24.11.83

அளவு: 1 மி.மீ : 2 மீட்டர்

LEASE AREA

RPATTI

M. DHARMALINGAM
M.Sc.,(Geol.) FCC.,(Mining)
Recognised Qualified Person
QP / MAS / 260 / 2014

Kurichchiyarpatti 0.81 Kilometre

Kurichchiyarpatti

Deyarayanpatti 0.40 Kilometre

470 469 468 473 472 471 474 476 475 479 477 478 550 549 597 596 590 589 584 583 599 585 582 581 551 592 591 598 595 593 587 588 586 577 578 579 563 576 580 552 594 621 611 620 575 574 558 623 622 624 560 573

01/11/2023

A74

ANNEXURE -V

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை

MINES LAND PHOTO

விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம் பட்டா புலஎண்கள். 586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18 ஆக மொத்தம் 2-12.50 ஹெக்டேரில் மட்டும் 5 வருடங்களுக்கு உதவிஇயக்குனர், புவியியல் மற்றும் சுரங்கத்துறை, விருதுநகர் மாவட்ட ஆட்சியர் அலுவலக வளாகம், விருதுநகர் அவர்களின் செயல்முறை ஆணை எண். கே.வி.1/1029/2023 நாள் 10.10.2024ன் படி திரு. சு. சண்முகவேல், த/பெ. சுப்பையாத் தேவர் அவர்கள் மனு செய்துள்ளார்கள். மேற்படி இடம் உடைகல் மற்றும் கிராவல் வெட்டி எடுப்பதற்கு அங்கீகரிக்கப்பட்ட இடம் என்பதை இதன் முலம் சான்றளிக்கிறேன்.

இடம்: கோபாலபுரம்

நாள்: 04.11.2024

மனுதாரர் கையெப்பம்

04/11/2024

கிராம நிர்வாக அலுவலர்.

கிராம நிர்வாக அலுவலர்
கோபாலபுரம் கிராமம்
வெம்பக்கோட்டை வட்டம்

சு. சண்முகவேல்

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை

கிராம நிர்வாக அலுவலரின் சான்று

விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம் பட்டா புலஎண்கள். 586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18 ஆக மொத்தம் 2-12.50 ஹெக்டேரில் மட்டும் 5 வருடங்களுக்கு உதவிஇயக்குனர், புவியியல் மற்றும் சுரங்கத்துறை, விருதுநகர் மாவட்ட ஆட்சியர் அலுவலக வளாகம், விருதுநகர் அவர்களின் செயல்முறை ஆணை எண். கே.வி.1/1029/2023 நாள் 10.10.2024ன் படி திரு. சு. சண்முகவேல், த/பெ. சுப்பையாத் தேவர் அவர்கள் மனு செய்துள்ளார்கள். இவர்கள் ஆரம்பிக்க உள்ள உடைகல் மற்றும் கிராவல் குவாரி நிலத்தை சுற்றி 300மீட்டர் சுற்றளவில் குடியிருப்புகள், கோயில்கள், பள்ளிக்கூடம் ஏதும் இல்லை.

மேற்படி புல எண்கள். மேற்படி கிராம கணக்கு தடை ஆணை புத்தகத்தில் இடம் பெறவில்லை. மேற்படி சான்று கனிமவளத்துறைக்கு அளிக்கும் வகைக்காக வழங்கப்படுகிறது.

04/11/2024

கிராம நிர்வாக அலுவலர்.

கிராம நிர்வாக அலுவலர்
கோபாலபுரம் கிராமம்
வெம்பக்கோட்டை வட்டம்

S' சண்முகவேல்

ANNEXURE-VI

தமிழக அரசு

வருவாய்த் துறை

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

உதவி இயக்குநர் அலுவலகம் விருதுநகர் மாவட்டம் 19 NOV 2024 விருதுநகர் புவியியல் & சுரங்கத்துறை

ாவட்டம் : விருதுநகர் வட்டம் : வெம்பக்கோட்டை

வருவாய் கிராமம் : கோபாலபுரம் பட்டா எண் : 956

உரிமையாளர்கள் பெயர்

சுப்பையாத் தேவர் மகன் சண்முகவேல்

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
586	11	0 - 78.50	2.17	--	--	--	--	R08/219 --- -- 13-12-2002
586	12	0 - 91.50	2.53	--	--	--	--	R08/219 --- -- 13-12-2002
586	13	0 - 10.00	0.28	--	--	--	--	R08/219 --- -- 06-07-2004
586	14	0 - 11.00	0.30	--	--	--	--	R08/219 --- -- 13-12-2002
586	15	0 - 11.00	0.30	--	--	--	--	R08/219 --- -- 13-12-2002
586	17	0 - 5.00	0.14	--	--	--	--	R08/219 --- -- 06-09-2012
586	18	0 - 5.50	0.15	--	--	--	--	R08/219 --- -- 06-09-2012
		2 - 12.50	5.87					

குறிப்பு2 :

1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் **https://eservices.tn.gov.in** என்ற இணைய தளத்தில் **26/09/010/00956/170050** என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
2. இத் தகவல்கள் 23-06-2023 அன்று 10:26:01 AM நேரத்தில் அச்சடிக்கப்பட்டது.
3. கைப்பேசி கேமராவின்2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

DISTRICT - VIRUDHUNAGAR TALUK - VEMBAKKOTTAI VILLAGE - GOPALAPURAM

586	1	586-1		ர	ய			4-3	3	2	77	0	78.00	2	16	697-பெரிய கோபால்சாமி நாயக்கர் மற்றும் 4 நபர்(கள்)
586	2	586-2		ர	ய			4-3	3	2	77	0	19.00	0	53	896-எம்.டி. கண்ணன்
586	3	586-3		ர	ய			4-3	3	2	77	0	18.00	0	50	896-எம்.டி. கண்ணன்
586	4	586-4		ர	ய			4-3	3	2	77	0	19.00	0	53	896-எம்.டி. கண்ணன்
586	5	56-5		ர	ய			4-3	3	2	77	0	18.00	0	50	896-எம்.டி. கண்ணன்
586	6							4-3	3	2	77	0	76.50	2	12	1074-அ. அசோதை
586	7	586-7		ர	ய			4-3	3	2	77	0	19.00	0	53	385-பாலன்
586	8	586-8		ர	ய			4-3	3	2	77	0	20.00	0	55	900-வெங்கிடபதி
586	9	586-9		ர	ய			4-3	3	2	77	0	13.00	0	36	128-அச்சம்மாள்
586	10	586-10		ர	ய			4-3	3	2	77	0	13.00	0	36	900-வெங்கிடபதி
586	11	586-11		ர	ய			4-3	3	2	77	0	78.50	2	17	956-சண்முகவேல்
586	12	586-12		ர	ய			4-3	3	2	77	0	91.50	2	53	956-சண்முகவேல்
586	13	586-13	P	ர	ய			4-3	3	2	77	0	10.00	0	28	956-சண்முகவேல்
586	14	586-14		ர	ய			4-3	3	2	77	0	11.00	0	30	956-சண்முகவேல்
586	15	586-15		ர	ய			4-3	3	2	77	0	11.00	0	30	956-சண்முகவேல்
586	16	586-16		ர	ய			4-3	3	2	77	0	12.00	0	33	900-வெங்கிடபதி
586	17	586-17		ர	ய			4-3	3	2	77	0	5.00	0	14	956-சண்முகவேல்
586	18	586-18		ர	ய			4-3	3	2	77	0	5.50	0	15	956-சண்முகவேல்
		TOTAL FOR SURVEY NUMBER- 586										5	18.00	14	34	
587	1	587-1		ர	ய			4-3	3	2	77	1	83.00	5	06	896-எம்.டி. கண்ணன்
587	2A	587-2		ர	ய			4-3	3	2	77	0	60.00	1	66	896-எம்.டி. கண்ணன்
587	2B	587-3		ர	ய			4-3	3	2	77	1	24.50	3	45	896-எம்.டி. கண்ணன்
		TOTAL FOR SURVEY NUMBER- 587										3	67.50	10	17	

19 NOV 2024

15/11/23

கி .எண். 35. கோபாலபுரம்.

உதவி இயக்குநர் அலுவலர்
விருதுநகர் மாவட்டம்
11
19 NOV 2024
விருதுநகர்
வியிய்ல் & அச்சுக்கத்து
நாயக்கர்.

2	3	4	5	6	7	8	9	10	11
						ரு. பை.	ஹெ. ஏர். ரு. பை.		
8	586-8	ம	ப	...	4-3	3	3 77	0 20.0 0 55	
9	-9	ம	ப	...	4-3	3	2 77	0 13.0 0 36	367 அ. நாராயண நாயக்கர்.
10	-10	ம	ப	...	4-3	3	2 77	0 13.0 0 36	9 அ. அச்சய நாயக்கர்.
11	-11	ம	ப	...	4-3	3	2 77	0 78.5 2 17	290 அ. சுப்பா நாயக்கர்.
12	-12	ம	ப	...	4-3	3	2 77	0 91.5 2 53	536 வீ. இராஜேந்திரன்.
13	-13	ம	ப	...	4-3	3	2 77	0 10.0 0 28	697 சு. பெரிய கோபால் சாமி நாயக்கர் (1) சின்னகோபால சாமி நாயக்கர் (2).
14	-14	ம	ப	...	4-3	3	2 77	0 11.0 0 30	445 சு. பெருமாள் சாமி நாயக்கர்.
15	-15	ம	ப	...	4-3	3	2 77	0 11.0 0 30	131 வெ. குப்பா சாமி நாயக்கர்.
16	-16	ம	ப	...	4-3	3	2 77	0 12.0 0 33	9 அ அச்சய நாயக்கர்.
17	-17	ம	ப	...	4-3	3	2 77	0 05.0 0 14	522 அ இராமசாமி நாயக்கர்.
18	-18	ம	ப	...	4-3	3	2 77	0 05.5 0 15	18 பெ. பாலன்.
							5 18.0	14 34	
87 1	587-1	ம	ப	...	4-3	3	2 77	1 83.0 3 06	95 அ. கிருஷ்ண சாமி நாயக்கர்.
2A	-2A	ம	ப	...	4-3	3	2 77	0 60.0 1 66	421 அ. பெரிய சுப்பா நாயக்கர்.
2B	-2B	ம	ப	...	4-3	3	2 77	1 24.5 3 45	221 அ. சின்ன சுப்பா நாயக்கர்.
							3 07.5	10 17	
	588-1	ம	ப	...	4-3	3	2 77	0 52.0 2 54	502 [illegible] நாயக்கர்.

— வரைபடம் நகல் —
15/6/23
கிராம நிர்வாக அலுவலர்
கோபாலபுரம் கிராமம்
வெம்பக்கோட்டை வட்டம்.

586

150

ANNEXURE-VII

5000Rs.

41043 ரூ.5000/-
10.3.08.

E. K. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர், தமிழ்நாடு.
உரிமம் எண். R.O.C. 12517/98

உதவிக் கருவூல அலுவலர்
திருவில்லிபுத்தூர்

S. சண்முகவேல்
இராஜபாளையம்

-1-

கிரையம் ரூபாய் 84,000/-

மார்க்கட் மதிப்பு ரூ.84000/-

2008ம் வருடம் மார்ச் மாதம் 10ம் தேதிக்கு தமிழ் ஸர்வஜித் வருடம் மாசி மாதம் 27ம்தேதி விருதுநகர் மாவட்டம் இராஜபாளையம் வட்டம் இராஜபாளையம் டவுண் மாப்பிள்ளை சுப்பையா தெரு கதவு எண் 430ல் வசிக்கும் சுப்பைய்யாத்தேவர் அவர்கள் குமாரர் S.சண்முகவேல் (D.L.No.F/TN/67Z/004887/2006) அவர்களுக்கு

S. சண்முகவேல்

1053

2008

இடதுகை பெருவிரல்

இடதுகை பெருவிரல்

(2)

भारतीय गैर न्यायिक

एक सौ रुपये Rs. 100

रु. 100 ONE HUNDRED RUPEES

सत्यमेव जयते

भारत INDIA

INDIA NON JUDICIAL

தமிழ்நாடு தமிலநாடு TAMILNADU A1044 ரூ100 H 042161

E.R. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர், தமிழ்நாடு.
உரிமம் எண், B.O.C. 12517/19

10.3.08

S. சண்முகவேல் இராஜபாளையம்

-2-

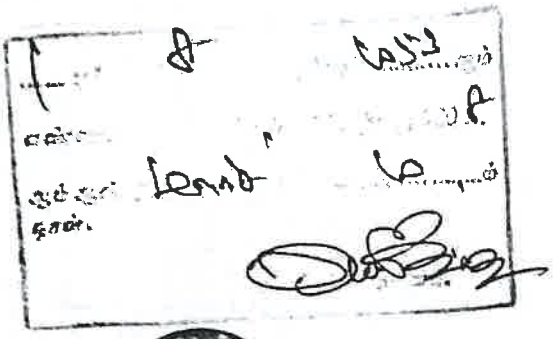
மேற்படிமாவட்டம் மேற்படி வட்டம் வடகரை கிராமம் மஜரா மேட்டு வடகரை இலுப்பட்டியில் கதவு எண் 23A ல் வசிக்கும் கோவிந்தத்தேவர் அவர்கள் குமாரர் M.G.மாரியப்பன்(இராஜபாளையம் வ.கு.அ .எண் TN/35/209/0444135) ஆகிய நான் எழுதிக் கொடுத்த கிரையப் பத்திரம் என்னவென்றால்

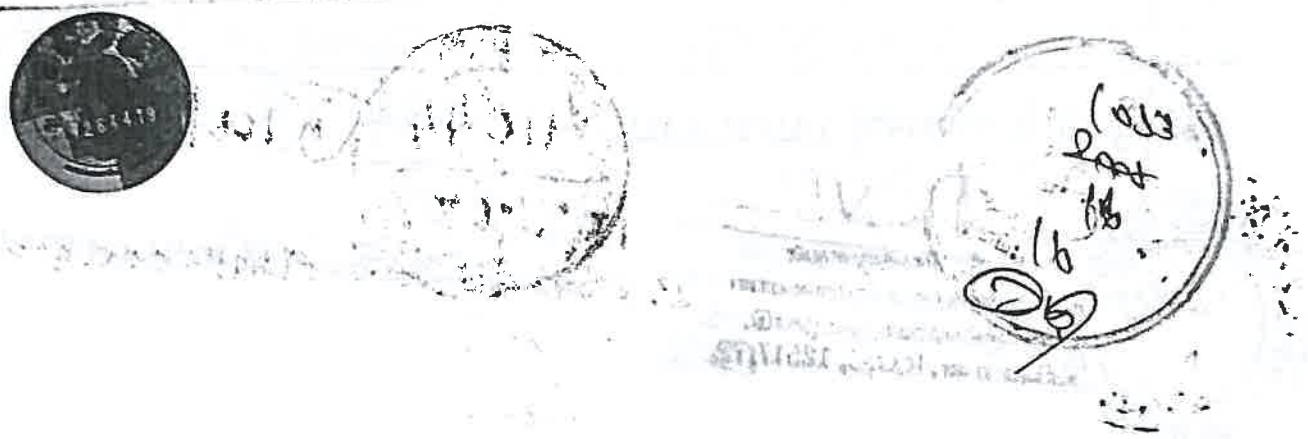
S. சண்முக வேல் — M.G. மாரியப்பன்

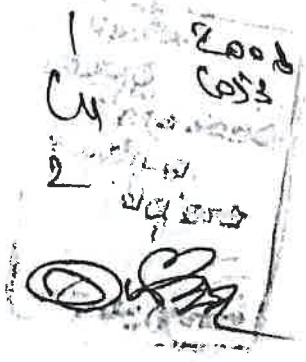
S. சண்முக வேல்

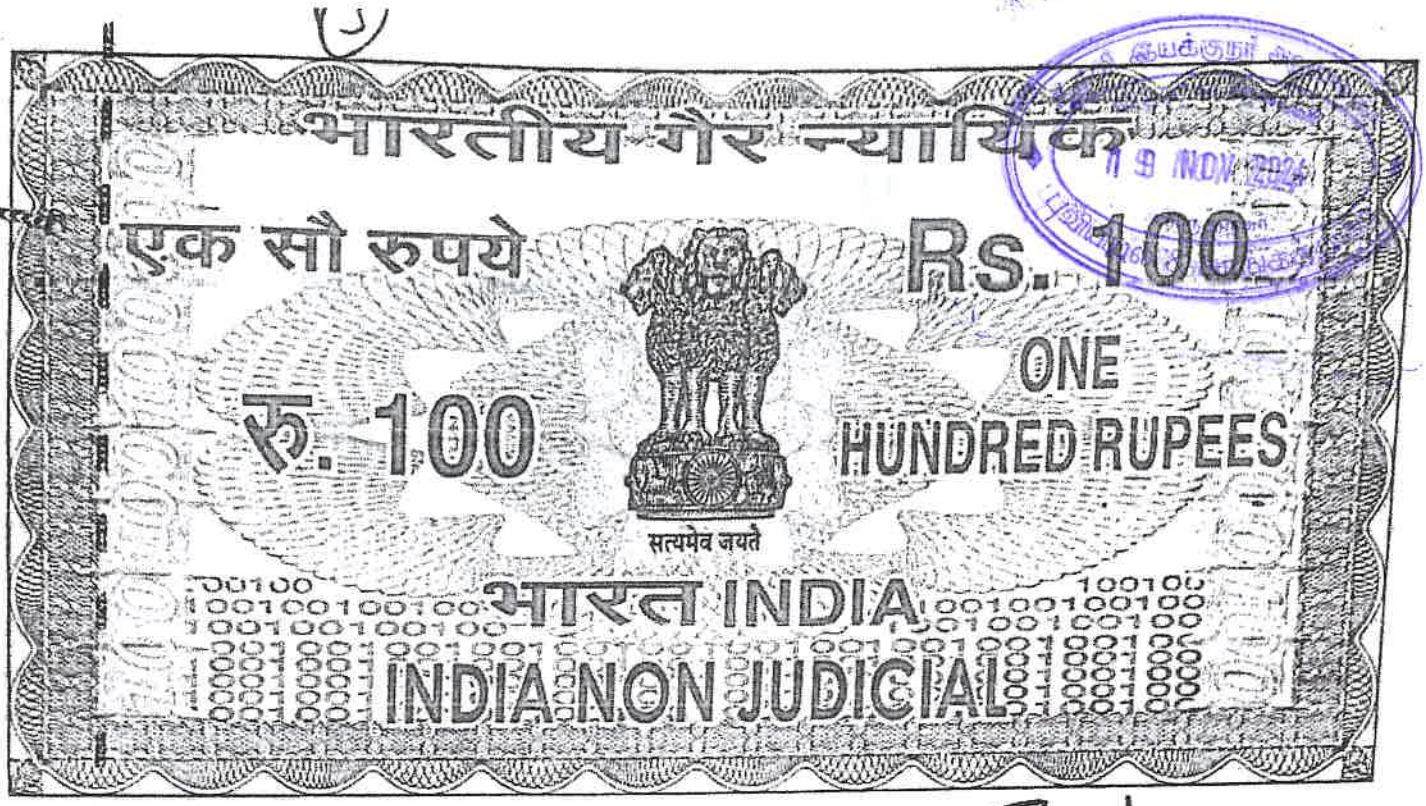
19 NOV 2024

M. R. Sundaram S/o M. Muthuvelayutham









தமிழ்நாடு தமிலநாடு TAMILNADU 41043 ரூ100 H 042162

10.3.08

E. K. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர். தமிழ்நாடு.
உரிமம் எண். R.O.C. 12517/19

S. சண்முகவேல் கிரையப்பணம்

இதன் தபசில் கண்ட சொத்தானது எனக்கு கீழராஜகுலராமன் சார்பதிவகம் 1.794.57.59.168/2001, 1.794.61.63.169/2001, 1.798.95. 98. 457/2001, 1.819.77.78. 2100/2001, 1.819.93.95.2108/2001, 1.874.195. 196.824/2003 நம்பர்களாக பதிவு செய்யப்பட்ட கிரையப் பத்திரங்கள் மூலம் பாத்தியமாகி சர்வசுதந்திரமாய் அனுபவித்து வருவதாகும். தபசில் சொத்தை நான் நாளது தேதியில் தங்களுக்கு கிரையம் செய்து கொடுத்தது ரூபாய் 84,000/- இந்த ரூபாய் எண்பத்தி நான்காயிரத்தையும் நான் எனது குடும்

×S. சண்முகவேல் — Mகுமாரப்பன்

S. சண்முகவேல்

தமிழ்நாடு தமிலநாடு TAMILNADU 41046 ரூ100 H 042163

10.3.08

E. R. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர். தமிழ்நாடு.
உரிமம் எண். R.O.C. 12517/78

S. சண்முகவேல் க/பெ மாரியப்பன்

-4-

பார்த்தமான செலவுக்காக இது முன் தங்களிடமிருந்து நேரில் ரொக்கம் பெற்றுக்கொண்டபடியால் தபசில் சொத்தை தாங்கள் நாளதுதேதி முதல் கிரைய பாத்தியமாகவும் சர்வசுதந்திர பாத்தியமாகவும் சந்ததி பரம்பரை யாகவும் ஆண்டனுபவித்துக் கொள்வீர்களாகவும்.

X S. சண்முகவேல் — M. மாரியப்பன்

S. சண்முகவேல்

156

(5)

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV
விருதுநகர்
நிலையியல் & கணக்குத்திட்டம்

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रु. 100 ONE HUNDRED RUPEES

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INDIA NON JUDICIAL

தமிழ்நாடு தமிலநாடு TAMILNADU 41047 ரூ100/- H 042164

E. K. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர். தமிழ்நாடு.
உரிமம் எண். R.O.C. 12517/[illegible]

10.3.08

S. சுண்முகவேல் கிராம நிர்வாக அலுவலர்

மாவட்ட ஆட்சியர் அலுவலகம்
விருதுநகர்

தபசில் சொத்து தங்கள் பெயருக்கு பட்டா மாறுதல் ஆவதற்குரிய புள்ளிமனு வில் நான் கையெழுத்துச்செய்து இத்துடன் இணைத்துக்கொடுத்துள்ளேன்.

தபசில் சொத்தைப்பொருத்து யாதொரு வில்லங்கமும் கிடையாது என்று உறுதி கூறுகின்றேன்.

× S. சண்முக வேல் — [illegible]

மாவட்ட ஆட்சியர் அலுவலகம்
விருதுநகர்
10

S. சண்முகவேல்

(6)

தமிழ்நாடு தமிலநாடு TAMILNADU 41048 ரூ100/- H 042165

10.3.08

E. K. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர். தமிழ்நாடு.
உரிமம் எண். R.O.C. 12517/79

S. சண்முகவேல் இந்துபாண்டியன்

ஏதேனும் வில்லங்கம் விபகாரம் இருந்து பின் வெளியானால் நான் கட்டுப்பட்டு எனது இதர ஸ்தாபர சங்கம சொத்துக்களில் இருந்து தங்களுக்கு ஏற்படும் சகல கஷ்ட நஷ்டங்களையும் நிவர்த்தி செய்து தருவேன் என்றும் உறுதி கூறுகின்றேன்.

- M. மாரியப்பன்

X S. சண்முகவேல்

(7)

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2

தமிழ்நாடு தமிழ்நாடு TAMILNADU A1049 ரூ50 F 403533

10.3.08

S. சண்முகவேல் இராஜபாளையம்

E. R. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர். தமிழ்நாடு.
உரிமம் எண். R.O.C. 12517/[illegible]

-7-

சொத்து விபரம்

தபசில் விருதுநகர் மாவட்டம் விருதுநகர் பதிவு மாவட்டம் கீழராஜகுலராமன் சார்பதிவு சரகம் கோபாலபுரம் கிராமம்.

1.அ.பு.ச 586/11 நிர் ஹெக்டேர் 0.78.5க்கு ஏக்கர் 1 செண்டு 94,

2.அ.பு.ச 586/12 நிர் ஹெக்டேர் 0.91.5க்கு ஏக்கர் 2 செண்டு 26,

— மாடமாயன்

× S. சண்முகவேல்

S. சண்முகவேல்

(8)

தமிழ்நாடு தமிலநாடு TAMILNADU

F 403534

10.3.08

E. K. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
பரமக்குடி, தமிழ்நாடு.
உரிமம் எண். R.O.C. 12517/79

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3. அ.பு.ச 586/13 நிர் ஹெக்டேர் 0.10.0க்கு செண்டு25

4.அ.பு.ச 586/14 நிர் ஹெக்டேர் 0.11.0க்கு செண்டு 27

(9)

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்

தமிழ்நாடு தமிலநாடு TAMILNADU A 1051 ரூ50/- F 403535

10.3.08

E.H. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர். தமிழ்நாடு.
உரிமம் எண். R.O.C. 12517/79

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5. அ.பு.ச 586/15 நிர் ஹெக்டேர் 0.11.0க்கு செண்டு 27

6. அ.பு.ச 586/16 நிர் ஹெக்டேர் 0.12.0க்கு செண்டு 30

7. அ.பு.ச 586/17 நிர் ஹெக்டேர் 0.05.0க்கு செண்டு 12

(10)

தமிழ்நாடு தமிழ்நாடு TAMILNADU A 105 [illegible] F 403536

E. R. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர். தமிழ்நாடு.
உரிமம் எண். R.O.C. 12517/[illegible]

10.3.08.

S. சண்முகவேல் இராஜபாளையம்

-10-

8.அ.பு.ச 586/18 நிர் ஹெக்டேர் 0.05.0க்கு செண்டு 12

ஆக மொத்த ஹெக்டேர் 2.24.0 ஏக்கர் 5 செண்டு 53ம் சேர்ந்து தபசில் சரி.

S.சண்முகவேல் 4-99 Amount - Mahendran

-6-

S.சண்முகவேல்

தமிழ்நாடு தமிலநாடு TAMILNADU A 10553 F 403537

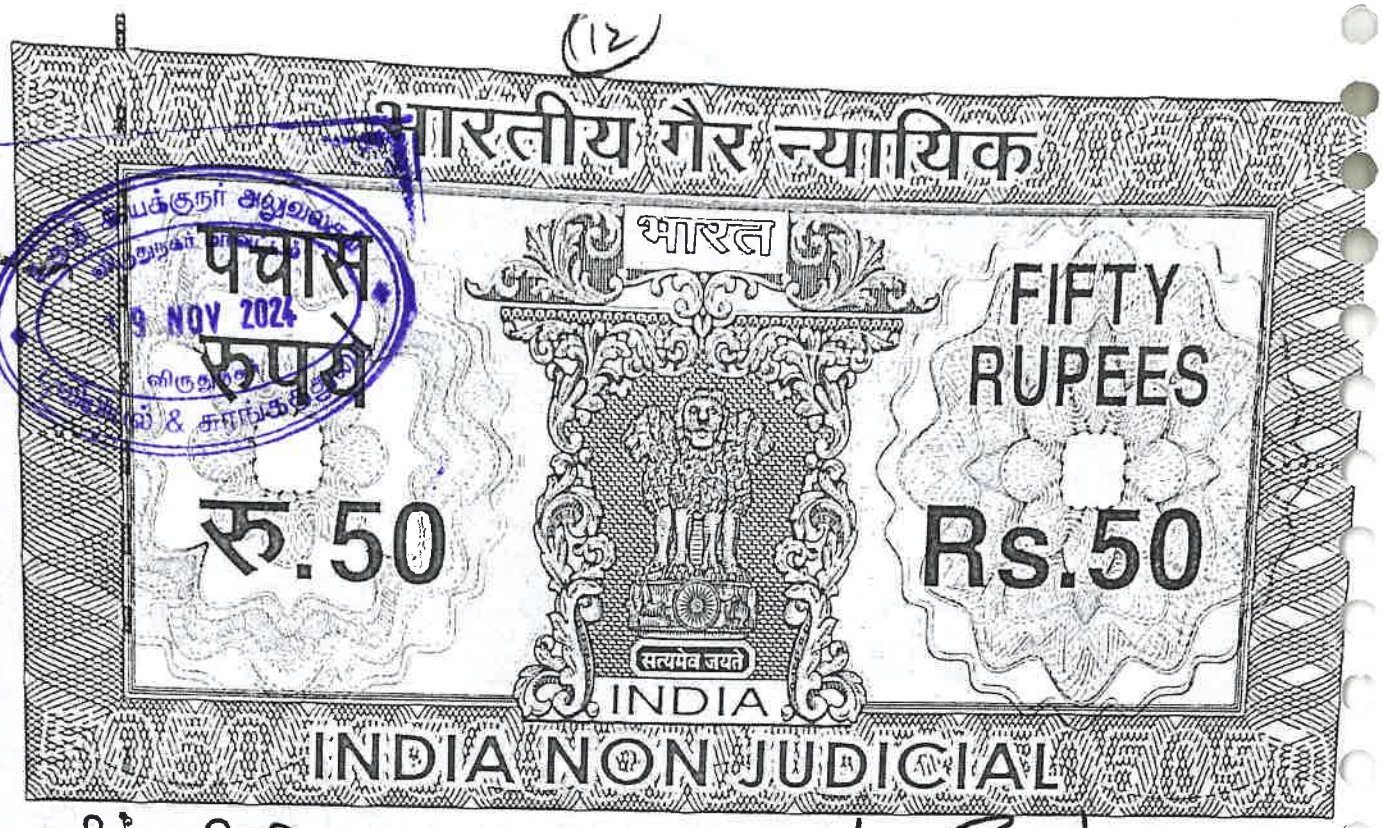
10.3.08

K. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர், தமிழ்நாடு.
உரிமம் எண். R.O.C. 12517/[illegible]

-11-

நான் தங்களுக்கு கிரையம் செய்து கொடுத்த மேற்படி நிலங்களின் அசல் ஆவணங்களை நாளது தேதியில் தங்கள் வசம் ஒப்படைத்துள்ளேன்.

(12)



19 NOV 2024

தமிழ்நாடு தமிலனாடு TAMILNADU

41054 F 403538

10.3.08

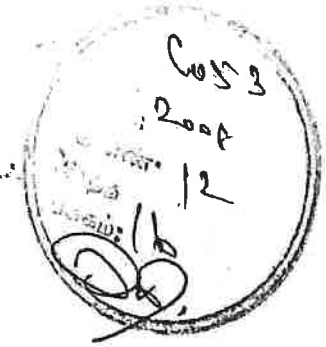
E. K. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர். தமிழ்நாடு.
உரிமம் எண். R.O.C. 12517/19

S. சண்முக வேல் இராஜ பாளையம்

-12-

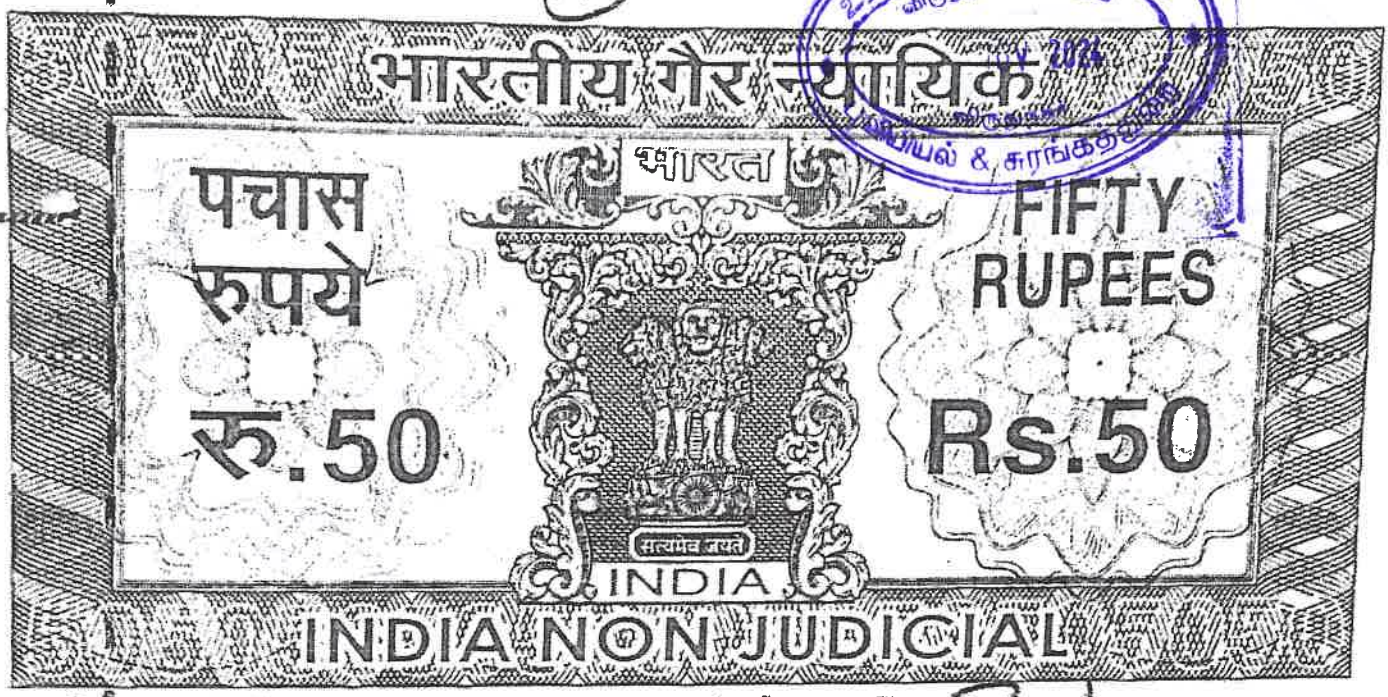
மேற்படி சொத்து கோபாலபுரம் பஞ்சாயத்து இராஜபாளையம் யூனியனைச் சேர்ந்தது.

× S. சண்முக வேல் — ஆக மொத்தம்



S. சண்முக வேல்

(13)



உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
சுரங்கத்துறை

தமிழ்நாடு தமிழ்நாடு TAMILNADU 41055 ரூபாய் F 403539

10.3.09

E. R. சிவகுருநாதன்
முத்திரைத்தாள் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர் விருதுநகர்
உரிமம் எண். B.O.C. 12517/[illegible]

-13-

மேற்படி சொத்தின் தற்கால மார்க்கட் மதிப்பு ரூபாய் 84,005/- ஆகும்.

சாட்சிகள்

1. R. [illegible] s/o தாக்கப்பத்தேவர், ஸ்ரீரங்கபாளையம்.

2. [illegible] s/o. பழனிச்சாமித்தேவர், திருவிகினம்.

வரைவு செய்தவர் D/O T. முத்துசாமித்தேவர்

கீழராஜகுலராமன் உரிமம் எண் B/1337/VGR/91.

A94

165

(14)

-14-

19 NOV 2024

1968ம் வருடத்திய இந்திய முத்திரைச்சட்டம்
முத்திரைக்குறைப்பு தடுப்புச்சட்டம் விதிஎண்
3(1) ன்படி அறிக்கை

கோபாலபுரம்வடகரை கிராமம்

சை நிர்	சர்வே நிர்	விஸ்தீரணம் ஏ. செ	சொத்தின் தன்மை	மார்க்கட் மதிப்பு
1.	586/11	0.78.5	புஞ்சை ரூ	29440/-
2.	586/12	0.91.5	புஞ்சை ரூ	34315/-
3	586/13	0.10.0	புஞ்சை ரூ	3750/-
4.	586/14	0.11.0	புஞ்சை ரூ	4125/-
5.	586/15	0.11.0	புஞ்சை ரூ	4125/-
6.	586/16	0.12.0	புஞ்சை ரூ	4500/-
7.	586/17	0.05.0	புஞ்சை ரூ	1875/-
8.	586/18	0.05.0	புஞ்சை ரூ	1875/-
			மொத்தம்	84000/-

வட்டாட்சியர்

மே 2024

ANNEXURE-VIII

பெறுநர்:

மாவட்ட ஆட்சியர்,
விருதுநகர்.

அனுப்புநர்:

திரு மு.சிவகுமார்., பி.எஸ்.சி.,
உருவாய் கோட்டாட்சியர்,
சாத்தூர்.

மூ.மு.அ2 / 4615 /2023, நாள்: 28.08.2024.

ஐ,

பொருள் : கனிமங்களும் குவாரிகளும் - விருதுநகர் மாவட்டம் - சாத்தூர் கோட்டம் - வெம்பக்கோட்டை வட்டம் - கோபாலபுரம் கிராமம் - புல எண்கள். 586/11 (0.78.50), 586/12 (0.91.50), 586/13 (0.10.00), 586/14 (0.11.00), 586/15 (0.11.00), 586/17 (0.05.00), 586/18 (0.05.50) மொத்த பரப்பு 2.12.50 ஹெக்டேர் நிலத்தில் - ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்கக் கோரியது - கருத்துரு அனுப்ப கோருதல் - தொடர்பாக.

பார்வை:

1. விருதுநகர் மாவட்ட ஆட்சித்தலைவர் அவர்களின் கடிதம் எண் ந.க. கேவி1/1029/2023, நாள்: 07.09.2023.
2. வெம்பக்கோட்டை வருவாய் வட்டாட்சியர் கடிதம் எண். ந.க. ஆ1/4153/2023, நாள்: 02.01.2024. (இவ்வலுவலகத்திற்கு வரப்பெற்ற நாள்: 15.02.2024).
3. இவ்வலுவலக இதே எண்ணிட்ட கடிதம் நாள்: 06.03.2024.
4. வெம்பக்கோட்டை வருவாய் வட்டாட்சியர் கடிதம் எண். ந.க. ஆ1/4153/2023, நாள்: 13.08.2024.

*****

இராஜபாளையம் வட்டம், க.எண்.300, டி5/2, சங்கரன்கோவில் ரோடு என்ற முகவரியைச் சேர்ந்த திரு.சண்முகவேல், த/பெ. சுப்பையாத்தேவர் என்பவர் வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம், புல எண்கள். 586/11 (0.78.50), 586/12 (0.91.50), 586/13 (0.10.00), 586/14 (0.11.00), 586/15 (0.11.00), 586/17 (0.05.00), 586/18 (0.05.50) மொத்த பரப்பு 2.12.50 ஹெக்டேர் நிலங்களில் ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் வழங்கக் கோரியது தொடர்பாக, புலத்தணிக்கை செய்து எனதறிக்கையினை கீழ்க்கண்டவாறு சமர்ப்பிக்கிறேன்.

மனுதாரர் குவாரி உரிமம் கோரும் புல எண்களான 586/11 பரப்பு 0.78.5 ஏர்ஸ், 586/12 பரப்பு 0.91.5 ஏர்ஸ், 586/13 பரப்பு 0.10.0 ஏர்ஸ், 586/14 பரப்பு 0.11.0 ஏர்ஸ், 586/15 பரப்பு 0.11.0 ஏர்ஸ், 586/17 பரப்பு 0.05.0 ஏர்ஸ் மற்றும் 586/18 பரப்பு 0.05.5 ஏர்ஸ் ஆக மொத்தம் 2.12.5 ஹெக்டேர் நிலமானது பட்டா எண்.956-ன்படி மனுதாரரான சண்முகவேல், த/பெ. சுப்பையாத்தேவர் என்பவரது பெயரில் கோபாலபுரம் கிராமக் கணக்கில் தூக்கலாகியுள்ளது. மனுதாரர் குவாரி உரிமம் கோரும் புலங்களில் புலத்தணிக்கை செய்யப்பட்டதில், சுமார் 300 மீட்டர் சுற்றளவில் குடியிருப்பு பகுதிகளோ, பள்ளி மற்றும் கல்லூரிகளோ் எதுவும் இல்லை. மேற்படி குவாரி குத்தகை உரிமம் கோரும் கூட்டுப்புலத்திற்கு தெற்கே சுமார் 10 மீட்டர் அருகில் புல எண்.624-ல் கிராமக் கணக்கின்படி "தீர்வை ஏற்படாத தரிசு" வகைப்பாடுடைய நிலத்தில் முடிவடைந்த அரசு குவாரி ஒன்று செயல்படாத நிலையில்

S. அண்ணாதுரை

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை

உள்ளது. கிழக்கே புல எண்கள்.557/1, 558/1, 558/2, 559, 574 மற்றும் 557/2 ஆகியவற்றில் ராஜ்மோகன், த/பெ. வெங்கிடபதி என்பவருக்கு சொந்தமான குவாரி ஒன்று ந.க.கே.வி1/232/2023, நாள்: 31.01.2023-ன்படி செயல்பட்டு வருகிறது. இது சுமார் 350 மீட்டர் தொலைவில் உள்ளது. புல எண். 556/2-ல் திரு.ராஜ்மோகன் என்பவருக்கு சொந்தமான செயல்படாத குவாரி ஒன்றும் சுமார் 430 மீட்டர் தொலைவில் உள்ளது. தென்கிழக்கில் புல எண்.567/2ஏ, 567/2பி மற்றும் 568/1பி ஆகியவற்றில் ஆறுமுகம், த/பெ.பரமகுரு என்பவருக்குச் சொந்தமான குவாரி (ந.க.கே.வி1/159/2021, நாள்: 31.01.2023-படி சுமார் 230 மீட்டர் தொலைவில் இயங்கி வருகிறது. புல எண்.565/2-ல் மேற்படி நபருக்கு முடிவடைந்த செயல்படாத குவாரி ஒன்றும் உள்ளது. தென்மேற்கில் புல எண்.635/4 மற்றும் 636 ஆகியவற்றில் முருகேசன், த/பெ. சங்கிலிக்காளை என்பவருக்கு சொந்தமான குவாரி ஒன்று (ந.க.கேவி1/170/2019, நாள்: 01.08.2020) சுமார் 220 மீட்டர் தொலைவில் இயங்கி வருகிறது.

மனுதாரரால் குவாரி குத்தகை உரிமம் கோரப்படும் புல எண்களில் 586/11 மற்றும் 586/12 ஆகிய புலங்களின் குறுக்கே கிழமேலாக மும்முனை மின்சாரக் கம்பிகள் செல்கிறது. இதனை அகற்றித்தரக் கோரி மின்சார வாரிய அலுவலகத்தில் மனு அளித்துள்ளதாக மனுதாரர் தெரிவிக்கிறார். மேற்படி குவாரி குத்தகை உரிமம் கோரும் புலங்களைச் சுற்றிலும் 50 மீட்டர் சுற்றளவிற்குள் சாலைகளோ, இரயில் இருப்பு பாதைகளோ, கோவில்களோ, புராதானச் சின்னங்களோ, நீர்நிலைகளோ மற்றும் வேறு நிரந்தர அமைப்புகள் எதுவும் இல்லை. மனுதாரர் உடைகல் மற்றும் கிராவல் குவாரி செய்வதால், அருகில் உள்ள நிலங்களுக்கு பாதிப்பு ஏதும் ஏற்படுவதற்கான வாய்ப்புகள் ஏதும் இல்லை. மனுதாரர் குவாரிசெய்ய உரிமம் கோரும் நிலத்திற்கு தெற்கே புல எண்.624-ல் செயல்படாத அரசுக் குவாரியின் மேல்பக்கம் ஒரு சிறிய ஓடை ஒன்று உள்ளது. மனுதாரர் குவாரி செய்வதால் மேற்படி ஓடைக்கு பாதிப்பு ஏதும் இல்லை. உரிமம் கோரிய இடத்தில் ஏற்கனவே குவாரி செய்யப்பட்டு இருப்பது புலத்தணிக்கையில் தெரியவருகிறது. இந்த குவாரிப் புலத்திற்கான பாதையானது குவாரிப் புலத்தினை ஒட்டி தென்பகுதியில் புல எண்.611-ல் உள்ளது. இது கிராமக் கணக்கின்படி "பாதை" என உள்ளது.

மனுதாரர் சண்முகவேல், த/பெ. சுப்பையாத்தேவர் என்பவர் மேற்படி புலங்களில் குவாரி உரிமம் கோரி விண்ணப்பித்துள்ள விபரம் குறித்து கோபாலபுரம் கிராம பொது மக்களுக்கு "அ1" நோட்டீஸ் வினம்பரம் செய்யப்பட்டதில் மேற்படி குவாரி அமைப்பதற்கு பொது மக்களிடம் இருந்து ஆட்சேபனை ஏதும் வரப்பெறவில்லை. மேற்படி குவாரி அமையவுள்ள நிலமானது கோபாலபுரம் ஊராட்சி, இராஜபாளையம் ஊராட்சி ஒன்றியத்தைச் சேர்ந்தது.

நான்குமால் விபரம்:-

வடக்கு - புல எண். 565 - எம்.டி.கண்ணன்,
தெற்கு - புல எண்.611 - கிழமேல் பாதை,
கிழக்கு - புல எண்.575 - சுப்புராமன் மற்றும் ராஜ்மோகன் நிலம்,
புல எண்.577/1 - வெங்கிடபதி (ம) சுப்புராமன்,
மேற்கு -புல எண்.586/7-பாலன் நிலம், 586/8,10-வெங்கிடபதி நிலம், 586/9 - அச்சம்மாள் நிலம்,

ரு. சண்முகவேல்

மேலும், உரிமம் கோரும் புல எண்ணில் தெற்கிலிருந்து வடக்கே கற்கள் எடுக்கப்பட்டுள்ளது. ஒருசில பகுதிகளில் கிராவல் எடுக்கப்பட்டுள்ளது. அதனை வரைபடத்தில் வண்ணமிட்டு குவாரி செய்த அளவுகளுடன் அறிக்கையினை அனுப்பி வைக்குமாறு பார்வை-3ல் காணும் கடிதத்தில் கோரப்பட்டது தொடர்பாக, பார்வை-4ல் காணும் கடிதத்தில் வெம்பக்கோட்டை வட்டாட்சியர் கீழ்க்கண்டவாறு அறிக்கை செய்துள்ளார்.

மேற்படி குவாரி உரிமம் கோரும் புல எண்களில் தெற்கிலிருந்து வடக்காக கற்கள் எடுக்கப்பட்ட விபரம் புல எண்கள் முறையே 586/11, 586/12-ல் 37450 க.மீ (10 மீ ஆழம்), 586/11, 586/12, 586/14, 586/15-ல் 28800 க.மீ (8 மீ ஆழம்), 586/11, 586/12, 9000 க.மீ (10 மீ ஆழம்) கிராவல் கற்கள் வெட்டி எடுக்கப்பட்டுள்ளது என்றும், அதன் அளவுகள் வரைபடத்தில் வண்ணமிட்டு காட்டப்பட்டுள்ளதாக வட்டாட்சியர் தெரிவித்துள்ளார்.

இந்நேர்வில், இராஜபாளையம் வட்டம், க.எண்.300, டி5/2, சங்கரன்கோவில் ரோடு என்ற முகவரியைச் சேர்ந்த திரு.சண்முகவேல், த/பெ. சுப்பையாத்தேவர் என்பவருக்கு வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம், புல எண்கள். 586/11 (0.78.50), 586/12 (0.91.50), 586/13 (0.10.00), 586/14 (0.11.00), 586/15 (0.11.00), 586/17 (0.05.00), 586/18 (0.05.50) மொத்த பரப்பு 2.12.50 ஹெக்டேர் நிலங்களில் ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் தமிழ்நாடு சிறுகனிம விதிகளுக்கு உட்பட்டு வழங்க பரிந்துரை செய்கிறேன் என்பதைப் பணிவுடன் தெரிவித்துக்கொள்கிறேன்.

இணைப்பு: மேற்கண்டவாறு.

ஒம்/ மு.சிவகுமார்,
வருவாய் கோட்டாட்சியர்,
சாத்தூர்.

/உத்தரவுப்படி/

நேர்முக உதவியாளர்

S. சண்முகவேல்

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
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விருதுநகர்
புவியியல் & சுரங்கத்துறை

புலத்தணிக்கைக்குறிப்பு

புலத்தணிக்கை அலுவலர் பெயர் மற்றும் பதவி	திரு. மு.சிவகுமார்., பி.எஸ்.சி., வருவாய் கோட்டாட்சியர் , சாத்தூர்.
தணிக்கை செய்த இடம்	வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம்
புல எண்கள்	புல எண்கள். 586/11 (0.78.50), 586/12 (0.91.50), 586/13 (0.10.00), 586/14 (0.11.00), 586/15 (0.11.00), 586/17 (0.05.00), 586/18 (0.05.50) மொத்த பரப்பு 2.12.50 ஹெக்டேர்
தணிக்கை நாள்	27.02.2024
புலத்தணிக்கையின் நோக்கம்	5 வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்கக் கோரி கோரியது - தொடர்பாக.

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இராஜபாளையம் வட்டம், க.எண்.300, டி5/2, சங்கரன்கோவில் ரோடு என்ற முகவரியைச் சேர்ந்த திரு.சண்முகவேல், த/பெ. சுப்பையாத்தேவர் என்பவர் வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம், புல எண்கள். 586/11 (0.78.50), 586/12 (0.91.50), 586/13 (0.10.00), 586/14 (0.11.00), 586/15 (0.11.00), 586/17 (0.05.00), 586/18 (0.05.50) மொத்த பரப்பு 2.12.50 ஹெக்டேர் நிலங்களில் ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் வழங்கக் கோரியது தொடர்பாக, இன்று (27.02.2024) புலத்தணிக்கை மேற்கொள்ளப்பட்டது. புலத்தணிக்கையின்போது வெம்பக்கோட்டை வட்டாட்சியர், மண்டல துணை வட்டாட்சியர், வருவாய் ஆய்வாளர், குறுவட்ட அளவர் மற்றும் கிராம நிர்வாக அலுவலர் ஆகியோர் உடனிருந்தனர்.

மனுதாரர் குவாரி உரிமம் கோரும் புல எண்களான 586/11 பரப்பு 0.78.5 ஏர்ஸ், 586/12 பரப்பு 0.91.5 ஏர்ஸ், 586/13 பரப்பு 0.10.0 ஏர்ஸ், 586/14 பரப்பு 0.11.0 ஏர்ஸ், 586/15 பரப்பு 0.11.0 ஏர்ஸ், 586/17 பரப்பு 0.05.0 ஏர்ஸ் மற்றும் 586/18 பரப்பு 0.05.5 ஏர்ஸ் ஆக மொத்தம் 2.12.5 ஹெக்டேர் நிலமானது பட்டா எண்.956-ன்படி மனுதாரரான சண்முகவேல், த/பெ. சுப்பையாத்தேவர் என்பவரது பெயரில் கோபாலபுரம் கிராமக் கணக்கில் தாக்கலாகியுள்ளது. மனுதாரர் குவாரி உரிமம் கோரும் புலங்களில் புலத்தணிக்கை செய்யப்பட்டதில், சுமார் 300 மீட்டர் சுற்றளவில் குடியிருப்பு பகுதிகளோ, பள்ளி மற்றும் கல்லூரிகளோ எதுவும் இல்லை. மேற்படி குவாரி குத்தகை உரிமம் கோரும் கூட்டுப்புலத்திற்கு தெற்கே சுமார் 10 மீட்டர் அருகில் புல எண்.624-ல் கிராமக் கணக்கின்படி "தீர்வை ஏற்படாத தரிசு" வகைப்பாடுடைய நிலத்தில் முடிவடைந்த அரசு குவாரி ஒன்று செயல்படாத நிலையில் உள்ளது. கிழக்கே புல எண்கள்.557/1, 558/1, 558/2, 559, 574 மற்றும் 557/2 ஆகியவற்றில் ராஜ்மோகன், த/பெ. வெங்கிடபதி என்பவருக்கு சொந்தமான குவாரி ஒன்று ந.க.கே.வி1/232/2023, நாள்: 31.01.2023-ன்படி செயல்பட்டு வருகிறது. இது சுமார் 350 மீட்டர் தொலைவில் உள்ளது. புல எண். 556/2-ல் திரு.ராஜ்மோகன் என்பவருக்கு சொந்தமான செயல்படாத குவாரி ஒன்றும் சுமார் 430 மீட்டர் தொலைவில் உள்ளது. தென்கிழக்கில் புல எண்.567/2ஏ, 567/2பி மற்றும் 568/1பி ஆகியவற்றில்

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ஆறுமுகம், த/பெ.பரமகுரு என்பவருக்குச் சொந்தமான குவாரி (ந.க.கே.வி1/159/2021, நாள்: 31.01.2023-படி சுமார் 230 மீட்டர் தொலைவில் இயங்கி வருகிறது. புல எண்.565/2-ல் மேற்படி நபருக்கு முடிவடைந்த செயல்படாத குவாரி ஒன்றும் உள்ளது. தென்மேற்கில் புல எண்.635/4 மற்றும் 63 ஆகியவற்றில் முருகேசன், த/பெ. சங்கிலிக்காளை என்பவருக்கு சொந்தமான குவாரி ஒன்று (ந.க.கேவி1/170/2019, நாள்: 01.08.2020) சுமார் 220 மீட்டர் தொலைவில் இயங்கி வருகிறது.

மனுதாரரால் குவாரி குத்தகை உரிமம் கோரப்படும் புல எண்களில் 586/11 மற்றும் 586/12 ஆகிய புலங்களின் குறுக்கே கிழமேலாக மும்முனை மின்சாரக் கம்பிகள் செல்கிறது. இதனை அகற்றித்தரக் கோரி மின்சார வாரிய அலுவலகத்தில் மனு அளித்துள்ளதாக மனுதாரர் தெரிவிக்கிறார். மேற்படி குவாரி குத்தகை உரிமம் கோரும் புலங்களைச் சுற்றிலும் 50 மீட்டர் சுற்றளவிற்குள் சாலைகளோ, இரயில் இருப்பு பாதைகளோ, கோவில்களோ, புராதானச் சின்னங்களோ, நீர்நிலைகளோ மற்றும் வேறு நிரந்தர அமைப்புகள் எதுவும் இல்லை. மனுதாரர் உடைகல் மற்றும் கிராவல் குவாரி செய்வதால், அருகில் உள்ள நிலங்களுக்கு பாதிப்பு ஏதும் ஏற்படுவதற்கான வாய்ப்புகள் ஏதும் இல்லை. மனுதாரர் குவாரிசெய்ய உரிமம் கோரும் நிலத்திற்கு தெற்கே புல எண்.624-ல் செயல்படாத அரசுக் குவாரியின் மேல்பக்கம் ஒரு சிறிய ஓடை ஒன்று உள்ளது. மனுதாரர் குவாரி செய்வதால் மேற்படி ஓடைக்கு பாதிப்பு ஏதும் இல்லை. இப்புலத்தில் மனுதாரரால் ஏற்கனவே குவாரி செய்யப்பட்டு இருப்பது புலத்தணிக்கையில் தெரியவருகிறது. இந்த குவாரிப் புலத்திற்கான பாதையானது குவாரிப் புலத்தினை ஒட்டி தென்பகுதியில் புல எண்.611-ல் உள்ளது. இது கிராமக் கணக்கின்படி "பாதை" என உள்ளது.

மனுதாரர் சண்முகவேல், த/பெ. சுப்பையாத்தேவர் என்பவர் மேற்படி புலங்களில் குவாரி உரிமம் கோரி விண்ணப்பித்துள்ள விபரம் குறித்து கோபாலபுரம் கிராம பொது மக்களுக்கு "அ1" நோட்டீஸ் விளம்பரம் செய்யப்பட்டதில் மேற்படி குவாரி அமைப்பதற்கு பொது மக்களிடம் இருந்து ஆட்சேபனை ஏதும் வரப்பெறவில்லை. மேற்படி குவாரி அமையவுள்ள நிலமானது கோபாலபுரம் ஊராட்சி, இராஜபாளையம் ஊராட்சி ஒன்றியத்தைச் சேர்ந்தது.

நான்குமால் விபரம்:-

வடக்கு - புல எண். 585 - எம்.டி.கண்ணன்,
தெற்கு - புல எண்.611 - கிழமேல் பாதை,
கிழக்கு - புல எண்.575 - சுப்புராமன் மற்றும் ராஜ்மோகன் நிலம்,
புல எண்.577/1 - வெங்கிடபதி (ம) சுப்புராமன்,
மேற்கு -புல எண்.586/7-பாலன் நிலம், 586/8,10-வெங்கிடபதி நிலம், 586/9 - அச்சம்மாள் நிலம்,

மேற்படி குவாரி உரிமம் கோரும் புல எண்களில் தெற்கிலிருந்து வடக்காக கற்கள் எடுக்கப்பட்ட விபரம் புல எண்கள் முறையே 586/11, 586/12-ல் 37450 க.மீ (10 மீ ஆழம்), 586/11, 586/12, 586/14, 586/15-ல் 28800 க.மீ (8 மீ ஆழம்), 586/11, 586/12, 9000 க.மீ (10 மீ ஆழம்) கிராவல் கற்கள் வெட்டி எடுக்கப்பட்டுள்ளது. அதன் அளவுகள் வரைபடத்தில் வண்ணமிட்டு காட்டப்பட்டுள்ளது.

S' சண்முகவேல்

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புனரமைப்பு மற்றும் வளர்ச்சி அரங்கத்துறை

இந்நேர்வில், இராஜபாளையம் வட்டம், க.எண்.300, டி.5/2, சங்கரன்கோவில் ரோடு எனும் முகவரியைச் சேர்ந்த திரு.சண்முகவேல், த/பெ சுப்பையாத்தேவர் என்பவருக்கு வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம், புல எண்கள். 586/11 (0.78.50), 586/12 (0.91.50), 586/13 (0.10.00), 586/14 (0.11.00), 586/15 (0.11.00), 586/17 (0.05.00), 586/18 (0.05.50) மொத்த பரப்பு 2.12.50 ஹெக்டேர் நிலங்களில் ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் தமிழ்நாடு சிறுகனிம விதிகளுக்கு உட்பட்டு அனுமதி வழங்கலாம்.

வருவாய் கோட்டாட்சியர்,
சாத்தூர்.

S. முத்துமுகவேல்

உதவி இயக்குநர் புவியியல் & சுரங்கத்துறை விருதுநகர் மாவட்டம் 19 NOV 2024 விருதுநகர்

பெறுநர்

வருவாய் கோட்டாட்சியர்,
சாத்தூர் வருவாய் கோட்டம்,
சாத்தூர்.

பெறுநர்

திருமதி.பா.முத்துப்பாண்டீஸ்வரி,எம்.எஸ்.சி.பி.எட்.,
வருவாய் வட்டாட்சியர்,
வெம்பக்கோட்டை வட்டம்,
வெம்பக்கோட்டை.

ந.க.அ1/4153/2023 நாள்:02.01.2024

மதிப்பிற்குரிய ஐயா,

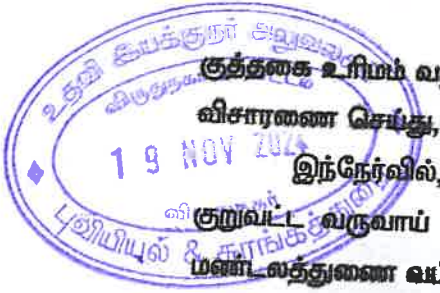
பொருள்: கனிமம் மற்றும் சுரங்கம் - விருதுநகர் மாவட்டம் - வெம்பக்கோட்டைவட்டம் - கோபாலபுரம் கிராமம்- பட்டா புல எண்கள்.586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18 .மொத்தப் பரப்பு 2.12.50 ஹெக்டேர் நிலங்கள்- திரு.சண்முகவேல் என்பவருக்கு ஐந்து வருட காலத்திற்கு உடைகல் மற்றும் கிராவல் குவாரி அனுமதி வழங்கக் கோரியது — அறிக்கைகள் வரப்பெற்றன — கருத்துரு அனுப்புதல் - தொடர்பாக

பார்வை:

1. சாத்தூர் வருவாய் கோட்டாட்சியர் அவர்களின் கடிதம் ந.க.அ2/4315/2023 நாள்:13- 09-2023
2. விருதுநகர் மாவட்டஆட்சித்தலைவர் அவர்களின் கடிதம் எண் ந.க.கேவி1/1029/2023,நாள்:07-09-2023
3. கீழராஜகுலராமன் குறுவட்ட நிலஅளவரின் அறிக்கை நாள்: 08.11.2023
4. கீழராஜகுலராமன் வருவாய் ஆய்வாளரின் அறிக்கை நாள்: 08.11.2023
5. கோபாலபுரம் கிராம நிருவாக அலுவலரின் அறிக்கை நாள்: 08.11.2023.
6. வெம்பக்கோட்டை மண்டலத்துணை வட்டாட்சியரின் அறிக்கை நாள்:1.11.2023.
7. வெம்பக்கோட்டை வருவாய் வட்டாட்சியரின் புலத்தணிக்கை நாள்:11 .12.2023.

விருதுநகர் மாவட்டம், இராஜபாளையம் வட்டம் மற்றும் நகரம் க.எண்.300 டி 5/2, சங்கரன் கோவில் ரோடு, என்ற முகவரியைச் சேர்ந்த திரு.திரு. சண்முகவேல் த/பெ சுப்பையாத் தேவர் என்பவர் பட்டா புல எண்கள் 586/11, 586/12, 586/13, 586/14, 586/15, 586/17, 586/18 மொத்த பரப்பு 2.12.50 ஹெக்டேர் நிலங்களில் ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி

S' சண்முக வேல்



குத்தகை உரிமம் வழங்கக் கோரி,மனு செய்துள்ளார். இதுதொடர்பாக, புலத்தணிக்கை விசாரணை செய்து, பார்வை 3,4,5 மற்றும் 6 வரையிலான அறிக்கைகள் வரப்பெற்றன.

இந்நேர்வில், பிரஸ்தாப புலஎண்கள் கோபாலபுரம் கிராம நிருவாக அலுவலர், ஆலங்குளம் குறுவட்ட வருவாய் ஆய்வாளர், ஆலங்குளம் குறுவட்ட சார் ஆய்வாளர் மற்றும் வெம்பக்கோட்டை மண்டலத்துணை வட்டாட்சியர் ஆகியோர்களுடன் கூட்டுப்புலத்தணிக்கை செய்யப்பட்டது.

மனுதாரர் குவாரி உரிமம் கோரும் புல எண்களான, 586/11-ல் பரப்பு 0.78.5 ஏர்ஸ், 586/12-ல் பரப்பு 0.91.5 ஏர்ஸ், 586/13-ல் பரப்பு 0.10.0 ஏர்ஸ், 586/14-ல் பரப்பு 0.11.0 ஏர்ஸ், 586/15-ல் பரப்பு 0.11.0 ஏர்ஸ், 586/17-ன் பரப்பு 0.05.0 ஏர்ஸ் மற்றும் 586/18-ல் பரப்பு 0.05.5 ஏர்ஸ் ஆக மொத்தப் பரப்பளவான 2.12.5 ஹெக்டேர் நிலமானது பட்டா எண் 956-ன்படி மனுதாரரான சண்முகவேல் த/பெ சுப்பையாத்தேவர் என்பவரது பெயரில் கோபாலபுரம் கிராமக்கணக்கில் தாக்கலாகி உள்ளது. மனுதாரர் குவாரி உரிமம் கோரும் புலங்களில் புலத்தணிக்கை செய்யப்பட்டதிலர், சுமார் 300 மீட்டர் சுற்றளவிற்கு குடியிருப்புப் பகுதிகளோ, பள்ளி மற்றும் கல்லூரிகளோ எதுவும் இல்லை. மேற்படி, குவாரி குத்தகை உரிமம் கோரும் கூட்டுப்புலத்திற்குத் தெற்கே சுமார் 10 மீட்டர் அருகில் புல எண் 624-ல் கிராமக் கணக்கின்படி, "தீர்வை ஏற்படாத தரிசு" வகைப்பாடுடைய நிலத்தில் முடிவடைந்த அரசுக்குவாரி ஒன்று செயல்படாத நிலையில் உள்ளது. கிழக்கே புல எண்கள் 557/1, 558/1, 558/2, 559, 574 மற்றும் 557/2-ஆகியவற்றில் ராஜ்மோகன் த/பெ. வெங்கிடபதி என்பவருக்கு சொந்தமான குவாரி ஒன்று "ந.க-கே.வி-1/232/2023/நாள்: 31.01.2023"-ன்படி செயல்பட்டு வருகிறது. இது சுமார் 350 மீட்டர் தொலைவில் உள்ளது. புல எண் 556/2-ல் மேற்படி ராஜ்மோகன் என்பவருக்குச் சொந்தமான செயல்படாத குவாரி ஒன்றும் சுமார் 430 மீட்டர் தொலைவில் உள்ளது. தென்கிழக்கில் புல எண்கள் 567/2ஏ, 567/2பி மற்றும் 568/1பி ஆகியவற்றில் ஆறுமுகம் த/பெ. பரமகுரு என்பவருக்குச் சொந்தமான குவாரி ஒன்று ந.க.கேவி-1/159/2021/நாள்: 31.01.2023-ன்படி சுமார் 230 மீட்டர் தொலைவில் இயங்கி வருகிறது. புல எண் 565/2-ல் மேற்படி நபருக்கு முடிவடைந்த செயல்படாத குவாரி ஒன்றும் உள்ளது. தென்மேற்கில் புல எண்கள். 635/4மற்றும் 636 ஆகியவற்றில் முருகேசன் த/பெ. சங்கிலிக்காளை என்பவருக்குச் சொந்தமான குவாரி ஒன்று நக.கே.வி-1/170/2019/நாள்: 01.08.2020-ன்படி, சுமார் 220மீட்டர் தொலைவில் இயங்கி வருகிறது.

மனுதாரரால் குவாரி குத்தகை உரிமம் கோரப்படும் புல எண்களில் 586/11 மற்றும் 586/12 ஆகிய புலங்களின் குறுக்கே கீழமேலாக மும்முனை மின்சாரக் கம்பிகள் செல்கின்றன. இதனை அகற்றித் தரக்கோரி மின்சார வாரிய அலுவலகத்தில் மனு அளித்துள்ளதாக, மனுதாரர் தெரிவிக்கிறார். மேற்படி குவாரி குத்தகை உரிமம் கோரும் கூட்டுப்புலத்தினைச் சுற்றிலும் சுமார் 50 மீட்டர் சுற்றளவிற்கு சாலைகளோ, இரயில் இருப்புப் பாதைகளோ,கோவில்களோ, புராதனச் சின்னங்களோ, நீர்நிலைகளோ மற்றும் வேறு நிரந்தர அமைப்புகளோ எதுவும் காணப்படவில்லை. மனுதாரர் உடைகல் மற்றும் கிராவல் குவாரி செய்வதால், அருகில் உள்ள நிலங்களுக்கு பாதிப்பு எதுவும் ஏற்படுவதற்கான வாய்ப்புகள் ஏதும் இல்லை. மனுதாரர் குவாரி செய்ய உரிமம் கோரும் நிலத்திற்கு தெற்கே புல எண். 624-ல் செயல்படாத அரசுக் குவாரியின் மேல்பக்கம் ஒரு சிறிய ஓடை ஒன்று உள்ளது. மனுதாரர் குவாரி செய்வதால் மேற்படி ஓடைக்குப் பாதிப்பு ஏதும் இல்லை. இப்புலத்தில் மனுதாரரால் ஏற்கெனவே குவாரி செய்யப்பட்டு இருப்பது புலத்தணிக்கையில் தெரிய

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பெரியியல் & சுரங்கத்துறை

...து. இந்தக் குவாரிப் புலத்திற்கான பாதையானது குவாரிப் புலத்தினை ஒட்டி தென்பகுதியில்
...ணை. 611-ல் உள்ளது. இது கிராமக்கணக்கின்படி "பாதை" என உள்ளது.

மனுதாரர் சண்முகவேல் த/பெ. சுப்பையாத்தேவர் என்பவர் மேற்படி புலங்களில் குவாரி
ஊரிமம் கோரி விண்ணப்பித்துள்ள விவரம் குறித்து கோபாலபுரம் கிராமப்பொதுமக்களுக்கு "அ1-
நோட்டீஸ்" மூலம் உரிய முறையில் 17.10.2023 அன்று விளம்பரம் செய்யப்பட்டதில் மேற்படி குவாரி
அமைப்பதற்கு பொது மக்களிடம் இருந்து ஆட்சேபனை ஏதும் வரப்பெறவில்லை. மேற்படி குவாரி
அமையவுள்ள நிலமானது கோபாலபுரம் ஊராட்சி, இராஜபாளையம் ஊராட்சி ஒன்றியத்தை சேர்ந்தது.
மனுதாரர் குவாரி உரிமம் கோரும் கூட்டுப்புலத்திற்கு நான்குமால் பின்வருமாறு

வடக்கு - புலஎண் 585/- (எம்.டி.கண்ணன்)

தெற்கு - புலஎண் 611/- (கிழமேல் பாதை)

கிழக்கு - புலஎண்கள் 575/- (சுப்புராமன் மற்றும் ராஜ்மோகன் நிலம்) மற்றும்
புலஎண் 577/1 (வெங்கிடபதி மற்றும் சுப்புராமன்)

மேற்கு — புலஎண் 586/7 (பாலன் நிலம்), புலஎண் 586/8,10 (வெங்கிடபதி நிலம்)
மற்றும் புலஎண் 586/9 (அச்சம்மாள் நிலம்)

எனவே, மேற்கண்ட அலுவலர்களின் அறிக்கைகள் மற்றும் புலத்தணிக்கையின் அடிப்படையில், வெம்பக்கோட்டை வட்டம், புல எண்கள் 586/11-ல் பரப்பு 0.78.5 ஏர்ஸ், 586/12-ல் பரப்பு 0.91.5 ஏர்ஸ், 586/13-ல் பரப்பு 0.10.0 ஏர்ஸ், 586/14-ல் பரப்பு 0.11.0 ஏர்ஸ், 586/15-ல் பரப்பு 0.11.0 ஏர்ஸ், 586/17-ல் பரப்பு 0.05.0 ஏர்ஸ் மற்றும் 586/18-ல் பரப்பு 0.05.5 ஏர்ஸ் ஆக மொத்தப் பரப்பளவான 2.12.5 ஹெக்டேர் நிலங்களை திரு.சண்முகவேல் த/பெ. சுப்பையாத்தேவர் என்பவருக்கு 5 வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் அனுமதி வழங்கலாம் எனப் பரிந்துரை செய்கிறேன் என்பதைப் பணிவுடன் தெரிவித்துக் கொள்கிறேன்.

02/10/24

இணைப்பு : தொடர்புடைய ஆவணங்கள்.

வருவாய்வட்டாட்சியர்,
வெம்பக்கோட்டை.

21/10/24

S. சண்முகவேல்

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
புவியியல் & சுரங்கத்துறை
விருதுநகர்

விருதுநகர் மாவட்டம் வெம்பக்கோட்டை வருவாய் வட்டாட்சியரின் புலத்தணிக்கை அறிக்கை

1.	குத்தகை உரிமம் கோரிய விண்ணப்பம் பெறப்பட்ட தேதி	:	06.09.2023.
2.	அ) புலத்தணிக்கை செய்த நாள்	:	11.12.2023.
	ஆ) புலத்தணிக்கையின் போது உடனிருந்த அலுவலர்கள் பற்றிய விவரம்	:	கோபாலபுரம் கிராம நிர்வாக அலுவலர் மற்றும் உதவியாளர்
3.	குத்தகை உரிமம் கோரும் விண்ணப்பதாரரின் பெயர் மற்றும் முகவரி	:	திரு.சண்முகவேல் த/பெ.சுப்பையாத்தேவர் 300 டி 5/2- சங்கரன் கோவில் ரோடு, இராஜபாளையம், இராஜபாளையம் வட்டம்
4.	குத்தகை உரிமம் கோரும் கனிமங்களின் பெயர்	:	உடைகல் மற்றும் கிராவல் குவாரி
5.	குத்தகை உரிமம் கோரும் கால அளவு	:	5 (ஐந்து ஆண்டுகள்)
6.	குத்தகை உரிமம் கோரும் இடம் அமைந்துள்ளது பற்றிய விவரம்	:	

வ. எண்	வட்டம்	கிராமம்	புல எண்கள்	மொத்த பரப்பு (ஹெக்)	குத்தகை உரிமம் கோரும் பரப்பு (ஹெக்)	வகைப்பாடு
1	வெம்பக்கோட்டை	கோபாலபுரம்	586/11 586/12 586/13 586/14 586/15 586/17 586/18	0.78.5 0.91.5 0.10.0 0.11.0 0.11.0 0.05.0 0.05.5	0.50.0 0.28.5 0.37.0 1.32.0	பட்டா நிலம்
			மொத்தம்	2.12.5	2.12.5	

7.	அ) குத்தகை உரிமம் கோரும் புல எண்கள், விண்ணப்பதாரரின் பெயரில் பட்டா நிலங்களாக இருப்பின் அது பற்றிய விவரம்	:	குவாரி பணி செய்யக்கோரும் புல எண்கள் அனைத்தும் கோபாலபுரம் கிராமக்கணக்கில் பட்டா எண்.956-ல் மனுதாரர் சுப்பையாத்தேவர் மகன் சண்முகவேல் என்பவர் பெயரில் தாக்கலாகியுள்ளது
	ஆ) பட்டாதாரரிடமிருந்து குத்தகை ஒப்பந்தம் பெறப்பட்டிருப்பின் அதுபற்றிய விவரம்	:	இல்லை.
	இ) குத்தகை கோரும் புல எண்கள் தாழ்த்தப்பட்டோர் / பழங்குடியினருக்கு ஒதுக்கீட்டின் அடிப்படையில் பட்டா வழங்கப்பட்டிருப்பின் அதுபற்றிய விவரம்	:	இல்லை.

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8.	குத்தகை உரிமம் கோரும் புல எண்களின் நான்கு எல்லைகள்.	:	புல எண் / வடக்கு / தெற்கு / [illegible] 586/11 / 585/- / 611/- / 586 586/12 / 585/- / 611/- / 577 586/13 / 577/1 / 586/14 / 575/- 586/14 / 586/13 / 586/15 / 575/- 586/15 / 586/14 / 586/12 / 575/- 586/17 / 586/16 / 611/- / 586/18 586/18 / 586/16 / 611/- / 575/-
9.	குத்தகை உரிமம் கோரும் புல எண்களுக்கு ஏற்கனவே குத்தகை உரிமம் வழங்கப்பட்டிருப்பின் அது பற்றிய விவரம்.	:	குவாரி பணி செய்யக்கோரும் புல எண்கள் தற்போதுவரை குவாரிபணி நடைபெறவில்லை.
10.	குத்தகை உரிமம் கோரும் புல எண்களுக்கு அருகில் பாதுகாப்பு இடைவெளிக்குள் அமைந்துள்ள நிரந்தர அமைப்புகள் ஒதுக்கப்பட வேண்டிய பாதுகாப்பு இடைவெளி பற்றிய விவரம்	:	மேற்படி புல எண்களுக்கு அருகில் உள்ள பட்டா நிலங்களுக்கு, ஓடைகளுக்கு போதிய பாதுகாப்பு இடைவெளி விட வேண்டும்.
11.	அ)குத்தகை உரிமம் கோரும் புல எண்களிலிருந்து 300 மீட்டர் சுற்றளவுக்குள் குடியிருப்பு பகுதிகள்/ அங்கீகரிக்கப்பட்ட வீட்டுமனைப்பிரிவுகள் மற்றும் புராதனச் சின்னங்கள் அமைந்துள்ள விவரம்	:	300 மீட்டர் சுற்றளவுக்குள் குடியிருப்பு பகுதிகள் / அங்கீகரிக்கப்பட்ட வீட்டுமனைப் பிரிவுகள் மற்றும் புராதனச்சின்னங்கள் ஏதும் இல்லை.
	ஆ) குத்தகை உரிமம் கோரும் பகுதிக்கு பாதை வசதி உள்ளது பற்றிய விவரம்	:	பாதை வசதி உள்ளது.
12	குத்தகை உரிமம் கோரும் புல எண்கள் அமைந்துள்ள கிராமம், மலையிடை பாதுகாப்பு குழுமத்தின் கீழ் வருவது மற்றும் தடையில்லா சான்று பெற வேண்டியது பற்றிய விவரம்	:	-இல்லை-
13.	குத்தகை உரிமம் கோரும் பகுதி வனவிலங்கு சரணாலயத்திலிருந்து அமைந்துள்ள தூரம், பெறப்பட வேண்டிய தடையில்லா சான்று பற்றிய விவரம்.	:	-இல்லை-
14.	குத்தகை கோரும் புலஎண்களில் தகுந்த அனுமதியின்றி ஏற்கனவே கனிமங்கள் எடுக்கப்பட்டு அபராதம் விதிக்கப்பட்டிருப்பின் அது பற்றிய விவரம்.	:	-இல்லை-
15.	அ) குத்தகை உரிமம் கோரும் புலங்களின் பேரில் நிலம் கையகப்படுத்தும் நடவடிக்கைகள் இருப்பின் அது பற்றிய விவரம்.	:	-இல்லை-
	ஆ) குத்தகை உரிமம் கோரும் புல எண்களின் பேரில் நீதிமன்றத்தில் வழக்குகள் இருப்பின் அதுபற்றிய விவரம்.	:	-இல்லை-
16.	கிராம நிர்வாக அலுவலரின் வாக்குமூலம் பெறப்பட்டுள்ளதா?	:	கிராம நிர்வாக அலுவலர் வாக்குமூலம் அளித்துள்ளார்.

S. சண்முக வேல்

17.	குத்தகை உரிமம் வழங்குவது தொடர்பாக "அ1" நோட்டீஸ் விளம்பரம் செய்யப்பட்டு பொது மக்களிடமிருந்து ஆட்சேபனை ஏதும் பெறப்பட்டுள்ளதா?	:	"அ1" நோட்டீஸ் விளம்பரம் 17.10.2023 அன்று பிரசுரம் செய்யப்பட்டு ஆட்சேபனைகள் ஏதும் பெறப்படவில்லை.
18.	குத்தகை உரிமம் கோரும் புல எண்களின் பேரில் வருவாய்துறை பரிந்துரை செய்கின்றதா?	:	ஆம்

19) குத்தகை உரிமம் கோரும் விண்ணப்பத்தின் பேரில் வெம்பக்கோட்டை வருவாய் வட்டாட்சியரின் அறிக்கையும் பரிந்துரையும்.

திரு.சண்முகவேல் த/பெசுப்பையாத்தேவர் என்பவர் விண்ணப்பித்துள்ள புல எண்கள் பட்டா நிலங்கள் என்ற அடிப்படையிலும் கோபாலபுரம் கிராம நிர்வாக அலுவலர், கீழராஜகுலராமன் குறுவட்ட வருவாய் ஆய்வாளர் மற்றும் வெம்பக்கோட்டை மண்டலத் துணை வட்டாட்சியர் ஆகியோர் மனுதாரர் நிறுவனத்திற்கு குத்தகை உரிமம் வழங்க பரிந்துரை செய்துள்ளதன் அடிப்படையிலும் மனுதாரர் நிறுவனத்தாருக்கு தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959, விதி 19 மற்றும் 20-ன் கீழ் கீழ்கண்ட நிபந்தனைகளுக்கு உட்பட்டு ஐந்தாண்டுகளுக்கு குத்தகை உரிமம் வழங்கலாம்.

1) அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5மீ பாதுகாப்பு இடைவெளி விட வேண்டும்.
2) EB Line மற்றும் கிணற்றுக்கு 50மீ பாதுகாப்பு இடைவெளி விட வேண்டும்.
3) புல எண்களுக்கு அருகில் உள்ள குவாரிகளுக்கு போதிய பாதுகாப்பு தூரம் விட வேண்டும்.
4) குவாரி கழிவுகளை குத்தகை உரிமம் வழங்கப்படும் பகுதிக்கு உள்ளேயே இருப்பு வைக்க வேண்டும்.
5) வெடிமருந்தினை விதிகளின் படி பாதிப்பு ஏற்படா வண்ணம் பயன்படுத்த வேண்டும்.
6) சுரங்கத்திட்டம் மற்றும் சுற்றுச்சூழல் தடையில்லாச் சான்று குத்தகை உரிமம் வழங்குவதற்கு முன் சமர்ப்பிக்க வேண்டும்.

11.12.2

வருவாய் வட்டாட்சியர்
வெம்பக்கோட்டை

அலுவலகம்
19 NOV
புழலியல் & சார்ந்த்துறை

பார்வை : i) சார்ந்த்துறை அலுவலக ஆணை நகை அ2/ H313/ 2023 நாள் 13.09.2023

ii) அனைத்து நகை அடகுதாரர்கள் சங்கம் அவர்கள் நகை/ 1089/ 2023 நாள் 07.09.2023

iii) அரசு அடகுக் கடை நிர்வாகம் அவர்கள் - நகை அ1/ H153/ 2023 நாள் 19.10.2023

பார்வை i) சார்ந்த்துறை அலுவலக ஆணை நகை அ2/ H313/ 2023 நாள் 13.09.2023 மற்றும் ii) அனைத்து நகை அடகுதாரர்கள் சங்கம் அவர்கள் நகை/ 1089/ 2023 நாள் 07.09.2023 மற்றும் iii) அரசு அடகுக் கடை நிர்வாகம் அவர்கள் - நகை அ1/ H153/ 2023 நாள் 19.10.2023

பார்வை i) சார்ந்த்துறை அலுவலக ஆணை நகை அ2/ H313/ 2023 நாள் 13.09.2023 மற்றும் ii) அனைத்து நகை அடகுதாரர்கள் சங்கம் அவர்கள் நகை/ 1089/ 2023 நாள் 07.09.2023 மற்றும் iii) அரசு அடகுக் கடை நிர்வாகம் அவர்கள் - நகை அ1/ H153/ 2023 நாள் 19.10.2023

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3) தென்னை தோப்பு ...

386/11, 586/12-ல் உள்ளது தென்னை தோப்பு

நிலப்பகுதி கம்பி ... தொட்டி அமைந்துள்ளது. இது

சுற்றுச்சுவர் மற்ற கம்பிவேலி வைத்து வழிந்தடம்

மற்றும் அதன் அருகில் தோட்டமாடு செல்லும்

பாதையாகிய அனுபவத்தில் தற்போது அனுபவித்து

வருகின்றார்.

மேலும் இவர் தோப்பை பிரிக்க

வரும் இடத்தில் சுற்றுச்சுவர் மற்றும்

இரண்டு தென்னை மரங்கள், தென்னை மரங்கள்

தற்போது மாற்றப்பட்டு புதிய மரங்கள்

நடப்பட்டுள்ளன.

மேலும் தோப்பை பிரிக்கும் பொழுது

1) நான் 62H-ல் உள்ள ... தோட்டம் மாற்றம்

வேலாயுதம் தனது அனுபவத்தில் தோட்டம் மாற்றம்

நடப்பட்டுள்ளது. மேலும் அவருக்கு தோப்பை பிரிக்கும்

பொழுது தோட்டம் மாற்றம் செய்யப்பட்டுள்ளது.

2) மேலும் தற்போது தோப்பை பிரிக்கும்

பொழுது நிலத்தில் மாற்றம் செய்யப்பட்டுள்ளது

3) தோப்பு உரிமம் மேலும் பட்டா மாற்றம்

386/6 -ல் உள்ள தோட்டம் (பட்டா மாற்றம்)

மாற்றம் செய்யப்பட்டுள்ளது. மேலும் 62H-ல்

அமைந்துள்ள தோட்டம் மாற்றம் செய்யப்பட்டுள்ளது. தோப்பு அமைப்பதில்

தோட்டம் மாற்றம் பிரிக்கும் பொழுது மாற்றப்பட்டுள்ளது.

(P.W) S. வேலாயுதம்

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இனிய வணக்கம்.

6) எனது கிணறு உரிமை தொடர்பான வழக்கு
நிலுவையில் உள்ளதால் எனது நிலத்தில் "A" வரையும்
17.10.2024 -ம் தேதிக்கு பிறகு அளவீடு செய்யப்பட்ட
A1 வரைபடம் நீதிமன்றம் ஏற்றுக்கொள்ளவும்

7) பொதுவான உரிமை தொடர்பான வழக்கு
நிலுவையில் உள்ளதால் எனது நிலத்தில் "A" வரையும்
அளவீடு செய்யப்பட்ட A1 வரைபடம் நீதிமன்றம்
ஏற்றுக்கொள்ளவும்.

8) பொது கிணறு உரிமை தொடர்பான வழக்கு
நிலுவையில் இருப்பதால் எனது நிலத்தில் "A" வரையும்
அளவீடு செய்யப்பட்ட A1 வரைபடம் நீதிமன்றம்
ஏற்றுக்கொள்ளவும்

இப்படிக்கு,
தங்கள் உண்மையுள்ள,
சர்வே எண்கள்: 586/11, 12, 13, 14, 15, 17
மற்றும் 586/18.

தெற்கே :- சுப்பராயன் ராஜகோபால் (575/-)
மேற்கே, சுப்பராயன் (577/1)

வடக்கே :- [illegible] (586/7) S. [illegible]

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— வடக்கு — ரூ.4.0. கணக்கு (545/-)

— கிழக்கு — தென்னை மரம் (611/-)

எனது A1 நிலபுலன் விவரம் மேற்படி நபரிடம் விசாரணைசெய்து நான்குஎல்லை நிர்ணய அடையாளமும் வரைபடமும்.

மேல் விபரம் கொண்டு

A1 புலன்களுக்கு பாத்தியமானது மேல் சொல்லப்பட்ட பட்டி நெல்பதிவில் உள்ளபடி 1/1 ம் உள்ளது. மேலும் விபரம் வினவியதில் எது என் உள்ளது. அதன்படியும் பதிவேடு பதிவுக்குக் கொள்கிறேன்.

3/11/2023

REVENUE INSPECTOR
KEELARAJAKULARAMAN FIRKA
VEMBAKKOTTAI TALUK

இணைப்புகள்:

(i) சுயபட்டா நகல்

(ii) 10(1) நகல்

(iii) பரிந்துரை மேல் அலுவலர் அவர்களின் நேரு, அகலம் கொண்ட வரைபட நகல்.

கி. தண்டபாணி

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A113

மேலப்பாளையம் மாவட்ட ஆட்சியர் அலுவலகம்

திருநெல்வேலி மாவட்டம்

பெறுதல் உறுதிப்படுத்தப்படுகிறது

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திருநெல்வேலி

பெறுதல் & சுரங்கத்துறை

வெம்பக்கோட்டை தாலுகா

பார்வை : மேலப்பாளையம் வெம்பக்கோட்டை மாவட்ட ஆட்சியர் அலுவலகம் அவர்களின் கடிதம் ந.க.எண் 251/2023/ நாள் 13.10.23

சிவகாசி மாவட்டம், இராஜபாளையம் வட்டம் சேத்தூர் தாலுகா, இராஜபாளையம் கிழக்கு கிராமம், கணக்கு எண் 300-ல் 5/2 - சந்தூரணன் தோலில் ரோடு, இராஜபாளையம் சர்வே எண்ணை ஒட்டியுள்ள புறம்போக்கு நிலம் 5/பை சிப்பையாத் தேவர் என்பவர் தன் கோபாலபுரம் கிராமத்தில் 4ல எண்களை 586/11, 586/12, 586/13, 586/14, 586/15, 586/17 மற்றும் 586/18 - ஆகிய புறம்போக்கு நிலங்களில் 2.12.50 ஹெக்டேர் அளவு நிலத்தை 25 ஆண்டுகளுக்கு குத்தகை உரிமம் பெறுவதற்கு விண்ணப்பித்துள்ளார். மேற்படி குத்தகை உரிமம் கோரி விண்ணப்பதாரர் 4ல எண்களான 586/11-ல் உள்ள 0.78.50 ஏர்கள், 586/12-ல் உள்ள 0.91.50 ஏர்கள், 586/13-ல் உள்ள 0.11.00 ஏர்கள், 586/14-ல் உள்ள 0.05.50 ஏர்கள், 586/18-ல் உள்ள 2.12.50 ஹெக்டேர் ஆக மொத்தம் புறம்போக்கு நிலங்களாக பட்டா எண் 414 விண்ணப்பதாரரான சிப்பையா தேவர் என்பவரின் கோபாலபுரம் கிராம

5451/29/11/2023

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திருவாரூர் தெற்கு ரயில்வே பாதுகாப்பு படை காவல் நிலையம் மற்றும் கொரடாச்சேரி காவல் நிலையம் மேற்கு திருவாரூர் தாலுகா திருமகள் நகர் பகுதியில் உள்ள திட்டச்சேரி அலுவலகத்தை ஒட்டி அருகில் புல எண் 624 -ல் திருமண கூடங்களை "திருவை திருமண மஹால்" என்ற பெயரில் நடத்தி வரும் திருவாரூர் தெற்கு ரயில்வே காவல் நிலையத்திற்கு சொந்தமான கீழ்கண்ட புல எண்கள் 557/1, 558/1, 558/2, 559, 574, மற்றும் 557/2 ஆகியவற்றில் நஞ்சை நிலத்தை வகைப்படுத்தி கொரடாச்சேரி காவல் நிலையத்திற்கு சொந்தமான திருவாரூர் தெற்கு ரயில்வே காவல் நிலையம் புல எண் 556/2 -ல் மேற்கு நஞ்சை நிலத்தை வகைப்படுத்தி கொரடாச்சேரி காவல் நிலையத்திற்கு சொந்தமான திருவாரூர் தெற்கு ரயில்வே காவல் நிலையம் புல எண்கள் 567/2A, 567/2B மற்றும் 568/1B ஆகியவற்றில் தெற்கு திருவாரூர் தாலுகா கொரடாச்சேரி காவல் நிலையத்திற்கு சொந்தமான திருவாரூர் தெற்கு ரயில்வே காவல் நிலையம் புல எண் 565/2 -ல் மேற்கு

S. Senthilkumar — த.ம.ப —

சென்னை மாநகராட்சி வார்டு எண் 178 கோயம்பேடு
2024 ஆண்டு 01.08.20 -ன் படி
இயற்றி முடிக்கப்பட்டது.

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மனுதாரர் தரப்பு: கோயம்பேடு தேவி தியேட்டர் உரிமம்
கோரியுள்ளது. புல எண்கள்: 586/11 மற்றும் 586/12 ஆகிய
புலங்களில் தனியாருக்கு சொந்தமான சுமார் 2.00 ஏக்கர்
நிலப்பரப்பில் அமைந்துள்ளது. இதனை அளவீடு செய்து தரக்கோரி
விண்ணப்பம் அளித்ததன் அடிப்படையில் மனு அளிக்கப்பட்டதாக
மனுதாரர் தெரிவித்தார். மேற்படி கோயம்பேடு தேவி தியேட்டர்
உரிமம் கோரும் இடம் புலத்தணிக்கை செய்யும்போது
சுமார் 50 மீட்டர் தொலைவில் சாலைகளோ, இரயில்
இருப்புப் பாதைகளோ, கோவில்களோ, பராமரிக்கப்படும்
பள்ளிகளோ, நீர்நிலைகளோ மற்றும் வேறு
தொந்தரவு அளிக்கும் அமைப்புகளோ காணப்படவில்லை.
மனுதாரர், உடைய மற்றும் பிராமண கோயம்பேடு
பகுதியைச் சார்ந்த அருகில் உள்ள நிலவருவாய்க்கு பாதிப்பு
ஏதும் ஏற்படுமாறான ஆய்வுகள் ஏதுமில்லை.
மனுதாரர் கோயம்பேடு தியேட்டர் உரிமம் கோரும்
நிலத்திற்கு எதிர்கே புலஎண் 624 ல் அமைந்துள்ள
பிரதான கோயம்பேடு மேம்பாலம் ஒரு சிறிய அளவு
மட்டுமே உள்ளது. மேற்படி இடைக்க கோயம்பேடு
அமைந்துள்ளதால் எந்தவித பாதிப்பும் இல்லை

— தொடர்கிறது —

S. திருமுருகன்

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மேற்படி அனுமதிக்கான உடைமை திராவல்
தேவாரி முத்தனவே செயல்படுவதில் அனுமதிக்கான
மேற்படி தேவாரி ^ 30 மீட்டர் நீளம், 20 மீட்டர்
அகலம் 15 மீட்டர் ஆழத்துடன் இவ்வாறு
அனுமதிக்கான வேலைப் பகுதியில் 20 மீ நீளம்
15 மீட்டர் அகலம் 3 மீ ஆழம் திராவல்
எடுக்கப்படுவதால், மேலும் அனுமதி
கோரும் 582/11, 12 ஆகிய பகுதியில் 30 மீட்டர் நீளம்
15 மீட்டர் அகலம் 8 மீ ஆழத்துடன் திராவல்
எடுக்கப்படுவதால். மேலும் தேவாரி உரிய
அனுமதிகள் திராவம் வரைபடத்தில் அனுமதிக்கப்பட்ட
தேவாரி ^ அனுமதிகள் தயாரிக்கப்பட்டு கோரும்
மேற்கண்டவைகளுக்கு அனுமதி சான்பகிக்கப்படுகிறது

8/11/23

கனிமவள அலுவலர்
திருவாரூர்

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நக-அ1-4153/2023/நிலம்/பஞ-அறிக்கை/நரசிங்கபுரம்

பணிந்தனுப்பப்படுகிறது.

நெல்லை நகரட்சி வரிதண்டல் உட்பட்டியல் அலுவலர்-நகராட்சி நரசிங்கபுரம் நகர் - கோரிய விவரங்கள் அனுப்புவதன் அறிக்கை பணிந்தனுப்பப்படுகிறது:

பார்வை: நெல்லை நகராட்சி வரிதண்டல் உட்பட்டியல் அலுவலரின் குறிப்பாணை: நக-அ1/4153/2023/நாள்: 13.10.2023.

மேற்கு நகர் மாவட்டம், திருநெல்வேலி தாலுகா, நரசிங்கபுரம் கிராமம் புல எண்- 300-4-5/2- சங்கரன்கோவில் ரோடு, திருநெல்வேலி மேற்கு நகரியில் உள்ளது. சண்முகவேல் த/பெ சிவனையாத் தேவர் என்பவர் நரசிங்கபுரம் வருவாய்க் கிராமத்தி புல எண்கள்- 586/11, 586/12, 586/13, 586/14, 586/15, 586/17, மற்றும் 586/18- மொத்தப் பரப்பு 2.12.5- ஹெக்டேர் நிலங்களில் தென்னை மரக்கன்று நடுவதற்கு உடைகல்- மற்றும் - கிராவல் மண் நரசிங்கபுரம் கிராம நிர்வாக அலுவலர் பரிந்துரை அறிக்கையினை இத்துடன் இணைத்து பணிந்து சமர்ப்பி-கின்றனர்.

மேற்காணும் கிராம நிர்வாக அலுவலர் அறிக்கையில் புல எண்களான 586/11-ல் உள்ள- 0.78.5-ஹெக்; 586/12-ல் 2 0.91.5- ஹெக்; 586/13-ல் உள்ள- 0.10.0- ஹெக்; 586/14-ல் 0.11.0- ஹெக்; 586/15-ல் உள்ள- 0.11.0- ஹெக்; 586/17-ல் 0.05.0- ஹெக் - மற்றும் 586/18-ல் உள்ள 0.05.5- ஹெக் - ஆ மொத்தப் பரப்பளவான 2.12.5- ஹெக்டேர் நிலமானது பட்டா 956-ன் படி மேற்காணும் நபரான சண்முகவேல் நிலை சிவனையாத் தே மகன் பெயரில் நரசிங்கபுரம் கிராம நத்தம் புலங்களில் - பதிவாகி பேற்காணும் கிராம நிர்வாக உதவி நகரமைப்பு புலங்களில் - தென்னை மரக்கன்று நடுவதற்கு சுமார் 300- குழிகள் தோண்

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இடைய கணக்கன்பட்டி "தோலை நல்லபாளை கரிசல்" வகைப்பாடு-
டைய நன்செய் மற்றும் புன்செய் நிலங்களுக்கு அருகில் தொலை புல்லு
பாதை வசதியில் உள்ளது. கிழக்கே புல எண்கள் 557/1,
558/1, 558/2, 559/-, 574/-, மற்றும் 557/2- ஆகியவற்றில்
ராஜமோகன் த/பெ எல்லப்பகவுண்டர் என்பவருக்கு சொந்தமான
தோட்ட நிலம் "RC-ரெஜி-1/232/2021/நாள்: 31.01.2023"ன்
படி நிலவன்பட்டி ஊராட்சி- இரு சிமார்-350- பீட்டர் சந்தானம்
என்பது. புல எண்-556/2-ல்- மேற்படி ராஜமோகன் என்பவருக்கு
சொந்தமான நிலவன்பட்டாவில் தோட்ட புன்செய் சிமார்-430- பீட்டர்
சந்தானம் என்பது. தெற்கிழக்கில் புல எண்கள் 567/2A,
567/2B, மற்றும்-568/1B- ஆகியவற்றில் ஆறுமுகம் த/பெ
மாதேஷ் என்பவருக்குச் சொந்தமான தோட்ட புன்செய்- RC-ரெஜி-1/
79/2021/நாள்: 31.01.2023-ன் படி- சிமார்-230- பீட்டர்
சந்தானம் கையகம் ஊராட்சி. புல எண்-565/2-ல் மேற்படி-
யவருக்கு சொந்தமான நிலவன்பட்டாவில் தோட்ட புன்செய் மற்றும் உள்ளது
தென்மேற்கில் புல எண்கள்- 635/4, மற்றும்-636/- ஆகியவற்றில்
ராஜேஷ் த/பெ நல்லதம்பிகவுண்டர் என்பவருக்குச் சொந்தமான
தோட்ட புன்செய்- RC-ரெஜி-1/170/2019/நாள்: 01.08.2020-ன் படி
சிமார்-220- பீட்டர்- சந்தானம் கையகம் ஊராட்சி.

மனுதாரருக்கு இதனால் நிரந்தர உரிமம் கோரும்-
புல எண்களில் 586/11, மற்றும் 586/13- ஆகிய புன்செய்
நிலத்தின் மேற்கில் கிழக்கிலான மண்சாலை கல்பிகள்
இல்லாமலுள்ளது. இதனால் அதன்மீது நிரந்தர கோரி மின்சார உயரிய
அழுத்தமுள்ள மின் அமைப்புகள் மனுதாரர் ஏற்படுத்தவில்லை.
மேற்படி இதனால் நிரந்தர உரிமம் கோரும் கோட்டம் பகுதியை
சார்ந்தும் சிமார்-50- பீட்டர் சின்னதம்பிக்கு சொந்தமான, தற்போது
பயிர் பாதுகாப்பான, குடிசைகளையும், புராதனச் சின்னங்களையும்,
மரங்களையும்- மற்றும்- இதனை ஒட்டிய இதர பகுதிகளை பாதிக்கப்
படவில்லை. மனுதாரர் சார்பில் மேற்கண்ட இதனால்

திருவேங்கடம் தாலுகா பெரியகுளம் கிராமத்தில் பாதிப்பு ஏற்படுத்தும் நிறுவனங்களை வகைப்படுத்தல் மற்றும் இனங்காணல். மனுதாரர் தொழில் தொடங்க விரும்பி கோபாலபுரம் கிராமம் புல எண் 624/2 ல் அமைந்துள்ள 1.21.0 ஹெக்டேர் நிலத்தை விண்ணப்பித்து அதற்கான தடையின்மை சான்றிதழ் கோரி விண்ணப்பித்துள்ளார். மனுதாரர் தொழில் தொடங்க விண்ணப்பித்துள்ள நிலம் தொழில் பகுதிக்கு வெளியே அமைந்துள்ளதால் தொழில் தொடங்க தடையின்மை சான்றிதழ் வழங்க இயலாது என்று தெரிவிக்கப்பட்டது. இதனை மனுதாரர் ஏற்றுக்கொள்ளவில்லை. இந்நிலையில் மனுதாரர் தரப்பில் மேல்முறையீட்டு மனு எண்-611/2023 தாக்கல் செய்யப்பட்டது. இந்த மனு "பாதி" என்று அழைக்கப்படும்.

மனுதாரரின் மனுவினை பரிசீலனை செய்ததில் கீழ்கண்ட விவரங்கள் தெரியவருகிறது. மனுதாரர் விண்ணப்பித்துள்ள நிலம் கோபாலபுரம் கிராமம் புல எண்-624/2 ல் அமைந்துள்ளது. மேற்படி நிலம் "ஆ-1 குடியிருப்பு" என்ற பிரிவு மண்டலில் அமைந்துள்ளதால் தொழில் தொடங்க அனுமதி அளிப்பதற்கு சம்மந்தப்பட்ட துறை அலுவலர்களிடம் தடையின்மை சான்றிதழ் பெற்று வழங்கப்படுகிறது. மேற்படி நிலத்தை தொழில் தொடங்க தடையின்மை சான்றிதழ் வழங்க பரிந்துரை செய்கிறேன்.

01/11/2023

கிராம நிர்வாக அலுவலர்
கோபாலபுரம் கிராமம்
வேம்பக்கோட்டை வட்டம்

19 NOV 2024

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பணிக்கருப்பய்பனோது:

எனது தகப்பனாரது பாதுகாப்பில், ஆதாரபாளையம் கிராம நத்தம் எண்-300-14-5/2- சர்வேநம்பரில் வரும், ஆதாரபாளையம் என்ற வகையில் அனுபவித்து வரும் நிலம். சுண்டைகுமார் சிவனையாதேவர் என்பவர் ஏகாம்பரபுரம் கிராமத்தில் இவர் அனுபவத்திலுள்ள மனை புல எண்களை கண்டுள்ளார்:

புல எண்- 586/11- கீழ்கண்டவர்கள்:

— வடக்கு: எம். டி. கண்ணன் (585/-)

— தெற்கு: கிழக்கம்பாளையம் (611/-)

— கிழக்கு: நாணல் ஓடை (586/12)

— மேற்கு: பாலன் (586/7)

வெங்கடேசன் (586/8, 10)

அருணாச்சலம் (586/9)

புல எண்- 586/12- கீழ்கண்டவர்கள்:

— வடக்கு: எம். டி. கண்ணன் (585/-)

— தெற்கு: கிழக்கம்பாளையம் (611/-)

— கிழக்கு: வெங்கடேசன், சுப்பிரமணி (577/1)

நாணல் ஓடை (586/13, 14, 15, 17, 18)

A121 வெங்கடேசன் (586/16)

உதவி இயக்குநர் அலுவலகம்
19 NOV 2024
புவியியல் & சுரங்கத்துறை

வடக்கு : (576/1)

— கிழக்கு : சுண்ணாம்புக் கல் (586/14)

— தெற்கு : சிப்புராயன், நாகலோகன் (575/-)

— மேற்கு : சுண்ணாம்புக் கல் (586/12)

எண் - 586/14 - க்கான எல்லைகள் :

— வடக்கு : சுண்ணாம்புக் கல் (586/13)

— கிழக்கு : சுண்ணாம்புக் கல் (586/15)

— தெற்கு : சிப்புராயன், நாகலோகன் (575)

— மேற்கு : சுண்ணாம்புக் கல் (586/12)

எண் - 586/15 - க்கான எல்லைகள் :

— வடக்கு : சுண்ணாம்புக் கல் (586/14)

— கிழக்கு : சுண்ணாம்புக் கல் (586/12)

— தெற்கு : சிப்புராயன், நாகலோகன் (575/-)

— மேற்கு : சுண்ணாம்புக் கல் (586/12)

..... கி.பி.பா.

A122 S' சுண்ணாம்புக் கல்

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
விருதுநகர்
வருவாய் & சர்க்கத்துறை

புல எண்-586/17-க்கான நான்கெல்லை:

— வடக்கு: வெங்கடேஷ் (586/16)

— கிழக்கு: நிலம் பாதை (611/-)

— தெற்கு: ரவி குமார் (586/18)

— மேற்கு: ரவி குமார் (586/12)

புல எண்-586/18-க்கான நான்கெல்லை:

— வடக்கு: வெங்கடேஷ் (586/16)

— கிழக்கு: நிலம் பாதை (611/-)

— தெற்கு: சிவ புராணம், ராஜ மோகன் (575/-)

— மேற்கு: ரவி குமார் (586/17)

01/11/2023

கிராம நிர்வாக அலுவலர்
கோபாலபுரம் கிராமம்
வெம்பக்கோட்டை வட்டம்

A123 S. ரவி குமார்

அலுவலகம்
மாவட்டம்
19 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை

பணிக்குறிப்பு:

ஸ்ரீவில்லிபுத்தூர் மாவட்டம், வெம்பக்கோட்டை வட்டம், கிராம பரணையம் வட்டம், சுப்பிரமணியபுரம் கிராமம், சர்வே எண்-3004-5/2, சுப்பிரமணியபுரம் ஊரில், கிராம பரணையம் அலுவலகத்தில் இருந்து 1.5 கி.மீ. தூரத்தில் அமைந்துள்ள பகுதியில் உள்ள புல எண்கள் 586/11, 586/12, 586/13, 586/14, 586/15, 586/17 - மற்றும் - 586/18 - ஆகிய கிடப்பில் புலத்திற்கான எல்லை விவரம் வருமாறு:

- வடக்கு: எல். முத்து நாராயணன் (585/-)

- கிழக்கு: திருமலை பாண்டி (611/-)

- தெற்கு: சிவபுராணம், முத்துலட்சுமி (575/-)
  ஸ்ரீவில்லிபுத்தூர், சிவபுராணம் (577/1)

- மேற்கு: பாலன் (586/7)
  ஸ்ரீவில்லிபுத்தூர் (586/8,10)
  அருணாச்சலம் (586/9)

01/11/2023

கிராம நிர்வாக அலுவலர்
சுப்பிரமணியபுரம் கிராமம்
வெம்பக்கோட்டை வட்டம்

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
13 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை

A1 நோட்டீஸ்

அரசு புறம்போக்கு / பட்டா நிலத்தில் கனிம உரிமம் (கல், மண், கிராவல், கங்கர் கல், கிரானைட்) செய்து கொள்ளும் விண்ணப்பம் குறித்து ஆட்சேபனை இல்லை என்பது குறித்து அறிக்கை

!!!!

இதனால் அறிவிக்கப்படுவது என்னவென்றால் 300-19-5/2-சின்னபிள்ளை கோவில்

ராஜபாளையம் கிராமத்தில் வசித்து வரும் ...சின்னையாத் தேவர்..... மகன் / முனுசாமி சிண்டு மேஸ்திரி

என்பவர் கோவிலபுரம் கிராமத்தில் - 586/11, 12, 13, 14, 15, 17- மற்றும் - 586/18- பகுதி 2.12.5-ஹெக்

தென்மேல் பாறைக்குழி (புல எண் - 611/-)...க்கு வடக்கிலும்,

எம்.டி.சின்னமணி (புல எண் - 585/-)...க்கு தெற்கிலும்,

பாலன் (586/7), வெள்ளைச்சாமி (586/8, 10) அருச்சுனன் (586/9)...க்கு கிழக்கிலும்,

சிவபுராணம், நாராயணன் (575/-) வெள்ளைச்சாமி, சிவபுராணம் (577/1)...க்கு மேற்கிலும்

சர்வே எண் 586/11-மற்றும்-பல விஸ்தீரணம் = 2.12.5-Hec- ஹெக்டேர் நிலத்தில்

கல்குவாரி/குவாரி பணி செய்வது தொடர்பாக ஆட்சேபனையுடைய நபர்கள் அதன்

விபரத்தை இந்த அறிக்கை பிரசித்தம் செய்யப்படும் தேதியிலிருந்து பதினைந்து தினங்கள்

கொண்ட கால அளவிற்குள் மேற்படி கிராமத்தின் கிராம நிர்வாக அலுவலர் மற்றும்

வட்டாட்சியரிடம் தெரிவிக்க வேண்டும்.

17/10/23

கிராம நிர்வாக அலுவலர்
வெம்பக்கோட்டை வட்டம்

மேற்படி அறிக்கையானது 17.10.2023 தேதியில் தண்டோரா மூலமாகவும், கிராமச் சாவடி

மற்றும் முக்கிய இடங்களிலும் பிரசித்தம் செய்யப்பட்டு கையொப்பம் பெறப்பட்டுள்ளது.

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புள்ளியியல் & சார்ங்கத்துறை

J. ராகவன்

M. Vaneey

V. சுமதி

M. மகேந்திரன்

R. Siva

G. Manikandan

M. Kasthuri

A. அஜித்குமார்

K. ரெங்கராஜன்

P. Abinesh.

I. பொன்னுத்துரை

P. ராமலட்சுமி

M. பொன்மணி

M. Suresh

S. ராக்கம்மாள்

M. கனிமுத்து

K. ஆவிதா

மற்றும் உரிமம் பெற்ற நெசவாளர்களின் வாரிசுகளுக்கு அட்டையினை உறுதி செய்கிறேன்.

01/11/2024

கிராம நிர்வாக அலுவலர்
கோபாலபுரம் கிராமம்
வெம்பக்கோட்டை வட்டம்.

S. கண்முருகவேல்

ANNEXURE- IX
19 NOV 2024

भारतीय गैर न्यायिक

एक सौ रुपये

Rs. 100

रु. 100

ONE HUNDRED RUPEES

सत्यमेव जयते

भारत INDIA

INDIA NON JUDICIAL

தமிழ்நாடு तमिलनाडु TAMILNADU

EB 051723

Rambalan Explosives
Sankaran Kovil

ரூ.ரி. முகம்மது நற்பமத்துல்
நகர முத்திரைத்தாள் விற்பனையா
58, கழுகுமலை ரோடு, சங்கரன்கோவி
• ரிமம் எண் B.1.26480/77

DEED OF AGREEMENT

This Agreement is entered into at **Sankarankovil** on this **04 Nov 2024** between **Thiru Shanmugavel, S/o Subbaiah devar, 300/D5/2, Sankarankovil Road, Rajapalayam Taluk, Virudhunagar District** herein after referred to as party of the First Part, and **M/s Ram Balan Explosives,** having office at **No. 7,Gomathi Nagar, Sankarankovil, Tenkasi, DISTRICT** herein after referred to as party of the Second part.

S. சண்முக வேல்

Ram balan Explosives
Sankarankovil

S. சண்முக வேல்

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The party of the first part is operating quarry work in the area **Gopalapuram Village, Vembakottal Taluk, Virudhunagar District** over and extent of survey number **586/11 (0.78.50), 586/12 (0.91.50), 586/12 (0.91.50), 586/13 (0.10.00), 586/14 (0.11.00), 586/15 (0.11.00), 586/17 (0.05.00), 586/18 (0.50.00). 2.12.50 hectares** in per Tamilnadu Govt Consent Order No. **N.K.N:K.V1/1020/2023. Dated: 10-10-2024**

Whereas the party of the First Part wants blasting to be done at quarry to excavate the Blue metal stone. The blasting work is so intensive and large that the part of the first part has decided to entrust the work involved to the party of the second part on contract basis is as follows.

The party of the First part will allot the blasting operations in the above said areas to the party of the Second part who is responsible for blasting rocks and also making his own arrangement for the explosives and exploding equipments required for the work. The entire blasting in the above quarry and the possessment of the blasting equipment will be handled by the party of the second part having valid explosives License No.**E95317, E63073, E83537** and Shot Firer licenses issued by the Joint Chief Controller of Explosives, South Circle, Chennai and he hereby undertake the responsibility for the work entrusted.

Payments will be made periodically by the party of the first part for the quantity used, explosives consumed and hours and time of the exploding equipments put into use. Calculations will be made and settlement will be arrived every month. The rates for the items of work will as mutually agreed as marginal cost which includes cost of explosives, transportation cost and other charges for blasting work. This agreement is made for all blasting in the said area.

The Agreement is valid from the date of execution and validity of quarrying leases granted by the State Government to the party of the First part. The agreement is terminable earlier by mutual consent with a month's notice. The agreement will expire with the expiry of quarry lease.

First Party: Second Party:

Witnesses:

1.

2.

Place: SANKARANKOVIL

Date: 04-11-2024

अनुज्ञप्ति प्ररूप एलई – 7 | LICENCE FORM LE-7
(विस्फोटक नियम 2008 की अनुसूची 4 के भाग I का अनुच्छेद 7 देखें)
(See article no 7 of Part I of Schedule IV of Explosives Rules, 2008)

अनुज्ञप्ति : सडक वैन में विस्फोटकों के परिवहन के लिए
Licence to : transport explosives in a road van

अनुज्ञप्ति संख्या / Licence No. : E/SC/TN/25/2771(E151647)
वार्षिक फीस रूपए / Annual Fee Rs : 2500/-

1. अनुज्ञप्ति एतदद्वारा जारी की जाती है
Licence is hereby granted to : **R.LAVANYA, M/S SRI BALAN EXPLOSIVES, (Occupier : R.LAVANYA), No.7, Gomathi Nagar 1st Street, Sankarankovil Taluk, Tenkasi District, District-TENKASI, State-Tamil Nadu, Pincode-627756**

2 अनुज्ञप्तिधारी की प्रास्थिति / Status of licensee : **Partnership Firm**

3. सड़क वैन की विशिष्टियाँ / Particulars of the road van:

पंजीकरण संख्या / Registration No.	TN 79 K 5598
यान का मेक एवं मॉडल / Make and model of vehicle	MAHINDRA & MAHINDRA LTD
लदान रहित वजन / Unladen weight	2090 Kg(s)
लदान सहित अधिकतम वजन / Maximum laden weight	2990 Kg(s)
परिवहन के लिए अनुज्ञेय विस्फोटकों की अधिकतम मात्रा Maximum quantity of explosives permitted for transport	900 Kg(s)
इंजिन संख्या / Engine No.	TLN4D75638
चैसिस संख्या / Chassis No.	MA1ZW2TLKN6D44456
अन्य फिटिंग्स का विवरण / Description of Other Fittings	
वाहन के लिए अनुमत्य विस्फोटकों की मात्रा / Quantity of Explosives permitted to carry	900 Kg(s)

4. अनुज्ञप्त परिसर निम्नलिखित आरेखण (आरेखणों) के अनुरूप होना चाहिए / The licensed premises shall conform to the following drawing(s):
आरेखण संख्या / Drawing No : E/SC/TN/25/2771(E151647) दिनांक / dated : 17/11/2023

5. समय समय पर यथा संशोधित विस्फोटक अधिनियम, 1884 और उसके अधीन बनाए गए विस्फोटक नियम, 2008 के उपबन्धों और शर्तों एवं निम्नलिखित अनुलग्नकों के अधीन अनुज्ञप्ति प्रदान की जाती है |
The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed thereunder and the conditions and the following annexures:...
(क) उपर्युक्त क्रम संख्या 4 में यथाकथित सड़क वैन का आरेखण / (a) Drawings of the road van as stated in serial no 4 above.
(ख) अनुज्ञापन प्राधिकारी द्वारा हस्ताक्षरित शर्तें / (b) Conditions signed by the licensing authority.

6. यह अनुज्ञप्ति तारीख 31 मार्च 2028 तक विधिमान्य रहेगी / This licence shall remain valid till 31st day of March 2028

यह अनुज्ञप्ति, अधिनियम या उसके अधीन विरचित नियमों या इस अनुज्ञप्ति की शर्तों के उल्लंघन, अनुसूची 5 के भाग 4 में सन्दर्भित, जहाँ भी लागू हो, या यदि अनुज्ञप्त परिसर आरेखण या उससे संलग्न उपाबद्धों में दर्शाए गए विवरण के अनुरूप नहीं पाए जाने पर निलम्बित या प्रतिसंहृत की जा सकती है |
This licence is liable to be suspended or revoked for any violation of the Act or rules framed there under or the conditions of this licence as set forth under Conditions, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

दिनांक / Date 17/11/2023

संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives
दक्षिणांचल, चेन्नै | South Circle, Chennai

अनुज्ञप्ति के नवीनीकरण हेतु पृष्ठांकन / Endorsement for renewal of licence:

नवीनीकरण की तिथि Date of Renewal	वैधता समाप्ति की तिथि Date of Expiry	अनुज्ञापन प्राधिकारी के हस्ताक्षर Signature of licensing authority

वैधानिक चेतावनी : विस्फोटकों का लापरवाही से प्रयोग या दुरूपयोग, विधि के अधीन गम्भीर दाण्डिक अपराध होगा |
Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.

Digitally signed by Dr T L THANULINGAM
Reason: Licence No. : E/SC/TN/25/2771
Location:Chennai [E151647]
Date:17-11-2023 09:48:51 AM

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अनुज्ञप्ति प्रपत्र एल. ई.-3 | LICENCE FORM LE-3

(विस्फोटक नियम, 2008 की अनुसूची 4 के भाग 1 के अनुच्छेद 3(क) से (घ) देखिए।)

(See article 3(a) to (d) of Part 1 of Schedule IV of Explosives Rules, 2008)

(ग) उपयोग के लिए एक समय पर वर्ग 1,2,3,4,5 या वर्ग 7 के विस्फोटक या किसी मैगजीन में वर्ग 6 के विस्फोटक रखने के लिए अनुज्ञप्ति

Licence to possess (c) for use,explosives of class 1, 2,3,4,5,6 or 7 in a magazine

உதவி இயக்குநர் அலுவலகம் விருதுநகர் மாவட்டம் 19 NOV 2 விருதுநகர் புதையியல் & சுரங்கத்துறை

अनुज्ञप्ति सं. (Licence No.) : E/SC/TN/22/646(E83537)

वार्षिक फीस रुपए (Annual Fee Rs): 5600/-

1. Licence is hereby granted to

M/s.Ram Balan Explosives (अधिभोगी / Occupier : R.LAVANYA), DoorNo-7,GomathiNagar, Town/Village - Sankarankoil, District-THIRUNELVELI, State-Tamil Nadu, Pincode - 627756

को अनुज्ञप्ति अनुदत्त की जाती है।

2. अनुज्ञप्तिधारी की प्रास्थिति | Status of licensee : Partnership Firm

3. अनुज्ञप्ति निम्नलिखित प्रयोजनों के लिए विधिमान्य है।

Licence is valid only for the following purpose

possess for use of Nitrate Mixture, Safety Fuse, Detonating Fuse,; Electric and/or Ordinary Detonators, - के उपयोग के लिए

4. अनुज्ञप्ति विस्फोटकों के निम्नलिखित किस्मों, प्रकार और मात्रा के लिए विधिमान्य है।

Licence is valid for the following kinds and quantity of explosives: – (क) (a)

क्र Sr. No.	नाम और विवरण Name and Description	वर्ग और प्रभाग Class & Division	उप-प्रभाग Sub-division	मात्रा किसी एक समय में Quantity at any one time
1.	Nitrate Mixture	2,0	0	1300 Kg.
2.	Safety Fuse	6,1	0	5000 Mtrs
3.	Detonating Fuse	6,2	0	10000 Mtrs
4.	Electric and/or Ordinary Detonators	6,3	0	44000 Nos.

किसी एक कलैंडर मास में खरीदे जाने वाले विस्फोटक की मात्रा [अनुच्छेद 3(ख) और (ग) के अधीन अनुज्ञप्ति के लिए] 15 times

(b) Quantity of explosives to be purchased in a calendar month(applicable for licence under article 3(b) and (c)) : as above.

5. निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञप्त परिसर की पुष्टि होती है। रेखाचित्र क्र. (Drawing No.) E/SC/TN/22/646(E83537)

Licensed premises shall conform to the following drawing(s): दिनांक (Dated) 28/12/2015

6. अनुज्ञप्ति परिसर निम्नलिखित पते पर स्थित हैं। The licensed premises are situated at following address:

Survey No(s). 86/1,86/2,86/3,86/4 and 86/5 , ग्राम (Town/Village) : Kuvadaikanni Village, Sankarankovil Taluk

पुलिस थाना (Police Station) : Sankarankoil

जिला (Distnct)	THIRUNELVELI	राज्य (State)	Tamil Nadu	पिनकोड (Pincode)	627756
दूरभाष (Phone)		ई मेल (E-Mail)		फैक्स (Fax)	

7. अनुज्ञप्ति परिसर में निम्नलिखित सुविधाएं अंतर्विष्ट हैं।

The licensed premises consist of following facilities: One High Explosives Magazine, One Detonators Room with intervening Lobby.

8. अनुज्ञप्ति समय – समय पर यथासंशोधित विस्फोटक अधिनियम, 1884 और उनके अधीन विरचित विस्फोटक नियम, 2008 के उपबंधों, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपाबंधों के अधीन रहते हुए अनुदत्त की जाती है।

The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed there under and the conditions, additional conditions and the following Annexures.

1. उपर्युक्त क्रम सं. 5 में यथा कथित रेखाचित्र (स्थान, सन्निर्माण संबंधी और अन्य विवरण दर्शित करते हुए)।
   Drawings (showing site, constructional and other details) as stated in serial No. 5 above.
2. अनुज्ञप्ति प्राधिकारी द्वारा हस्ताक्षरित इस अनुज्ञप्ति की शर्तें और अतिरिक्त शर्तें।
   Conditions and Additional Conditions of this licence signed by the licensing authority.
3. दूरी प्ररूप DE-2 | Distance Form DE-2.

9. अनुज्ञप्ति तारीख 31 मार्च 2020 तक विधिमान्य रहेगी। This licence shall remain valid till 31st day of March 2020.

यह अनुज्ञप्ति, अधिनियम या उसके अधीन विरचित नियमों या अनुसूची V के भाग 4 के प्रति निर्दिष्ट सेट-VII के अधीन तथा उपवर्णित इस अनुज्ञप्ति की शर्तों का अतिक्रमण करने या यदि अनुज्ञप्त परिसर योजना या उससे संलग्न उपबंध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निलंबित या प्रतिसंहृत की जा सकती है, जहां वह लागू हो।

This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Set VIII, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached thereto.

तारीख | The Date - 28/12/2015

संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives South Circle, Chennai

Amendments :

- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 23/06/2016
- Change in Authorised Signatory/Occupier/Partners/Directors dated : 24/10/2016
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 06/03/2018
- Change in Authorised Signatory/Occupier/Partners/Directors dated : 19/04/2023

Errata :

- Change in Licensee Name/Address/Status dated : 29/12/2015

नवीनीकरण के पृष्ठांकन के लिए स्थान

Space for Endorsement of Renewal

नवीकरण की तारीख Date of Renewal	समाप्ति की तारीख Date of Expiry	अनुज्ञापन प्राधिकारी के हस्ताक्षर और स्टाम्प Signature of licensing authority and stamp
04/03/2020	31/03/2025	Sd/- Jt. Chief Controller of Explosives, South Circle, Chennai

कानूनी चेतावनी : विस्फोटकों को गलत ढंग से चलाने या उनका दुरूपयोग विधि के अधीन गंभीर दांडिक अपराध होगा।

Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

S. ஜெயகுமார்

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अनुज्ञप्ति प्ररूप एल.ई. -10 | Form LE-10
शॉट फायर कर्ता प्रमाण-पत्र | Shot Firer's Certificate
[अनुसूची IV के भाग I का अनुच्छेद 10 देखें | See article 10 of Part I of Schedule IV]
[विस्फोटक नियम, 2008 का नियम 107(5) देखें | see rule 107(5) of Explosives Rules, 2008]

(खान अधिनियम,1952 के अधीन न आने वाले क्षेत्र में विस्फोट करने के लिए सक्षमता प्रमाणपत्र)
(Certificate of competency to carry out blasting of explosives in area not coming under the Mines Act, 1952)

संख्या | No.: E/SC/TN/30/2702(E152468)

प्रमाणित किया जाता है कि श्री M.Rajapandiyan,
जिनका जन्म 10/06/1978 को हुआ था, जो No.176/2, Muthalamman Kovil Street, Valayakulam, Madurai South T.K, MADURAI, Tamil Nadu - 625022 के निवासी है ने संयुक्त मुख्य विस्फोटक नियंत्रक,चेन्नै द्वारा तारीख 26/12/2023 को आयोजित शॉट फायर की परीक्षा तारीख को 26/12/2023 उत्तीर्ण कर ली है और वह विस्फोटक अधिनियम, 1884 और उसके अधीन विरचित नियमों के उपबंधों के अधीन रहते हुए खान अधिनियम,1952की परिधि के अधीन आनेवाले खानों से अन्यथा क्षेत्र में नीचे यथा उल्लिखित विस्फोटकों का उपयोग करते हुए विस्फोट प्रचालन करने के लिए प्राधिकृत है।
This is to certify that *Shri M.Rajapandiyan*,
born on 10/06/1978 ,resident of No.176/2, Muthalamman Kovil Street, Valayakulam, Madurai South T.K, MADURAI, Tamil Nadu - 625022 passed the shotfirer's examination held on 26/12/2023 conducted by Joint Chief Controller of Explosives, Chennai and is authorised to conduct blasting operations as mentioned below using explosives in areas other than mines coming under the purview of the Mines Act 1952, subject to the provisions of the Explosives Act, 1884 and the rules framed thereunder

विस्फोट करने के प्राधिकृत वर्ग, प्रवर्ग और प्रकार :
वर्ग:(ख), श्रेणी: सामान्य जमीन के ऊपर, जमीन के ऊपर ब्लास्टिंग आपरेशन

Authorised class, category and type of blasting :
Class : (B), Category : General aboveground, All phases of aboveground blasting operation
[नियम 107 का उप-नियम (5) का स्पष्टीकरण देखें | See explanation of sub-rule (5) of rule 107]

यह प्रमाणपत्र 26/12/2028 (जारी करने की तारीख से पांच वर्ष) तक विधिमान्य होगा |
This certificate shall remain valid till 26/12/2028 (five years from the date of issue)

यह प्रमाण-पत्र, अधिनियम या उसके अधीन विरचित नियमों अथवा इस प्रमाण-पत्र की शर्तों का कोई अधिक्रमण करने पर या यदि आवेदक द्वारा आवेदन प्ररूप में दी गई सूचना में कोई फर्क या विचलन होता है तो निलंबित या अभिखंडित कर दिया जाएगा |
This certificate is liable to be suspended or revoked for any violation of the Act or rules framed thereunder or the conditions of this certificate or if there is any discrepancy or deviation in the information or suppression of facts furnished by the applicant in his application form.

स्थान | Place चेन्नै | Chennai
दिनांक | Date 26/12/2023

संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives
दक्षिणांचल, चेन्नै | South Circle, Chennai

पुनर्विधिमान्यनकरण के लिए पृष्ठांकन | Endorsement for revalidation

पुनर्विधिमान्यनकरण की तारीख Date of Revalidation	समाप्ति की तिथि Date of Expiry	अनुज्ञप्ति प्राधिकारी के हस्ताक्षर Signature of licensing authority

कानूनी चेतावनी : विस्फोटकों को गलत ढंग से चलाने या उनका दुरूपयोग विधि के अधीन गंभीर दांडिक अपराध होगा |
Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.

Digitally signed by Dr T L THANULINGAM
Reason: Licence No. : E/SC/TN/30/2702
Location:Chennai [E152468]
Date:26-12-2023 15:01:51 PM

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अनुज्ञप्ति प्ररूप एलई - 7 | LICENCE FORM LE-7
(विस्फोटक नियम 2008 की अनुसूची 4 के भाग 1 का अनुच्छेद 7 देखें)
(See article no 7 of Part 1 of Schedule IV of Explosives Rules, 2008)

अनुज्ञप्ति : सडक वैन में विस्फोटकों के परिवहन के लिए
Licence to : transport explosives in a road van

अनुज्ञप्ति संख्या / Licence No. : E/SC/TN/25/2771(E151647)
वार्षिक फीस रूपए / Annual Fee Rs : 2500/-

1. अनुज्ञप्ति एतद्द्वारा जारी की जाती है
Licence is hereby granted to : **R.LAVANYA, M/S SRI BALAN EXPLOSIVES, (Occupier : R.LAVANYA) No.7, Gomathi Nagar 1st Street, Sankarankovil Taluk, Tenkasi District, District-TENKASI, State-Tamil Nadu, Pincode-627756**
2. अनुज्ञप्तिधारी की प्रास्थिति / Status of licensee : **Partnership Firm**
3. सड़क वैन की विशिष्टियाँ / Particulars of the road van:

पंजीकरण संख्या / Registration No	TN 79 K 5598
यान का मेक एवं मॉडल / Make and model of vehicle	MAHINDRA & MAHINDRA LTD
लदान रहित वजन / Unladen weight	2090 Kg(s)
लदान सहित अधिकतम वजन / Maximum laden weight	2990 Kg(s)
परिवहन के लिए अनुज्ञेय विस्फोटकों की अधिकतम मात्रा Maximum quantity of explosives permitted for transport	900 Kg(s)
इंजिन संख्या / Engine No.	TLN4D75638
चैसिस संख्या / Chassis No.	MATZWZTLKN6D44456
अन्य फिटिंग्स का विवरण / Description of Other Fittings	
वाहन के लिए अनुमत्य विस्फोटकों की मात्रा / Quantity of Explosives permitted to carry	900 Kg(s)

4. अनुज्ञप्त परिसर निम्नलिखित आरेखण (आरेखणों) के अनुरूप होना चाहिए / The licensed premises shall conform to the following drawing(s):
आरेखण संख्या / Drawing No : E/SC/TN/25/2771(E151647) दिनांक / dated : 17/11/2023
5. समय समय पर यथा संशोधित विस्फोटक अधिनियम, 1884 और उसके अधीन बनाए गए विस्फोटक नियम, 2008 के उपबन्धों और शर्तों एवं निम्नलिखित अनुलग्नकों के अधीन अनुज्ञप्ति प्रदान की जाती है|
The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed thereunder and the conditions and the following annexures....
(क) उपर्युक्त क्रम संख्या 4 में यथाकथित सड़क वैन का आरेखण / (a) Drawings of the road van as stated in serial no.4 above.
(ख) अनुज्ञापन प्राधिकारी द्वारा हस्ताक्षरित शर्तें / (b) Conditions signed by the licensing authority.

6. यह अनुज्ञप्ति तारीख **31 मार्च 2028** तक विधिमान्य रहेगी / This licence shall remain valid till **31st day of March 2028**

यह अनुज्ञप्ति, अधिनियम या उसके अधीन विरचित नियमों या इस अनुज्ञप्ति की शर्तों के उल्लंघन, अनुसूची 5 के भाग 4 में सन्दर्भित, जहाँ भी लागू हो, या यदि अनुज्ञप्त परिसर आरेखण या उससे संलग्न उपाबद्धों में दर्शाए गए विवरण के अनुरूप नहीं पाए जाने पर निलम्बित या प्रतिसंहृत की जा सकती है |
This licence is liable to be suspended or revoked for any violation of the Act or rules framed there under or the conditions of this licence as set forth under Conditions, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

दिनांक / Date: 17/11/2023

संयुक्त मुख्य विस्फोटक नियंत्रक | Joint Chief Controller of Explosives
दक्षिणमंडल, चेन्नै | South Circle, Chennai

अनुज्ञप्ति के नवीनीकरण हेतु पृष्ठांकन / Endorsement for renewal of licence:

नवीनीकरण की तिथि Date of Renewal	वैधता समाप्ति की तिथि Date of Expiry	अनुज्ञापन प्राधिकारी के हस्ताक्षर Signature of licensing authority

वैधानिक चेतावनी : विस्फोटकों का लापरवाही से प्रयोग या दुरूपयोग, विधि के अधीन गम्भीर दाण्डिक अपराध होगा |
Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Note :- This is system generated document does not require physical signature. Applicant may take printout for their records.

Digitally signed by Dr T L THANULINGAM
Reason: Licence No. : E/SC/TN/25/2771
Location:Chennai (E151647)
Date:17-11-2023 09:48:51 AM

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ANNEXURE - X

தமிழ்நாடு तमिलनाडु TAMILNADU

2710

S.சீதாலெக்ஷ்மி
முத்திரைத்தாள் விற்பனையாளர்,
ஸ்ரீவில்லிபுத்தூர், விருதுநகர்
L.No.R.O.C.A2 641/78

APPENDIX – IV

(See Rule 19 & 20 of the Tamil Nadu Minor Minerals Concession Rules, 1959)

FORM OF AGREEMENT FOR QUARRYING AND CARRYING AWAY MINOR MINERALS FROM RYOTWARI LANDS IN WHICH THE MINERALS BELONGS TO GOVERNMENT

Collector's Proceedings No. KV1/53243/2013, Dated: 05.05.2018

AGREEMENT MADE on this 21st day of May 2018 between Thiru S. Shanmugavel, S/o. Subbaiah thevar residing at 300D5/2, Sankarankoil Road, Rajapalayam, Virudhunagar District (hereinafter referred to as "the registered holder" which term shall include in these presents where the context so admits include also his heirs, executors,

S. சண்முகவேல்
LESSEE

LESSOR

Document No. 1191 of 2018 of Book
1 Contains 1 Sheets 1 Sheet
Registering Officer.

S. சண்முகவேல்

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உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2
புவியியல் & சுரங்கத்துறை
விருதுநகர்

தமிழ்நாடு தமிழ்நாடு TAMILNADU 2.111 10.5.18 Rs 10000 F 111491

S.சீதாலெக்ஷ்மி
முத்திரைத்தாள் விற்பனையாளர்,
ஸ்ரீவில்லிபுத்தூர், தமிழ்நாடு
L No.R.O.C.A2 641/78

administrators, legal representatives and assigns) of the one part and the Collector of Virudhunagar District (hereinafter called "the Government" which term shall where the context so admits, include also his successors in office and assigns) of the other part.

WHEREAS the registered holder holds (amongst others) the lands described in the schedule hereunder written (hereinafter referred to as the said lands).

AND, WHEREAS, the registered holder has made application to the Collector of the District of Virudhunagar (hereinafter referred to as "The Collector") seeking grant of quarrying lease for quarrying **Roughstone, Jelly & Gravel** in the said lands and has lodged with the Collector an accurate map or sketch of the said lands.

LESSEE

LESSOR

Document No.....1191..... ...தொகுதி... of Book
.....1..... Contains ...ஒன்று... Sheets .....2..... Sheet
Registering Officer

உதவி இயக்குநர் சுரங்கங்கள்
திருநெல்வேலி மாவட்டம்
19 NOV 2024
திருநெல்வேலி
உதவி இயக்குநர் சுரங்கத்துறை

भारतीय गैर न्यायिक INDIA NON JUDICIAL

दस हजार रुपये

रु. 10000

भारत

Rs. 10000

TEN THOUSAND RUPEES

INDIA

தமிழ்நாடு तमिलनाडु TAMILNADU

2712 B 10000 F 111492

15-5-18

S.சுரேஷ்குமார்

LNo.R.O.C.A2643/78

AND, WHEREAS, the Collector, acting for and on behalf of the Government, has granted a quarrying lease to the registered holder and allowed him to commence quarrying operations for **Five Years** in the said lands and to deposit mining waste there on by registered holder.

AND WHEREAS the registered holder has deposited with the Collector the sum of Rs.10,000/- as security against any loss or damage which may be incurred by the Government by reason of any of the said lands being rendered unfit for cultivation by any mining operations therein of the registered holder or by the deposit of mining waste thereon by the registered holder.

NOW THESE PRESENTS WITNESS and the registered holder doth hereby agree with the Government in the manner following, that is to say:-

LESSEE

LESSOR

Document No. 1191 of 2018 of Book 1
Certified Sheets 2 Sheet
Registering Officer

AX 365392

தமிழ்நாடு தமிலநாடு TAMILNADU

1) The registered holder shall be at liberty at all times during the period of the lease to carry on mining operations for **Five Years** in the said lands in a proper and workman like manner and to deposit mining waste on the said lands and shall at all times, be answerable and accountable to the Government for all acts and defaults by any of his nominees, servants or agents in carrying on such operations or in making such deposit.

2) The said premises shall be held by the Registered Holder for a term of **Five Years** from the 21st day of May **2018** to the 20th day of May **2023**. The registered holder shall pay to the Collector for and on behalf of the Government in addition to the land assessment for the time being payable in respect of the said lands, seigniorage on the minor minerals viz. **Roughstone,**

LESSEE

Document No. 1119/1 of Book 4 Sheet
Contains 2 Sheets
Registering Officer.

LESSOR

தமிழ்நாடு तमिलनाडु TAMILNADU

AX 367599

2429

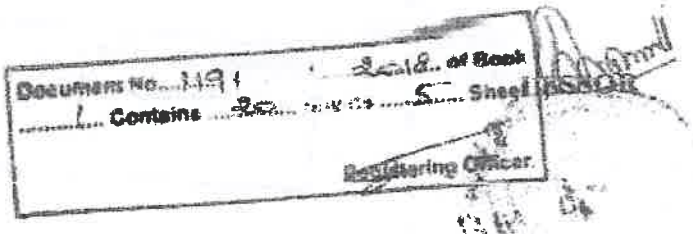
25 4 15

S.சிதாலெக்ஷ்மி
முத்திரைத்தாள் விற்பனையாளர்.
திருவெள்ளக்குளம், தமிழ்நாடு
LNo.ROCA2641/78

Jelly & Gravel at the rate specified in Appendix-II to the Tamil Nadu Minor Minerals Concession Rules, 1959

3) The registered holder shall and will keep correct accounts in such form as the Collector shall from time to time required and direct showing the quantities and other particulars of all minerals obtained by the registered holder from the said lands and also the number of persons employed in carrying on the said mining operations therein and shall from time to time when so directed by the Collector prepare and maintain complete and correct plans of all mines and workings in the said lands and shall allow any officer hereunto authorized by the Director of Geology and Mining, Chennai-32 Tamil Nadu from time to time and at any time to examine such accounts and any such

LESSEE



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இணை இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புவியியல் மற்றும் சுரங்கத்துறை

தமிழ்நாடு தமிழ்நாடு TAMILNADU 2430/25.4.18 AX 367600

S.சீதாலெட்சுமி
முத்திரைத்தாள் விற்பனையாளர்,
விருதுநகர், தமிழ்நாடு
L.No R.O.C.A2 641/78

plans and shall when so required supply and furnish all such information and returns regarding all or any of the matter aforesaid as the Government shall, from time to time require and direct.

4). The registered holder shall and will at all times allow any Officer authorized by the Director of Geology and Mining, Tamil Nadu in that behalf to enter upon any part of the said lands where any mining operations may be carried on for the purpose of inspecting the same.

5) The registered holder shall forthwith send to the Collector a report of any accident which may occur at or in the said lands and also of the discovery of any minerals other than **Roughstone, Jelly & Gravel** .

LESSEE

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LESSOR

208

19 NOV 2024

भारतीय गैर न्यायिक INDIA NON JUDICIAL

भारत

एक हजार रुपये ONE THOUSAND RUPEES

रु.1000 Rs.1000

INDIA

தமிழ்நாடு तमिलनाडु TAMILNADU

AX 367601

S.சுதாகர்

முத்திரைத்தாள் விற்பனையாளர்,
ஸ்ரீவில்லிபுத்தூர், தமிழ்நாடு
L.No.R.O.C.A2641/78

2431
25/4/18

6) It shall be lawful for the registered holder at any time to cease mining operations under these presents provided he shall pay to the Collector, for and on behalf of the Government land assessment, cess and seigniorage due to the Government and shall restore the said lands or fence or fill in abandoned pits and excavations therein if required by the Collector and upon his so doing these presents shall cease and determine.

7) In case the registered holder shall relinquish the whole or any part of the said lands or in case of expiry or sooner determination of this agreement then and in any such case, he shall restore the lands so relinquished or so much thereof as the Collector shall require to be restored to a state fit for cultivation or shall securely and permanently fence or fill in all such abandoned pits and

LESSEE

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Registering Officer.

LESSOR

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை

தமிழ்நாடு தமிலநாடு TAMILNADU

2432

AX 367602

S.சந்தோஷ்குமார்
முத்திரைத்தாள் விற்பனையாளர்.
ஸ்ரீவில்லிபுத்தூர், தமிழ்நாடு
L.No.R.O.C.A2641/78

excavation therein as the Collector shall require to be so fenced or filled in and in case the registered holder shall fail or neglect to restore any such lands which he shall be required to restore to a state fit for cultivation, or to so fence or fill in any such abandoned pit or excavation which he shall be required to so fence or fill in them and in such case, it shall be lawful for the Collector to so restore any such lands or as the case may be, to so fence or fill in any such pits, or excavation at the expense of the registered holder and to apply the said sum of Rs.10,000/- so deposited in or towards the cost of so doing and to deduct from the amount of the said deposit and retain on behalf of the Government a sum equal to thirty times the assessment of the said lands, which shall have been rendered unfit for cultivation. If however, the amount of deposit is not

LESSEE

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Registering Officer.

300

உதவி இயக்குநர் (சுரங்கங்கள்)
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
பசுமையம் & சுரங்கத்துறை

भारतीय गैर न्यायिक
भारत INDIA
₹. 500 FIVE HUNDRED RUPEES
पाँच सौ रुपये Rs. 500
INDIA NON JUDICIAL
தமிழ்நாடு तमिलनाडु TAMILNADU
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sufficient to cover the cost of such restoration or filling in or to meet thirty times the assessment on the area rendered uncultivable, it shall be lawful for the Government to recover the balance by resort to Civil Court.

8) The registered holder shall not be entitled to any remission of assessment in respect of any of the said lands which shall be rendered unfit for surface cultivation by the carrying on of any mining operations or by the deposit of mining waste, unless thirty times the assessment thereon has already been deducted under the preceding clause.

9) The registered holder shall not assign, lease or part with the possession of the said lands or any part there of for the whole or any part of the said term without previous intimation in writing to the Collector.

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Registering Officer.

LESSEE

10) If the registered holder does not intend to carry on mining operations himself, but intends to lease out the right to do so to another person the registered holder and his lessee shall enter into an agreement with Government binding themselves jointly and severally to accept the conditions and stipulations herein contained which agreement shall be in the form set out in Appendix-V to the Tamil Nadu Minor Mineral Concession Rules, 1959.

11) All land assessment, cess and seigniorage payable under these present shall be recoverable under the provisions of the Tamil Nadu Revenue Recovery Act, 1864, as if they were arrears of land revenue.

12) In the event of any breach by the registered holder by any of the conditions of this agreement, it shall be lawful for the Government to levy enhanced seigniorage fee or for the Collector to give notice in writing to the registered holder of his intention to cancel these presents whereupon the same shall stand cancelled but without prejudice to any rights which the Government may have against the pattadar in respect of any antecedent claim of breach of covenant or condition.

13) Any notice to be given to the registered holder may addressed to his last known place of abode and where a notice has been so addressed it shall be deemed to have been duly served for the purpose of these presents.

14) Should any question or dispute arises regarding the agreement executed in pursuance of these rules or any matter or thing connected therewith or the powers of the registered holder there under, the amount or payment of the Seigniorage fee or Area Assessment made payable thereby, the matter in issue shall be decided by the Director of Geology and Mining. In case the registered holder is not satisfied with the decision of the Director of Geology and Mining, the matter shall be referred to the State Government for decision.

15) The registered holder shall abide by the conditions laid down in the payment of wages Act 1936 (Central Act IV of 1936), the Mines Act, 1952 (Central Act XXXV of 1952) and the Indian Explosives Act, 1884 (Central Act IV of 1884).

16) The registered holder should demarcate the lease hold area at his own cost and shall quarry **Roughstone, Jelly & Gravel** only within the area leased out to him and keep the boundary stones, painted and maintained at all times.

17) The registered holder shall make his own arrangements for road, pathways channels and ramp etc. to the quarry at his own cost.

LESSEE

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Engineering Officer.

LESSOR

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உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
புவியியல் & சுரங்கத்துறை
விருதுநகர்

18) The registered holder shall obtain the permits and dispatch slips for the transport of **Roughstone, Jelly & Gravel** from the Deputy Director of Geology and Mining Virudhunagar. The despatch slips shall be kept in the quarry site and be issued to all the vehicles while transporting the **Roughstone, Jelly & Gravel** from the quarry.

19) The registered holder should leave necessary safety distance from the features like road, low tension and high tension power lines, transformers, temples, villages, place of Historical importance and Archaeological importance, Highways habitations etc., as per relevant Mettalliferrous Mines Regulations 1961 and as per Tamil Nadu Minor Mineral Concession Rules, 1959.

20) The registered holder shall put up a board at the entrance of the lease hold area showing very clearly the details of the S.Nos., Villages, Extent of the Area, Period of Lease, the authority granting the lease etc.

21) The registered holder shall immediately report any accident that may occur at the quarry site to the District Collector, Deputy Director of Geology and Mining and other authorities concerned including the Director of Mines Safety, Anna Nagar, Chennai

22) The registered holder should strictly adhere to the conditions and rules stipulated by the Government for the minor minerals from time to time.

23) Quarrying should be done without any hindrance to the adjacent pattadars.

24) Quarrying should be done 7.5 mtrs away from the boundaries of the area granted for quarry lease.

25) In case event of any breach of rules or the conditions of the lease stated above the lease shall become liable for automatic termination without any prior notice.

26) The Lessee should do quarrying operation as per the Mining Plan, Environmental Clearance Letter No.DEIAA/VNR/007/EC:No:078/2017, dated: 27.03.2018.

விருதுநகர் மாவட்ட ஆட்சித்தலைவர் அவர்களின் செயல்முறை ஆணைகளின்படி குத்தகை நிபந்தனைகள் ந.க.கே.மி.1/53243/2013, நாள்.05.05.2018

1) சரியான முறையில் குறிப்பிட்ட படிவத்தில் கணக்குகள் பராமரிக்க வேண்டும் தினந்தோறும் வெட்டி எடுத்துக் கொண்டு செல்லப்பட்ட கனிம அளவைக் குறித்த பதிவேடுகள் வைத்திருக்க வேண்டும். அலுவலகனை தணிக்கை செய்யும் அதிகாரிகளுக்கு தவறாமல் காண்பிக்க வேண்டும்.

LESSEE

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Registering Officer.

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2) மொத்த செலவிலேயே குறிப்பிட்ட படிவத்தில் நடைச்சீட்டு அச்சிட்டு நடைச்சீட்டில் துணை இயக்குநர் (புவியியல் மற்றும் சுரங்கத்துறை) விருதுநகர் அலுவலக முத்திரையுடன் கையொப்பமும் பெறவேண்டும். குவாரியில் இருந்து கனிமம் ஏற்றிச் செல்லும் ஒவ்வொரு வாகனத்திற்கும் நடைச்சீட்டு வாங்கப்பட வேண்டும். சோதனையின்போது நடைச்சீட்டு இல்லையென்று கண்டுபிடிக்கப்பட்டால் வாகனங்கள் பறிமுதல் செய்யப்படுவதோடு குவாரி குத்தகைதாரர் மீது நடவடிக்கையும் எடுக்கப்படும்

3) குவாரி செய்ய அனுமதிக்கப்பட்ட குறிப்பிட்ட புல எண் மற்றும் குறிப்பிட்ட விஸ்தீரணத்திற்குள் தான் குவாரி செய்ய வேண்டும்.

4) குத்தகைதாரர் குவாரியை வேறு யாருக்கும் உள் குத்தகைக்கு விடலாகாது.

5) ஒப்பந்தப் பத்திரத்தில் கண்டுள்ள நிபந்தனைகளுக்கு அவர் கட்டுப்பட்டு நடக்க வேண்டும்.

6) **பிரதிமாதமும் 5ம் தேதிக்குள் முந்தைய மாதத்தில் குவாரி செய்து எடுக்கப்பட்ட கனிம அளவு வெளியில் அனுப்பப்பட்ட கனிம அளவு குவாரியில் வேலை செய்யவும் கூலி ஆட்களின் எண்ணிக்கை முதலிய விபரங்களை விருதுநகர் மாவட்ட புவியியல் மற்றும் சுரங்கத்துறை துணை இயக்குநருக்கு அனுப்பி வைக்க வேண்டும்.**

7) குத்தகை ஒப்பந்தப் பத்திரம் நிறைவேற்றப்பட்ட பின்புதான் குவாரியில் வேலை செய்யத் தொடங்க வேண்டும்.

8) குத்தகை பற்றிய முழு விபரங்கள் அடங்கிய தகவல் பலகை ஒன்று குவாரியில் கண்டிப்பாக வைத்திருக்க வேண்டும்.

9) சொந்த செலவிலும் முயற்சியாலும் குவாரிக்குச் செல்லும் சாலைகள் மற்றும் பாதைகள் மற்றும் வசதிகள் அமைத்துக் கொள்ள வேண்டும்.

10) தன் சொந்த செலவிலேயே குவாரியில் குத்தகை வழங்கப்பட்ட விஸ்தீரணத்தை வட்ட அளவர் மூலம் அளந்து நான்கு எல்லைக்கும் கல்தூண்கள் நட்டு அமைத்துப் பராமரித்து வா வேண்டும்.

11) குவாரிக்குரிய நடைச்சீட்டுகளை கண்டிப்பாக குவாரியில் இருந்துதான் வழங்க வேண்டும். நடைச்சீட்டுக்களின் அடிக்கட்டைகளை குவாரியில் வைத்திருக்க வேண்டும்.

12) **குவாரிக்கு அருகில் வீடுகள், சாலைகள், பாதைகள், மின்சாரக்கம்பிகள், மின்சார டிரான்ஸ்பார்மர்கள் கோவில், ஓடை, குடிநீர் ஆதாரங்கள் மற்றும் சரித்திரப் புகழ் பெற்ற ஸ்தலங்கள் போன்றவை** அமைந்திருந்தால் அவைகளுக்கு சேதம் ஏற்படாதவாறு **தேவையான அளவு** பாதுகாப்பு இடைவெளி விட்டு குவாரி செய்ய வேண்டும்.

13) குவாரியில் வேலை செய்யும் தொழிலாளர்களின் நலன் பேணப்படவேண்டும். குழந்தைத் தொழிலாளர்களை குவாரிப் பணியில் ஈடுபடுத்தக்கூடாது.

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Registering Officer.

LESSEE

உதவி இயக்குநர் அலுவலகம் விருதுநகர் மாவட்டம் 19 NOV 2024 புவியியல் & சுரங்கத்துறை விருதுநகர்

14) அனுமதிதாரர் பாதுகாப்பு நிறுவனங்களுக்கோ, அரசாங்க சொத்துக்களுக்கோ எவ்வித சேதமும் இன்றி குவாரி செய்ய வேண்டும். அருகாமையில் உள்ள பட்டா நிலங்களுக்கு எவ்வித சேதமுமின்றி குவாரி செய்ய வேண்டும்.

15) அருகில் அமைந்துள்ள விவசாய நிலங்களுக்கு எவ்வித பாதிப்பும் இல்லாத வகையில் குவாரிப்பணி மேற்கொள்ள வேண்டும்.

16) அருகில் உள்ள நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி தூரம் கடைப்பிடிக்க வேண்டும்.

17) மாவட்ட சுற்றுச்சூழல் பாதிப்பு மதிப்பீட்டு ஆணையம், விருதுநகர் கடித எண் DEIAA/VNR/025/EC.No:026/2017 நாள்: 11.08.2017, தெரிவிக்கப்பட்டுள்ள அனைத்து நிபந்தனைகளையும் தவறாது கடைப்பிடிக்க வேண்டும்.

18) சுரங்க திட்டத்தில் (Mining Plan) குறிப்பிட்டுள்ள விபரங்களின்படி குவாரிப்பணி மேற்கொள்ள வேண்டும்.

19) காலை 7 மணி முதல் மாலை 5 மணி வரை குவாரிப் பணி மேற்கொள்ள வேண்டும்.

20) குவாரியில் வெடிபொருட்கள் பயன்படுத்தும்போது முன்னெச்சரிக்கை நடவடிக்கை மேற்கொள்ளப்பட வேண்டும்

21) கனிமம் எடுத்து செல்லும் வாகனங்களால் பொது மக்களுக்கு எந்த ஒரு பாதிப்பும் இல்லாமல் தார்பாய் போட்டு மூடி எடுத்துச் செல்ல வேண்டும்

22) அருகிலுள்ள பட்டா புலங்களுக்கு இடையூறு ஏதுமின்றி குவாரிப்பணி செய்யவேண்டும்.

23) குத்தகை ஒப்பந்தம் நிறைவேற்றும் நாளிலிருந்து 31/05/2018 முதல் 30/05/2023 வரை ஐந்து வருடங்களுக்கு குவாரிப்பணி மேற்கொள்ள வேண்டும்.

For the pourpose of stamp duty the anticipated Seigniorage fee for a period of Five years from the demised land is Rs.35,45,619/-

THE SCHEDULE

In the village of Gopalapuram, Rajapalayam Taluk, Virudhunagar District and Sub-Registration Office at Keelarajakularaman of within the registration District of Virudhunagar.

Survey No	Lease granted Area in Hectares	North	South	East	West
586/11	0.78.5	585	611	586/12	586/7,8,9,10
586/12	0.91.5	585	611	575, 576, 577	586/11
586/13	0.10.0	577, 576	586/14	575	586/12
586/14	0.11.0	586/13	586/15	575	586/12
586/15	0.11.0	586/14	586/12	575	586/12
586/17	0.05.0	586/16	611	586/18	586/12
586/18	0.05.0	586/16	611	575	586/17
Total	2.12.5				

LESSEE

LESSOR

305

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை

IN WITNESS WHEREOF **Thiru A. Sivagnanam, I.A.S., District Collector,** Virudhunagar acting for and on behalf and by the order and direction of the Governor of Tamil Nadu and Thiru S. Shanmugavel, S/o. Subbaiah thevar residing at 300D5/2, Sankarankoil Road, Rajapalayam, Virudhunagar District (Aadhar Card No.5712 1708 0932) The registered holder have hereunto set their respective hands.

LESSEE
Signed by the above named in the presence of

LESSOR
COLLECTOR
VIRUDHUNAGAR DISTRICT
Signed by the above named in the presence of

Witness

1 R. [illegible]
51. Baskyanathan Road
Thatthaneri
Madurai - 18.

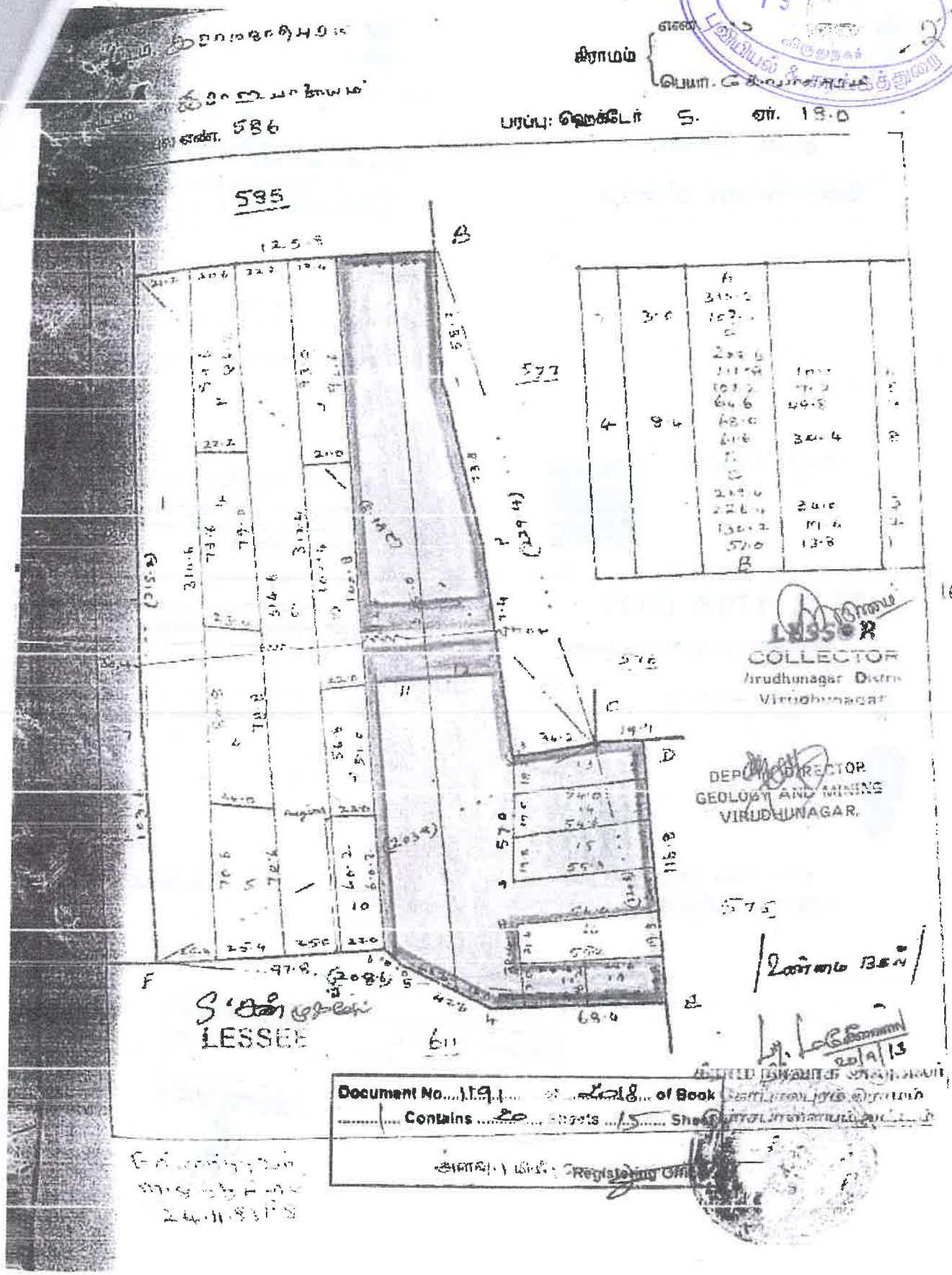
2 V. [illegible]
112/NA
[illegible]

1) (A.Arumuga Nainar)
DEPUTY DIRECTOR i/c
GEOLOGY AND MINING
VIRUDHUNAGAR.

2) (R.Sankara Narayanan)

Document No. 1191 of 2024 of Book 1 Contains 20 Sheets 14 Sheet
Registering Officer.

Drafted by
M. MUTHULAKSHMANAN
S/o. S. Muthupandi
[illegible]
LMC B/1/2003/VHK


595
586
577
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575
611
LESSEE
COLLECTOR
Virudhunagar Distrt
Virudhunagar
DEPUTY DIRECTOR
GEOLOGY AND MINING
VIRUDHUNAGAR.
Document No.
Contains
Sheets

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை

இந்திய அரசாங்கம்

Government of India

உங்கள் எண் / Your No

5712 1708 0932

சாதாரண மனிதனின் அதிகாரம்

இந்திய அரசாங்கம்
Government of India

5712 1708 0932

சாதாரண மனிதனின் அதிகாரம்

AADHAAR

INFORMATION

- Aadhaar is proof of identity, not of citizenship
- To establish identity, authenticate online

- ஆதார் நாடு முழுவதிலும் செல்லுபடியாகும்
- எதிர்காலத்தில் அரசு மற்றும் அரசு சாரா சேவைகளை பயன்படுத்திட ஆதார் உதவிகரமாக இருக்கும்
- Aadhaar is valid throughout the country
- Aadhaar will be helpful in availing Government and Non-Government services in future

Unique Identification Authority of India

5712 1708 0932

Document No. 1191 of Book 1 Contains 2 Sheet 16

Registering Officer

17

A148

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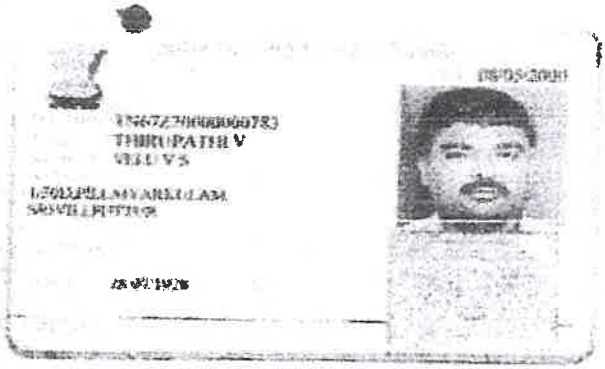

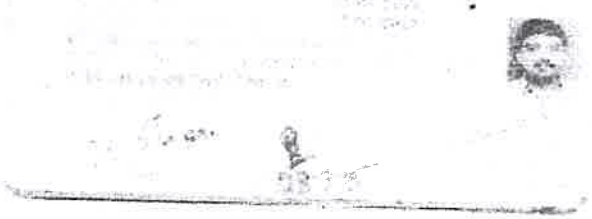

S. வெங்கடேசன்

V. Giri..

Document No. 1191 of 2018 of Book 1 Contains 20 Sheets 17 Sheet

Registering

A149 S. வெங்கடேசன்

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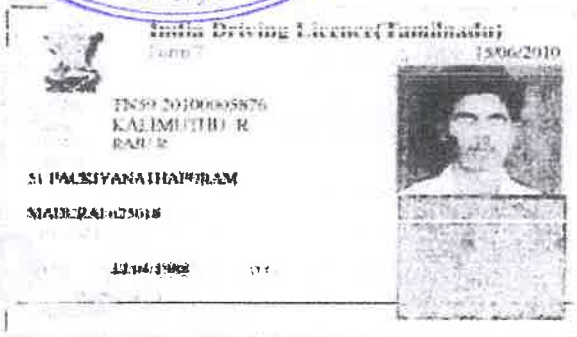
உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை



Document No.....1191..... of .....2024..... of Book
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Registering Officer

உதவி இயக்குநர் அலுவலகம்
திருமுருகன் மாவட்டம்
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பதிவுத்துறை
திருமுருகன்
பதிவியல் & சுரங்கத்துறை

சுகீழராஜகுலராமன்புத்தகம்-1/7191/2018

1908ம் ஆண்டு இந்திய முத்திரைச் சட்டம் 47வது பிரிவின் கீழான சான்று

29ம் ஆண்டு வரிசை எண் 126

பழைய சுங்கார்கோவில் மெயின் இராஜபாளையம் இராஜபாளையம் விருதுநகர் தமிழ்நாடு இந்தியா [illegible] வசிக்கும் திரு சண்முகவேல் என்பவரிடமிருந்து ₹ 6,570/- ரூபாய் ஆறாயிரத்து நானூற்று எம்பதேழு மட்டும் இந்த ஆவணத்திற்காக இந்திய முத்திரைச் சட்டம் 47வது பிரிவின் படி குறைவாயிருந்த முத்திரைக் கட்டணம் வசூலிக்கப்பட்டது என நான் இதன் மூலம் சான்றளிக்கிறேன்.

சார்பதிவாளர் கீழராஜகுலராமன்
நாள் 29/05/2018

சார்பதிவாளர் மற்றும் இந்திய முத்திரைச் சட்டம் பிரிவு 41ன் படி ஆட்சியர்

2018 ஆம் ஆண்டு மே மாதம் 29ம் தேதி பிற்பகல் 02:20 மணியளவில் கீழராஜகுலராமன் சார்பதிவாளர் அலுவலகத்தில் தாக்கல் செய்து கட்டணம் ₹ 20,270/- செலுத்தியவர்

இடது பெருவிரல்

S. சண்முகவேல்

கூடுதல் விவரங்கள் ஆவண வகைத்தில் உள்ளபடி

எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர்

இடது பெருவிரல்

S. சண்முகவேல்

கூடுதல் விவரங்கள் ஆவண வகைத்தில் உள்ளபடி

பதிவுச் சட்டம் பிரிவு 58ன் கீழ் நேரில் வருவதனின்றிருந்து விலக்களிக்கப்பட்ட திரு சிவஞானம் தமிழ்நாடு இந்திய அவர்களால் இந்த ஆவணம் எழுதிக் கொடுத்தலை குறித்து நான் மனநிறைவடைந்துள்ளேன்

கீழராஜகுலராமன்
சார்பதிவாளர்

இச்சான்றென்று திருப்திதெரிவிக்கும்

1. R. திரு காளிமுத்து தகப்பனார் [illegible] மதுரை தமிழ்நாடு இந்தியா 625016

2. V. திரு திருப்பதி தகப்பனார் [illegible] திருவில்லிபுத்தூர் விருதுநகர் தமிழ்நாடு இந்தியா 626125

Registering Officer

S. சண்முகவேல்

உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
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புதையியல் & சுரங்கத்துறை

R/[redacted] அ([redacted]-1/1191/2018

2018 ஆம் ஆண்டு மே மாதம் 24ம் நாள்

ஆனந்தன் இரா
சார்பதிவாளர்
கீழராஜகுலராமன்

R/கீழராஜகுலராமன்/புத்தகம்-1/1191/2018 எண்ணாகப் பதிவு செய்யப்பட்டது

நாள் 24/05/2018
கீழராஜகுலராமன்

ஆனந்தன் இரா
சார்பதிவாளர்

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Sub-Registrar.

ANNEXURE-XI

19 NOV 2024

Thiru.A. SIVAGNANAM , I.A.S.,
CHAIRMAN – DEIAA/
DISTRICT COLLECTOR

DISTRICT LEVEL ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY-VIRUDHUNAGAR
Room No.206, 2nd Floor,
Collectorate Building,
Virudhunagar – 626 002,
Tamil Nadu.
Phone No.04562-252729

ENVIRONMENTAL CLEARANCE

Lr.No.DEIAA/VNR/025/EC.No 020/2017, Dated 11.08.2017

To

Thiru.S.Shanmugavel
S/o.M.Subbaiah Thevar
No.300105/2,SankarankoilRoad
Rajapalayam Town & Taluk
Virudhunagar District-626 117

Sir,

Sub: DEIAA –TN – Proposed Rough Stone and Gravel quarry in SF. No.586/11,12,13,14,15,17,18, Gopalaperam Village, Rajapalayam Taluk, Virudhunagar District by Thiru.S.Shanmugavel– Environmental Clearance issued Reg.

Ref: 1) Your Application for Environmental Clearance dated.01.03.2017
2) Minutes of the 1st DEAC meeting held on 30.05.2017.
3) Minutes of the 1st DEIAA meeting held on 30.06.2017.
4) The Member Secretary SEIAA-TN Letter No.SEIAA-TN /Virudhunagar District/2017 dated: 09.03.2017

Details of Minor Mineral Activity :-

This has reference to your application first cited. The proposal is for obtaining environmental clearance for mining/ quarrying of minor minerals based on the particulars furnished in your application as shown below :

Name of Project Proponent and Address	Thiru.S.Shanmugavel S/o.M.Subbaiah thevar No.300105/2,SankarankoilRoad Rajapalayam Town & Taluk Virudhunagar District-626 117
Location of the proposed Activity	
Survey Number	S.F. Nos: 586/11,12,13,14,15,17,18
Village	Gopalaperam
Taluk	Rajapalayam
District	Virudhunagar

THE CHAIRPERSON
DEIAA-VNR-TN

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உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
1 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை

DISTRICT LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY
VIRUDHUNAGAR DISTRICT (TAMIL NADU)

	Latitude Longitude	09°21'26" to 09°21'37.4"N 77°36'44.5" to 77°36'49"E
3	Proposed Activity	
	i. Minor mineral	ROUGH STONE & GRAVEL
	ii. Mining Lease Area	2.12.5 Hectares
	iii. Approved Quantity	50,021 Cu.m of Rough Stone & 17,660 Cu.m of Gravel
	iv. Depth of Mining	22 Meters
	v. Type of Mining	Opencast Semi Mechanized Method
	vi. Category (B1/B2)	B2
	vii. Precise Area Communication	District Collector, Virudhunagar letter No. KV1/53243/2013, dated: 19.05.2014
	viii. Mining Plan Approval	Assistant Director of Geology & Mining, Virudhunagar letter No.KV1/53243/2014, dated: 12.05.2015
	ix. Mining Lease Period	5 Years
4	Whether project area attracts any General conditions specified in the EIA notification, 2006 as amended :-	Not attracted, Affidavit furnished
5	Man power requirement per day :	12 Employees
6	Utilities	
	i. Source of Water	Water vendors / Existing bore hole
	ii. Quantity of Water Requirement in KLD	
	a. Domestic	0.060 KLD
	b. Industrial	
	c. Green Belt & Dust Suppression	0.300KLD
	iii Power Requirement: a. Domestic Purpose b. Industrial Purpose	 TNEB 14,800 ltrs of HSD
7	Cost i. Project Cost ii. EMP Cost	 Rs. 30.49 Lakhs Rs. 6.00 Lakhs
8	Public Consultation	Not required as per O.M. dated 24.12.2013 of MoEF, GoI
9	Date of Appraisal by DEAC :- Agenda No	30.05.2017 1-20
10	Date of Review/ Discussion by DEIAA and the Remarks :- The proposal was placed before the DEIAA in its 1st Meeting held on 30.06.2017 and the Authority after careful examination, decided to grant Environmental Clearance to the said project quarrying of Rough Stone and Gravel subject to terms and conditions stipulated under the provisions of Environment Impact Assessment Notification, 2006 as amended.	
11	Validity :- This Environmental Clearance is granted to Mining of Rough Stone & Gravel for the production quantity of 50,021 Cu.m of Rough Stone & 17,660 of Gravel for the period of 5 years from the date of execution of the Mining Lease Period.	

THE CHAIRPERSON
DEIAA-TN-VNR

S. தண்டபாணி

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DISTRICT LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY
VIRUDHUNAGAR DISTRICT (TAMIL NADU)

Conditions To be complied before/ during commencing operations :-

1. The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that
   i. The project has been accorded Environmental Clearance
   ii. Copies of Clearance letters are available with the Tamil Nadu Pollution Control Board
   iii. Environmental Clearance may also be seen on the website of the DEIAA, Virudhunagar
   iv. The advertisement should be made within 7 days from the date of receipt of the Environmental Clearance and a copy of the same shall be forwarded to the DEIAA.
2. The applicant has to obtain land use classification as industrial use before start of mining of minor mineral quarry lease.
3. NOC from the Standing Committee of the National Board for Wild Life (NBWL) shall be obtained if protected areas are located within 10Km from the proposed project site.
4. The Project Proponent shall comply the conditions laid down in Section V, Rule 26 of Tamil Nadu Minor Minerals Concession Rules 1959.
5. A copy of the Environment Clearance letter shall be sent by the Proponent to the concerned Panchayat, Town Panchayat/ Panchayat Union/ Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal, the clearance letter shall also be put on the Website of the Proponent and shall be displayed at the site, for the General Public to see.
6. The Proponent shall ensure the First Aid Box is available at site.
7. The excavation activity shall not alter the natural drainage pattern of the area.
8. The excavated pit shall be restored by the Project Proponent for useful purposes.
9. The Proponent shall quarry and remove only in the permitted and approved areas.
10. The Proponent shall do the quarrying as per the Approved Mining Plan.
11. It shall be ensured that the quarrying operation shall be carried out between 07.00 AM and 06.00PM.
12. The Proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby Human Habitations, by way Pollution to the Environment.
13. A minimum distance of 15 meters from any civil structure shall be kept from the periphery of the excavation area.
14. Depth of quarrying shall be 2.0mts above the Ground Water Table/ approved depth of mining whichever is lesser to be considered as a safe guard against Environmental Contamination and over exploitation of resources.
15. The mined out pits should be back filled wherever warranted and the area should be suitably landscaped to prevent environmental degradation. The Mine Closure Plan as furnished in the proposal shall be strictly followed while back filling and tree plantation.
16. Wet drilling method is to be adopted to control dust emissions. Delay Detonators and Shock tube initiation system for blasting shall be used so as to reduce vibration and dust.
17. Drilling and blasting shall be done only either by Licensed Explosive Agent or by the Proponent after obtaining required approvals from Competent Authorities.
18. The explosives shall be stored at site as per the conditions stipulated in the permits issued by Licensing Authority.

THE CHAIRPERSON
DEIAA-TN-VNR

S. கண்ணன்

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19 NOV 2021

19. Blasting shall be carried out after announcing to the Public adequate through public address system to avoid any accident.
20. A study has to be conducted to assess the Optimum Blast Parameter and Blast Design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified locations to be conducted and records kept for inspection.
21. The Proponent shall take appropriate measures to ensure that the O.C. shall comply with revised NAAQ norms notified by MoEF, GOI on 16.11.2009.
22. The following measures are to be implemented to reduce Air Pollution during transportation of mineral
    i. Roads shall be graded to mitigate the dust emission
    ii. Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust.
23. The following measures are to be implemented to reduce Noise Pollution
    i. Proper and regular maintenance of vehicles and other equipment
    ii. Limiting time exposure of workers of excessive noise
    iii. The Workers employed shall be provided with protection equipment and earmuffs etc.
    iv. Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25kmph to prevent undue noise from empty trucks.
24. Measures should be take to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules,2010, dated 11.01.2010 issued by the MoE&F, GoI to control noise to the prescribed levels.
25. Suitable conservation measures to augment Ground Water Resources in the area shall be planned and implemented in consultation with Regional Director, CGWB. Suitable measures should be taken for Rain Water Harvesting.
26. Permission from the Competent Authority should be obtained for drawl of Ground Water, if any required for this project.
27. Topsoil, if, any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.
28. The following measures are to be adopted to control erosion of dumps:
    i. Retention toe walls shall be provided at the foot of the dumps.
    ii. Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.
29. Waste oils, used oil generated from the EM machines, mining operation, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and trans boundary movement) Rules, 2008 and its Amendments thereof to the recyclers authorized by TNPCB.
30. Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this Clearance and attract action under the provisions of Environment (Protection) Act, 1986.
31. Rain Water Harvesting to collect and utilize the entire water falling in land area should be provided.
32. Rainwater getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water

THE CHAIRPERSON
DEIAA-TN-VNR

S. சண்முகவேல்

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உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
சுற்றுச்சூழல் & காடுகள் துறை

being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season.

53. The Lease Holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surroundings area shall not be affected. Regular monitoring of Ground Water Level and quality shall be carried out around the mine/ quarry lease area during the quarrying operation. If at any stage, if it is observed that the Ground Water Table is getting depleted due to the mining activity, necessary corrective measures shall be carried out. District Collector/ Mining Officer shall ensure this.
54. No tree-felling shall be done in the leased area, except only with the permission from Competent Authority.
55. To take up Environmental Monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, Water, Air & Flora/Fauna environment, slurry water generated/ disposed and method of disposal, involving a reputed Academic Institution.
56. It shall be ensured that the total extent of nearby quarries(existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 25.00.0 hectares within the mining lease period of this application.
57. It shall be ensured that there is no Habitation is located within 300 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitations located within 500m radius from the periphery of the quarry site.
58. Ground Water Quality Monitoring should be conducted once in 3 months.
59. Transportation of the quarried materials shall not cause any hindrance to the Village People/Existing Village Road.
60. Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GoI at chennai.
61. Air Sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GoI at chennai.
62. Bunds to be provided at the boundary of the Project Site.
63. The Project Proponent shall undertake plantation/afforestation work by planting the native species on all side of the lease area at the rate of 400 Ha. Suitable tall-tree saplings should be planted on the bunds and other suitable areas in and around the work place.
64. At least 10 Neem trees should be planted around the boundary of the quarry site.
65. Floor of excavated pit to be leveled and sides to be sloped with gentle slope (Except for Granite quarries) in the Mine Closure Phase.
66. The Project Proponent shall ensure a minimum of 2.5% of the annual turnover will be utilized for the Community Social Responsibility (CSR) Activity.
67. The CSR funds should be channalised for planting programme nature conservation support, Tribal Development and activities that support Forest and Environment.
68. The Project Proponent shall provided solar lighting system to the nearby villages.
69. The Project Proponent shall comply with the mining/ quarrying and other relevant Rules and Regulations where ever applicable.
70. Rainwater shall be pumped out Via Settling Tank only.
71. Earthen Bunds and Barbed Wire Fencing around the pits with green belt all along the boundary shall be developed and maintained.

THE CHAIRPERSON
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52. As per MoEF, GOI, Office Memorandum dated 30.03.2015, prior Clearance from Forestry & Wild Life angle including Clearance from Standing Committee of the National Board for Wild life as applicable shall be obtained before starting the quarrying operation, if the project site is located within 10KM from National Park and Sanctuaries.
53. The quarrying activity shall be stopped if the entire quantity indicated in the Mining Plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.
54. Safety equipments to be provided to all the employees.
55. Safety distance of 50m has to be provided in case of Railway, Reservoir, Canal/Odai
56. The Assistant/Deputy Director, Department of Geology & Mining shall ensure that the Proponent has engaged the blaster with valid Blasting License/Certificate obtained from the Competent Authority before execution of mining lease.
57. The Proponent shall furnish the Baseline Data covering the Air, Water, Noise and Land Environment quality of the proposed quarry site before execution of quarry lease.
58. The Proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked boundary of the quarry site to monitor electronically before execution of quarry lease.
59. The Proponent has to provide Insurance Protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of quarry lease.
60. The Proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent, etc., with respect to the existing activity before execution of mining.
61. Heavy earth machinery equipments if utilized, after getting approval from the Competent Authority.
62. The Proponent shall ensure that the project activity including blasting, mining transportation etc., should in no way have adverse impact to other forest, such as Reserved Forest and Social Forest, tree plantation and Bio diversity, surrounding water bodies etc.
63. The Project Proponent is also directed to strictly adhere to the sustainable Sand Mining Management Guidelines, 2016, wherever applicable.
64. The quarrying activity in no way should disturb the wild Life Habitat, free migratory movement of the Wild Life nor disturb the Wild Life in any way.

GENERAL CONDITIONS :-

1. Environmental Clearance is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the Proponent.
2. The Proponent shall obtain the Consent for Establishment from the TNPC Board before commencing the activity.
3. No change in mining technology and scope of working should be made without prior approval of the DEIAA, Virudhunagar.
4. No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.
5. Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to Air Pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should

THE CHAIRPERSON
DEIAA-TN-VNR

be ensured that the Ambient Air Quality parameters confirm to the norms prescribed by the Central Pollution Control Board in this regard.

6. Effective safeguards shall be adopted against health risks on account of breeding of Vectors in the water bodies created due to excavation of earth.

7. A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.

8. Mineral loading area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.

9. Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.

10. Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.

11. All Personnel shall be provided with protective respiratory devices including safety shoes, masks, gloves etc. Supervisory People should be provided with adequate training and information on safety and health aspects. Occupational Health Surveillance Program of the workers should be undertaken periodically to observe any corrections due to exposure to dust and take corrective measures if needed.

12. Periodical medical examinations of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examinations of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.,

13. Workers/Labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.

14. The Project Proponent shall ensure that Child Labour is not employed in the project as per the terms affidavit furnished.

15. The funds earmarked for Environmental Protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Chennai.

16. Land use classification as per Department of Town and Country Planning (DTCP)/Agriculture shall meet the requirement of mining/ industrial use.

17. The Environmental Clearance does not absolve the Applicant/ Proponent of his obligation/ requirement to obtain other statutory and Administrative Clearances from other Statutory and Administrative Authorities.

18. This Environmental Clearance does not imply that the other Statutory/ Administrative Clearances shall be granted to the project by the concerned authorities. Such authorities should be considering the project on merits and be taking decisions independently of the Environmental Clearance.

19. The DEIAA, Virudhunagar may alter/ modify the above conditions or stipulate any further conditions in the interest of Environment Protection.

20. The DEIAA, Virudhunagar may cancel the Environmental Clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this Environmental Clearance, if it is found or it comes to the knowledge of this DEIAA, Virudhunagar that the

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THE CHAIRPERSON
DEIAA-TN-VNR

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உதவி இயக்குநர் அலுவலகம்
விருதுநகர் மாவட்டம்
19 NOV 2024
விருதுநகர்
புவியியல் & சுரங்கத்துறை

DISTRICT LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY
VIRUDHUNAGAR DISTRICT (TAMIL NADU)

Project Proponent has deliberately concealed and / or submitted false or misleading information or inadequate data for obtaining the Environmental Clearance.

21. Failure to comply with any of the conditions mentioned above may result in withdrawal of this Clearance and suitable action under the provisions of the Environment (Protection) Act, 1986.

22. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment Protection Act, 1986, the Public Liability Insurance Act, 1991, their rules with their amendments, draft Minor Mineral Conservation & Development Rules, 2010 framed under Mines and Minerals (Development and Regulation) Act, 1957, National Commission for Protection of Child Right Rules, 2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India, Hon'ble High Court of Madras/Madurai and any other Courts of competent jurisdiction relating to the subject matter.

23. The Environmental Clearance shall not be read as a document to obtain any other clearance unless it is specifically prescribed by the Issuing Authority.

24. Any other conditions imposed by other Statutory / Government Authorities shall be complied.

25. Any appeal against this Environmental Clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.

THE COMMISSION
DEIAA-DL-10/19

Copy to:

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. The Principal Secretary, Department Environment and Forests, Government of Tamil Nadu, Chennai-9.
3. The Principal Secretary, Industries Department, Government of Tamil Nadu, Chennai-9.
4. The Additional Principal Chief Conservator of Forests, Regional Office (SZ) 34, MPPC Building, 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai-34.
5. The Chairman, Tamil Nadu Pollution Control Board, 76, Anna salai, Guindy, Chennai-32.
6. EI Division, Ministry of Environment & Forests, Paryavaran Bhawan, New Delhi.
7. The Commissioner of Geology and Mining, Guindy, Chennai-32.
8. Stock File of EC.
9. Spare.

S. அன்புசெல்வன்

ANNEXURE- XII

19 NOV 2024

TAMIL NADU POLLUTION CONTROL BOARD

CONSENT ORDER NO. 1805210546798 DATED: 25/01/2018.

PROCEEDINGS NO.F.1335VDR/RS/DEE/TNPCB/VDR/A/2018 DATED: 25/01/2018

SUB: Tamil Nadu Pollution Control Board –CONSENT TO OPERATE –DIRECT -M/s. SHANMUGAVEL ROUGH STONE AND GRAVEL QUARRY , S.F.No. 586/11,12,13,14,15,17,18, GOPALAPURAM villageVempakottai Taluk and Virudhunagar District - Consent for operation of the plant and discharge of emissions under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) . –Issued- Reg.

REF: 1. Unit's OCMMS Application No. 10546798 Dated 16/10/2017
2. IR.No : F.1335VDR/RS/AE/VDR/2018 dated 24/01/2018
3. Minutes of the DLCCC Meeting held on 24/01/2018 (Item N0. 118-17)
4. Environmental clearance issued from VNR-DEIAA vide vide its Lr.No. DEIAA/VNR/025/EC.No.020/2017 Dated 11/08/2017

CONSENT TO OPERATE is hereby granted under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Proprietor,
M/s . SHANMUGAVEL ROUGH STONE AND GRAVEL QUARRY
S.F No.586/11,12,13,14,15,17,18,
GOPALAPURAM Village,
Vempakottai Taluk,
Virudhunagar District.

Authorizing the occupier to operate the industrial plant in the Air Pollution Control Area as notified by the Government and to make discharge of emission from the stacks/chimneys.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This CONSENT is valid for the period ending March 31, 2018

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
VIRUDHUNAGAR

To
The Proprietor,
M/s.SHANMUGAVEL ROUGH STONE AND GRAVEL QUARRY,
Gopalapuram Village,Rajapalayam Taluk, Virudhunagar District,
Pin: 626117

Copy to:
1.The Commissioner, RAJAPALAYAM-Panchayat Union, Vempakottai Taluk, Virudhunagar District .
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, TIRUNELVELI for favour of kind information.
4. File

This is computer generated order. Signature is not required.

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SPECIAL CONDITIONS

1. This consent to operate is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
	Product Details		
1.	Rough Stone upto a depth of 22.0mts, Land extended upto 2.12.5 Hectares (Latitude 09 21'26" to 09 21'37.4"N Longitude 77 36'44.5" to 77 36'49" E	50021	Cu.m of Rough Stone Over a period of 5 years
2.	Gravel upto a depth of 22.0mts, Land extended upto 2.12.5 Hectares (Latitude 09 21'26" to 09 21'37.4"N Longitude 77 36'44.5" to 77 36'49" E	17660	Cu.m of Rough Stone Over a period of 5 years

2. This consent to operate is valid for operating the facility with the below mentioned emission/noise sources along with the control measures and/or stack. Any change in the emission source/control measures/change in stack height has to be brought to the notice of the Board and fresh consent/Amendment has to be obtained.

I	Point source emission with stack :			
Stack No.	Point Emission Source	Air pollution Control measures	Stack height from Ground Level in m	Gaseous Discharge in Nm3/hr
II	**Fugitive/Noise emission :**			
Sl. No.	**Fugitive or Noise Emission sources**	**Type of emission**	**Control measures**	
1.	MINING OPERATION	Fugitive	Water sprinkler system	

3(a). The emission shall not contain constituents in excess of the tolerance limits as laid down hereunder :

Sl.	Parameter	Unit	Tolerance limits	Stacks

Annexure enclosed if applicable. :-

3.(b) The Ambient Air in the industrial plant area shall not contain constituents in excess of the tolerance limits prescribed below.

Sl. No.	Pollutant	Time Weighted Average	Unit	Tolerance Limits	
				Industrial, Residential, Rural and other area	Ecologically Sensitive Area (notified by Central Govt.)
1.	Sulphur Dioxide (SO2)	Annual 24 hours	microgram/m3 microgram/m3	50 80	20 80
2.	Nitrogen Dioxide (NO2)	Annual 24 hours	microgram/m3 microgram/m3	40 80	30 80
3.	Particulate Matter (Size Less than 10 micro M) or PM10	Annual 24 hours	microgram/m3 microgram/m3	60 100	60 100
4.	Particulate Matter (Size Less than 2.5 micro M) or PM2.5	Annual 24 hours	microgram/m3 microgram/m3	40 60	40 60
5.	Ozone (O3)	Annual 24 hours	8 Hours 1 Hour	100 180	100 180

Sl. No.	Pollutant	Time Weighted Average	Unit	Tolerance Limits	
				Industrial, Residential, Rural and other area	Ecologically Sensitive Area (notified by Central Govt.)
6.	Lead (Pb)	Annual 24 hours	microgram/m3 microgram/m3	0.5 1.0	0.5 1.0
7.	Carbon Monoxide (CO)	8 Hours 1 Hour	miligram/m3 miligram/m3	02 04	02 04
8.	Ammonia (NH3)	Annual 24 hours	microgram/m3 microgram/m3	100 400	100 400
9.	Benzene (C6H6)	Annual	microgram/m3	5	5
10.	Benzo(O) Pyrene (BaP) –particulate phase only	Annual	nanogram/m3	01	01
11.	Arsenic (As)	Annual	nanogram/m3	06	06
12.	Nickel (Ni)	Annual	nanogram/m3	20	20

3(c) The Ambient Noise Level in the industrial plant area shall not exceed the limits prescribed below:

Limits in L.eq.-dB(A)	Day Time	Night Time
ResidentialArea	55	45

4. All units of the Air pollution control measures shall be operated efficiently and continuously so as to achieve the standards prescribed in Sl. No.3 above.
5. The occupier shall not change or alter quality or quantity or the rate of emission or replace or alter the air pollution control equipment or change the raw material or manufacturing process resulting in change in quality and/or quantity of emissions without the previous written permission of the Board.
6. The occupier shall maintain log book regarding the stack monitoring system or operation of the plant or any other particulars for each of the unit operations of air pollution control systems to reflect the working condition which shall be furnished for verification of the Board officials during inspection.
7. The occupier shall at his own cost get the samples of emission/air/noise levels collected and analyzed by the TNPC Board Laboratory once in every 6 months/once in a year/periodically for the parameters as prescribed.
8. Any upset condition in any of the plants of the factory which is likely to result in increased emissions and result in violation of the standards mentioned in Sl.No.3 shall be reported to the Member Secretary / Joint Chief Environmental Engineer-Monitoring and the concerned District/Assistant Environmental Engineer of the Board by e-mail immediately and subsequently by Post with full details of such upset condition.
9. The occupier shall always comply and carryout the order/directions issued by the Board in this Consent Order and from time to time without any negligence. The occupier shall be liable for action as per provisions of the Act in case of non compliance of any order/directions issued.

Additional Conditions:

1. The unit shall maintain the effective safeguard measures including water sprinkling arrangements shall be provided in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points.
2. No drilling and blasting operations shall be carried out under any circumstances. Quarrying shall be open cast semi-mechanized mining as proposed. No change in mining technology and scope of working shall be made without prior approval of Competent Authority.
3. The emissions from the quarrying activity shall comply with AAQ/ANL standards prescribed by the Board.
4. The Proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations/water sources, by way of pollution to the environment.
5. The proponent shall comply with the conditions stipulated in the Environmental Clearance issued by VNR-DEIAA vide Lr. No. DEIAA/VNR/025/EC.No.020/2017 Dated 11.08.2017.
6. The consents do not absolve from obtaining permission/clearance from other authorities or other statutes as applicable.
7. The Consents issued are subject to the final outcome of NGT (SZ) 165/2013.
8. In case of revision of consent fee by the government, the unit shall remit the difference in amount within one month from the date of notification. Failing to remit the consent fee, this consent order will be withdrawn without any notice and further action will be initiated against the unit as per the law.

GENERAL CONDITIONS

1. The occupier shall make an application along with the prescribed consent fee for grant of renewal of consent at least 60 days before the date of expiry of this Consent Order along with all the required particulars ensuring that there is no change in production quantity and emission.
2. This Consent is given by the Board in consideration of the particulars given in the application. Any change or alteration or deviation made in actual practice from the particulars furnished, in the application will also be ground for review/variation/revocation of the Consent Order under Section 21 of the Act.
3. The conditions imposed shall continue in force until revoked under Section 21 of the Act.
4. After the issue of this order, all the 'Consent to Operate' orders issued previously under Air (Prevention and Control of Pollution) Act, 1981 as amended stands defunct.
5. The occupier shall maintain an Inspection Register in the factory so that the inspecting officer shall record the details of the observations and instructions issued to the unit at the time of inspection for adherence.
6. The occupier shall provide and maintain an alternate power supply along with separate energy meter for the Air Pollution Control measures sufficient to ensure continuous operation of all pollution control equipments to ensure compliance.
7. The occupier shall provide all facilities to the Board officials for collection of samples in and around the factory at any time.
8. The applicant shall display the flow diagram of the sources of emission and pollution control systems provided at the site.
9. The liquid effluent arising out of the operation of the air pollution control equipment shall also be treated in a manner and to the satisfaction of standards prescribed by the Board in accordance with the provisions of Water (Prevention and Control of Pollution) Act, 1974 as amended.
10. The air pollution control equipments, location of inspection chambers and sampling port holes shall be made easily accessible at all time.
11. In case of any episodal discharge of emission, the industry shall take immediate action to bring down the emission within the limits prescribed by the Board.
12. If applicable, the occupier has to comply with the provisions of Public Liability Insurance Act, 1991 to provide immediate relief in the event of any hazard to human beings, other living creatures/plants and properties while handling and storage of hazardous substances.
13. The issuance of this consent does not authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any natural watercourse or in Government Poromboke lands.
14. The issuance of this Consent does not convey any property right in either real personal property or any exclusive privileges, nor does it authorize any injury to private property or Government property or any invasion of personal rights nor any infringement of Central, State laws or regulation.
15. The occupier shall forth with keep the Board informed of any accident of unforeseen act or event of any poisonous, noxious or polluting matter or emissions are being discharged into stream or well or air as a result of such discharge, water or air is being polluted.
16. If due to any technological improvements or otherwise the Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any treatment system, either in whole or in part) the Board shall, after giving the applicant an opportunity of being heard, vary all or any of such conditions and thereupon the applicant shall be bound to comply with the conditions as so varied.
17. In case there is any change in the constitution of the management, the occupier of the new management shall file fresh application under Air (Prevention and Control of Pollution) Act, 1981, as amended in Form-I alongwith relevant documents of change of management immediately and get the necessary amendment with renewal of consent order.
18. In case there is any change in the name of the company alone, the occupier shall inform the same with relevant documents immediately and get the necessary amendments for the change of name from the Board.
19. The occupier shall display this consent order granted to him in a prominent place for perusal of the inspecting Officers of this Board.

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
VIRUDHUNAGAR

** This consent order is computer generated by OCMMS of TNPCB and no signature is needed**

TAMIL NADU POLLUTION CONTROL BOARD

CONSENT ORDER NO. 1805110546798 DATED: 25/01/2018.

PROCEEDINGS NO.F.1335VDR/RS/DEE/TNPCB/VDR/W/2018 DATED: 25/01/2018

SUB: Tamil Nadu Pollution Control Board –CONSENT TO OPERATE – DIRECT -M/s. SHANMUGAVEL ROUGH STONE AND GRAVEL QUARRY , S.F.No. 586/11,12,13,14,15,17,18, GOPALAPURAM villageVempakottai Taluk and Virudhunagar District - Consent for the operation of the plant and discharge of sewage and/or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act 6 of 1974) – Issued- Reg.

Ref: 1. Unit's OCMMS Application No. 10546798 Dated 16/10/2017
2. IR.No : F.1335VDR/RS/AE/VDR/2018 dated 24/01/2018
3. Minutes of the DLCCC Meeting held on 24/01/2018 (Item N0. 118-17)
4. Environmental clearance issued from VNR-DEIAA vide vide its Lr.No. DEIAA/VNR/025/EC.No.020/2017 Dated 11/08/2017

CONSENT TO OPERATE is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act, 6 of 1974) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Proprietor,
M/s . SHANMUGAVEL ROUGH STONE AND GRAVEL QUARRY
S.F No.586/11,12,13,14,15,17,18,
GOPALAPURAM Village,
Vempakottai Taluk,
Virudhunagar District.

Authorising the occupier to make discharge of sewage and /or trade effluent.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This CONSENT is valid for the period ending March 31, 2018

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
VIRUDHUNAGAR

To
The Proprietor,
M/s.SHANMUGAVEL ROUGH STONE AND GRAVEL QUARRY,
Gopalapuram Village,Rajapalayam Taluk, Virudhunagar District,
Pin: 626117

Copy to:
1.The Commissioner, RAJAPALAYAM-Panchayat Union, Vempakottai Taluk, Virudhunagar District .
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. Copy submitted to the JCEE-Monitoring, Tamil Nadu Pollution Control Board, TIRUNELVELI for favour of kind information.
4. File

SPECIAL CONDITIONS

1. This consent to operate is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
	Product Details		
1.	Rough Stone upto a depth of 22.0mts, Land extended upto 2.12.5 Hectares (Latitude 09 21'26" to 09 21'37.4"N Longitude 77 36'44.5" to 77 36'49" E	50021	Cu.m of Rough Stone Over a period of 5 years
2.	Gravel upto a depth of 22.0mts, Land extended upto 2.12.5 Hectares (Latitude 09 21'26" to 09 21'37.4"N Longitude 77 36'44.5" to 77 36'49" E	17660	Cu.m of Rough Stone Over a period of 5 years

2. This consent to operate is valid for operating the facility with the below mentioned permitted outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
Effluent Type : Sewage			
1.	SEWAGE	0.05	On Industrys own land
Effluent Type : Trade Effluent			
1.	TRADE EFFLUENT	0.0	MINING OPERATION

3. The effluent discharge shall not contain constituents in excess of the tolerance Limits as laid down hereunder.

Sl. No.	Parameters	Unit	TOLERANCE LIMITS - OUTLETS -Nos			
			Sewage	Trade Effluent		
			1	--	--	--
1.	pH	-	5.5 to 9			
2.	Temperature	oC	-			
3.	Particle size of Suspended solids	-	-			
4.	Total Suspended Solids	mg/l	30			
5.	Total Dissolved solids (inorganic)	mg/l	-			
6.	Oil & Grease	mg/l	-			
7.	Biochemical Oxygen Demand (3 days at 27oC)	mg/l	20			
8.	Chemical Oxygen Demand	mg/l	-			
9.	Chloride (as Cl)	mg/l	-			
10.	Sulphates (as SO4)	mg/l	-			
11.	Total Residual Chlorine	mg/l	-			
12.	Ammonical Nitrogen (as N)	mg/l	-			
13.	Total Kjeldahl Nitrogen (as N)	mg/l	-			
14.	Free Ammonia (as NH3)	mg/l	-			
15.	Arsenic (as As)	mg/l	-			
16.	Mercury (as Hg)	mg/l	-			
17.	Lead (as Pb)	mg/l	-			
18.	Cadmium(as Cd)	mg/l	-			
19.	Hexavalent Chromium (as Cr+6)	mg/l	-			
20.	Total Chromium (as Cr)	mg/l	-			
21.	Copper (as Cu)	mg/l	-			
22.	Zinc (as Zn)	mg/l	-			
23.	Selenium (as Se)	mg/l	-			
24.	Nickel (as Ni)	mg/l	-			
25.	Boron (as B)	mg/l	-			
26.	Percent Sodium	%	-			
27.	Residual Sodium Carbonate	mg/l	-			
28.	Cyanide (as CN)	mg/l	-			
29.	Fluoride (as F)	mg/l	-			
30.	Dissolved Phosphates(as P)	mg/l	-			
31.	Sulphide (as S)	mg/l	-			
32.	Pesticides	mg/l	-			
33.	Phenolic Compounds (as C6H5OH)	mg/l	-			
34.	Radioactive materials a) Alpha emitters	micro curie/ml	-			
35.	Radioactive materials b). Beta emitters	micro curie/ml	-			

4. All units of the sewage and Trade effluent treatment plants shall be operated efficiently and continuously so as to achieve the standards prescribed in Sl No.3 above or to achieve the zero liquid discharge of effluent as applicable.

5. The occupier shall maintain the Electro Magnetic Flow Meters/water Meters installed at the inlet of the water supply connection for each of the purposes mentioned below for assessing the quantity of water used and ensuring that such meters are easily accessible for inspection and maintenance and for other purposes of the Act.
   a. Industrial Cooling, Spraying in mine pits or boiler feed.
   b. Domestic purpose.
   c. Process.

6. The occupier shall maintain the Electro Magnetic Flow Meters with computer recording arrangement for measuring the quantity of effluent generated and treated for the monitoring purposes of the Act.
7. Log book for each of the unit operations of ETP have to be maintained to reflect the working condition of ETP along with the readings of the Electro Magnetic Flow Meters installed to assess effluent quantity and the same shall be furnished for verification of the Board officials during inspection.
8. The occupier shall at his own cost get the samples of effluent/surface water/ground water collected in and around the unit by Board officials and analyzed by the TNPC Board Laboratory periodically.
9. Any upset condition in any of the plants of the factory which is, likely to result in increased effluent discharge and result in violation of the standards mentioned in Sl. No.3 above shall be reported to the Member Secretary / Joint Chief Environmental Engineer-Monitoring and the concerned District/Assistant Environmental Engineer of the Board by e-mail immediately and subsequently by Post with full details of such upset condition.
10. The occupier shall always comply and carryout the order/directions issued by the Board in this Consent Order and from time to time without any negligence. The occupier shall be liable for action as per provisions of the Act in case of non compliance of any order/directions issued.
11. The occupier shall develop adequate width of green belt at the rate of 400 numbers of trees per Hectare.
12. The occupier shall provide and maintain rain water harvesting facilities.
13. The occupier shall ensure that there shall not be any discharge of effluent either treated or untreated into storm water drain at any point of time.
14. In the case of zero liquid discharge of effluent units, the occupier shall adhere the following conditions as laid under.

i). The occupier shall ensure zero liquid discharge of effluent, thereby no discharge of untreated / treated effluent on land or into any water bodies either inside or outside the premises at any point of time.

ii) The occupier shall operate and maintain the Zero liquid discharge treatment components comprising of Primary, Secondary and tertiary treatment systems at all times and ensure that the RO permeate/Evaporator condensate shall be recycled in the process and the final RO reject shall be disposed off with the reject management system ensuring zero liquid discharge of effluents in the premises.

iii) The occupier shall operate and maintain the reject management system effectively and recover the salt from the system which shall be reused in the process if reusable or shall be disposed off as ETP sludge.

iv) In case of failure to achieve zero discharge of effluents for any reason, the occupier shall stop its production and operations forthwith and shall be reported to the Member Secretary/Joint Chief Environmental Engineer-Monitoring and the concerned District/Assistant Environmental Engineer of the Board by e-mail immediately and subsequently by Post with full details of such upset condition.

v) The occupier shall restart the production only after ascertaining that the Zero discharge treatment system can perform effectively for achieving zero discharge of effluents.

Additional Conditions:

1. The unit shall maintain the effective safeguard measures including water sprinkling arrangements shall be provided in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points.
2. No drilling and blasting operations shall be carried out under any circumstances. Quarrying shall be open cast semi-mechanized mining as proposed. No change in mining technology and scope of working shall be made without prior approval of Competent Authority.
3. The Proponent shall treat the sewage generated in septic tank and disposed to the soak pit only.
4. The Proponent shall ensure that no trade effluent is generated at any stage of quarrying activity.
5. The Proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations/water sources, by way of pollution to the environment.
6. The proponent shall comply with the conditions stipulated in the Environmental Clearance issued by VNR-DEIAA vide Lr. No. DEIAA/VNR/025/EC.No.020/2017 Dated 11.08.2017.
7. The consents do not absolve from obtaining permission/clearance from other authorities or other statutes as applicable.
8. The Consents issued are subject to the final outcome of NGT (SZ) 165/2013.
9. In case of revision of consent fee by the government, the unit shall remit the difference in amount within one month from the date of notification. Failing to remit the consent fee, this consent order will be withdrawn without any notice and further action will be initiated against the unit as per the law.

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
VIRUDHUNAGAR

GENERAL CONDITIONS

1. The occupier shall make an application along with the prescribed consent fee for grant of renewal of consent at least 60 days before the date of expiry of this Consent Order along with all the required particulars ensuring that there is no change in Production quantity and change in sewage/Trade effluent.
2. This Consent is issued by the Board in consideration of the particulars given in the application. Any change or alteration or deviation made in actual practice from the particulars furnished in the application will also be ground for review/variation/revocation of the Consent Order under Section 27 of the Act and to make such variation as deemed fit for the purpose of the Act.
3. The consent conditions imposed in this order shall continue in force until revoked under Section 27(2) of the Act.
4. After the issue of this order, all the 'Consent to Operate' orders issued previously under Water (Prevention and Control of Pollution) Act, 1974 as amended stands defunct.
5. The occupier shall maintain an Inspection Register in the factory so that the inspecting officer shall record the details of the observations and instructions issued to the unit at the time of inspection for adherence.
6. The occupier shall provide and maintain an alternate power supply along with separate energy meter for the Effluent Treatment Plant sufficient to ensure continuous operation of all pollution control equipments to maintain compliance.
7. The occupier shall provide all facilities to the Board officials for inspection and collection of samples in and around the factory at any time.
8. The occupier shall display the flow diagram of the sources of effluent generation and pollution control systems provided at the ETP site.
9. The solid waste such as sweepings, wastage, package, empty containers, residues, sludge including that from air pollution control equipments collected within the premises of the industrial plant shall be collected in an earmarked area and shall be disposed off properly.
10. The occupier shall collect, treat the solid wastes like food waste, green waste generated from the canteen and convert into organic compost.
11. The occupier shall segregate the Hazardous waste from other solid wastes and comply in accordance with Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.
12. The occupier shall maintain good house-keeping within the factory premises.
13. All pipes, valves, sewers and drains shall be leak proof. Floor washings shall be admitted into the trade effluent collection system only and shall not be allowed to find their way in storm drains or open areas.
14. The occupier shall ensure that there shall not be any diversion or by-pass of trade effluent on land or into any water sources.
15. The occupier shall ensure that solar Evaporation pans shall be constructed in such a way that the bottom of the solar pan is at least 1 m above the Ground level (if applicable).
16. The occupier shall furnish the following returns in the prescribed formats to the concerned District office regularly.
    a) Monthly water consumption returns of each of the purposes with water meter readings in Form-I on or before 5th of every month.
    b) Yearly return on Hazardous wastes generated and accumulated for the period from 1st April to 31st March in Form–4 before the end of the subsequent 30th June of every year (if applicable).
    c) Yearly Environmental Statement for the period from 1st April to 31st March in Form –V before the end of the subsequent 30th September of every year(if applicable).
17. If applicable, the occupier has to comply with the provisions of Public Liability Insurance Act, 1991 to provide immediate relief in the event of any hazard to human beings, other living creatures/plants and properties while handling and storage of hazardous substances.
18. The issuance of this consent does not authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any natural watercourse or in Government Poromboke lands.
19. The issuance of this Consent does not convey any property right in either real personal property or any exclusive privileges, nor does it authorize any injury to private property or Government property or any invasion of personal rights nor any infringement of Central, State laws or regulation.
20. The occupier shall forth with keep the Board informed of any accident of unforeseen act or event of any poisonous, noxious or polluting matter or emissions are being discharged into stream or well or air as a result of such discharge, water or air is being polluted.
21. If due to any technological improvements or otherwise the Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any treatment system, either in whole or in part) the Board shall, after giving the applicant an opportunity of being heard, vary all or any of such conditions and thereupon the applicant shall be bound to comply with the conditions as so varied.

22. In case there is any change in the constitution of the management, the occupier of the new management shall file fresh application under Water (Prevention and Control of Pollution) Act, 1974, as amended in Form-II alongwith relevant documents of change of management immediately and get the necessary amendment with renewal of consent order.

23. In case there is any change in the name of the company alone, the occupier shall inform the same with relevant documents immediately and get the necessary amendments for the change of name from the Board.

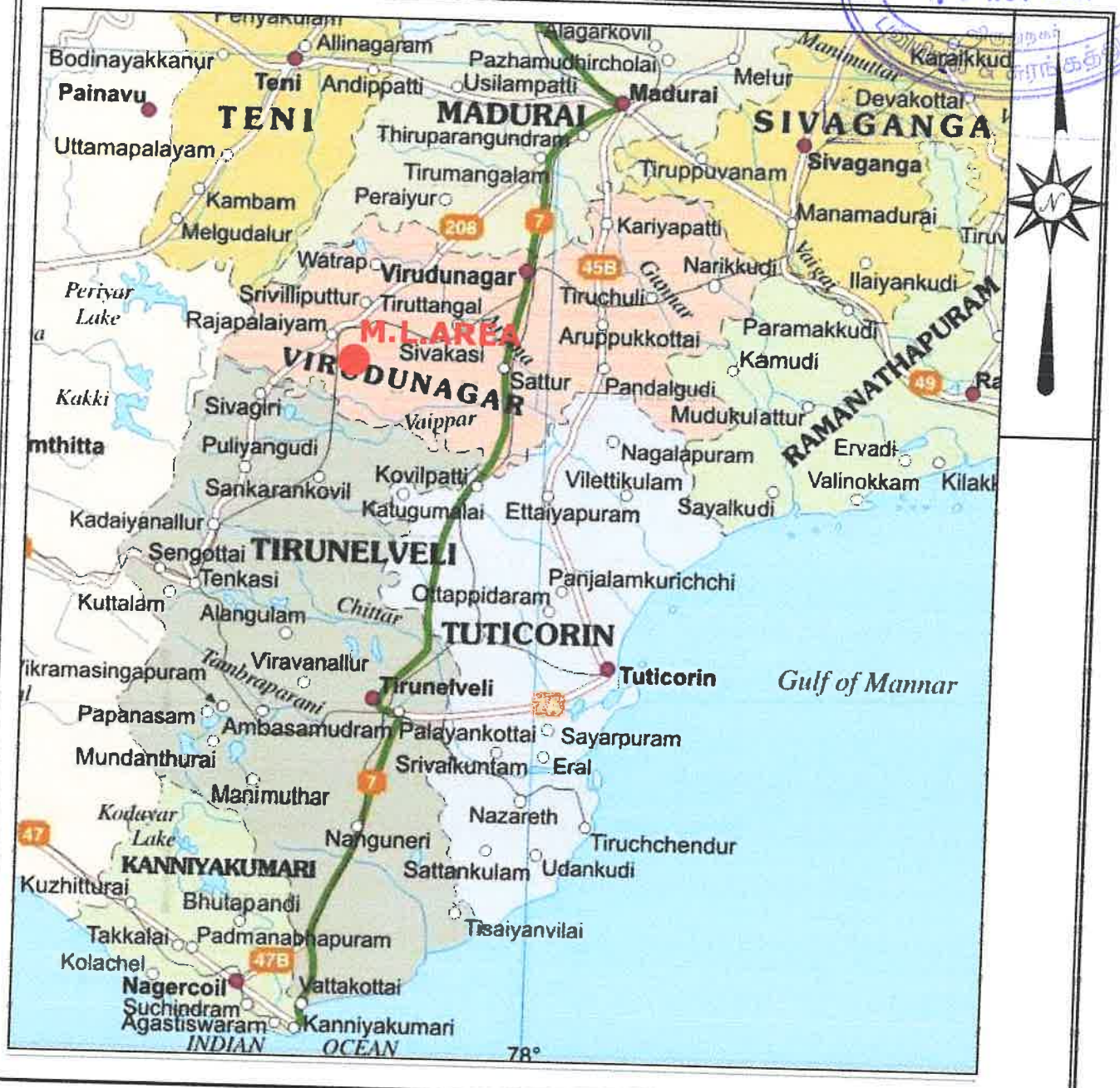
24. The occupier shall display this consent order granted to him in a prominent place for perusal of the inspecting Officers of this Board.

19 NOV

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
VIRUDHUNAGAR

** This consent order is computer generated by OCMMS of TNPCB and no signature is needed**

19 NOV 2024



NAME OF THE APPLICANT:

THIRU. S. SHUNMUGAVEL,
S/o. SRI. SUBBIAH THEVAR,
D.No. 300D5/2, SANKARANKOVIL ROAD,
RAJAPALAYAM TOWN & TALUK,
VIRUDHUNAGAR DISTRICT.

PLATE NO. I

ROUGH STONE AND GRAVEL QUARRY

LOCATION PLAN

SCALE:- 1CM = 12.5KMs

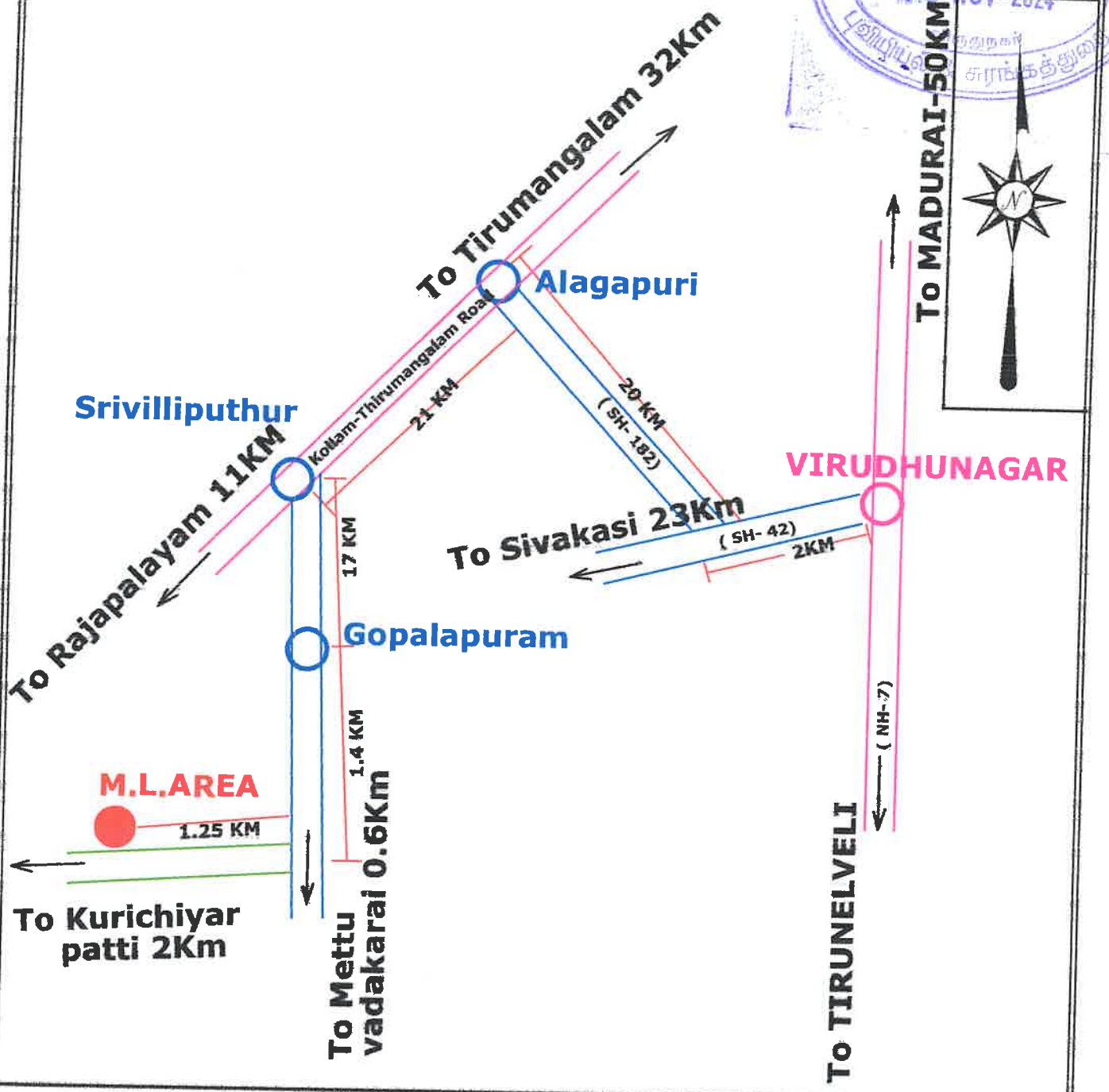
INDEX:-

MINING LEASE RENEWAL AREA

- State capital
- District headquarters
- Other town
- 45 National Highway number
- Golden Quadrilateral
- North-South & East-West Corridors
- National Highway
- Railway

PREPARED BY:-

M. DHARMALINGAM
M.Sc.,(Geol.) FCC.,(Mining)
Recognised Qualified Person
RQP / MAS / 260 / 2014 / A



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VIRUDHUNAGAR DISTRICT.

PLATE NO. IA

ROUGH STONE AND GRAVEL QUARRY

KEY MAP

SCALE:- NOT TO SCALE

INDEX:-

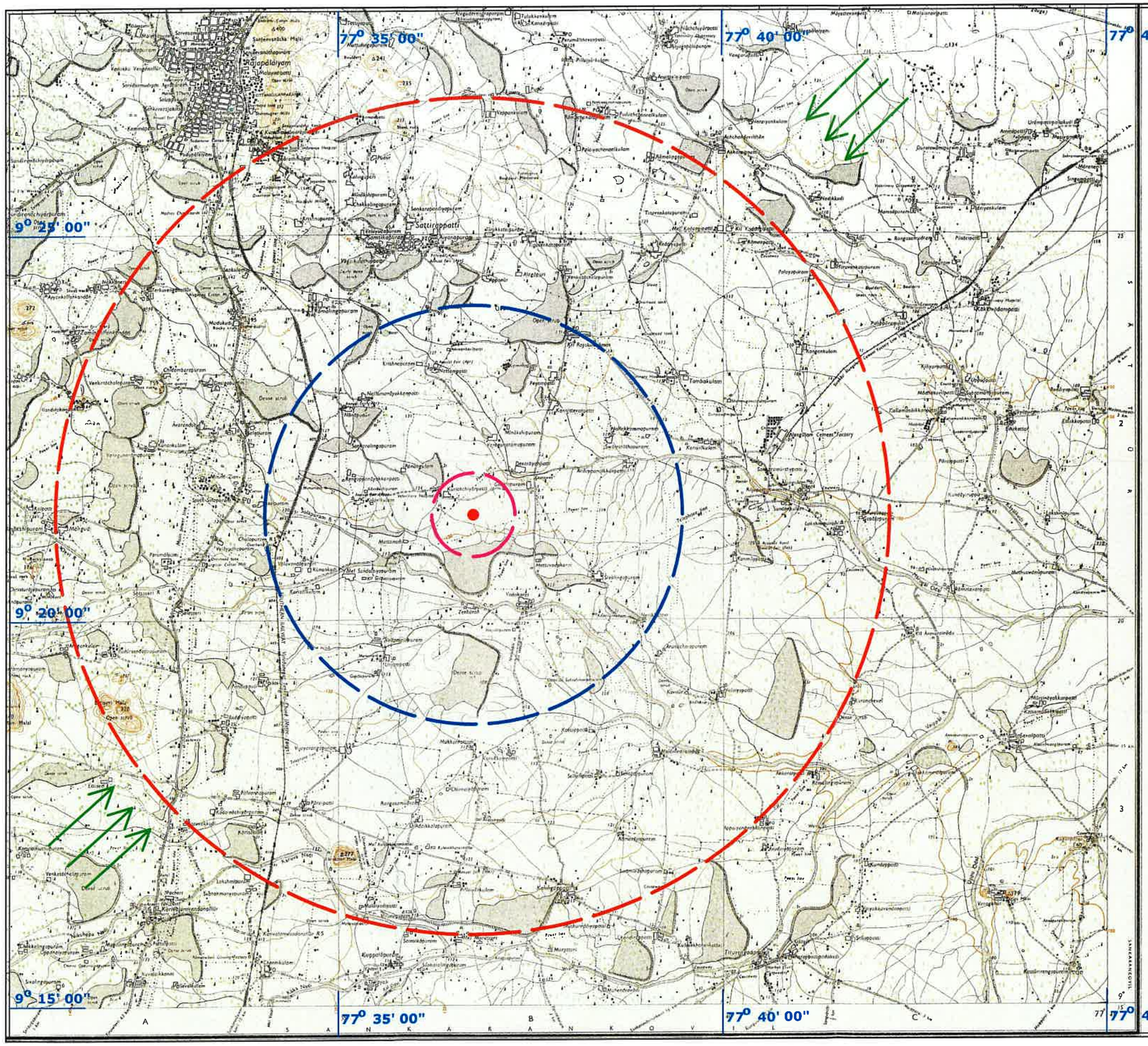
- MINING LEASE RENEWAL AREA
- NATIONAL HIGHWAY
- MAIN ROAD (STATE HIGHWAY & VILLAGE ROAD)
- APPROACH ROAD (Cart track)

PREPARED BY:-

M. DHARMALINGAM
M.Sc.,(Geol.) FCC.,(Mining)
Recognised Qualified Person
RQP / MAS / 260 / 2014 / A

உதவி இயக்குநர் அலுவலகம்
கிருதாவர் மையம்
19 NOV 2024

PLATE NO. II



NAME OF THE APPLICANT:

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S/o. SRI. SUBBIAH THEVAR,
D.No. 300D5/2, SANKARANKOVIL ROAD,
RAJAPALAYAM TOWN & TALUK,
VIRUDHUNAGAR DISTRICT.

TOPO SHEET No.58-G/11

LATITUDE	: 9° 21' 16.29" To 9° 21' 27.13"
LONGITUTE	:77° 36' 46.01" To 77° 36' 44.63"

INDEX:-

- MINING LEASE RENEWAL AREA
- WIND DIRECTION
- 1KM RADIUS
- 5KM RADIUS
- 10KM RADIUS

CONVENTIONAL SYMBOLS

- Express highway with toll, with bridge, with distance stone
- Roads, metalled according to importance
- Roads, double carriageway, according to importance
- Unmetalled road, Cart track, Pack-track with pass, Foot-path
- Streams with track in bed, undefined, Canal
- Dams masonry or rock-filled, earthwork, Weir
- River dry with water channel, with island & rocks, Tidal river
- Submerged rocks, Shoal, Swamp, Reeds
- Wells lined; unlined, Tube-well, Spring, Tanks; perennial, dry
- Embankments road or rail, tank, Broken ground
- Railways, broad gauge double, single with station; under constn
- Railways, other gauges double, single with distance stone; do
- Mineral line or tramway, Kiln, Cutting with tunnel
- Contours with sub-features, Rocky slopes, Cliffs
- Sand features (1)flat (2)sand-hills(permanent) (3)dunes(shifting)
- Towns or Villages inhabited; deserted, Fort

ROUGH STONE AND GRAVEL QUARRY

TOPO SKETCH - 10KM RADIUS

SCALE:- 1: 1,00,000

PREPARED BY:-

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Recognised Qualified Person
ROP / MAS / 260 / 2014 / A

S. சண்முகவேல்

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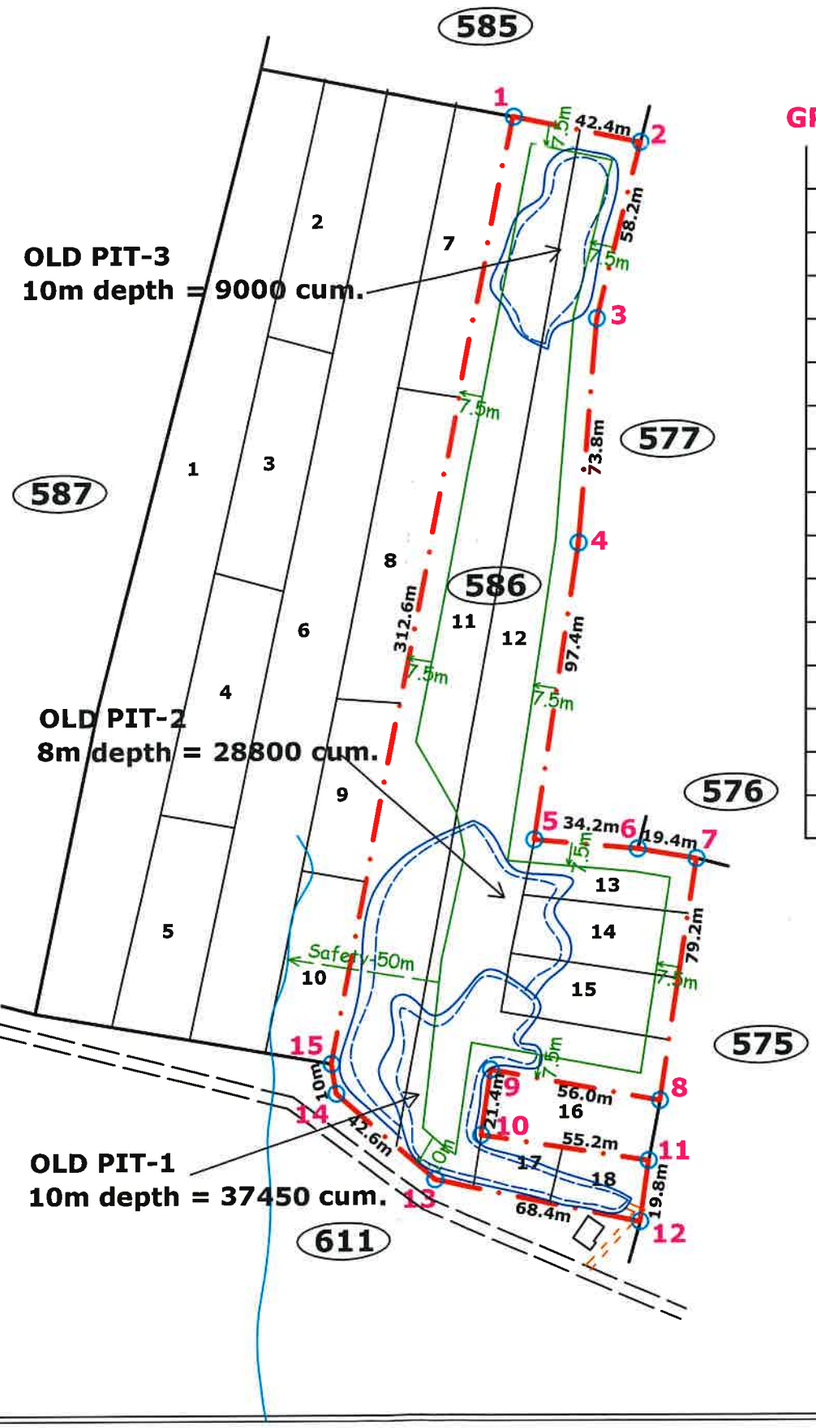
19 NOV 2024

PLATE NO. III



GPS CO-ORDINATES OF BOUNDARY PILLARS

PILLAR	LATITUDE	LONGITUDE
1	9° 21' 27.13"	77° 36' 44.63"
2	9° 21' 27.86"	77° 36' 46.00"
3	9° 21' 25.97"	77° 36' 45.53"
4	9° 21' 23.57"	77° 36' 45.34"
5	9° 21' 20.38"	77° 36' 44.86"
6	9° 21' 20.29"	77° 36' 45.98"
7	9° 21' 20.18"	77° 36' 46.61"
8	9° 21' 17.59"	77° 36' 46.22"
9	9° 21' 18.07"	77° 36' 44.59"
10	9° 21' 17.39"	77° 36' 44.53"
11	9° 21' 16.95"	77° 36' 46.10"
12	9° 21' 16.29"	77° 36' 46.01"
13	9° 21' 16.75"	77° 36' 43.80"
14	9° 21' 17.67"	77° 36' 42.74"
15	9° 21' 18.00"	77° 36' 42.69"

as per precise area letter	Gravel & Roughstone
pit -1 (10m depth)	37,450 cum
pit -2 (8m depth)	28,800 cum
pit -3 (10m depth)	9,000 cum
Total	75,250 cum

OLD PIT SIZE

	LENGTH [M]	WIDTH [M]	DEPTH [M]
PIT -1	113.5	33	10
PIT -2	68	53	8
PIT -3	40	22.5	10

NAME OF THE APPLICANT:

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RAJAPALAYAM TOWN & TALUK,
VIRUDHUNAGAR DISTRICT.

INDEX:-

- LEASE APPLIED BOUNDARY
- SAFETY DISTANCE 7.5M & 50m from seasonal odai, 10m from carttrack
- SEASONAL ODAI
- CATTRACK (Approach road)
- BOUNDARY PILLARS 1 2 3 . .
- EXISTING OLD PITS

PROPOSED QUARRY LOCATION :-

DISTRICT : VIRUDHUNAGAR
TALUK : VEMBAKOTTAI
VILLAGE : GOPALAPURAM
S.F.Nos. : 586/11,12,13,14,15,17,18
EXTENT : 2-12.50 HECTARE.

S.F.Nos	EXTENT (Ha)
586/11	0-78.50
586/12	0-91.50
586/13	0-10.00
586/14	0-11.00
586/15	0-11.00
586/17	0-05.00
586/18	0-05.50
TOTAL	2-12.50 Hectare

ROUGH STONE AND GRAVEL QUARRY

LEASE PLAN

SCALE:- 1: 2000

ALL PLANS AND SECTIONS ARE PREPARED BASED ON THE LEASE MAP AUTHENTICATED BY STATE GOVERNMENT.

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Recognised Qualified Person
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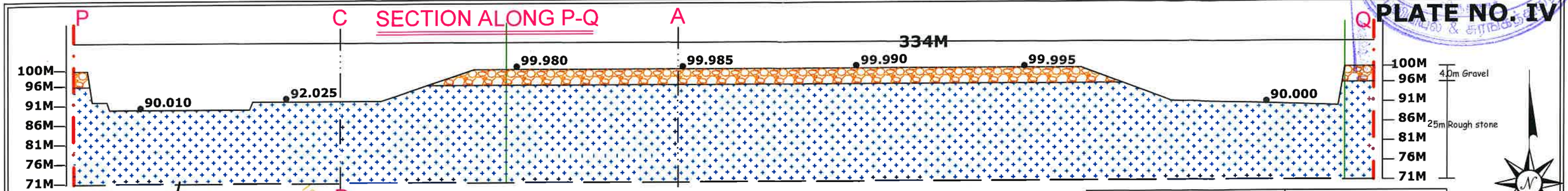
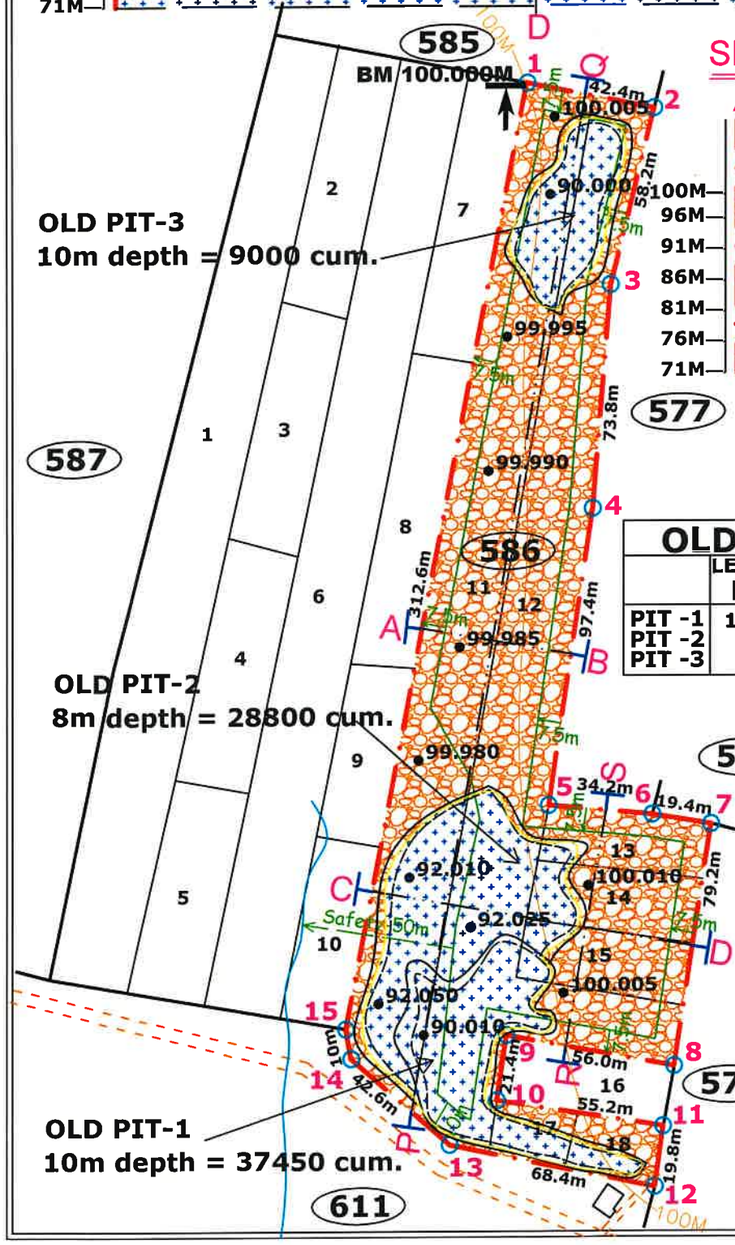
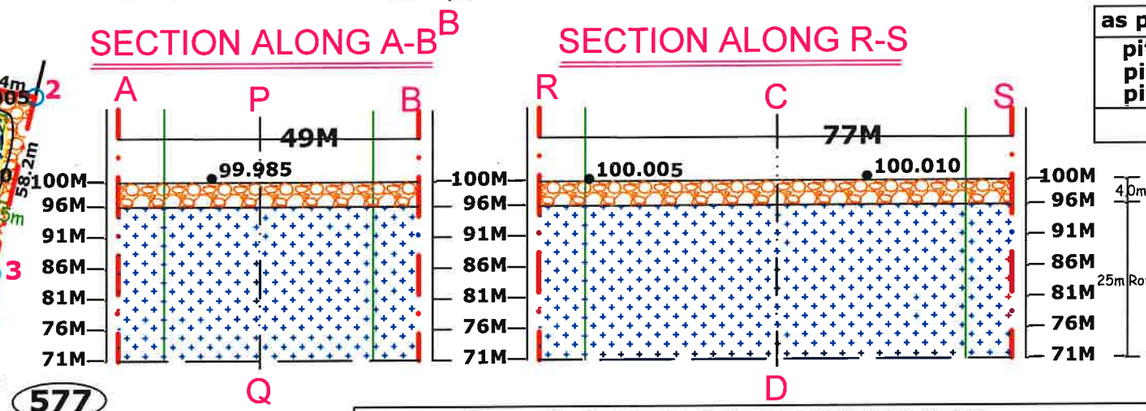
PLATE NO. IV





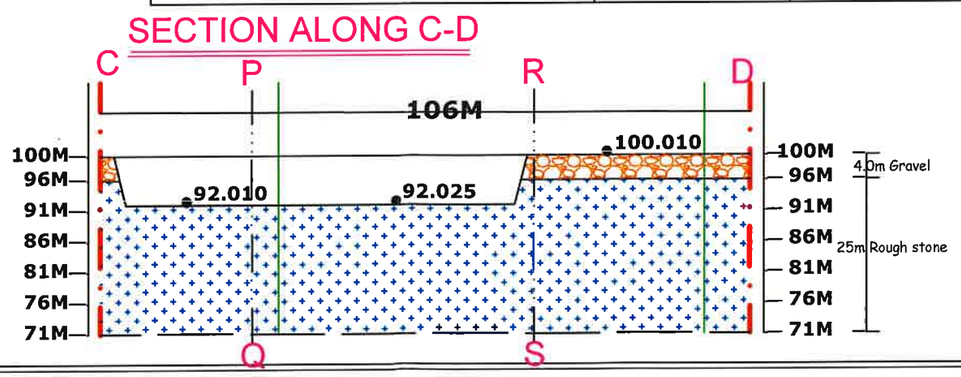
OLD PIT SIZE

	LENGTH [M]	WIDTH [M]	DEPTH [M]
PIT -1	113.5	33	10
PIT -2	68	53	8
PIT -3	40	22.5	10



GEOLOGICAL RESERVES

SECTION	LENGTH [M]	WIDTH [M]	DEPTH [M]	ROUGH STONE [CUM]	GRAVEL [CUM]
PQ-AB	334	49	4.0	---	65464
PQ-CD	77	106	4.0	---	32648
old pit-1 = 113.5 x 33 x 4 =					- 14982
old pit-2 = 68 x 53 x 4 =					- 14416
old pit-3 = 40 x 22.5 x 4 =					- 3600
PQ-AB	334	49	25.0	409150	
PQ-CD	77	106	25.0	204050	
old pit-1 = 113.5 x 33 x 6 =				- 22473	
old pit-2 = 68 x 53 x 4 =				- 14416	
old pit-3 = 40 x 22.5 x 6 =				- 5400	
TOTAL GEOLOGICAL RESERVES				5,70,911	65,114



as per precise area letter	Gravel & Roughstone
pit -1 (10m depth)	37,450 cum
pit -2 (8m depth)	28,800 cum
pit -3 (10m depth)	9,000 cum
Total	75,250 cum

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INDEX:-

- LEASE APPLIED BOUNDARY
- SAFETY DISTANCE - 7.5M & 50m from seasonal odai, 10m from carttrack
- BOUNDARY PILLARS (1 2 3..)
- CONTOURS (100M)
- BENCH MARK (BM 100.000M)
- APPROACH ROAD
- GRAVEL
- ROUGH STONE

ROUGH STONE AND GRAVEL QUARRY

SURFACE CUM GEOLOGICAL PLAN & SECTIONS

PLAN SCALE:- 1: 2000

SECTION SCALE:- HOR- 1: 1000, VER- 1:1000

ALL PLANS AND SECTIONS ARE PREPARED BASED ON THE LEASE MAP AUTHENTICATED BY STATE GOVERNMENT.

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ROP / MAS / 260 / 2014 / A

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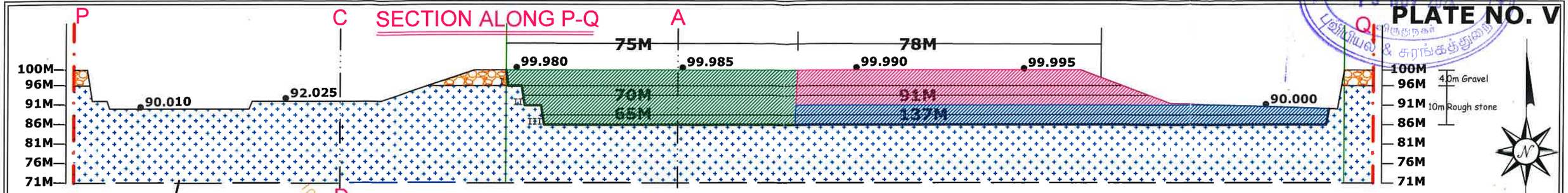
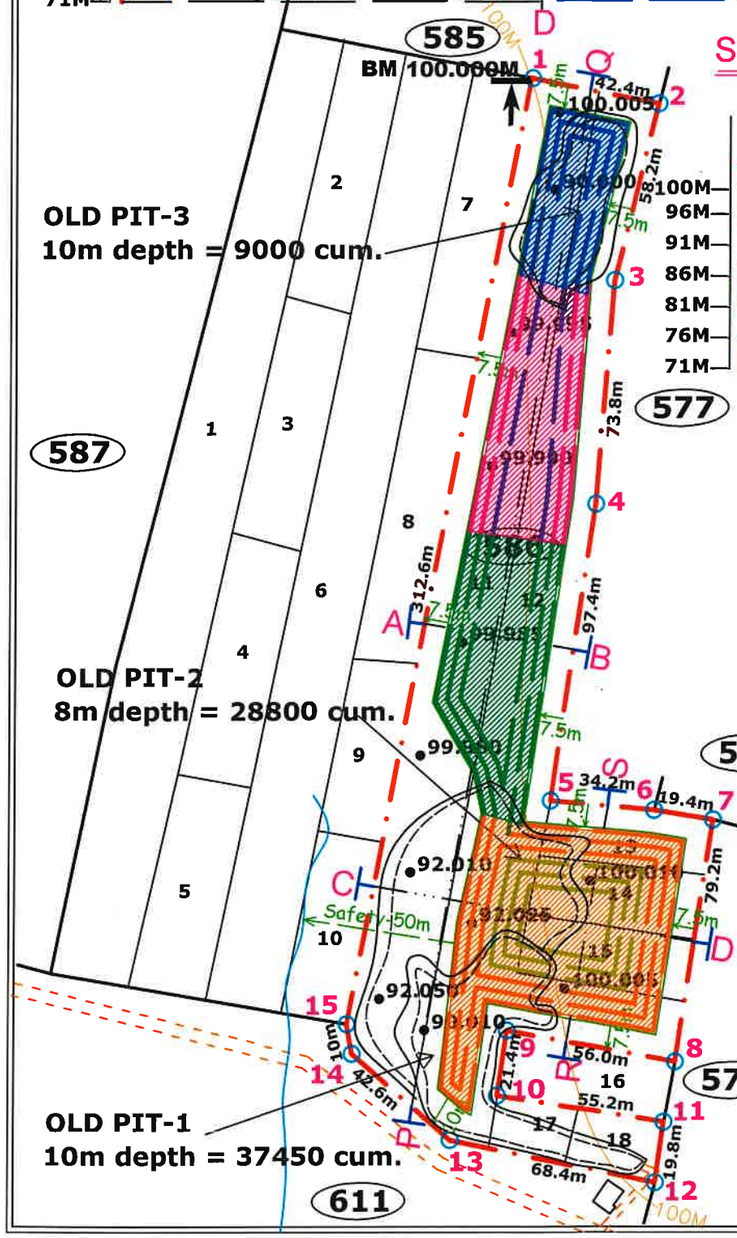
உதவி இயக்குநர் அலுவலகம்
கனிமவளம் மாவட்டம்
19 NOV 2021
புளியங்குடி & சிவகாசி

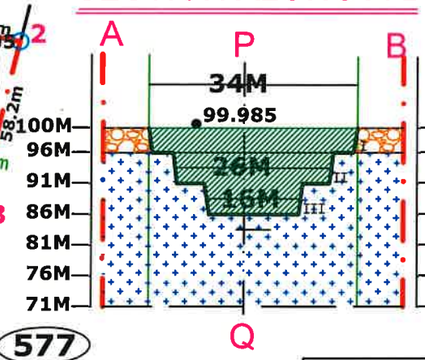
PLATE NO. V

SECTION ALONG P-Q

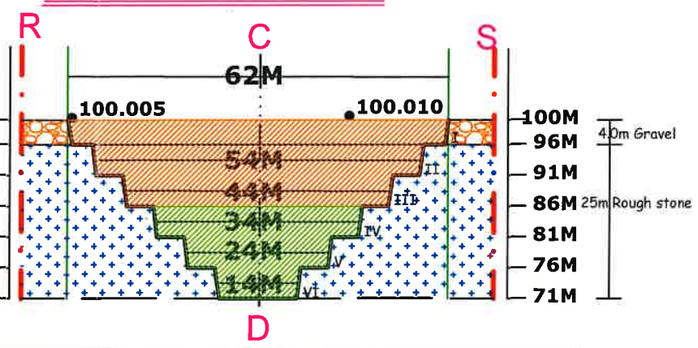




SECTION ALONG A-B



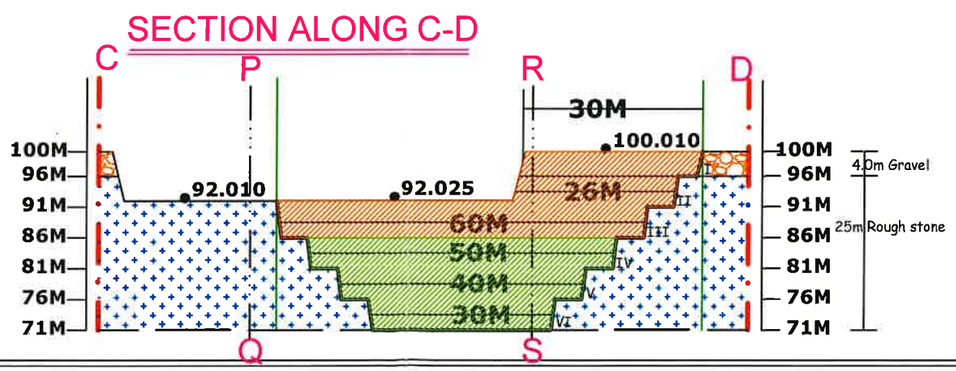
SECTION ALONG R-S



PRODUCTION SCHEDULE

YEAR	SECTION	BENCH	LENGTH [M]	WIDTH [M]	DEPTH [M]	ROUGH STONE [CU.M.]	GRAVEL [CU.M.]
I - YEAR	RS-CD	I	62	30	4.0		7,440
	RS-CD	II	54	26	5.0	7,020	
	RS-CD	III	44	60	5.0	13,200	
I YEAR EXCAVATION						20,220	7,440
II - YEAR	PQ-AB	I	75	34	4.0		10,200
	PQ-AB	II	70	26	5.0	9,100	
	PQ-AB	III	65	16	5.0	5,200	
II YEAR EXCAVATION						14,300	10,200
III - YEAR	PQ-AB	I	78	34	4.0		10,608
	PQ-AB	II	91	26	5.0	11,830	
III YEAR EXCAVATION						11,830	10,608
IV - YEAR	PQ-AB	III	137	16	5.0	10,960	--
IV YEAR EXCAVATION						10,960	--
V - YEAR	RS-CD	II	34	50	5.0	8,500	--
	RS-CD	III	24	40	5.0	4,800	
	RS-CD	IV	14	30	5.0	2,100	
V YEAR EXCAVATION						15,400	
FIVE YEARS TOTAL PRODUCTION						72,710	28,248

SECTION ALONG C-D



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INDEX:-

- LEASE APPLIED BOUNDARY
- SAFETY DISTANCE 7.5M & 50m from seasonal odai, 10m from carttrack
- I - YEAR EXCAVATION
- II - YEAR EXCAVATION
- III - YEAR EXCAVATION
- IV - YEAR EXCAVATION
- V - YEAR EXCAVATION

ROUGH STONE AND GRAVEL QUARRY

LAND USE CUM YEARWISE PLAN & SECTIONS

PLAN SCALE:- 1: 2000

SECTION SCALE:- HOR- 1: 1000, VER- 1:1000

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RQP / MAS / 260 / 2014 / A

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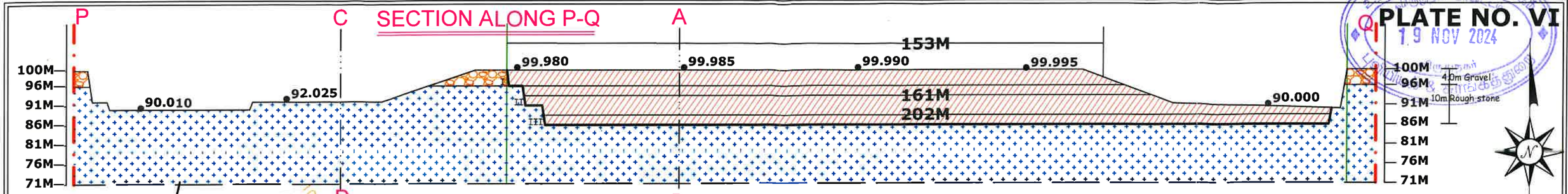
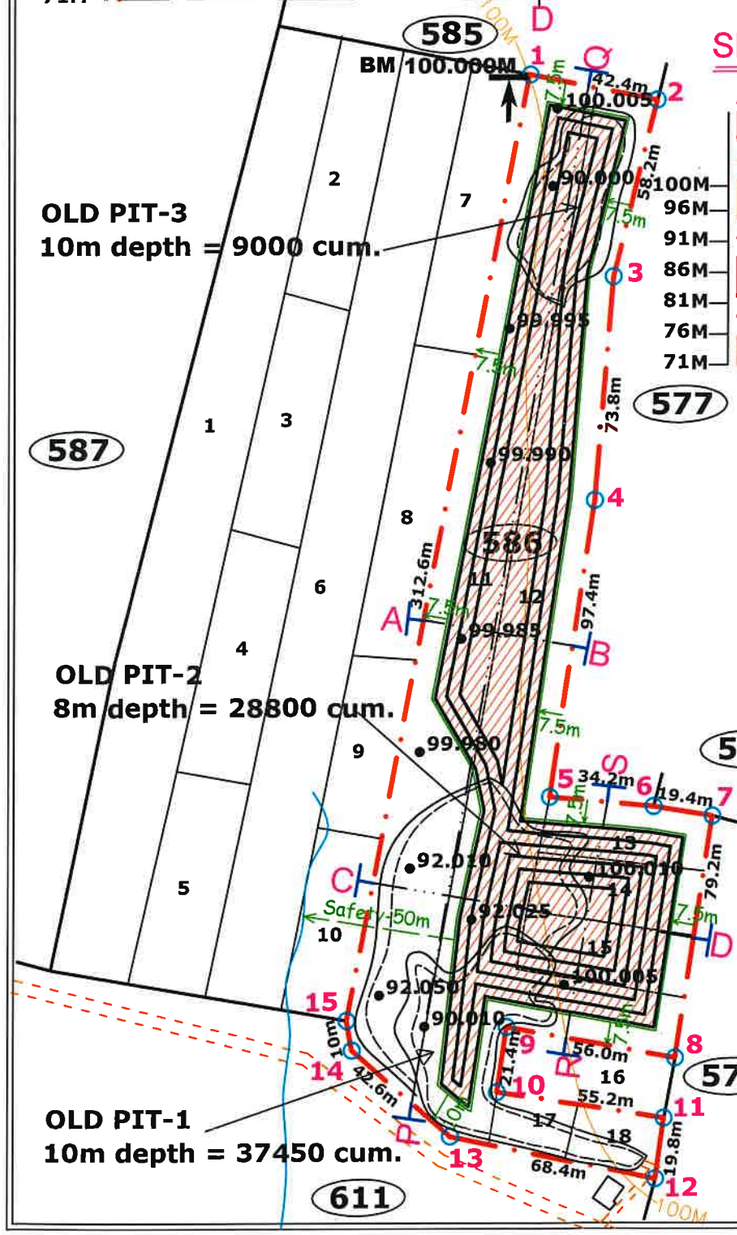
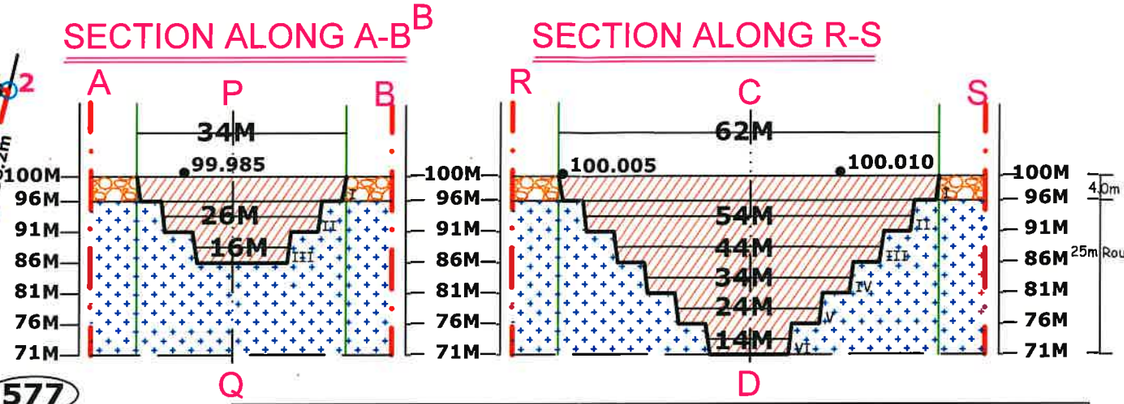
PLATE NO. VI

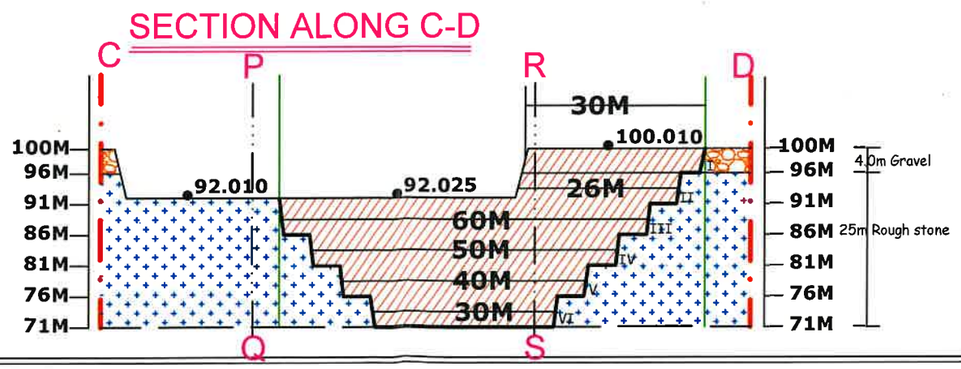






MINEABLE RESERVES

SECTION	BENCH	LENGTH [M]	WIDTH [M]	DEPTH [M]	ROUGHSTONE [CUM]	GRAVEL [CUM]
PQ - AB	I	153	34	4.0	---	20808
	II	161	26	5.0	20930	
	III	202	16	5.0	16160	
	TOTAL				37,090	20,808
RS - CD	I	62	30	4.0	---	7440
	II	54	26	5.0	7020	
	III	44	60	5.0	13200	
	IV	34	50	5.0	8500	
	V	24	40	5.0	4800	
	VI	14	30	5.0	2100	
	TOTAL				35,620	7,440
GRAND TOTAL					72,710	28,248



NAME OF THE APPLICANT:

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S/o. SRI. SUBBIAH THEVAR,
D.No. 300D5/2, SANKARANKOVIL ROAD,
RAJAPALAYAM TOWN & TALUK,
VIRUDHUNAGAR DISTRICT.

INDEX:-

- LEASE APPLIED BOUNDARY
- SAFETY DISTANCE - 7.5M & 50m from seasonal odai, 10m from carttrack
- BOUNDARY PILLARS — A B C..
- CONTOURS — 100M
- BENCH MARK — BM 100.000M
- APPROACH ROAD
- LAYOUT OF MINE WORKING
- ULTIMATE PIT SLOPE

ROUGH STONE AND GRAVEL QUARRY

CONCEPTUAL MINING PLAN

SECTIONS

PLAN SCALE:- 1: 2000

SECTION SCALE:- HOR- 1: 1000, VER- 1:1000

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19 NOV 2024

PLATE NO. VII

INDEX:-

- LEASE APPLIED BOUNDARY
- SAFETY DISTANCE 7.5M & 50m from seasonal odai, 10m from carttrack
- 300M RADIUS
- 500M RADIUS
- WIND DIRECTION
- APPROACH ROAD
- EXISTING WORKING QUARRY
- ABANDONED PITS
- PROPOSAL QUARRIES

500m Radius from the proposed quarry (Shunmugavel proposal area)

Quarries details	SL.No.	Name of owner	Village name	Survey nos	Extent (Ha)	Distance (m)
a. Existing workings	1.	Rajmohan	Gopalapuram	557/1,558/1,2,etc.,	4-85.00	95
	2.	Murugesan	Gopalapuram	635/4 & 636	2-89.00	405
	3.	Arumugam	Gopalapuram	567/2A,2B & 568/1B	2-48.50	245
b. Abandoned	4.	Arumugam	Gopalapuram	565/2	prior-2012	15
	5.	Rajmohan	Gopalapuram	556/2	prior-2018	430
	6.	Govt. pit	Gopalapuram	624	prior-2012	460
	7.	Murugesan	Gopalapuram	632	prior-2021	465
c. present proposed	8.	shunmugavel	Gopalapuram	586/11-15&17,18	2-12.50	applied
			TOTAL EXTENT (Ha)		12-35.00Ha	

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ROUGH STONE AND GRAVEL QUARRY

ENVIRONMENT CUM SATILITE IMAGERY PLAN

SCALE:- 1: 5000

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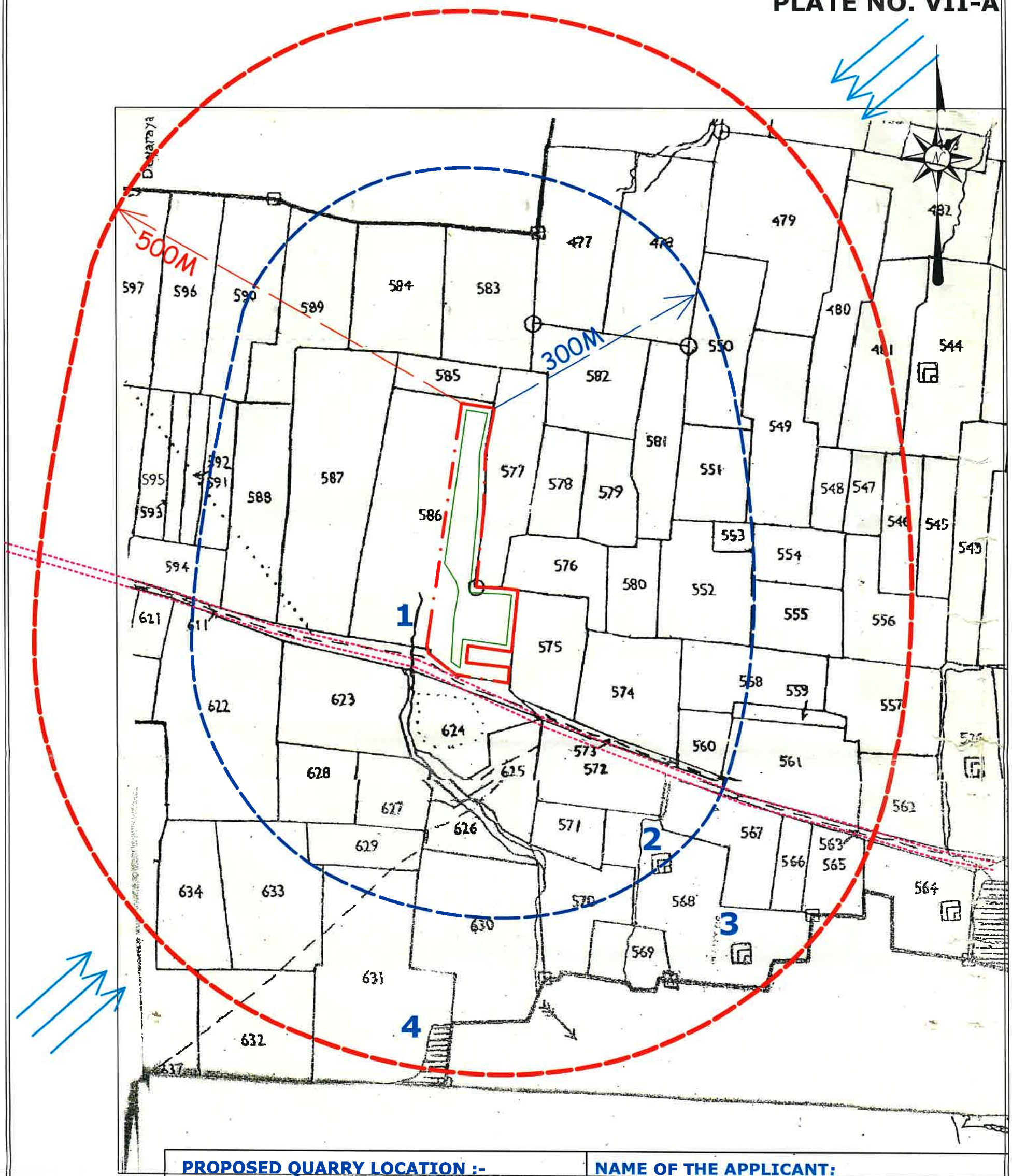
PLATE NO. VII-A



PROPOSED QUARRY LOCATION :-

DISTRICT : VIRUDHUNAGAR
TALUK : VEMBAKOTTAI
VILLAGE : GOPALAPURAM
S.F.Nos. : 586/11,12,13,14,15,17,18
EXTENT : 2-12.50 HECTARE.

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INDEX:-

Static water table in winter - 55M
in summer - 60M

AREA APPLIED FOR QUARRY LEASE

APPROACH ROAD

300M RADIUS LINE
(No well, No historical monuments)

500M RADIUS LINE
(No habitations, No temples, 3 working quarries with in 500m radius & No other structures like culverts, head works, bridges etc.,)

BASE LINE DATA FOR WATER BODIES

SL.No.	DETAILS	Direction	DIST. (M)	DEPTH (M)	WATER LEVEL
1.	Seasonodai	West	50	0.2	dry
2.	Well	South	290	15.0	dry
3.	Well	South	440	16.0	dry
4.	Kulam	South	450	2.5	dry

ROUGH STONE AND GRAVEL QUARRY

VILLAGE MAP

showing environmental features

SCALE:- 1: 5000

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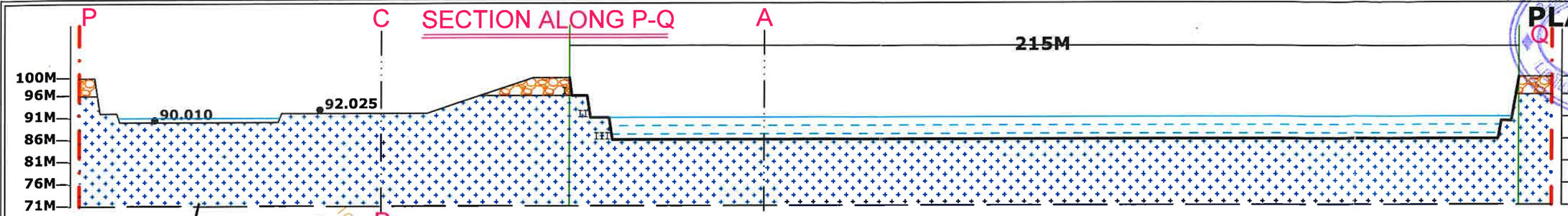
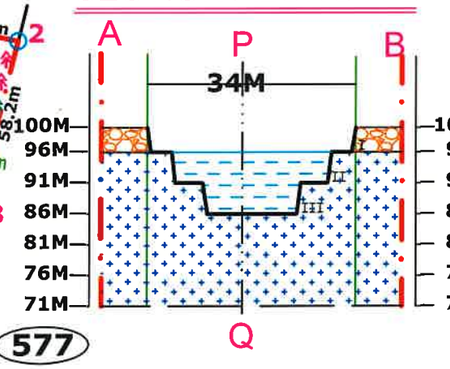
PLATE NO. VIII

19 NOV 2024

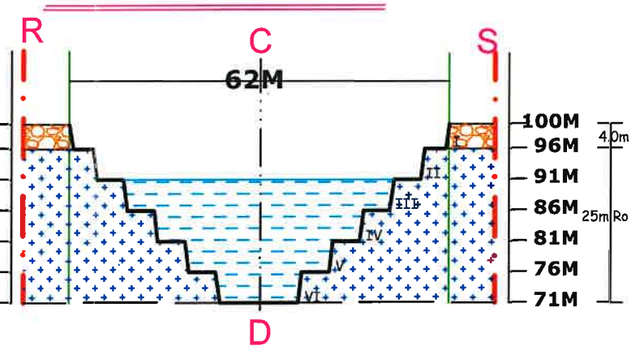
SECTION ALONG P-Q

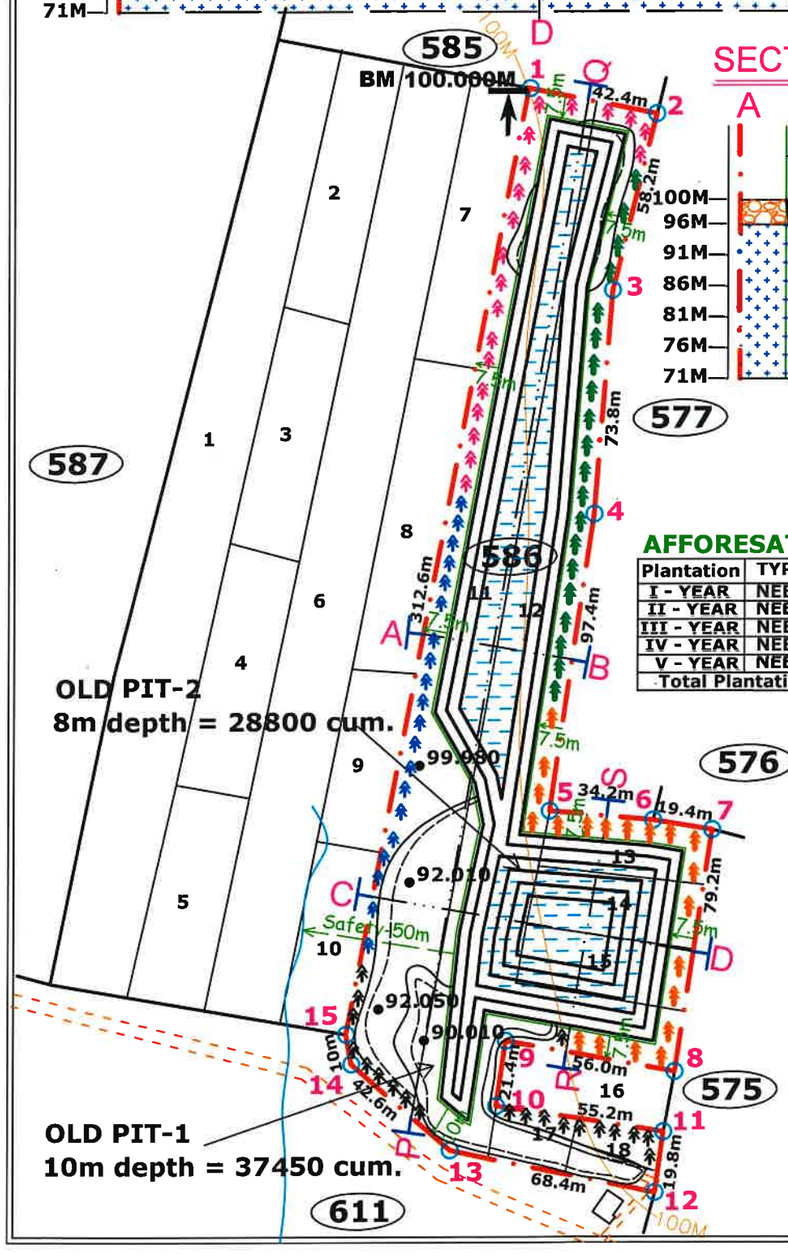


SECTION ALONG A-B



SECTION ALONG R-S





AFFORESATION PROGRAMME

Plantation	TYPE	No.of.Trees	Spacing	Area(Ha)	Survival
I - YEAR	NEEM	20	6m x6m	0-07.2	80%
II - YEAR	NEEM	20	6m x6m	0-07.2	80%
III - YEAR	NEEM	20	6m x6m	0-07.2	80%
IV - YEAR	NEEM	20	6m x6m	0-07.2	80%
V - YEAR	NEEM	20	6m x6m	0-07.2	80%
Total Plantation		100		0-36.0Ha	

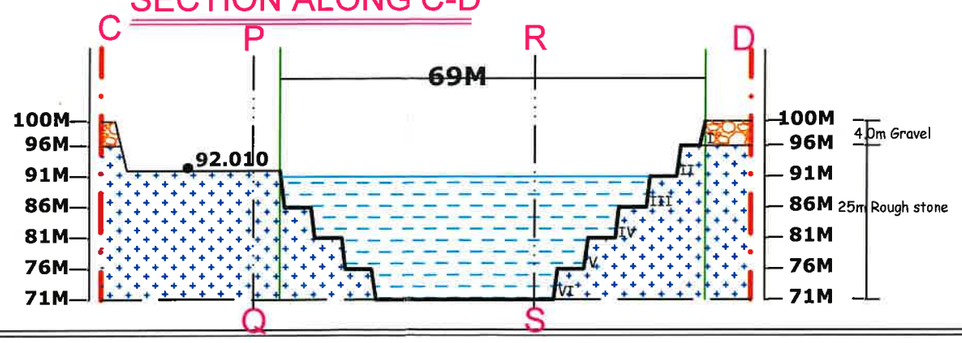
ULTIMATE PIT SIZE

SECTION	LENGTH[M]	WIDTH[M]	DEPTH[M]
PQ-AB	215	34	14.0
RS-CD	62	69	29.0

PRESENT MINING LAND USE PLANNING
(BREAKUP ALONG WITH GREENBELT ETC.;)

SL.No.	LAND USE CATEGORY	AT THE END OF LIFE OF MINE
1.	Area under quarrying	1-16.0 hectare
2.	Infrastructure & Road	0-04.0 hectare
3.	Fencing	0-10.00 hectare
4.	Afforesation (greenbelt & plantation)	0-36.0 hectare
5.	Unutilized area	0-46.5 hectare
	TOTAL	2-12.50 Hectare.

SECTION ALONG C-D



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ROUGH STONE AND GRAVEL QUARRY

PROGRESSIVE MINE CLOSURE PLAN

PLAN SCALE:- 1: 2000

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