

DRAFT EIA / EMP REPORT

FOR

ROUGH STONE AND GRAVEL QUARRY

A. Project Proponent Details

Name	THIRU. S. SOUNDARARAJAN
Address	D.NO. 2/115A2, MAIN ROAD, MAMSAPURAM, SIVAKASI WEST (POST), SIVAKASI TALUK, VIRUDHUNAGAR DISTRICT – 626124.

B. Location Details

Extent	2.92.00 HA
Survey No.	922/2,922/3,922/4
Location	NATHIKUDI VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU

C. Production Details

Total Production	ROUGH STONE - 1,75,840 m3, GRAVEL - 22,080 m3
Depth	39 m
Lease Period	5 YEARS

D. EIA/EMP details

ToR reference	TO24B0108TN5411304N DATED 02.05.2025
Baseline Monitoring	WINTER SEASON (DEC 2024 - FEB 2025)

CONSULTANT

CREATIVE ENGINEERS & CONSULTANTS



NABET ACCREDITED CONSULTANCY, NABL ACCREDITED TESTING LAB

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

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MAY 2025

REVISIONS OF EIA/EMP REPORT

Revision number	Report Status	Date of submission
00/MAY/25	Draft EIA /EMP Report	28.05.2025

Environmental Impact Assessment & Environmental Management Plan Report for Rough stone and Gravel Quarries of **Thiru. S. Soundararajan over an area of 2.92.00 Ha** in Nathikudi Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu and authorized for submission by Dr. B. Swamynathan, EIA Coordinator on 28.05.2025 after due review by the personnel and consultation with the project proponents. Current Revision number of the EIA/EMP report is 00/MAY/25, signifying as per the revision mentioned in the above table that this is a draft EIA/EMP report.

Signature:

Date: 28.05.2025

PROJECT PROPONENT DECLARATION

I, Thiru. S. Soundararajan received Terms of Reference under EIA Notification 2006 from SEIAA, Tamil Nadu vide their letter **TO24B0108TN5411304N** dated **02.05.2025** for Rough Stone and Gravel Quarry at Survey No. 922/2,922/3,922/4 over an area of 2.92.00 hectares In Nathikudi 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:



For Thiru. S. Soundararajan

Date: 28.05.2025



CREATIVE ENGINEERS & CONSULTANTS

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

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 upto 23.12.2026.

Thiru. S. Soundararajan received Terms of Reference under EIA Notification 2006 from SEIAA, Tamil Nadu vide their letter TO24B0108TN5411304N dated 02.05.2025 for Rough Stone and Gravel Quarry at Survey No. 922/2,922/3,922/4 over an area of 2.92.00 hectares In Nathikudi 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: 28.05.2025

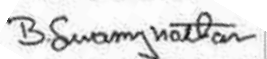
Annexure – VII

Declaration by Experts contributing to the EIA Report for

DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. SOUNDARARAJAN AT SURVEY NOS. 922/2,922/3,922/4 OVER AN AREA OF 2.92.00 HECTARES IN NATHIKUDI VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR, 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:



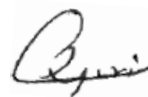
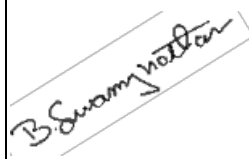
Name: **B.Swamynathan**

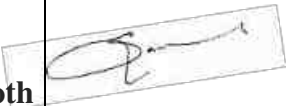
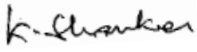
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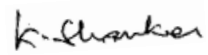
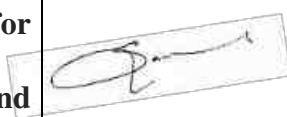
Period of involvement: **November 2024 onwards**

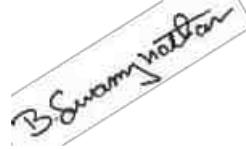
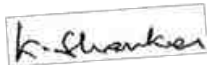
Contact information: **09444133619**

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: November 2024 onwards	
		B.Swamynathan	• Data interpretation of Micro meteorological data for wind rose. • Identification of polluting source and suggestion of suitable mitigation measures. Period: November 2024 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: November 2024 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: November 2024 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: December 2024 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: November 2024 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: December 2024 onwards	
7	GEO*	K.Shankar	• Study of geology of the ML area and the surrounding areas. • Provide details about Mineral composition Period: December 2024 onwards	
8	SC*	B.Swamynathan	• Study of soil profile • Assessment of Impact on soil and suggesting plantation scheme. Period: November 2024 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: December 2024 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: November 2024 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: November 2024 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: December 2024 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 AND GRAVEL QUARRY OF THIRU. S. SOUNDARARAJAN AT SURVEY NOS. 922/2,922/3,922/4 OVER AN AREA OF 2.92.00 HECTARES IN NATHIKUDI VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR, 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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Creative Engineers & Consultants

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**REV NO : 00/MAY/25
C-10**

TERMS OF REFERENCE & ITS COMPLIANCE



File No: 11562
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA),
TAMIL NADU)



Dated 02/05/2025



To,

Thiru. S. Soundararajan
D.No. 2/115A2, Main Road, Mamsapuram, Sivakasi West (Post), Sivakasi Taluk, Virudhunagar District
– 626124. , Nathikudi, VIRUDHUNAGAR, TAMIL NADU, 626124
srvmsand@gmail.com

Subject: Grant of Terms of Reference under the provision of the EIA Notification 2006- as amended regarding.

Sir/Madam,

Sub: SEIAA, Tamil Nadu – Terms of Reference along with Public Hearing (ToR) for the Rough Stone and Gravel Quarry of survey No. 922/2, 922/3, 922/4 over an area of 2.92.00 Ha in Nathikudi Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu by Thiru. S. Soundararajan - 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/508838/2024, Dated: 06/12/2024.

2. Your application submitted for Terms of Reference dated: 09.12.2024.

3. Minutes of the 523rd Meeting of SEAC held on 27.12.2024.

4. Minutes of the 540th Meeting of SEAC held on 20.03.2025.

5. Minutes of the 787th Meeting of Authority held on 08.01.2025

6. Minutes of the 811th Meeting of Authority held on 22.04.2025.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO24B0108TN5411304N
(ii) File No.	11562
(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. Soundararajan
(viii) Name of Company/Organization	S SOUNDARARAJAN
(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

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1(Part A and B) were submitted to the Ministry for an appraisal by the State Environment Impact Assessment Authority(SEIAA) Appraisal Committee (SEIAA) in the Ministry under the provision of EIA notification 2006 and its subsequent amendments.
4. The above-mentioned proposal has been considered by State Environment Impact Assessment Authority(SEIAA) Appraisal Committee of SEIAA in the meeting held on 22/04/2025. The minutes of the meeting and all the Application and documents submitted [(viz. Form-1 Part A, Part B, Part C EIA, EMP)] are available on PARIVESH portal which can be accessed by scanning the QR Code above.
5. The brief about configuration of plant/equipment, products and byproducts and salient features of the project along with environment settings, as submitted by the Project proponent in Form-1 (Part A, B and C)/EIA & EMP Reports/presented during SEIAA are annexed to this EC as Annexure (1).
6. The SEIAA, in its meeting held on 22/04/2025, based on information & clarifications provided by the project proponent and after detailed deliberations recommended the proposal for grant of Terms of Reference under the provision of EIA Notification, 2006 and as amended thereof subject to stipulation of specific and general conditions as detailed in Annexure (2).
7. 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 State Environment Impact Assessment Authority(SEIAA) Appraisal Committee hereby decided to grant Terms of Reference for instant proposal of M/s. S SOUNDARARAJAN under the provisions of EIA Notification, 2006 and as amended thereof.
8. The Ministry reserves the right to stipulate additional conditions, if found necessary.
9. The Terms of Reference to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.
10. This issues with the approval of the Competent Authority.

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 Standard Conditions:

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

S. No	Terms of Reference
	groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period. 20. Erosion Control measures. 21. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas. 22. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir. 23. The project proponent shall study and furnish the details on potential fragmentation impact on natural Environment, by the activities. 24. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts. 25. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components. 26. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites. 27. The EIA shall include the impact of mining activity on the following: - Hydrothermal/Geothermal effect due to destruction in the Environment. - Bio-geochemical processes and its foot prints including Environmental stress. - Sediment geochemistry in the surface streams. <u>Energy</u> 28. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished. <u>Climate Change</u> 29. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities. 30. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and physical, chemical & biological soil features. 31. Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood. <u>Mine Closure Plan</u> 32. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued. <u>EMP</u> 33. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued and the scope for achieving SDGs. 34. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan. <u>Risk Assessment</u> 35. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining. <u>Disaster Management Plan</u> 36. To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/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. <u>Others</u> 37. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies

S. No	Terms of Reference
	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.



SEIAA SPECIFIC CONDITIONS: -

The Authority noted that the subject was placed in the 540th meeting of SEAC-2 held on 20.03.2025. After detailed discussions, the Authority accepts the recommendation of SEAC-2 and decided to grant **Terms of Reference (ToR) along with Public Hearing for the quantity of 1,75,840m³ of Rough Stone & 22,080m³ of Gravel up to the depth of 39m BGL** as per the approved mining plan, under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC-2 & normal conditions & the conditions mentioned in Annexure of this minutes.

Discussion by SEAC and the Remarks: -

Rough Stone and Gravel Quarry of survey No. 922/2, 922/3, 922/4 over an area of 2.92.00 Ha in Nathikudi Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu by Thiru. S. Soundararajan - For Terms of Reference.

(SIA/TN/MIN/508838/2024, Dated: 06/12/2024)

The proposal was placed in the 540th meeting of SEAC held on 20.03.2025. The details of the project furnished by the proponent are available on the PARIVESH web portal (parivesh.nic.in). The project proponent made a detailed presentation.

The SEAC-II noted the following:

1. The project proponent, Thiru. S.Soundararajan has applied seeking Terms of Reference for EIA study for rough stone and gravel quarry of survey No. 922/2, 922/3, 922/4 over an area of 2.92.00 Ha in Nathikudi Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu.
2. The proposed quarry/activity is covered under Category "B1" of Item 1(a) "Mining Projects" of the Schedule to the EIA Notification, 2006, as amended.
3. As per the precise area communication letter, the lease period is 5 years and mining plan period is for 5 years & production should not exceed 2,69,708m³ of Rough Stone & 48,256m³ of Gravel. As per the approved mining plan, the annual peak production shall not exceed 82,600m³ of Rough Stone and 24,544m³ of Gravel for an ultimate depth of 39m BGL.

4. Considering the safety & leaving 50m from Sevalkulam Kanmai water-spread area on the South & East, the PP has proposed a revised production of not exceeding 1,75,840m³ of Rough Stone & 22,080m³ of Gravel and the annual peak production of not exceeding 47,850m³ of Rough Stone and 11,040m³ of Gravel for an ultimate depth of 39m BGL.
5. Earlier, the proposal was placed in the 523rd meeting of SEAC held on 27.12.2024. **SEAC decided to grant Terms of Reference (TOR) with Public Hearing. And** subsequently placed in the **787th Authority meeting held on 08.01.2025**. The authority noted that the subject was appraised in the 523rd meeting of SEAC held on 27.12.2024 and SEAC has furnished its recommendations for granting **Terms of Reference with Public Hearing** subject to the conditions stated therein. After a detailed discussion, the authority decided to seek additional clarification on the following aspects:
 - i. From the KML, it is seen that the proposed area falls within the water catchment area of red lake. The authority is of the view that the proposed site is in a sensitive region with respect to water table and water holding capacity. Hence, the issuance of ToR for the proposed area needs to be re-examined.
 - ii. Since the number of crackers manufacturing units present within 500m & 1km are 2 nos and 5 nos, respectively, the safety and security of the workers in these units needs to be considered.
 - iii. SEIAA also notices that the proposed area is an existing quarry and benches formations in the previous lease period seems to be lacking.

In view of the above, the Authority decided to **refer back** the proposal to SEAC for additional remarks.

Now the committee examined the ADS replied Furnished by the PP as follows:

- i. **From the KML, it is seen that the proposed area falls within the water catchment area of Redlake. The authority is of the view that the proposed site is in a sensitive region with respect to water table and water holding capacity. Hence, the issuance of ToR for the proposed area needs to be re-examined.**

Reply:

- Sevalkulam named as "Red Lake" is located south of the lease area. As per precise area condition and Tamil Nadu Minor Mineral Concession Rules, 1959, its subsequent rules, 50m safety distance is left from the Kanmai.
- In fact, mining activity in the southern side of the applied lease area was already carried out in the earlier lease period.
- Lease area is at an higher elevation and it does not form as a water-spread area.
- This kanmoi is more of a seasonal rainwater water harvesting structure with intake water mainly from the streams located 300m, E & 180m, W respectively from the lease area.
- Besides, the elevation of the tank varies from 114m RL to 120m RL with deeper portion south of the tank area.
- Normally even during the post monsoon, the rainwater is observed in the deeper southern side of the lease area which is more than 250m from the lease area. Google map for the different periods shown in Figure 1 validates the same.
- It is of shallow depth with rock exposure and bushes and it remains dry for the most months 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 then through a settling pond to be located in the southern side of the lease area. Supernatant clear water will be discharged to the kanmoi on the southern side ensuring proper flow of rainwater for downstream users.
- The southern side of the lease area will be fenced and protective earthen embankment of atleast 2m height will be created in the safety zone on the southern side so that the kanmai and the Government poramboke land south of the lease area is not disturbed.
- Detailed hydrogeological study will be carried out and the findings along with suitable mitigative measures will be given in the Final EIA/EMP report.
- Photographs of Kanmai, odai on the west & east is shown in. Photos of Surface runoff management arrangements & kanmai protection measures are shown in Figure 2.

- ii. **Since the number of crackers manufacturing units present within 500m & 1km are 2 nos and 5 nos, respectively, the safety and security of the workers in these units needs to be considered.**

Reply:

- Nearest cracker unit is located at the distance of 380 mts eastern side satisfying the statutory norms. Others are located more than 500m away.
- Since the average daily rough stone production is less which only comes around 180m³ per day. By adopting/following control measures, blast induced ground vibration will be maintained within the limits prescribed by DGMS, Dhanbad at the mining areas vide Circular No. 7 dated 29-08-1997 within 100m itself:
- Carrying out controlled blasting using Nonel delay detonator.
- Optimum design for burden and spacing.
- Reducing explosive charge per delay to minimum.
- The peak particle velocity (PPV) of ground vibration will be kept very low through optimally controlled blasting techniques, after necessary field trials.
- 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.
- Proper care and supervision during blasting by a competent and experienced person to be carried out. Further details in this regard including the safety and security of the workers will be given in the EIA report.

- iii. **SEIAA also notices that the proposed area is an existing quarry and benches formations in the previous lease period seems to be lacking.**

Reply:

- The existing pits of 3m to 13m deep are in the middle of the lease in a portion of the area. As such, it is possible and future mining is planned to be carried out with proper bench pattern as per the present approved mining plan. The benching profile as per the AMP is given in below

Now, the proposal was placed in the 540th meeting of SEAC held on 20.03.2025. Based on the presentation and details furnished by the project proponent, **SEAC-II decided to grant Terms of Reference (TOR) with Public Hearing** subject to the following conditions, in addition to the standard terms of reference for EIA study for non-coal mining projects and details issued by the MOEF & CC to be included in EIA/EMP Report:

1. 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, fireworks manufacturing units, factories, sheds, educational institutions, colleges, schools, etc., and spell out the mitigation measures to be proposed for the protection of the above structures, if any, during the quarrying operations.
2. **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) towards executing the planned activities.**
3. Since waterbodies are situated nearby, the PP shall carry out the scientific studies to assess the hydrological and hydrogeological conditions including the water flow pattern in the area adjacent to the quarry, to determine impacts of the mining operation on the ground water conditions & waterbodies and vice-versa. The report shall also include the studies to fixup impacts of the mining operation on the ground water table in the

proposed region as the proposed mining depth is 49m and the water table is found to be located at 55-60m.

4. **The PP shall furnish the Compliance Certificate Report for the EC obtained earlier, by duly audited by the RO, MoEF & CC, Chennai with the percentage of non-compliances, reasons for non-compliances, status on half-yearly compliance report submitted during the mine operation, actions taken on the non-compliances, etc during the EIA appraisal without fail.**
5. The PP shall erect the DGPS reference pillars painted with blue & white colour indicating the safety barrier of 7.5 m to be left under the Rule 13 (1) of MCDR, 1988 within the lease boundary and protective bunds and submit the photographic/videographic evidence along with the EIA report.
6. The proponent shall furnish photographs of adequate fencing, garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.
7. The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report.
8. The PP shall prepare the EMP for the entire project life of mine, i.e., 10 years and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.
9. The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding villages and structures.
10. The PP shall prepare a conceptual working plan accommodating the inclusion of haul road accessibility keeping the benches intact, by ensuring the slope stability of the working benches to be constructed and existing quarry wall.

11. As this is an existing quarry, the PP shall ensure that the CCTV Cameras are installed inside the mine premises and the photographs of the same shall be submitted at the time of EIA appraisal.

SEAC STANDARD CONDITIONS:

1. In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following:
 - (i) Original pit dimension
 - (ii) Quantity achieved Vs EC Approved Quantity
 - (iii) Balance Quantity as per Mineable Reserve calculated.
 - (iv) Mined out Depth as on date Vs EC Permitted depth
 - (v) Details of illegal/illicit mining
 - (vi) Violation in the quarry during the past working.
 - (vii) Quantity of material mined out outside the mine lease area
 - (viii) Condition of Safety zone/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 water bodies like lake, water tanks, etc are located within 1 km of the proposed quarry.

5. The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report.
6. The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.
7. In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.
8. However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.
9. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 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 lease area.
- If EC and CTO already obtained, the copy of the same shall be submitted.
- Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.

15. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).

16. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,

17. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.

18. The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same.

19. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.

20. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.

21. The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.

22. The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.

23. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.

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

25. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.

26. Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, 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 detail ed.

37. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.

38. The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.

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

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

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

42. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.

43. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.

A. STANDARD TERMS OF REFERENCE

- 1)Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed

whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.

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

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

- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
- 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
- 20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
- 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the

State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.

- 22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season); December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM₁₀, particularly for free silica, should be given.
- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
- 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.

- 28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 29) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
- 30) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and Bgl. A schematic diagram may also be provided for the same.
- 31) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
- 32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
- 33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.

- 34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
- 35) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
- 36) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
- 37) Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
- 38) Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed: -

- a) Executive Summary of the EIA/EMP Report
- b) All documents to be properly referenced with index and continuous page numbering.
- c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
- d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
- e) Where the documents provided are in a language other than English, an English translation should be provided.
- f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
- g) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA. II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
- i) As per the circular no. J-11011/618/2010-IA. II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
- j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological

maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

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

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

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

14. A study on the geological resources available shall be carried out and reported.
15. A specific study on agriculture & livelihood shall be carried out and reported.
16. Impact of soil erosion, soil physical chemical and biological property changes may be assumed.
17. Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./ private land, status of 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 -11013/77/2004-IA-II(I) dated 2nd December, 2009, 18th March 2010, 28th May 2010, 28th June 2010, 31st December 2010 & 30th September 2011 posted on the Ministry's website <http://www.moef.nic.in/> may be referred.
 - After preparing the EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above-mentioned points, the proponent will take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

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



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HA IN NATHIKUDI VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU.**

TOR COMPLIANCE

S.No	ToR Points	Reply	Pg.No
A. SEIAA SPECIFIC 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 implementing the Environmental policy devised shall be given in detail in the EIA Report.	• Details of the cluster management committee is provided under Section 10.2.2, Chapter-X.	10-2



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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	4-20
10	Impact on soil flora & vegetation around the project site.	•The impact of mining on biological environment is provided under Table 4.15, Chapter-IV.	4-19
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.	•The details of flora in the core zone is provided in Table 3.24, Chapter-III. There is no major clearance of vegetation or transplantation involved.	3-38
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.	3-36
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. 4.16. The post mining land use plan showing afforestation and water body is shown in Figure No- 4.5.	4-21 & 4-22
14	The project proponent shall study and furnish the impact of project on plantations	•Due to poor soil condition and non-availability of perineal water source, no	4-20



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	in adjoining patta lands, Horticulture, Agriculture and livestock.	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	
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.	--
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-	3-36
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.	3-36
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 10k radius. There are no reserve forest in the proximity of the lease area.	4-19
Water Environment			
19	Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.	• The details of hydrogeological study is provided under Section 3.6, Chapter-III.	4-10
20	Erosion Control measures.	• Since the entire material from the quarry face will be directly dispatched to the	11-12



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		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	
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	7-3
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.	4-21 & 4-22
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. 4.16. The post mining land use plan showing afforestation and water body is shown in Figure No- 4.5.	3-36 4-18
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.	3-1 11-12
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.3.1, 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 39 m. The ground water table in this area is below this level. Hence, ground water	



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		intersection in not envisaged and ground water will not be 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.	
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.	4-10
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 4-9 4-16
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 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 wherein 1500 number of plants will be planted in and around the lease area.	7-16
30	The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and	•Certified vehicles with low carbon emissions will only be used. These equipment's will be properly and regularly	7-16



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	physical, chemical & biological soil features.	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 1500 number of plants will be planted in and around the lease area.	
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	• The disaster management plan has been provided under section 7.3.1, Chapter-VII.	7-3



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	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.	•VAO Letter has been provided as Annexure-3B	A-19
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 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.	•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.	11-16
B. SEAC CONDITIONS - SITE SPECIFIC			
1	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, fireworks manufacturing units, factories, sheds, educational institutions, colleges, schools, etc., and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations.	•The details of the features within the 500m radius has been provided in Figure 2.6, Chapter-II.	
2	A Cluster Management Committee (CMC)	Environmental Management Cell of	



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	shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of statutory personnel, appropriate environmental monitoring, good maintenance of haul roads and village/panchayat roads, authorized blasting operation etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal: - Copy of the agreement forming CMC. - The Organisation chart of the Committee with defining the role of the members - The 'Standard Operating Procedures' (SoP) executing the planned activities.	projects in the cluster will act as a Cluster Management Committee. The various activities to be undertaken by this committee are detailed in para 10.2.2, Chapter – X. • Affidavit in this regard will be submitted during EIA appraisal.	
3	Since waterbodies are situated nearby, the PP shall carry out the scientific studies to assess the hydrological and hydrogeological conditions including the water flow pattern in the area adjacent to the quarry, to determine impacts of the mining operation on the ground water conditions & waterbodies and vice-versa. The report shall also include the studies to fixup impacts of the mining operation on the ground water table in the proposed region as the proposed mining depth is 49m and the water table is found to be located at 55-60m.	• Details of hydrogeological scenario of this project is provided under section 3.6, Chapter-III.	
4	The PP shall furnish the Compliance Certificate Report for the EC obtained earlier, by duly audited by the RO, MoEF & CC, Chennai with the percentage of non-compliances, reasons for non-compliances, status on half-yearly	• In progress	



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	compliance report submitted during the mine operation, actions taken on the non-compliances, etc during the EIA appraisal without fail.		
5	The PP shall erect the DGPS reference pillars painted with blue & white colour indicating the safety barrier of 7.5 m to be left under the Rule 13 (1) of MCDR, 1988 within the lease boundary and protective bunds and submit the photographic/videographic evidence along with the EIA report.	Will be carried out immediately after execution of lease & before commencement of mining operation.	
6	The proponent shall furnish photographs of adequate fencing, garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	• Provided under section 2.6, Chapter-II.	
7	The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report.	• Part of the lease area is mined out with rock exposure and the remaining land is free from major vegetation. Study area depicts varying land use and Bio diversity study details are provided in Para 3.5, Chapter-III.	
8	The PP shall prepare the EMP for the entire project life of mine, i.e., 10 years and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	• The Environment Management Budget of Rs.22.92 Lakhs is allocated under capital cost and Rs.16.81 Lakhs and the same has been furnished in Table 10.2, Chapter-X.	
9	The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding village and structures.	• A cumulative impact study has been carried out and furnished in Para 4.6, Chapter-IV.	
10	The PP shall prepare a conceptual working plan accommodating the inclusion	Agreed	



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	of haul road accessibility keeping the benches intact, by ensuring the slope stability of the working benches to be constructed and existing quarry wall.		
11	As this is an existing quarry, the PP shall ensure that the CCTV Cameras are installed inside the mine premises and the photographs of the same shall be submitted at the time of EIA appraisal.	Agreed	
C. SEAC STANDARD CONDITIONS			
1	In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following: a) Original pit dimension b) Quantity achieved Vs EC Approved Quantity c) Balance Quantity as per Mineable Reserve calculated. d) Mined out Depth as on date Vs EC Permitted depth e) Details of illegal/illicit mining f) Violation in the quarry during the past working. g) Quantity of material mined out outside the mine lease area h) Condition of Safety zone/benches i) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.	• Fresh lease, the lease period is 5 years. The present proposed quarry was earlier worked by the applicant from 2019 to 2024 by EC Lr.no. DEIAA/VNR/OO4/EC.NO.58/2018 Dated 08.12.2018.	2-14
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.	• Letter from VAO is obtained and given as Annexure – 3B.	7-15
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	• Details of the features produced within 500m radius are provided in Figure 2.3, Chapter-II	2-12



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	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.	•Hydrogeological Study is detailed under Section 3.6, Chapter-III.	3-48
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.	3-36
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.	2-12



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7	In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.	•The existing mine pit dimensions are 110m x 32m x 13m. Pit slope stability plan is provided in para 7.7, Chapter – VII.	2-14
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	7-15
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	•Controlled blasting will be adopted in this project and details of the same has been provided in Section 4.4.2, Chapter-IV	2-18



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	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.	• 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,	• Fresh lease, the lease period is 5 years. The present proposed quarry was earlier worked by the applicant from 2019 to 2024 by EC Lr.no. DEIAA/VNR/OO4/EC.NO.58/2018 Dated 08.12.2018. The existing mine pit dimensions are 110m x 32m x 13m.	2-19
13	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?	• Fresh lease, the lease period is 5 years. The present proposed quarry was earlier worked by the applicant from 2019 to 2024 by EC Lr.no. DEIAA/VNR/OO4/EC.NO.58/2018 Dated 08.12.2018. The existing mine pit dimensions are 110m x 32m x 13m.	2-19
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	• Fresh lease, the lease period is 5 years. The present proposed quarry was earlier worked by the applicant from 2019 to 2024 by EC Lr.no. DEIAA/VNR/OO4/EC.NO.58/2018 Dated 08.12.2018. The existing mine pit dimensions are 110m x 32m x 13m.	2-19



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	benches.		
15	All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).	•Project coordinates superimposed in satellite imagery and 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.3.21, 3.22 and 3.23, Chapter-III.	2-6 3-1 3-47 & 3-49
16	The PP shall carry out Drone video survey covering the cluster, Green belt, fencing etc.,	•Agreed	--
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.	•Site photographs have been provided in Chapter-II. Fencing and plantation are already carried out.	4-20 4-21
18	The Project Proponent shall provide the details of geological 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 proposed mitigation measures for the same.	•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	2-12 2-13



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		No.2.7, Chapter-II. • Anticipated Impacts of the mining operations and mitigation measures are discussed elaborately in Chapter-IV.	4-1
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.	3-45
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 Winter Season (December 2024 to February 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.	3-17 & 3-43 4-25
22	The Proponent shall carry out the Cumulative impact study due to mining	• The details of the quarries located within the 500m radius of the project is given vide	A-16



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	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.	Annexure-3. • A cumulative impact study has been carried out and furnished in Para 7.3, Chapter-VII. • Environmental Management Plan is provided under Chapter-X.	7-1 10-1
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 680m 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 4-13
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. 4.16. The post mining land use plan showing afforestation and water body is shown in Figure No- 4.5.	3-30 4-18 4-21 & 4-22
25	Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of	• 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	2-15



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	land area, distance from mine lease, its land use, R&R issues, if any, should be provided.	involved. Besides, there is no proposal for overburden dump outside the lease area.	
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 4.4, Chapter-IV. • The methods for reducing water consumption and rainwater harvesting is provided in section 4.3.4, Chapter-IV.	4-11 4-13
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.	4.25
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	• 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,	3-38



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	management during mining activity.	Chapter-III.	
30	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.	• Details of Mine Closure Plan is provided under section 7.5, Chapter-VII.	7-4
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.	3-48
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	-



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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.	• The disaster management plan has been provided under section 7.3.1, Chapter-VII.	7-5
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.	11-17
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 4.8, Chapter-IV.	4-35
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.	--
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.	--



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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.	• PP informed that there is no litigation pending against the project.	--
40	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.	• The 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 18 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 planned to allocate Rs.5 Lakhs for various activities under CER for all the three projects together. From the CER activities allocated for various social welfare activities, the villages near the lease area will be benefited.	2-28
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.	• In progress	2-19
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.	7-1
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	• Agreed	4-24



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	attracting penal provisions in the Environment (Protection) Act, 1986.		
D. Standard ToR			
1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.	• Fresh lease, the lease period is 5 years. The present proposed quarry was earlier worked by the applicant from 2019 to 2024 by EC Lr.no. DEIAA/VNR/OO4/EC.NO.58/2018 Dated 08.12.2018. The existing mine pit dimensions are 110m x 32m x 13m.	2-14
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 Vide Vide KV1/767/2024, dated 25.10.2024.	A-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.	• The production capacity, quantity of waste, its management and mining technology in mine plan and EIA, etc., are compatible with one another.	--
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.3.21, 3.22, Chapter-III. The Lithology map and Soil map are provided under Figure No. 3.23, 3.24, Chapter-III. • The 10km Radius Index plan showing buffer zone is given in Figure No.3.1 in Chapter – III.	2-6 3-47 3-48 3-49 3-50 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	• Replied in Standard ToR point no.4	--



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	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 1.41.0 Ha of mined out area will be left as water body. 0.03.0Ha will be the roads, 0.01.0 Ha will be the infrastructure, 0.36.0Ha will be covered with vegetation, 1.04.00Ha will be undisturbed area and 0.07.0 will be fencing.	4-18
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.	2-15
12	Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.	• There is no forest land 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	• Not Applicable	--



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	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.	• 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.	4-19
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 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	• 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.	3-36



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	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 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 shilling of village(s) including their R&R and socio-economic aspects should be discussed in the Report.	• The mining activities will be carried out within the mine lease area only. The entire mine lease area is a patta land in proponent's possession. There is no population within the ML area. Hence, the question of R& R does not arise.	7-4
22	One season (non-monsoon) (i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season) primary baseline data on	• The baseline data on micro- meteorology, ambient air quality, Water quality, noise level, soil and flora & fauna are collected	3-12 &



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		the resultant added concentrations with baseline figures with respect to PM10 is in the range of 54.5 µg/m³ to 77.82 µg/m³ and with respect to PM2.5 are in the range of 26.8µg/m³ to 37.61µg/m³ which are within the stipulated statutory limits. • Additionally, cumulative impact due to working of the proposed projects and also another 3 proposed project on ambient air quality is also assessed. The cumulative post project concentration with respect to PM10 is in the range of 54.5 µg/m³ to 82.8 µg/m³ and with respect to PM2.5 are in the range of 26.8µg/m³ to 40.7 µg/m³ which are within the statutory limits in each case.	
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.	4-9
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.	4-10



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		• Towards surface runoff management, a garland drain of length 680m 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. • The methods for reducing water consumption and rainwater harvesting is provided in section 4.3.4, Chapter-IV.	4-11 4-13
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. There is a Seasonal Odai-180m-W, 298m-East & 10m – East. Sevalkulam Kanmai in South for which 50m safety distance has been left. Due to scanty rainfall this drainage channel remains dry for most of the year. Lease periphery along the drainage will be properly fenced and also an Earthen bund will be formed within the lease area on the South side safety zone of the Sevalkulam Kanmai. Besides, plantation will also be carried out in the safety zone and on the bund and it will be ensured there is no disturbance to this drain. There will be no generation of effluent or its discharge from the mining operation in this lease area and as such no impact on surface or ground water quality is expected.. • The ultimate pit depth of mining is 39m.	4-10 11-12



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		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.	
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 39m. 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 3.6.2 Chapter – III.	11-12 3-46
29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.	There are no streams passing through the lease area.	--
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 39m.	2-2



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		The ground water table in this area is below this level.	4-11
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 1500 trees will be planted in and around the lease area. Details of the same is provided under TableNo.4.16, Chapter-IV.	4-21
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.	• 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.	4-25
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.	2-17
34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number	• In the post mining stage, entire 1.41.0 Ha of mined out area will be left as water	4-21



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	of sections) should be given in the EIA report.	body. 0.03.0Ha will be the roads, 0.01.0 Ha will be the infrastructure, 0.36.0Ha will be covered with vegetation, 1.04.00Ha will be undisturbed area and 0.07.0 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.	
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 4.8, Chapter-IV.	4-24
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.	3-9
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.	• Towards the socio economic development of the surrounding area, the proponent has earmarked an amount of Rs.5 Lakhs under Corporate Environmental Responsibility. The activities identified under CER will be implemented in a phased manner in the nearby Government schools. In consultation with the locals based on the	4-24



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		need & priority it will be implemented. Its details are provided in Para 4.7, 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 passed 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. 44.93 lakhs - The Environment Management Budget of Rs.22.92 Lakhs is allocated under capital cost and Rs.16.81 Lakhs and the same has been furnished in Table 10.2,	4-24 10-10



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		Chapter-X. All the recurring cost of maintenance of pollution control measures, environmental monitoring etc., will be met from revenue.	
42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	• The disaster management plan has been provided under section 7.3.1, Chapter-VII.	7-3
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 planned to allocate Rs. 5 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.	8-1



CHAPTER - I

INTRODUCTION

CHAPTER 1

INTRODUCTION

1.1 PURPOSE OF THE REPORT:

Thiru. S. Soundararajan propose to operate Rough Stone and Gravel Quarry at Survey No. 922/2,922/3,922/4 over an area of 2.92.00 hectares In Nathikudi Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu. **Revised production of 1,75,840m³ of rough stone and 22,080 m³ of Gravel up to depth of 39m for the period of 5 years** and has initiated action towards obtaining environmental clearance.

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. Apart from this proposal of Thiru. S. Soundararajan, there are other 2 proposals of Tmt. J. Dhavamani and Thiru. P.Jeyaraman are also falling in the cluster. As such combined impact prediction and individual EMP report preparation is carried out.

This EIA/EMP report for **Thiru. S. Soundararajan** is prepared based on standard and additional Terms of Reference issued by SEIAA, Tamil Nadu vide TOR Identification No. **TO24B0108TN5411304N dated 02.05.2025** 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. Soundararajan** are located in Nathikudi Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu.

Table 1.1: Details of the project

Project Name	Survey No.	Area	Land Type
Rough stone and Gravel Quarry of Thiru. S. Soundararajan	922/2,922/3,922/4	2.92.00 Ha	Patta land in the name of applicant wife, applicant got consent and registered



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

Figure 1.1: Site Vicinity Map



Table 1.2 Identification of project

Project Name	Rough stone and Gravel Quarry of Thiru. S. Soundararajan
Extent	2.92.00 Ha
Total Production	1,75,840m³ of rough stone and 22,080 m³ of Gravel up to depth of 39m for the period of 5 years
Peak Production	Annual peak production capacity of 47,850 m3 of Rough stone and 11,040 m3 of Gravel.
Ultimate Depth	39 m

Source: Approved Mining Plan



Creative Engineers & Consultants

CHAPTER-1 : INTRODUCTION

REV NO : 00/MAY/25

1-2

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Table 1.3: Statutory Clearances

Name	Issuing Authority	Status	Letter number	Date	Reference
Precise Area Communication	Department of Geology & Mining	Received	KV1/767/2024	25.10.2024	Annexure-1
Mining Plan Approval	Deputy Director, Geology & Mining	Approved	KV1/767/2024	20.11.2024	Annexure-2
VAO Letter	VAO	Obtained	--	--	Annexure-3
Details of quarry within 500m radius	Deputy Director, Geology & Mining	Approved	KV1/767/2024	20.11.2024	Annexure-4

1.2.2 IDENTIFICATION OF THE PROJECT PROPONENT:

Table 1.4: Identification of Project Proponent

Applicant Name	Thiru. S. Soundararajan
Address	D.No. 2/115A2, Main Road, Mamsapuram, Sivakasi West (Post), Sivakasi Taluk, Virudhunagar District – 626124.
Contact Number	99766 42587
Email-ID	srmsand@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	Brown field Project
Category	B1
Mineral to be mined	Rough stone & 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° 26' 00.31"N to 9° 26' 04.86"N Longitude: 77° 41' 27.96"E to 77° 41' 34.22"E
2	Toposheet Number	58 G/11
3.	Survey No.	922/2,922/3,922/4

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/508838/2024, dated: 06.12.2024
File no	11562
Terms of Reference	TO24B0108TN5411304N dated 02.05.2025
Baseline Data Collection	Carried out by Creative Engineers & Consultants , Chennai for Winter Season (Dec 2024 – Feb 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)



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HECTARES IN NATHIKUDI VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR, TAMIL NADU**

- 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.

* * * * *



CHAPTER - II

PROJECT DESCRIPTION

CHAPTER 2

PROJECT DESCRIPTION

2.1 TYPE OF PROJECT:

This proposal involves quarrying of Rough stone and Gravel by **Thiru. S. Soundararajan** 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. Soundararajan.
Location	Nathikudi Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu.
Survey No.	922/2,922/3,922/4
Coordinates	Latitude: 9° 26' 00.31"N to 9° 26' 04.86"N Longitude: 77° 41' 27.96"E to 77° 41' 34.22"E
Nearest Village	Nathikudi – 850m km (SW) side
Nearest Town	Sivakasi-11km - NE
Nearest Highway	SH-183-4.9Km– SE

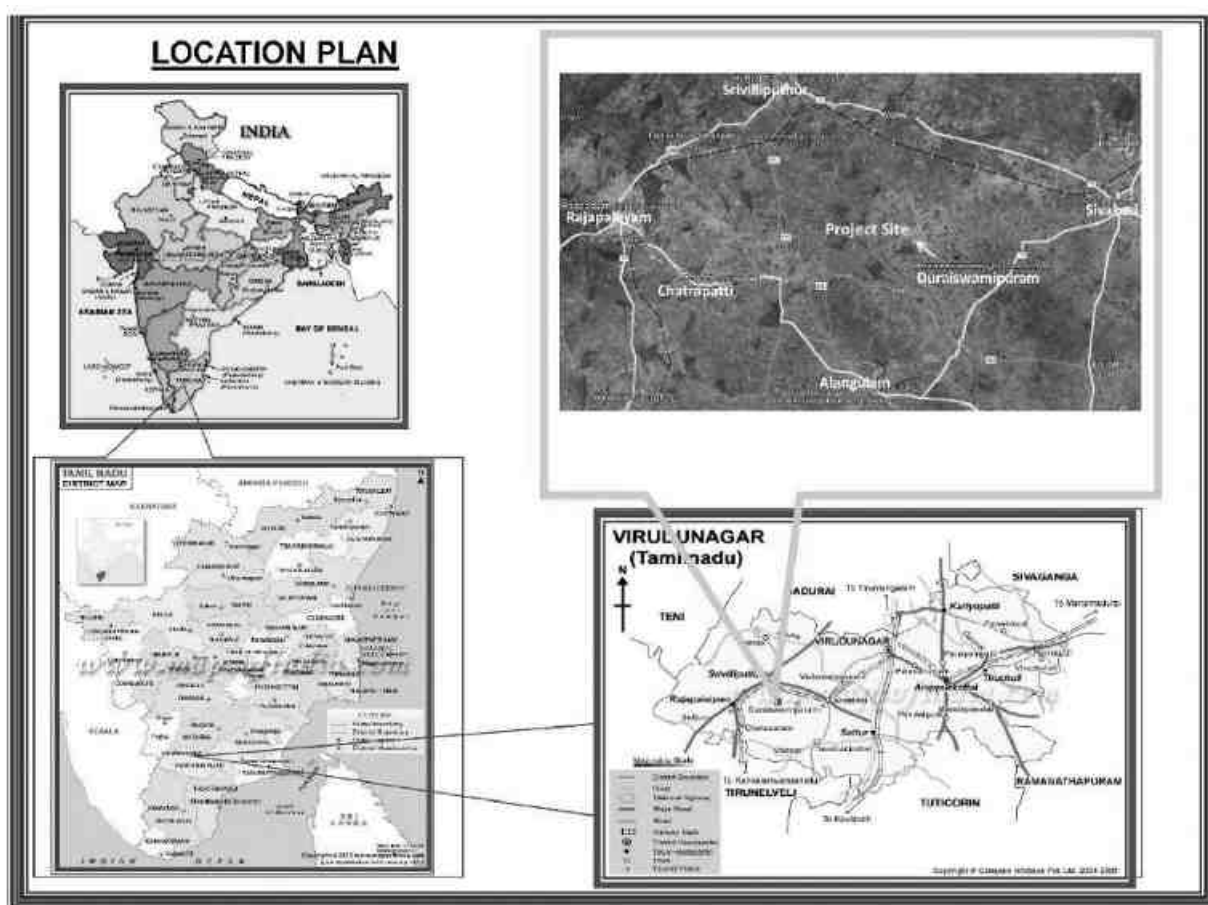


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Nearest Railway Station	Sivakasi-11km - NE
Nearest Airport	Madurai-62km-NE
Accessibility	Lease area is approachable from the existing road which is connected to Sivakasi to Srivilliputhur State highway road on the north.
Topography	The lease area is 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



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Figure 2.2: Approachability Map



Figure 2.3: Lease Plan

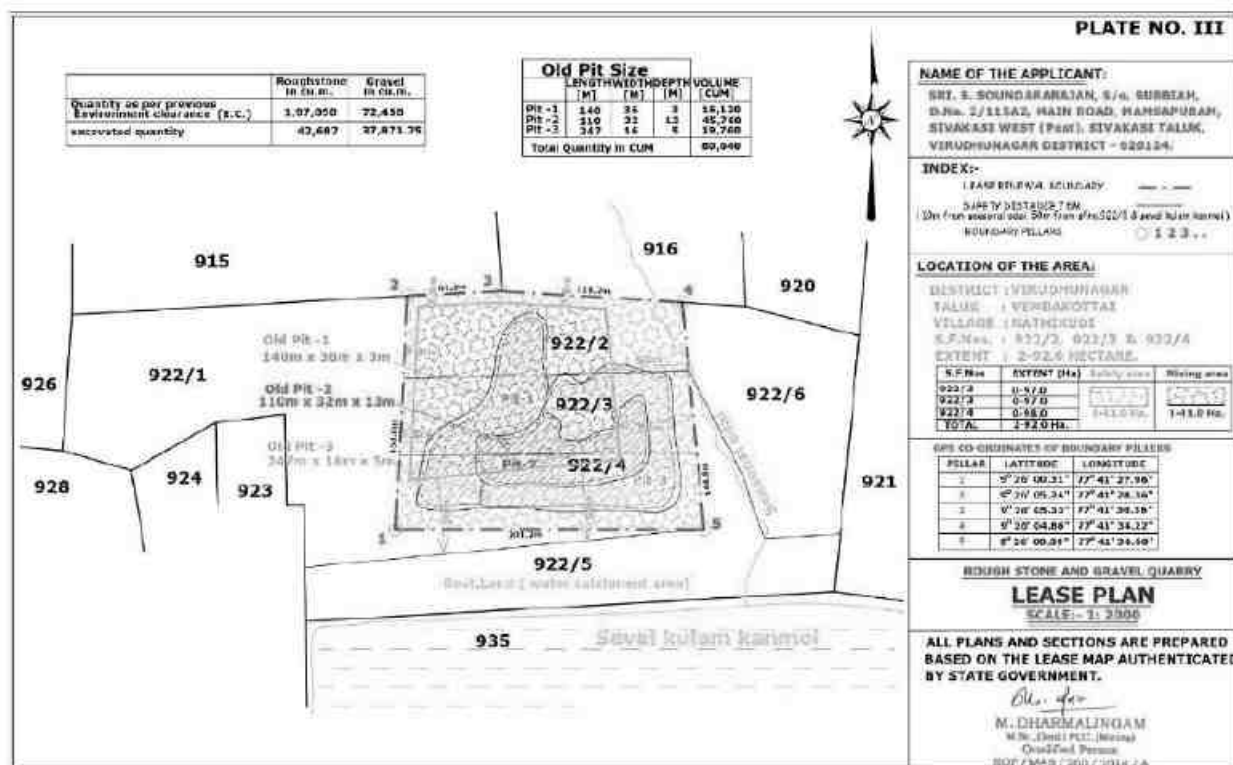


Figure 2.4: Satellite Imagery Showing Corner Co-ordinates



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SITE PHOTOGRAPHS



Creative Engineers & Consultants

CHAPTER-2 : PROJECT

DESCRIPTION

REV NO : 00/MAY/25

2-10

**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF
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HECTARES IN NATHIKUDI VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR, TAMIL NADU**

Figure 2.5: Village Map

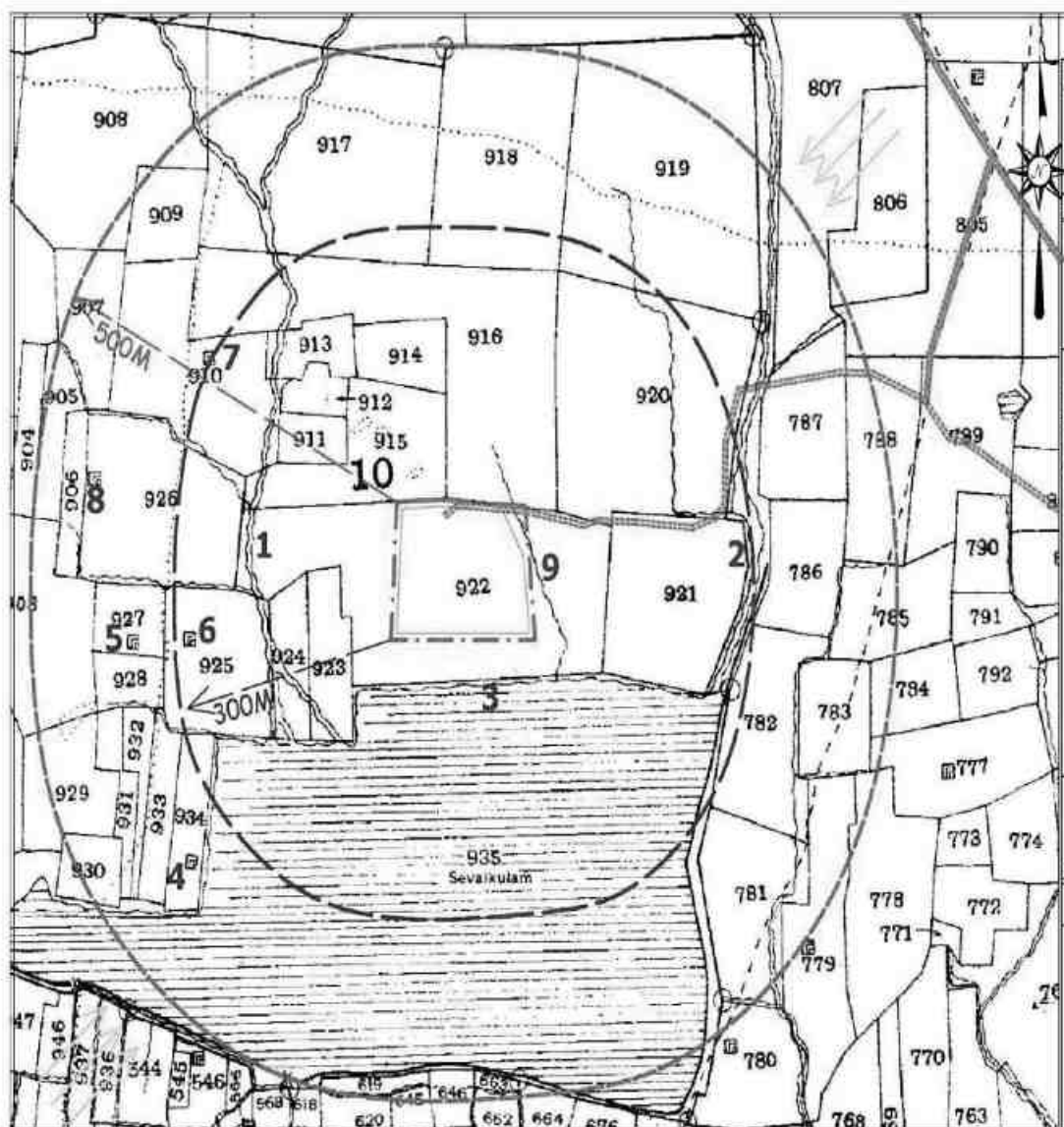


Figure 2.6: Details of features within 500m radius



DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. SOUNDARARAJAN AT SURVEY NOS. 922/2,922/3,922/4 OVER AN AREA OF 2.92.00 HECTARES IN NATHIKUDI VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR, TAMIL NADU

As per the conditions of the Terms of Reference, the details of structures located within the 100m, 200m, 300m and 500m radius are provided below.

Table 2.2: Structures within 500m radius

S.No	Features	Distance
1	Sevalkulam Kanmai	90m-S from mine working
2	Quarry Office	400m - E
3	Fire works	515m – E
4	Fire works office	480m - E

2.4 LAND CLASSIFICATION:

The lease area of Rough stone and Gravel is a patta land in the name applicant wife, applicant got consent and registered 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	Nathikudi	922/2 922/3 922/4	0.97.00 0.97.00 0.98.00	Lease area is 2.92.00 Ha is a patta land in the name applicant wife, applicant got consent and registered.
Total Area in (Hectares)				2.92.00	

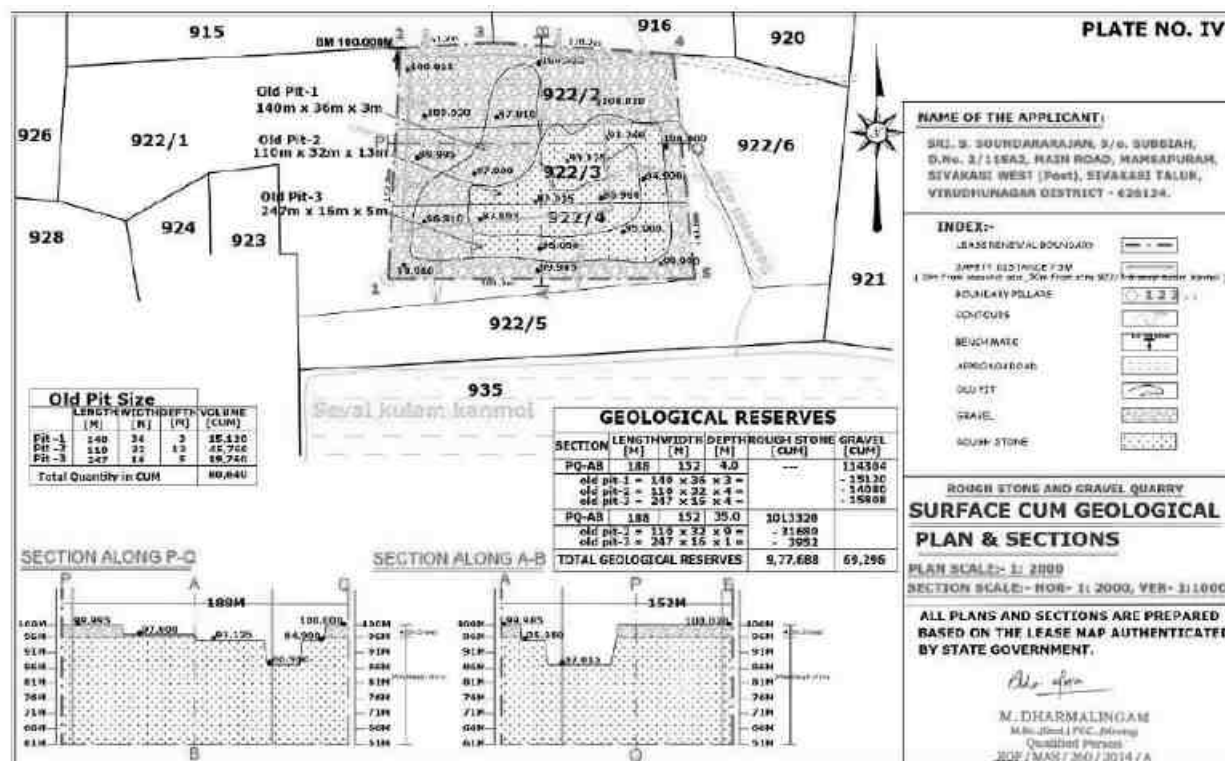
2.5 GEOLOGY:

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.



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Figure 2.7: Surface Geological Plan



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.
- Revised Production capacity of 1,75,840 m³ of Rough Stone & 22,080 m³ of Gravel up to depth of 39m for the period of 5 years after leaving 50m safety distance from the water catchment area (SF.No. 922/5) on the south & east side as per precise area letter & TOR condition.
- 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 Resources	9,85,808	71,728
Revised Mineable reserves after leaving 50m safety distance from the water catchment area (SF.No. 922/5) on the south & east side as per precise area letter & TOR condition	1,75,840	22,080

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 of Equipments

EQUIPMENT	CAPACITY	Roughstone and Gravel Quarry
		REQUIREMENT
Excavator	TATA HITACHI EX200	1
Tipper	10 Tonnes	6
Tractor compressor for drilling	175 CFM	2
Dewatering pump	5 HP Diesel pump	1

2.7 PROPOSED SCHEDULE FOR APPROVAL AND IMPLEMENTATION:

The proponents 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.



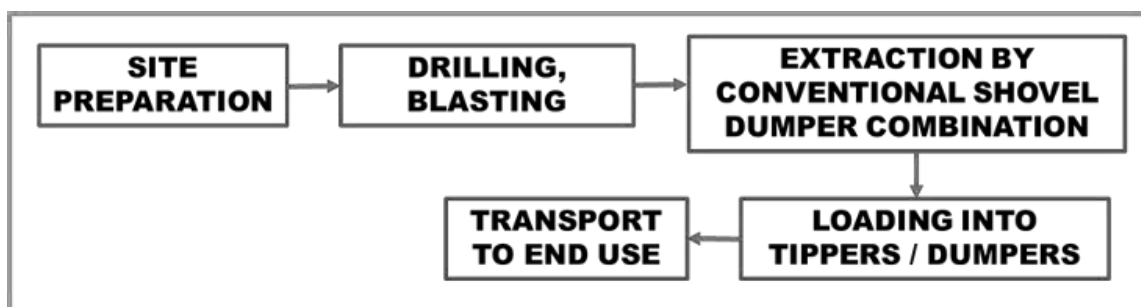
Table 2.6: Proposed Schedule of Implementation

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:

2.9.1 PAST PRODUCTION:

The present proposed quarry was earlier worked by the applicant from 2019 to 2024 by EC Lr.no. DEIAA/VNR/OO4/EC.NO.58/2018 Dated 08.12.2018. The pit dimension of the existing pit in the area is given below.

	Length (Max M)	Width (Max M)	Depth (Max M)
Pit 1	140	36	3
Pit 2	110	32	13
Pit 3	247	16	5



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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/004/EC.NO.58/2018 Dated 08.12.2018	Rc.No,KV1/10050/2017, dated 10.06.2019, 18/10/2019 to 17/10/2024	197050	72450		42687	37872	Pit1-3 Pit-13 Pit-5

2.9.2 PLAN PERIOD:

During the plan period of 5 years it is proposed to mine out 1,75,840 m3 of Rough Stone & 22,080 m3 of Gravel up to depth of 39m. The year wise production for the projects has been provided below:

Table 2.7: Production Schedule During Plan Period .

Year	Rough stone (m3)	Gravel (m3)
1	18,380	11,040
2	26,040	11,040
3	42,770	
4	47,850	
5	40,800	
Total	1,75,840	22,080

During the plan period of 5 years it is proposed to mine out 1,75,840 m3 of Rough Stone & 22,080 m3 of Gravel up to depth of 39m for the period of 5 years.

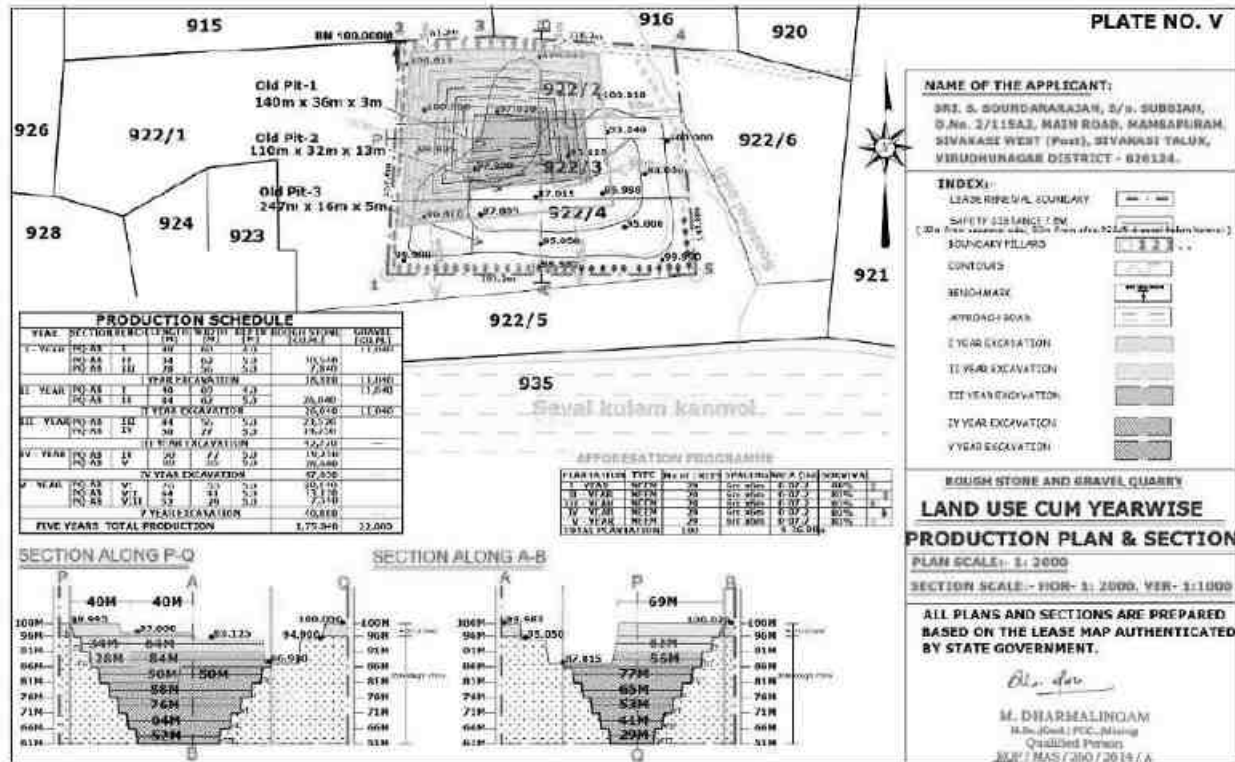
Waste Disposal during Plan Period:

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.



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Figure 2.9: Year wise Plan & Section



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2.9.3 CONCEPTUAL PERIOD:

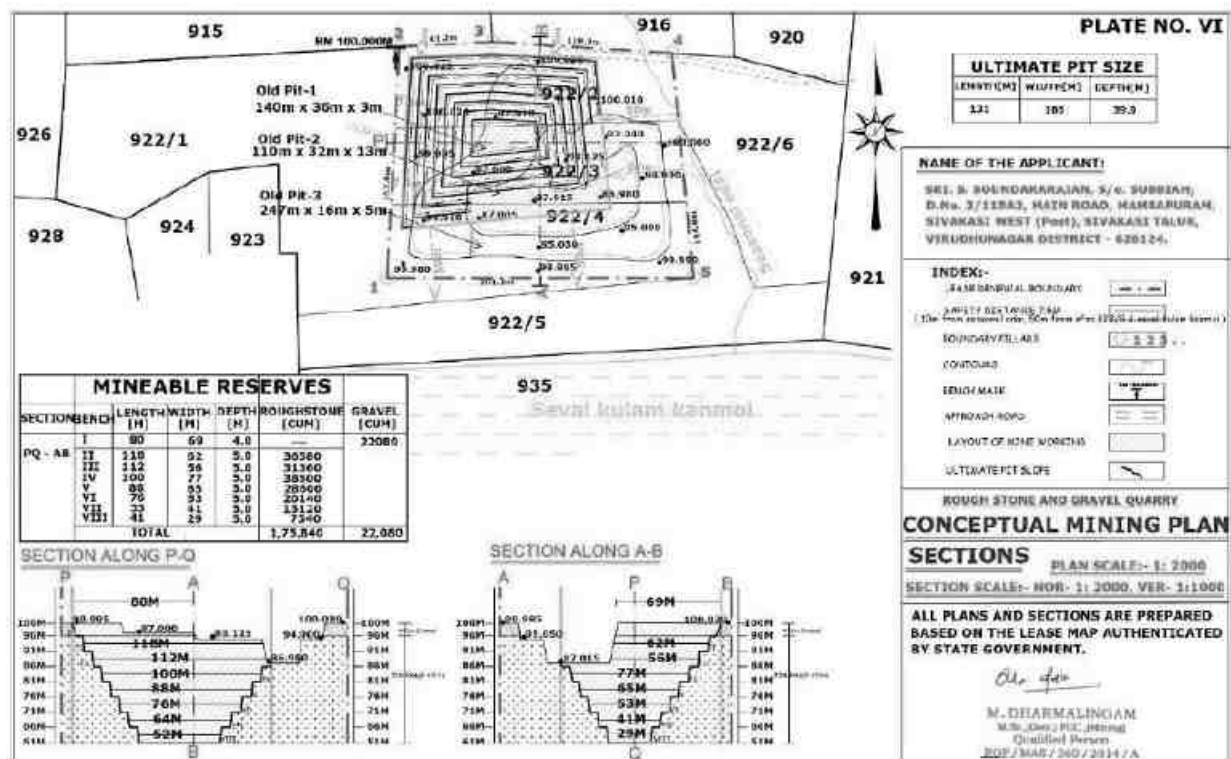
In the post mining stage, entire 1.41.0 Ha of mined out area will be left as water body. 0.03.0Ha will be the roads, 0.01.0 Ha will be the infrastructure, 0.36.0Ha will be covered with vegetation, 0.12.00Ha will be undisturbed area and 1.04.0 will be fencing. The ground water table on the surface in this area is ranging from 55 to 60m BGL Hence, ground water intersection in not envisaged

Table 2.8: Ultimate Pit Dimensions

Length (m)	Width (m)	Depth (m)
174	134	39

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



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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 Area	1.25.00	1.41.00
2.	Infrastructure	Nil	0.01.00
3.	Roads	0.03.00	0.03.00
4.	Green Belt	Nil	0.36.00
5.	Fencing	Nil	0.07.00
6.	Unutilized	1.64.00	1.04.00
Total		2.92.00	2.92.00

In the post mining stage, entire 1.41.00 Ha of mined out area will be left as water body. 0.03.0Ha will be the roads, 0.01.0 Ha will be the infrastructure, 0.36.0Ha will be covered with vegetation, 1.04.00 Ha will be undisturbed area and 0.07.0 will be fencing.

2.9.5 PROJECT REQUIREMENTS:

Table 2.10: Project Requirements

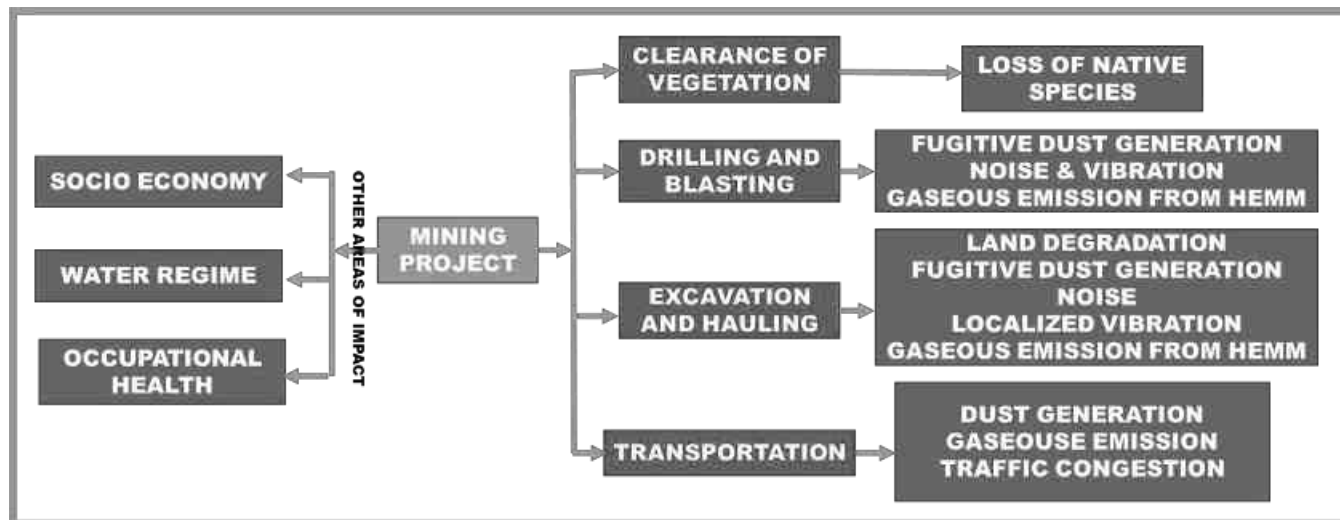
Project Name	Roughstone and Gravel Quarry	
Manpower	18 persons directly and 50 people indirectly.	
Water Requirement and Source	Water Requirement: 8 KLD	
	Details	Quantity (KLD)
	Drinking water and Domestic Use	1.0 KLD
	Dust Suppression	5.0 KLD
	Green belt	2.0 KLD
	Total	8.0KLD
	Source: The required 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. 44,93,940	
Funds allocated for socio-economic	Rs.5.0 Lakhs is allocated under CER budget.	



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 - III

DESCRIPTION OF ENVIRONMENT

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 **Winter Season (December 2024 to February 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 entire lease 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**

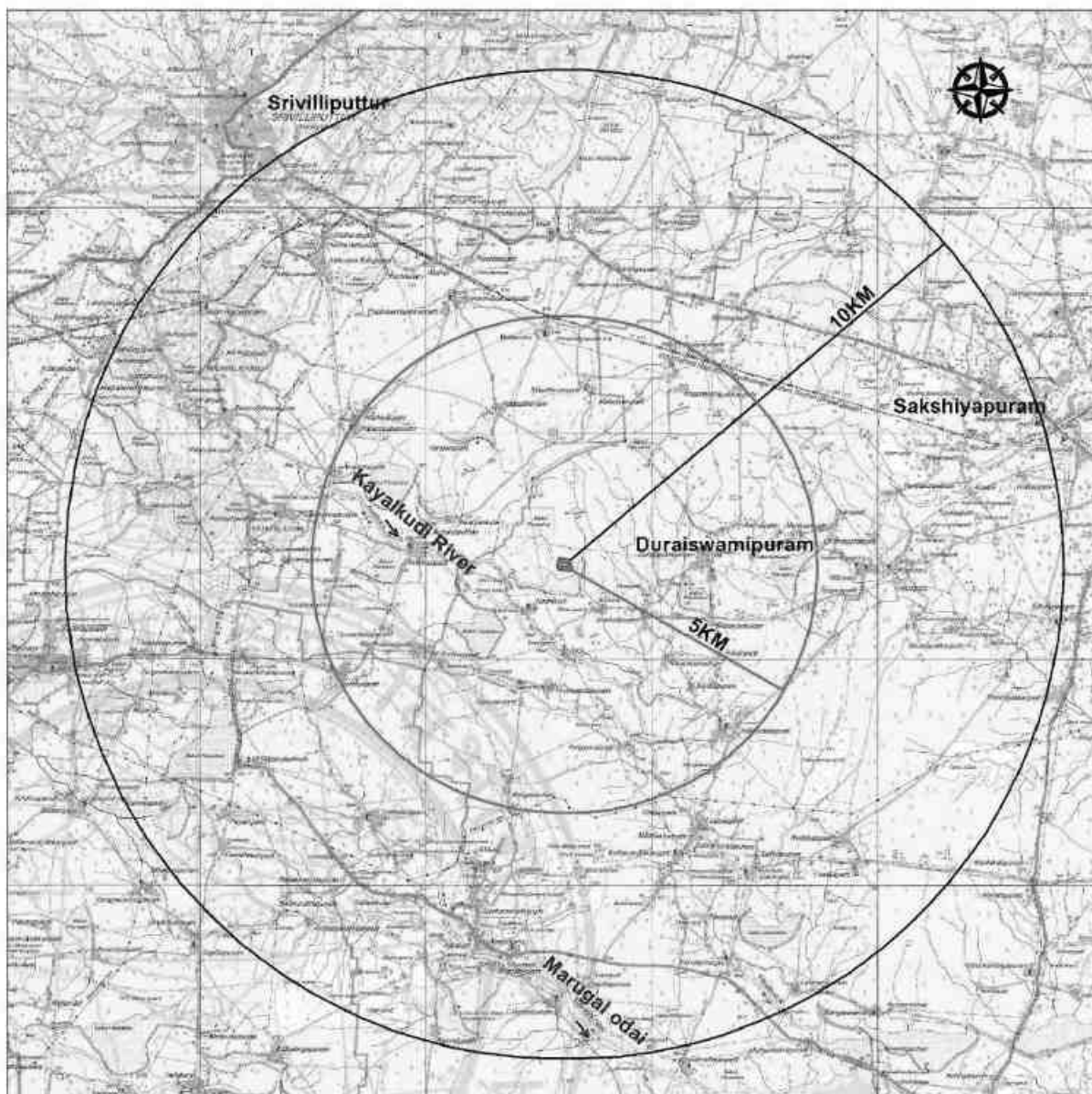
The primary data collection was done by means of field monitoring and the secondary data collection was obtained from published sources and Government documents. The details of the baseline data collection which has been elaborated through the course of this chapter has been concised below:

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, Viruthunagar	Virudhunagar
		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, 3 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

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HECTARES IN NATHIKUDI VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR, TAMIL NADU**

Figure 3.1: Study Area Map



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Table 3.2: Environmental Setting of the Study Area

S.No	PARTICULARS	Details
1	Nearest Highway	(SH-183)- Sivakasi – Alangulam– 4.9Km- (SE)
2	Nearest Railway station	Sivakasi RS – 11Km – (NE)
3	Nearest Airport	Madurai – 62Km – (NE)
4	Nearest major water bodies	Sevalkulam Kanmai -90m-South from mine boundary, Seasonal Odai-180m-W, 300 m-East & >10m – East, , Kayalkudi River -1.2km (SW), Marugal odai - 6.7km- (SW)
5	Nearest villages	Nathikudi – 850m-(SW), Paraippatti– 1.6km -(SE), Duraiswamipuram – 2.7km - (E), Nagapalaiyam– 2.8Km -(NW)– 2.8Km - (NW)
6	Hills / valleys	Nil within 10m radius
7	Notified Archaeologically important places, Monuments	Nil within 10m radius
8	Local Places of Historical and Tourism Interest	Nil within 10m radius
9	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
10	Reserved / Protected Forests	Nil within 10 km radius
11	Defence Installations	Nil within 10 km radius
12	Seismic Zone	Zone – II (Least Active)
13	Other Industries in the study area	Other than crushers, Roughstone quarries, match box, fire works factories 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 Nathikudi Village, Vembakottai Taluk, Virudhunagar District. Based on 2011 census data, in the 10km radius there are 28 Rural villages and 7 urban areas from Three Taluks namely Rajapalayam, Sivakasi, Srivilliputhur. 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	134570	49.67
Female Population	136384	50.33
Total	270954	100
B. Caste-wise population distribution		
Scheduled Caste	48390	17.86
Scheduled Tribes	292	0.11
Other	222272	82.03
Total	270954	100
C. Literate and Illiterate population		
Literate Males	107012	39.49
Literate Females	91000	33.59

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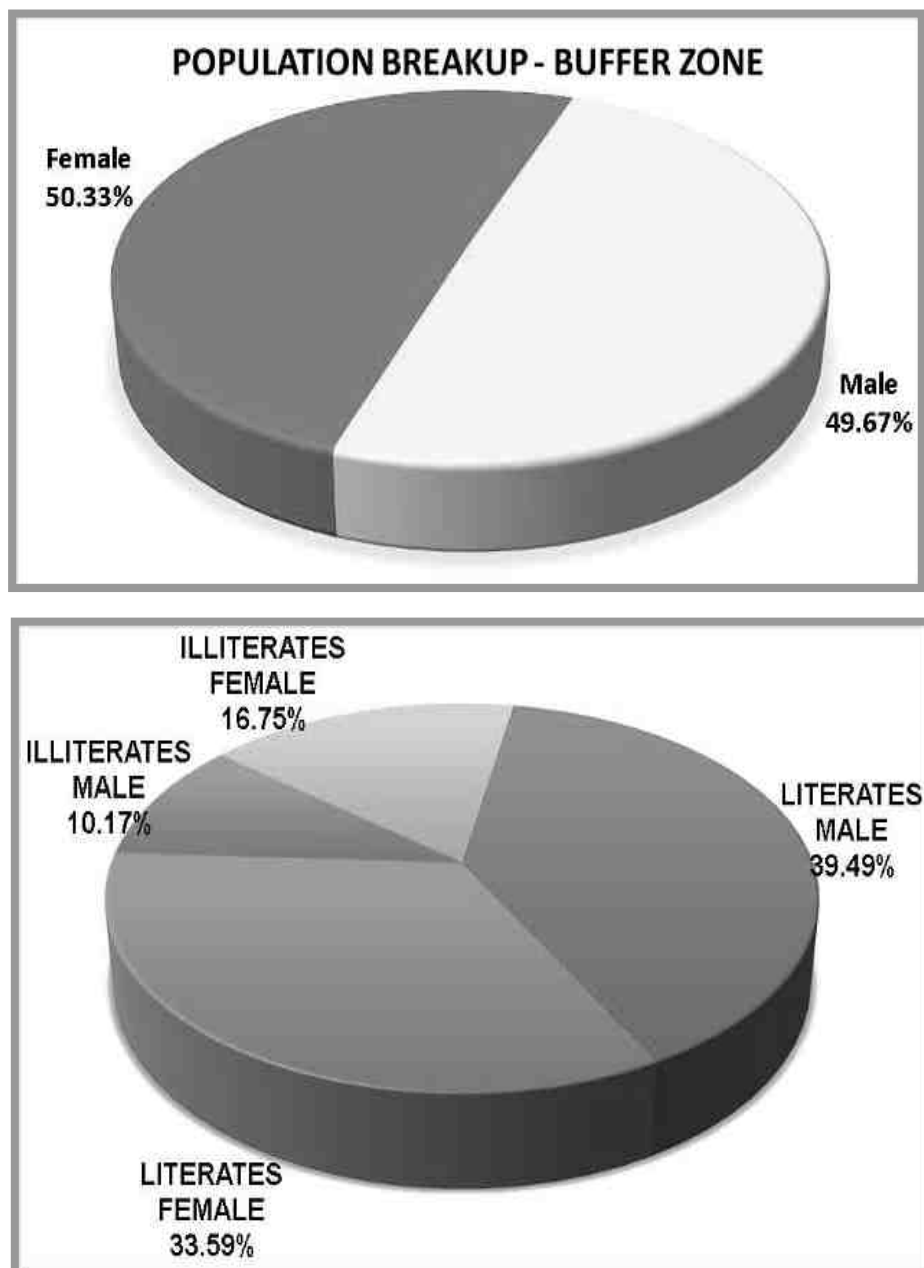
Details	Population	Percentage
Total Literate Population	198012	73.08
Others Males	27558	10.17
Others Females	45384	16.75
Others Population	72942	26.92
Total	270954	100
D. Occupational structure		
Main workers	119491	44.10
Marginal workers	10992	4.06
Total Workers	130,483	48.16
Total Non-workers	140471	51.84
Total	270954	100

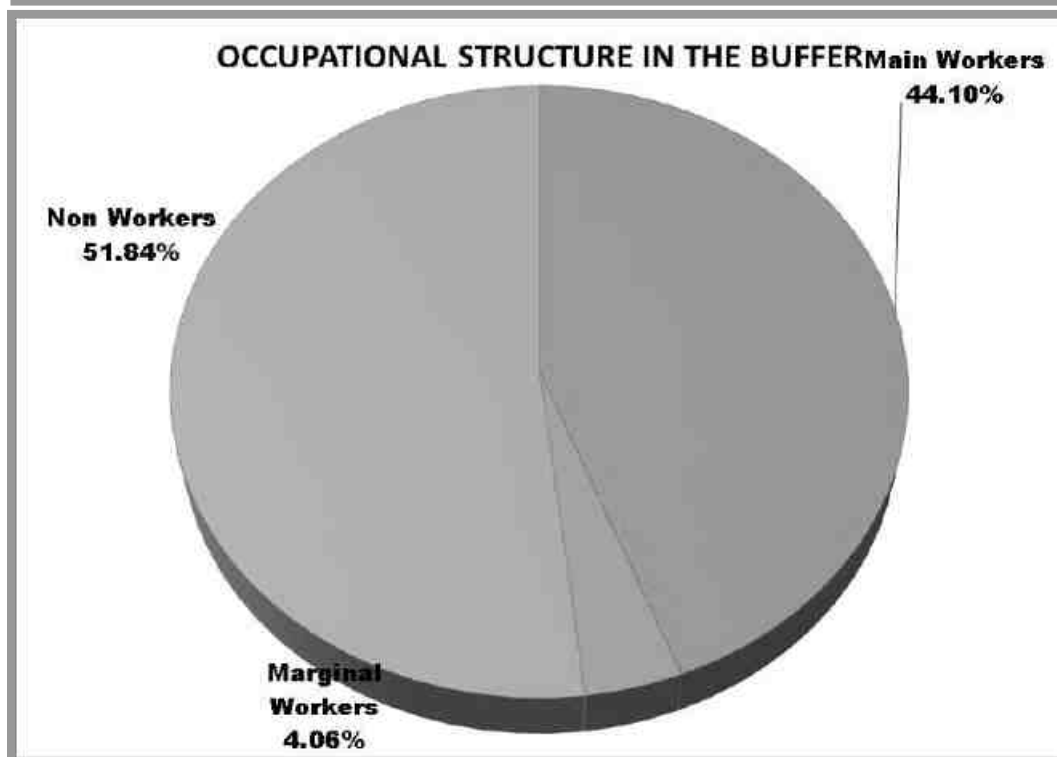
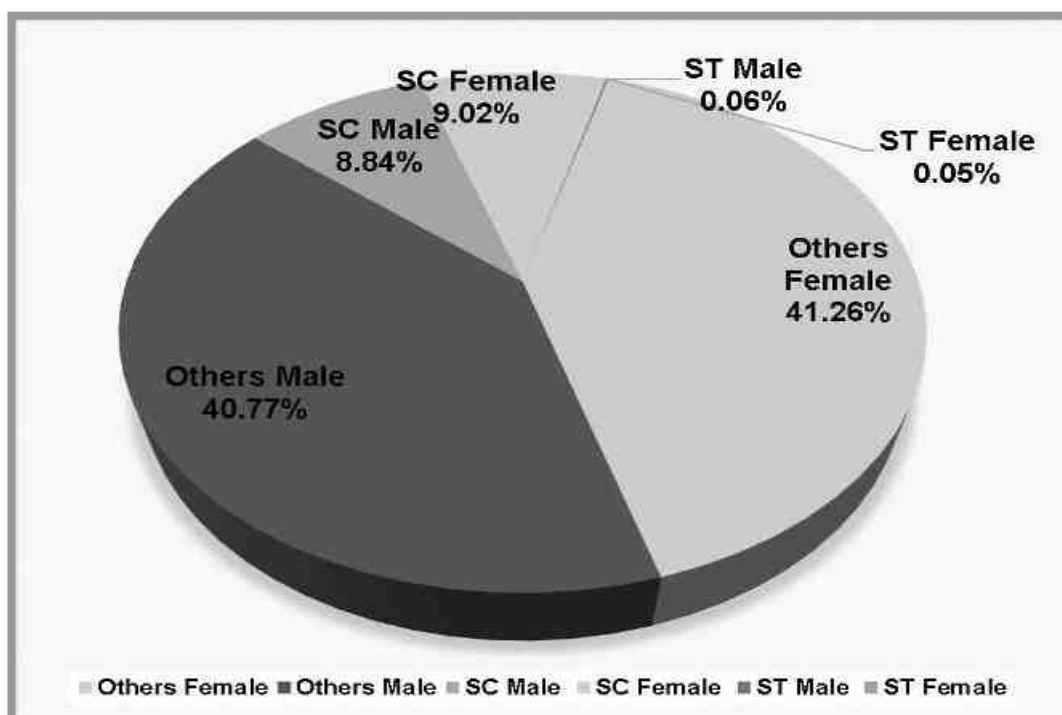
The total population of these 28 rural villages and 7 urban areas is 270954 in which the male population is 134570 (49.67%) and the female population is 136384 (50.33%). This shows that the male and female population ratio is almost equal. Among the total population 0.11% belong to Scheduled Tribes, 17.86 % are Scheduled Caste and the balance 82.03 % people belong to other castes. Among the total population, 73.08% of the people are literate.

Among the total population, 39.49% are literate males and 33.59% are literate females. This shows that the male literates are slightly more than the female literates. Totally, the illiterate constitute 26.92% of which the female cover 16.75% and the male 10.17%. Illiteracy in women is more than in the male population.

The village wise population, literacy levels and occupational structure details area given in **Annexures 4 and 5**. The demographic structure within the buffer zone is shown diagrammatically in **Figure No – 3.2**.

Figure 3.2: Demographic Structure in Buffer Zone





3.2.3 DETAILS OF AMENITIES:

Based on 2011 census data, regarding the educational facilities, 25 rural villages out of 28 rural villages have educational facilities. There are totally 92 Primary Schools functioning in these 25 rural villages. Among them 5 villages have one primary school, 3 villages have 2 primary schools, 7 villages have 3 primary schools, 1 villages have 4 primary schools, 2 villages has 5 primary schools ,4 villages have 6 primary schools, 2 villages have 7 primary schools and 1 village has 8 primary schools. With regards to educational facilities, from Primary School level to Senior Secondary School level, there is availability of some schools in the area. However, beyond this, college level education is not available in the buffer zone. Out of 28 villages, 18 villages have primary health sub centers. Better medical facilities are available in the nearby larger towns.

Table 3.4: Primary Schools in the Buffer Zone Rural Villages

S.No	No of Rural Villages	Number of primary schools	Totals
1	3	0	0
2	5	1	5
3	3	2	6
4	7	3	21
5	1	4	4
6	2	5	10
7	4	6	24
8	2	7	14
9	1	8	8
Total	28		92

Table 3.5: Education Facility Availability

PARTICULARS	Available in village
Govt Primary School	25
Govt Middle School	17
Govt Secondary School	9
Govt Senior Secondary School	4
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

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Table 3.6: Healthcare Amenities Availability

PARTICULARS	Available in village
Community Health Centre	2
Primary Health Centre	6
Primary Health Sub Centre	18
Maternity And Child Welfare Centre	10
TB Clinic	6
Hospital Allopathic	0
Hospital Alternative Medicine	0
Dispensary	6
Veterinary Hospital	7
Mobile Health Clinic	0
Family Welfare Centre	6

Table 3.7: Infrastructure Facilities

Particulars	Available in village
Tap Water-Treated	28
Covered Well	10
Hand Pump	19
Tube Wells/Borehole	25
Post office	3
Bus services	18
Railway station	2
Commercial Bank	6
Cooperative bank	12

The details of the educational, medical and infrastructural facilities available in the buffer zone as per 2011 census is provided in **Annexures- 6-8**.

However, lot of improvements are observed in the amenities in the area now.

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:

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. 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:

- Study area is dry, barren land. Mining & its allied activities is the major occupation in and around the lease area
- Patches of plantation and agriculture are observed during the monsoon season.
- Majority of the people are small farmers and others are working in the nearby crushers, mining , allied industries and crackers , match box, fire works factories.
- Since agriculture is predominantly rainfed and the water is available only for few months, during the rest of the time they have less employment opportunities. Other occupations include construction workers, vendors, etc.
- Bore well is the main source for agriculture activities during non monsoon season. There are OHT's, Ground level tanks, public taps are available .
- Education facilities from primary upto higher secondary school are available locally.
- Basic medical facilities are available locally.

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3.2.4.3 IDENTIFIED CER ACTIVITIES:

The following activities are identified based on the survey, which will be modified and implemented based on the needs and requirements of the local people:

- Improving the facilities in the nearby school like Provision of RO water facility, compound wall painting, Improvements in sanitation facilities .
- Road improvement work.



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.

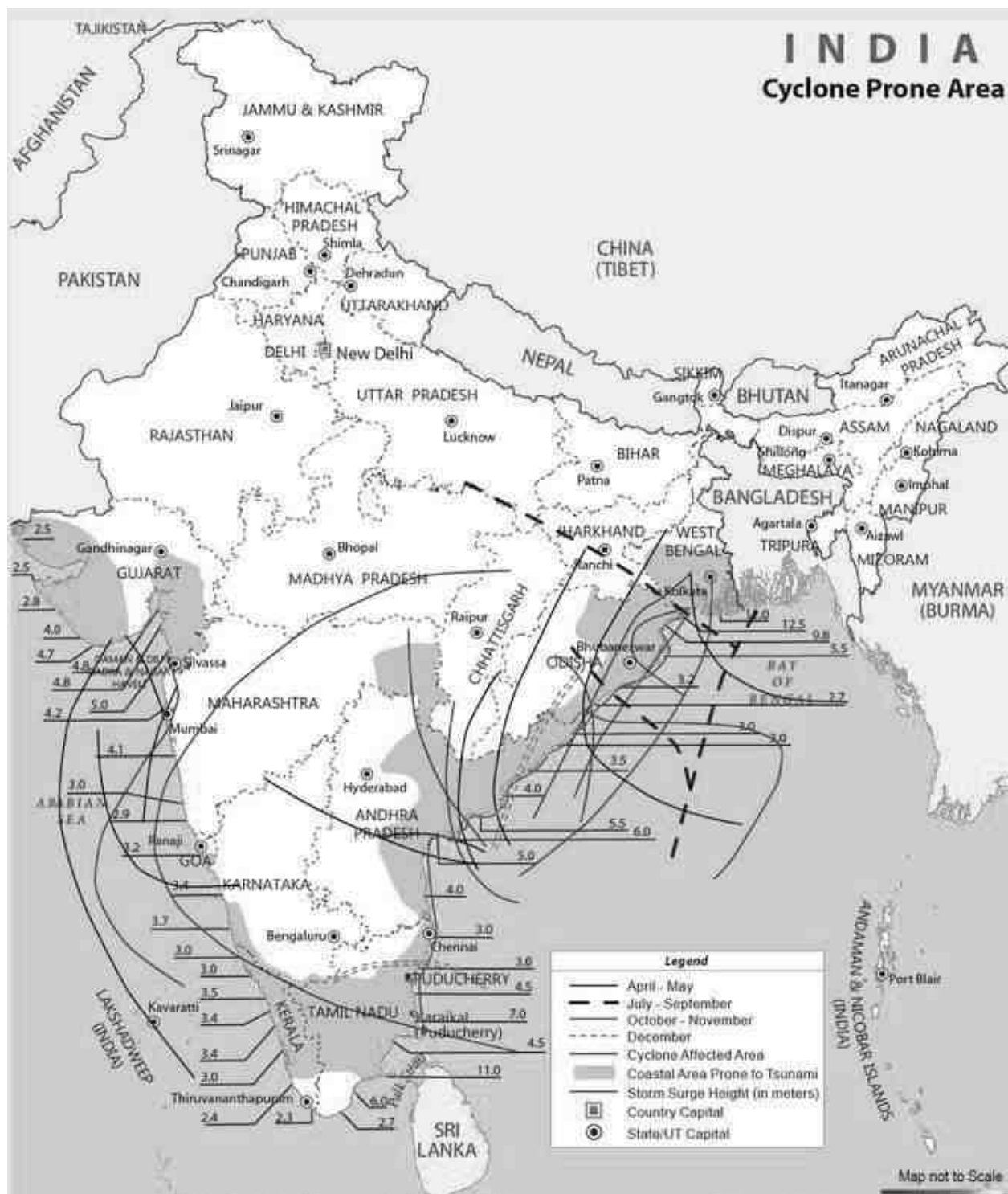
3.3.1.2 Historical Meteorological Data:

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.

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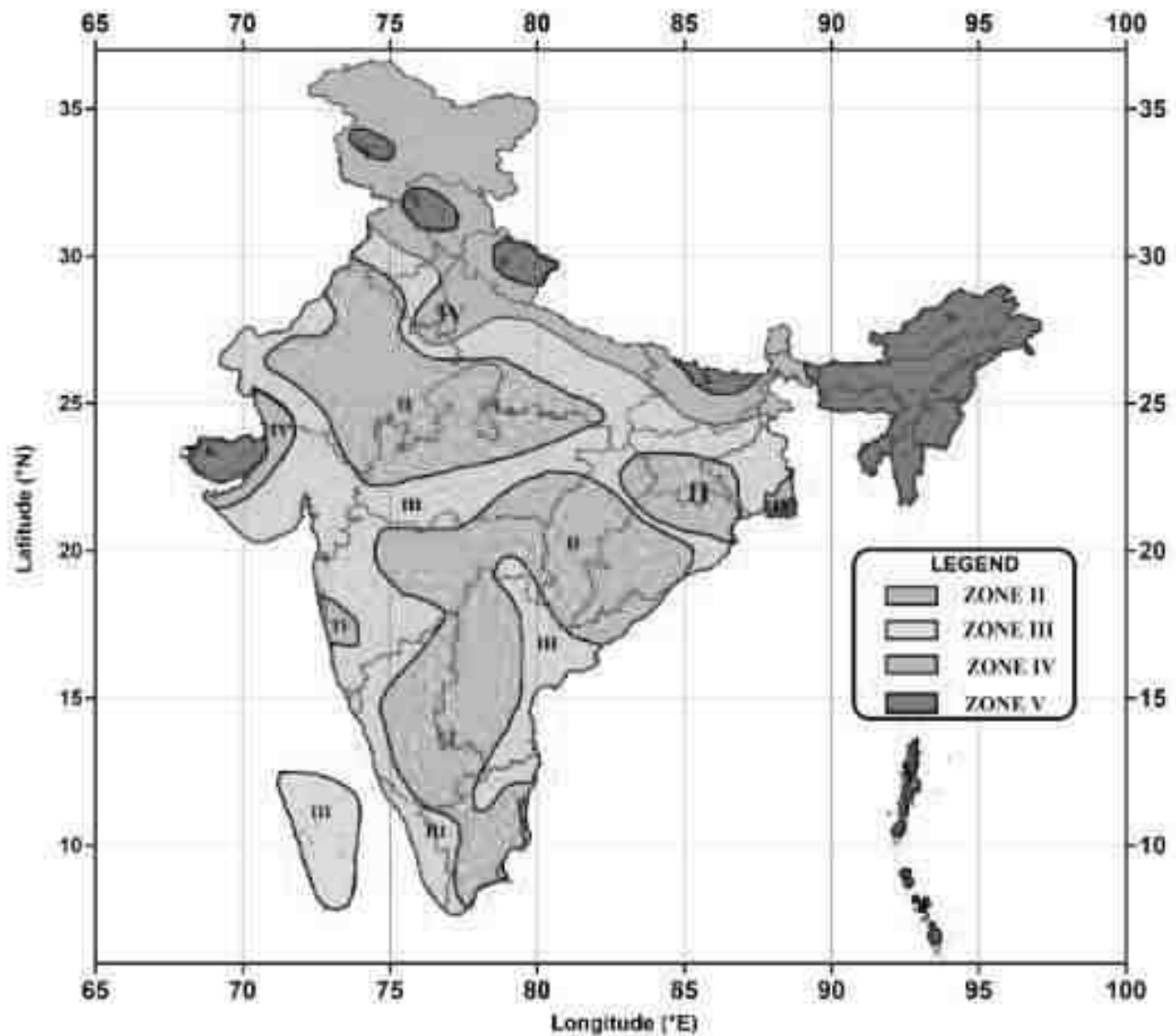
Figure 3.3: Cyclone Prone Areas



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



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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

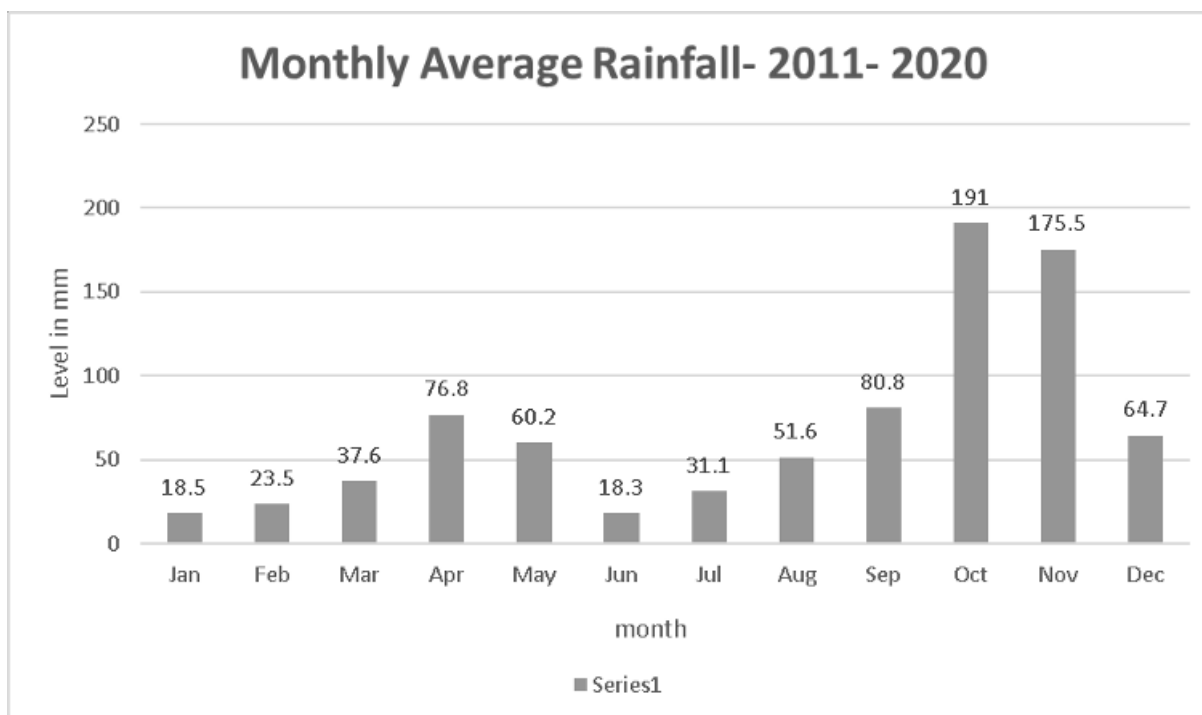
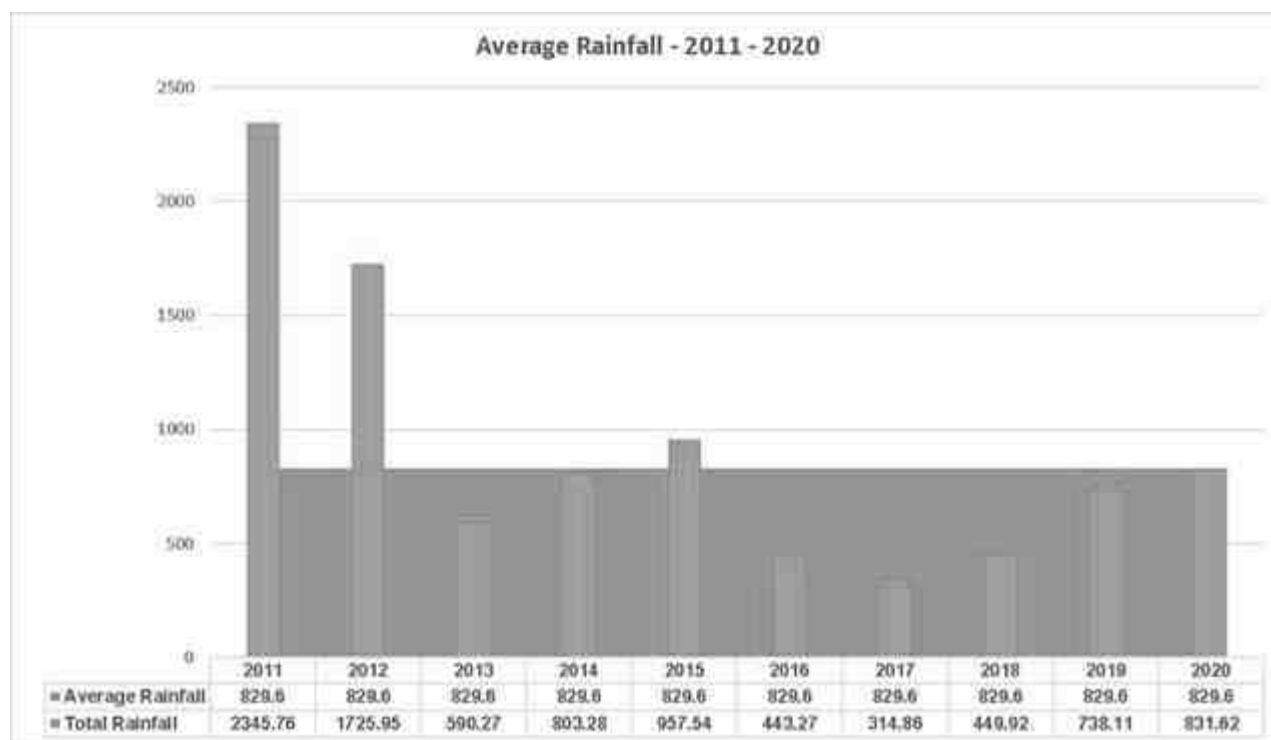


Figure 3.6: Average Annual Rainfall



3.3.1.3 SITE SPECIFIC METEOROLOGICAL DATA:

Micrometeorology and microclimatic parameters like wind velocity, wind direction, ambient temperature, relative humidity, were collected throughout the monitoring period.

DATA ANALYSIS:

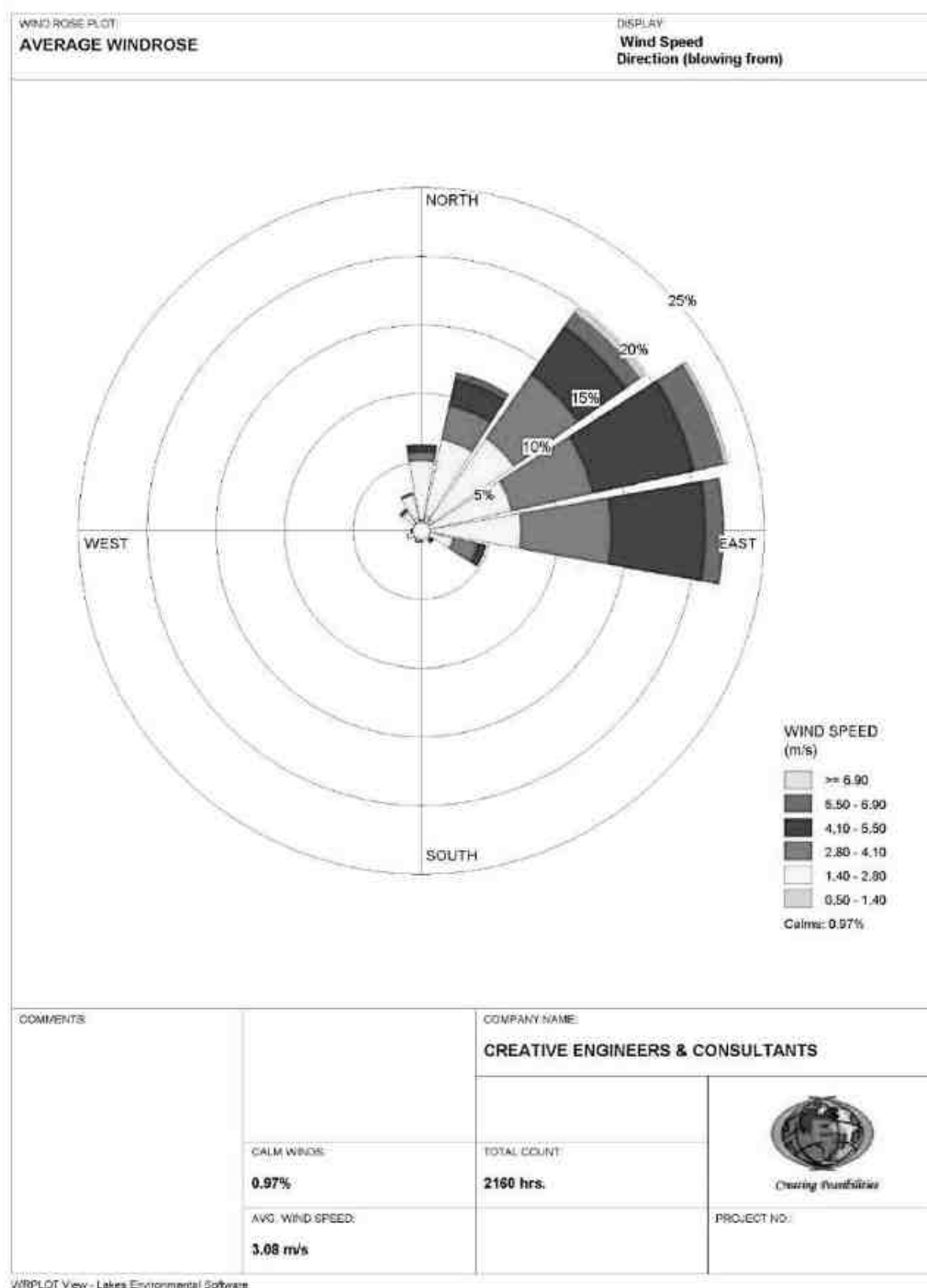
The temperature in the area during the study period ranged from 19.4°C to 35.1°C while the relative humidity varied between 20.0 – 95.0%. The wind speed during the study period ranged from <1.8 to 35.6 Km/hr. The predominant wind direction is from ENE. The meteorological data are presented in **Table no – 3.9**. The average wind rose is depicted in **Figure No - 3.7**.

Table 3.9: Meteorological Data

Season: Winter Season, December 2024 to February 2025)			
S.NO	PARAMETERS	MIN	MAX
1	Temperature In °c	19.4	35.1
2	Humidity in %	20.0	95.0
3	Wind speed in km/hr	<1.8	35.6
4	Predominant wind direction from	ENE	

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Figure 3.7: 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.0.9
- ❖ 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

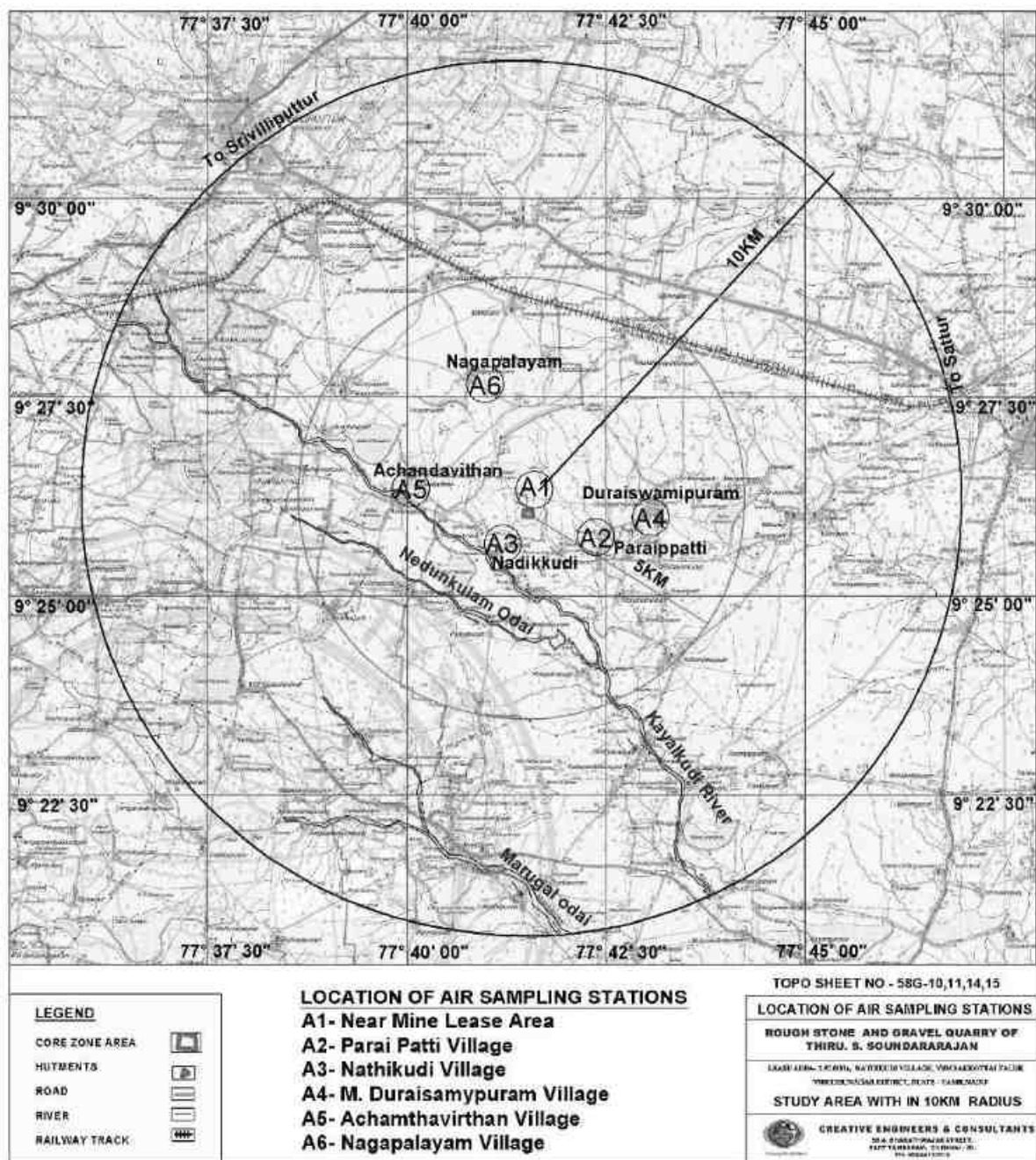
1.	Monitoring Period	Winter Season (Dec 2024 – Feb 2025)
2.	Monitoring Location	The location map showing Ambient Air Quality study stations are shown in Figure No- 3.8.
3.	Methodology	
	Parameter	Protocol
	a. Particulate Matter (PM10)	Gravimetric (IS 5182: Part 23:2017)
	b. Particulate Matter PM2.5	Gravimetric (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	Parai Patti Village	1.6km	SE
3	A3	Nathikudi Village	0.9 m	SW
4	A4	M.Duraisampuram Village	2.7km	E
5	A5	Achamthavirthan Village	2.7km	W
6	A6	Nagapalayam Village	3,2km	NW

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Figure 3.8: Ambient Air Quality Study Stations



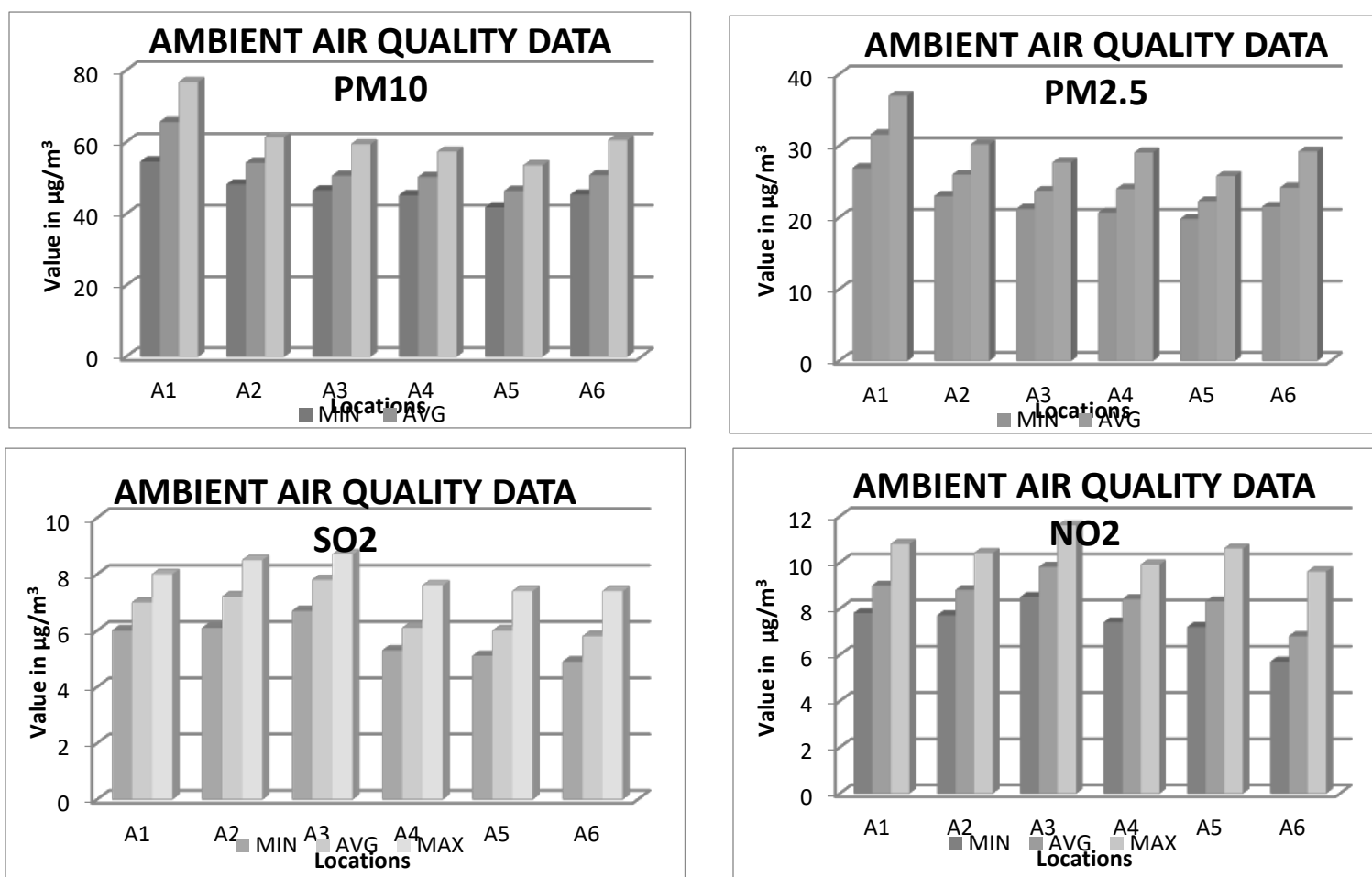
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Table 3.12: Ambient Air Quality Data

PARAMETERS	Cat.*	All Value in $\mu\text{g}/\text{m}^3$											
		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	54.6	65.6	76.7	26.9	31.6	37.0	6.0	7.0	8.0	7.8	9.0	10.8
A2-Parai Patti Village	R	48.2	54.2	61.4	23.0	26.0	30.2	6.1	7.2	8.5	7.7	8.8	10.4
A3-Nathikudi Village	R	46.6	50.6	59.4	21.2	23.7	27.7	6.7	7.8	8.7	8.5	9.8	11.6
A4-M.Duraisampuram Village	R	45.2	50.3	57.3	20.7	24.0	29.1	5.3	6.1	7.6	7.4	8.4	9.9
A5-Achamthavirthan Village	R	41.8	46.4	53.5	19.8	22.3	25.8	5.1	6.0	7.4	7.2	8.3	10.6
A6- Nagapalayam Village	R	45.4	50.8	60.5	21.5	24.2	29.2	4.9	5.8	7.4	5.7	6.8	9.6
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 3.9: 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 - 3.10**. 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 PM₁₀ values were in the range of 41.8-76.7 µg/m³. PM_{2.5} values were in the range of 19.8-37.0 µg/m³. SO₂ levels were ranging from 4.9–8.7 µg/m³. NO₂ levels were ranging from 5.7-11.6 µg/m³.

The existing Ambient Air Quality levels for PM₁₀, PM_{2.5}, SO₂ and NO₂, are within the NAAQ standards prescribed CPCB limits of 100 µg/m³, 60 µg/m³, 80 µg/m³ & 80 µg/m³. 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)

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		Winter Season (Dec 2024 – Feb 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	Parai Patti Village	Bore well	1.6km	SE
	W3	Nathikudi Village	Bore well	0.9 m	SW
	W4	M.Duraisampuram Village	Bore well	2.7km	E
	W5	Achamthavirthan Village	Bore well	2.7km	W
	W6	Nagapalayam Village	Bore well	3,2km	NW
3.	Methodology		Sampling - IS 3025 Part - I		
			Analysis – IS 3025 relevant parts / APHA 23rd Edition		

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Figure 3.10: Location of Water Sampling Stations

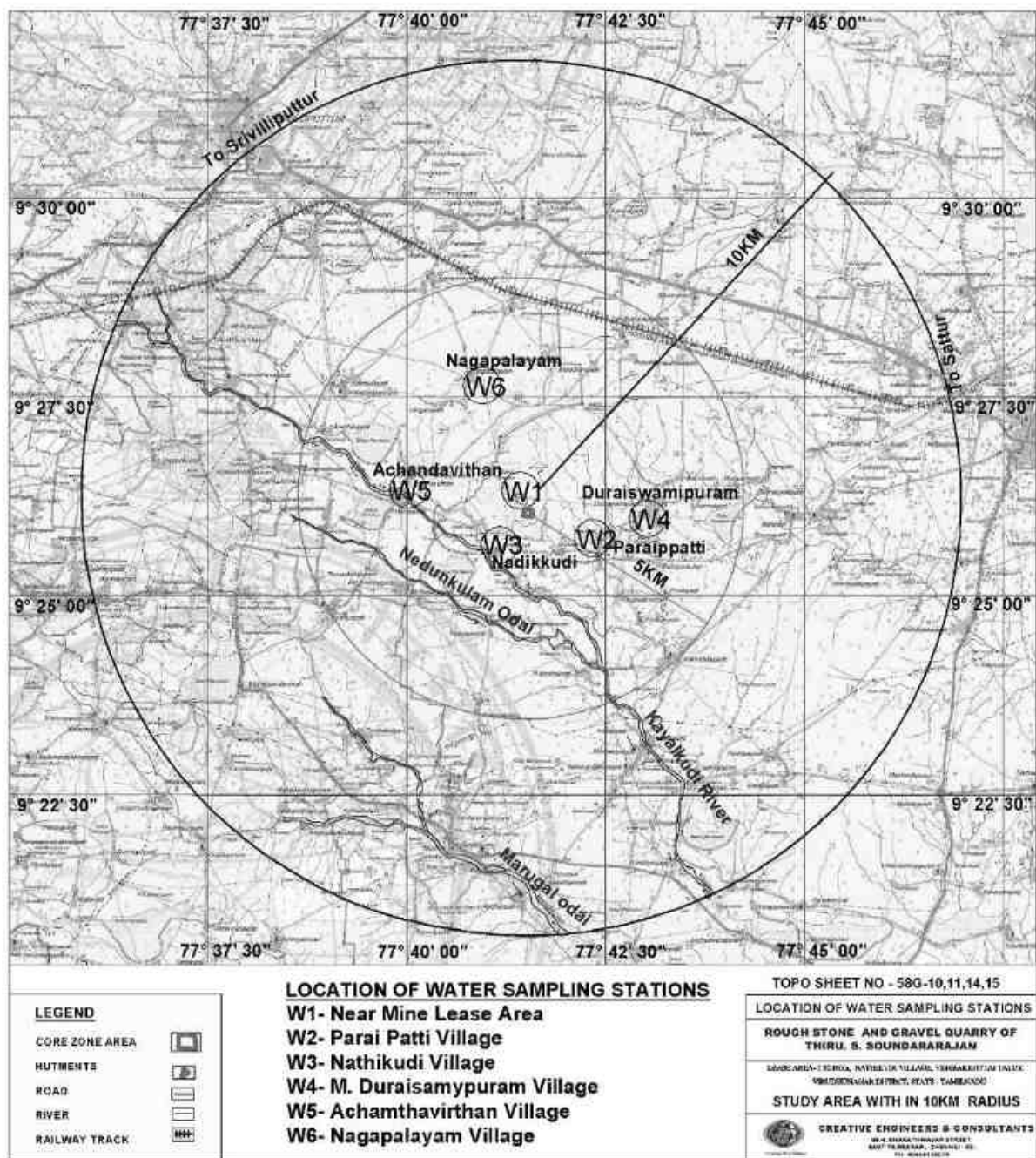


Table 3.14: Summary of Water Quality Data

Season	December 2024 to February 2025	
Monitoring Locations	6 locations	
Parameters	Range of values	Limits*
pH at 25 °C	7.42 – 7.92	6.5-8.5
Total Dissolved Solids, mg/L	94 – 620	2000
Chloride as Cl-, mg/L	35.80 – 348	1000
Total Hardness (as CaCO ₃), mg/L	184 – 432	600
Total Alkalinity (as CaCO ₃), mg/L	151– 332	600
Sulphates as SO ₄ ²⁻ , mg/L	32.30 – 245	400
Iron as Fe, mg/L	0.04 – 0.12	0.3
Nitrate as NO ₃ , mg/L	1.97 – 4.37	45
Fluoride as F, mg/L	0.21 – 0.58	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 of bore well water were ranging in between 7.42 – 7.92, TDS values were in the range of 94 – 620mg/L. Chloride values were ranging from 35.80 – 348mg/L. Iron content was found to be in the range 0.04 – 0.12mg/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:

Operational 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:

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Table 3.15: Noise Level Monitoring

1.	Monitoring Period	Winter Season (Dec 2024 – Feb 2025)		
2.	Monitoring Location	The location map showing noise monitoring locations are given in Figure No.3.11.		
	Code	Location	Distance	Direction
	N1	Near Mine Lease Area	-	-
	N2	Parai Patti Village	1.6km	SE
	N3	Nathikudi Village	0.9 m	SW
	N4	M.Duraisampuram Village	2.7km	E
	N5	Achamthavirthan Village	2.7km	W
	N6	Nagapalayam Village	3,2km	NW
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		



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Figure 3.11: Location of Noise Sampling Stations

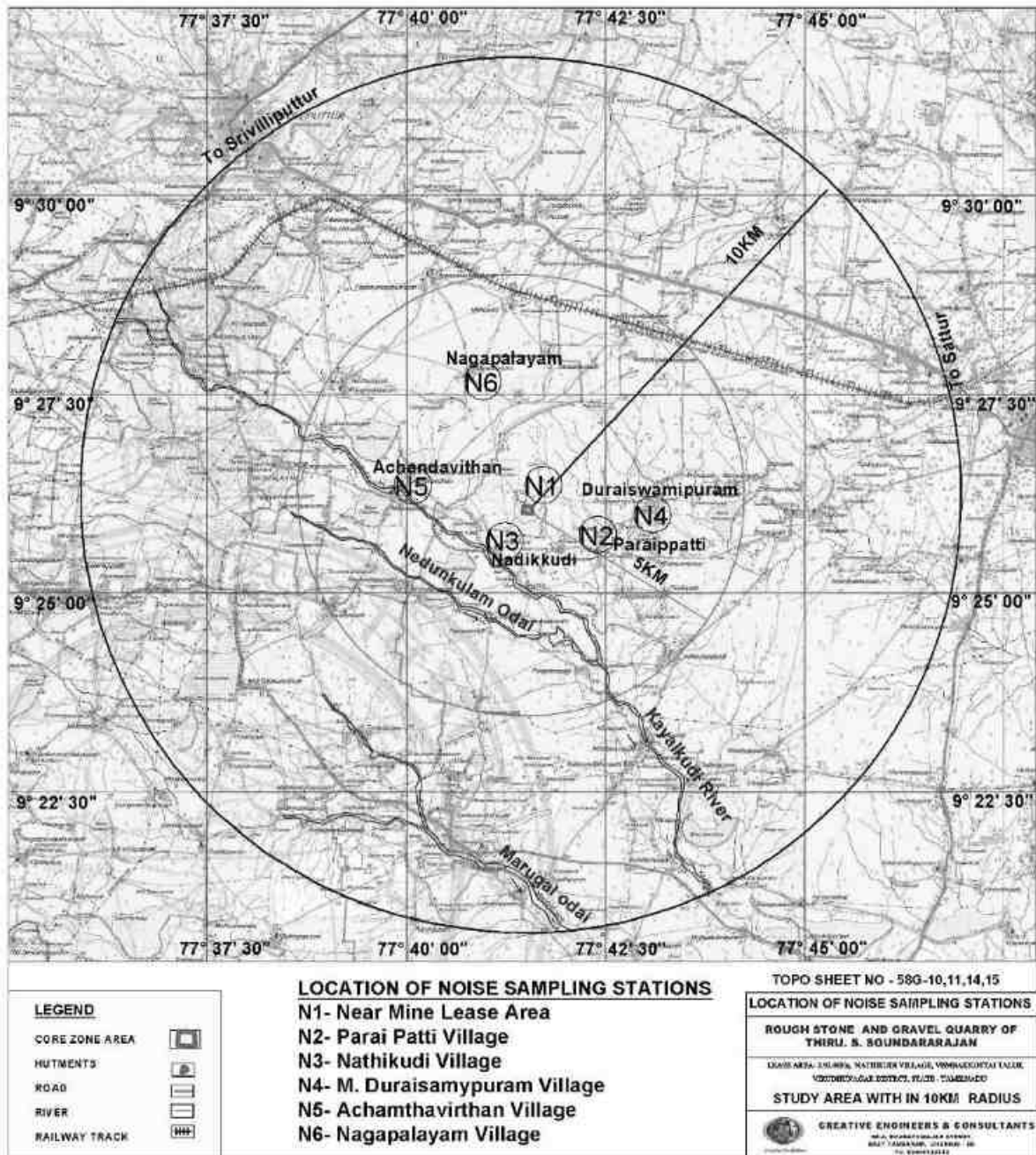
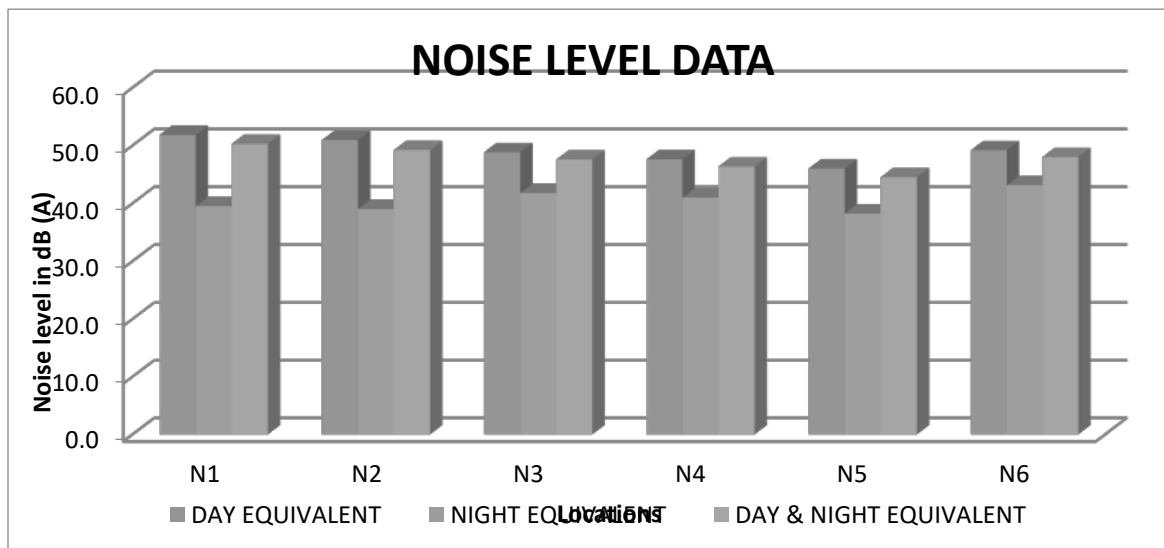


Table 3.16: Ambient Noise Level in dB (A)

Date and time of monitoring	N1	N2	N3	N4	N5	N6
Day Equivalent	51.8	50.9	48.8	47.6	46.0	49.2
Night Equivalent	39.5	39.0	41.8	41.0	38.3	43.1
Day & Night Equivalent	50.3	49.2	47.5	46.3	44.5	48.0
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 3.12: Noise Level Data



3.3.4.1 Results and Discussion:

The results of noise levels for all locations are given in **Table No-3.16**. The noise values for all above locations are shown in a comparative chart given in **Figure No - 3.12**. Day Equivalent Noise (Leq-d levels) were ranging from 46.0 dB(A) to 51.8 dB(A) and night Equivalent Noise (Leq-d) levels ranged between 38.3 dB(A) to 43.1 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 4 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.

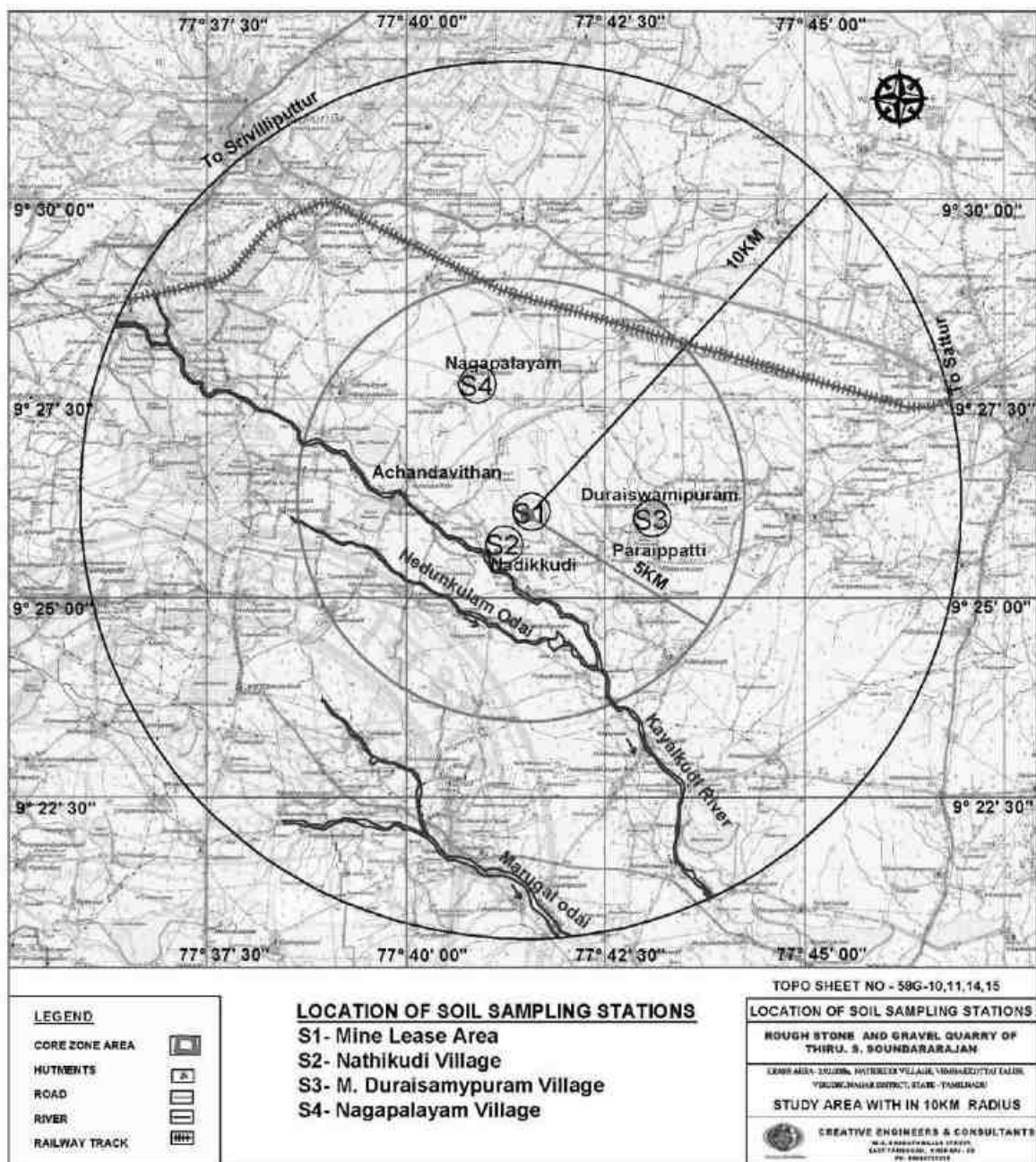
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Table 3.17: Soil Quality Monitoring

1.	Monitoring Period	Winter Season (Dec 2024 – Feb 2025)		
2.	Monitoring Location	The location map showing soil sampling locations are given in Figure No.3.13.		
	Code	Location	Distance	Direction
	S1	Mine Lease Area	-	-
	S2	Nathikudi Village	2.7 km	SW
	S3	M.Duraisampuram Village	2.7 km	E
	S4	Nagapalayam Village	3.2 km	NW
3.	Methodology	Composite soil samples using sampling augers and field capacity apparatus.		
4.	Monitoring Frequency	Once during monitoring period		

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Figure 3.13: Location of Soil Sampling Stations



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Table 3.18: Soil Quality Data

S.No	Parameters	Unit	S1	S2	S3	S4
1	pH at 25°C	-	7.46	7.32	6.98	7.86
2	Electrical Conductivity	(µmhos/cm)	174	152.5	106.4	121.3
3	Dry matter content	%	97.65	96.52	97.25	96.33
4	Water Content	%	2.35	3.48	2.75	3.67
5	Organic Matter	%	1.55	1.32	1.65	1.27
6	Soil texture	-	SILT LOAM	SILT LOAM	SILT LOAM	CLAY LOAM
7	Grain Size Distribution i. Sand	%	40.68	37.47	34.79	42.32
8	ii. Silt	%	52.36	53.01	50.69	29.78
9	iii. Clay	%	6.96	9.52	14.52	27.90
10	Phosphorous	µg/g	1.32	1.58	1.46	1.02
11	Sodium	mg/kg	212	242	265	307
12	Potassium	mg/kg	764	654	589	642
13	Total Nitrogen	mg/kg	705	547	632	324
14	Total Sulphur	%	BDL(D.L - 0.02)	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 6.98 to 7.86 and Electrical Conductivity values were ranging between 106.4 – 174.0 µmhos/cm. Soils are generally silt loam type. Organic matter values were ranging between 1.27 – 1.65%. Total Nitrogen values were ranging between 324 - 705 mg/kg. Phosphorus values were ranging between 1.02 – 1.58 µg/g. Potassium values were ranging between 589 -764 mg/kg. Sodium values were ranging between 212- 307 mg/kg. Total Sulphur values were observed to be BDL. The soil quality data for the 4 samples collected and analyzed are provided in **Table No – 3.18.**

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 (Figure No.3.15) 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 3.19: RS satellite image used for the present study

S.No	Type of Data	Date	Generated Map
1.	Landsat 8	February 2025	Landuse (LU) Map showing 10 Km buffer zone

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 3.14 : Landsat 8 Satellite Data of the Study Area

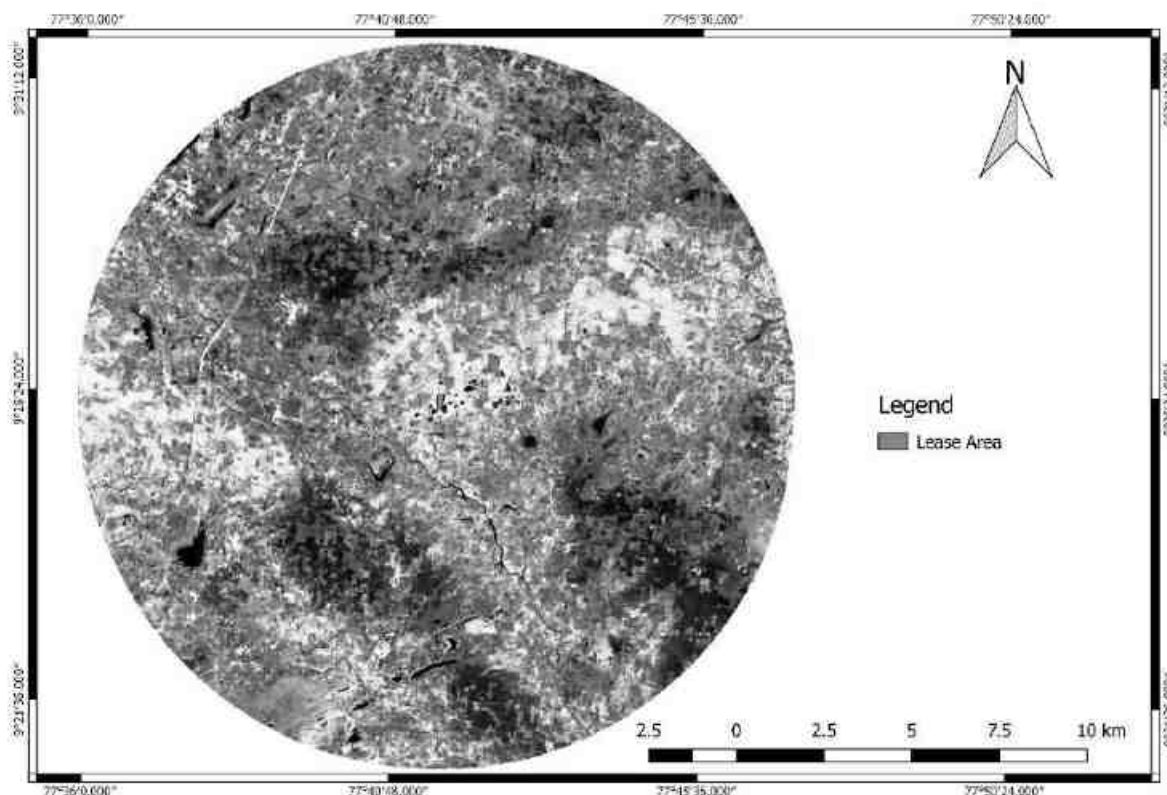


Table 3.20: Major Landuse Units of the Study Area

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. 3.16) using above such elaborate procedure and transformed into GIS environment for its spatial

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distribution and area estimation. Spatial nature and extent of various landuse categories within the buffer area is discussed is given below:

Figure 3.15: Map Showing Land Use Categories around 10km Buffer

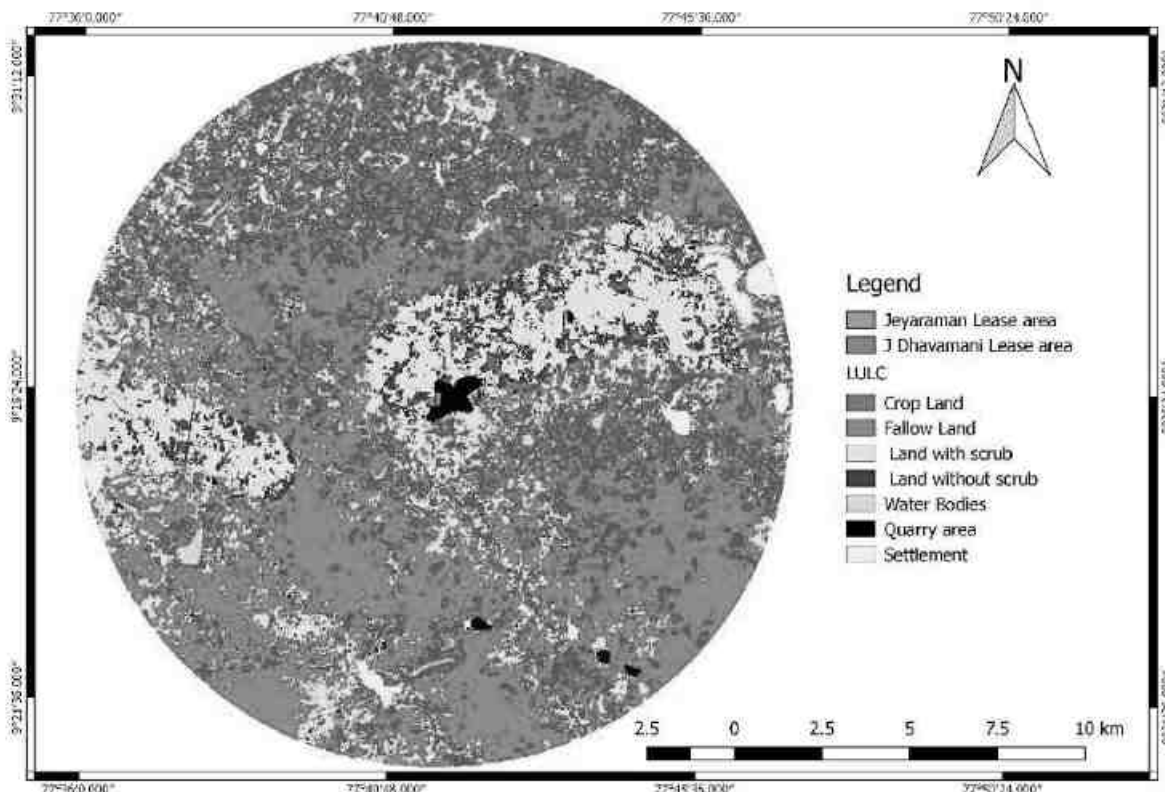


Table 3.21: Area Estimation of Landuse Categories in Buffer Zone

S.No	Landuse Feature	Area (Sq.Km)	Percentage
1	Agriculture/ Plantation	66.60	19.91
2	Fallow Land	167.12	49.97
3	Land With Scrub	66.87	19.99
4	Land Without Scrub	11.79	3.52
5	Water bodies	2.17	0.65
6	Mining	1.96	0.59
7	Settlement	17.93	5.36
	Total	334.44	100

From the above table it is seen that 49.97% of the buffer area is classified under fallow land, 19.91 % of Agriculture/ Plantation land, 19.99 % constitutes land with scrub, 3.52 % constitutes land without scrub and the balance falls under other land use categories.

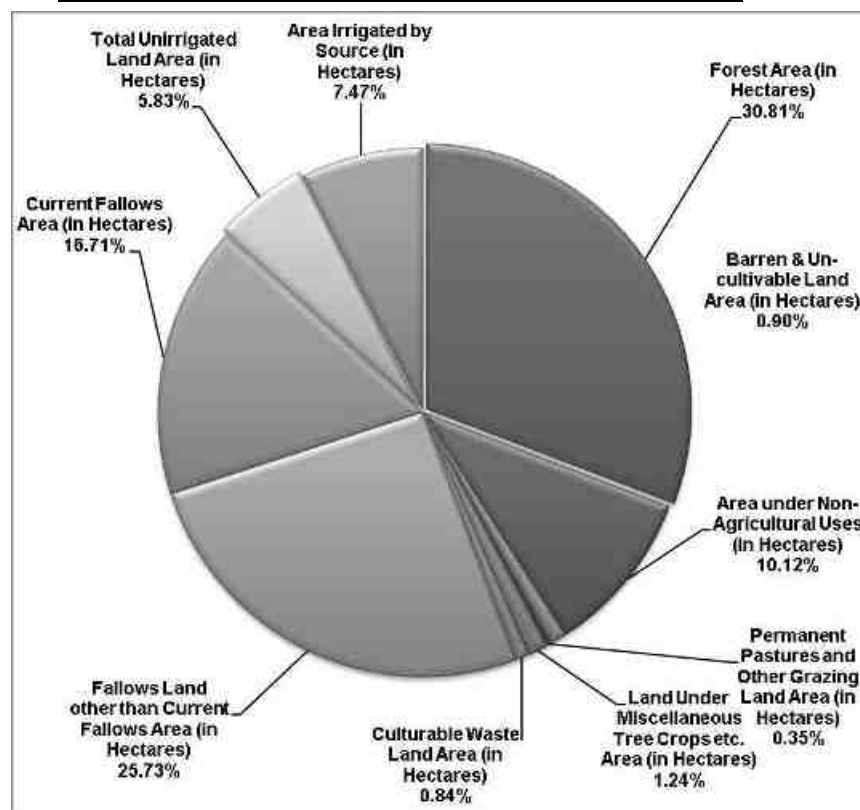
.LAND USED BASED ON REVENUE RECORDS:

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 - 3.22. Village wise land use pattern is provided in **Annexure-11**.

Table 3.22: 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	2384.77	0	353.28	0	4.1	114.9	4.93	1071.64	273.41	373.85	188.66
2 - 5 KM	4555.12	0	329.49	85.17	19.72	149.1	130.87	502.98	1967.41	879.38	491
5-10 KM	39703.17	14369	4037.85	335.53	141.38	316.66	257.79	10425.18	5551.58	1463.91	2804.29
0-10 KM	46643.06	14369	4720.62	420.7	165.2	580.66	393.59	11999.8	7792.4	2717.14	3483.95

Figure 3.16: 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.

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 Sampling Methodology:

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 5 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 : A total of 100 x 100 m Grid was laid for buffer zone of 300m from Core Zone. In that grid 10 × 10m sub-quadrat were laid down randomly within core, PIZ 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 apart to maximize the sampling efforts and minimize the species homogeneity, such as small stream area, Mining area, Working pit, Old quarries, agricultural areas, tank bunds, farm forestry plantations, natural forest area, avenue plantations, house backyards, etc. In each sample quadrat, 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 i th species in the dataset of interest.

Evenness index was calculated as: $E = H'/H_{max}$,

Whereas $H_{max} = \log_2$ (number of species in the plot)

A.CORE ZONE:

The proposed lease area is a non forest, private land. Part of the lease area are already mined, exposed with rock. The lease area is dominated with *Prosopis juliflora*. The detailed list of plants found in the core zone are given in Table no – 3.23.

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Table 3.23: List of Floristic Species in the Core Zone

Sl.No	Species Name	Family	Common Name
Trees			
1	Acacia leucophloea	Fabaceae	Valvelam
2	Acacia nilotica	Fabaceae	Karuvelan
3	Prosopis juliflora	Fabaceae	Cimaikkaruvel
Shrubs			
1	Lantana camara	Verbenaceae	Unni chedi
2	Cassia auriculata	Fabaceae	Avarai
3	Calotropis gigantea	Apocynaceae	Yerukku
Herbs			
1	Sida cordifolia	Malvaceae	Kurunthotti
2	Sida acuta	Malvaceae	Palambasi
3	Tridax procumbens	Asteraceae	Kenathuppoondu
4	Acalypha indica	Amaranthaceae	Kupaimeni keeri

PHOTOS OF CORE ZONE



B.BUFFER ZONE:

The Dominated species in the buffer zone are Prosopis juliflora, Sygygium cumuni, Borassus flabellifer, Albizia lebbeck, Acacia auriculiformis, Azadirachta indica, etc. Patches of coconut and casurina farms are also observed. The detailed list of plants found in the Bufferzone is given in Table no – 3.26.

Table 3.24: List of Floristic Species in the Buffer Zone

Sl. No.	Botanical name	Family	Local Name
Trees			
1	Acacia auriculiformis	Fabaceae	Pencile tree
2	Acacia leucophloea	Fabaceae	Valvelam
3	Acacia nilotica	Fabaceae	Karuvelan
4	Acacia catechu	Fabaceae	Karanagalli
5	Acacia horrida	Fabaceae	Karuvelai
6	Aegle marmelos	Rutaceae	Vilvamaran
7	Albizia amara	Fabaceae	Vagai
8	Anacardium occidentale	Anacardiaceae	Munthiri
9	Albizia odoratissima	Fabaceae	karu-vakai
10	Atalantia monophylla	Rutaceae	Kattu Elumeachi
11	Annona squamosa	Annonaceae	Siththa
12	Azadirachta indica	Meliaceae	Vembu
13	Bambusa vulgaris	Poaceae	Bamboo
14	Bauhinia racemosa	Fabaceae	Tataki
15	Borassus flabelliformis	Arecaceae	Panna-maram
16	Caesalpinia pulcherrima	Fabaceae	Mayilkondrai
17	Carica papaya	Caricaceae	Pappali
18	Cassia siamea	Caesalpinaceae	Manjal konrai
19	Cassia fistula	Fabaceae	Konrai
20	Casuarina equisetifolia	Casuarinaceae	Savukku
21	Citrus limon	Rutaceae	Lemon
22	Cocus nucifera	Arecaceae	Tennai
23	Delonix elata	Fabaceae	Perungondrai
24	Delonix regia	Fabaceae	Gulmohar
25	Eucalyptus grandis	Myrtaceae	Gum tree
26	Ficus benghalensis	Moraceae	Aalamaram
27	Ficus hispida	Moraceae	Aarasu
28	Ficus religiosa	Moraceae	Poarasamaram
29	Leucaena leucocephala	Fabaceae	Subabul

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Sl. No.	Botanical name	Family	Local Name
30	Madhuca longifolia	Sapotaceae	Iluppai
31	Mangifera indica	Anacardiaceae	Maamaram
32	Manilkara zapota	Sapotaceae	Sappota
33	Mimusops elengi	Sapotaceae	Magizhamboo
34	Morinda tinctoria	Rubiaceae	Nuna
35	Moringa oleifera	Moringaceae	Murungai
36	Murraya koenigii	Rutaceae	Curry leaf
37	Musa paradisiaca	Musaceae	Valzhlai
38	Peltophorum pterocarpum	Fabaceae	Kilukiluppai
39	Phyllanthus emblica	Euphorbiaceae	Nelli
40	Pithecellobium dulce	Fabaceae	Kodukkapuli
41	Polyalthia longifolia	Annonaceae	Nietilingam
42	Pongamia pinnata	Fabaceae	Pungai
43	Prosopis juliflora	Fabaceae	Seemai karuvel
44	Psidium guava	Myrtaceae	Koyya
45	Samanea saman	Fabaceae	Amaivagai
46	Sygygium cumuni	Myrtaceae	Naval
47	Tamarindus indica	Fabaceae	Puli
48	Tectona grandis	Verbenaceae	Tekku
49	Terminalia arjuna	Combretaceae	Marudha Maram
50	Terminalia catappa	Combretaceae	Badam Tree
51	Thespesia populnea	Malvaceae	Puvarasu
52	Terminalia chebula	Combretaceae	Kadukkai
53	Ziziphus mauritiana	Rhamanaceae	Elandhai
Shrubs			
1	Aloe vera	Asphodelaceae	Chotthu kathalai
2	Adhatoda vasica	Acanthaceae	Adhatoda
3	Agave americana	Asparagaceae	kittanara
4	Calotropis gigantea	Asclepiadaceae	Erukku
5	Canthium didymum	Rutaceae	Nanjul
6	Cassia auriculata	Fabaceae	Aavarampoo
7	Carissa carandas	Apocynaceae	Kalakkai
8	Cassia auriculata	Fabaceae	Avarai
9	Datura metel	Solanaceae	Umatai
10	Dodonaea viscosa	Sapindaceae	viraali
11	Euphorbia tirucalli	Euphorbiaceae	kalli
12	Grewia abutilifolia	Tiliaceae	Pampukonta
13	Hibiscus rosa-sinensis	Malvaceae	Chemparutti

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Sl. No.	Botanical name	Family	Local Name
14	Ixora casei	Rubiaceae	Idlipoo
15	Jatropha gossypifolia	Euphorbiaceae	Seemayavanakku
16	Justicia adhatoda	Acanthaceae	Adathoda
17	Lantana camara	Verbenaceae	Unnichi
18	Lawsonia inermis	Lythraceae	Maruthani
19	Nerium oleander	Apocynaceae	Arali
20	Opuntia dillenii	Cactaceae	Cappattukkalli
21	Opuntia elatior	Cactaceae	Cappattukkalli
22	Ricinus communis	Euphorbiaceae	Amanakku
23	Solanum xanthocarpum	Solanaceae	Kantankattiri
24	Streblus asper	Moraceae	Parai maram
25	Strychnos nuxvomica	Loganiaceae	kagodi
26	Tecoma stans	Bignoniaceae	Yellow trumpetbush
27	Vitex negundo	Verbenaceae	Nochchi
28	Ziziphus oenoplia	Rhamnaceae	Elanthai
Herbs			
1	Acalypha indica	Euphorbiaceae	Kuppaimeni
2	Achyranthes aspera	Amaranthaceae	Nayuruvi
3	Amaranthus viridis	Amaranthaceae	Green amaranth
4	Andrographis paniculata	Acanthaceae	Kirayt
5	Anisomeles indica	Lamiaceae	marutti
6	Anisomeles malabarica	Lamiaceae	Peyimarutti
7	Argemone mexicana	Papaveraceae	Mexican poppy
8	Boerhavia erecta	Nyctaginaceae	Erect spiderling
9	Cassia tora	Caesalpinaceae	Senavu
10	Cleome viscosa	Cleomaceae	Kaattu kadugu
11	Lepidagathis cristata	Acanthaceae	Karappanpoond
12	Mimosa pudica	Mimosaceae	Thottaccuringi
13	Ocimum sanctum	Lamiaceae	Thulasi
14	Ocimum tenuiflorum	Lamiaceae	Thulasi
15	Parthenium hysterophorus	Asteraceae	Parthenium
16	Phyllanthus niruri	Phyllanthaceae	Keelanelli
17	Sida acuta	Malvaceae	Palambasi
18	Sida cordifolia	Malvaceae	Kurunthotti
19	Sida rhombifolia	Malvaceae	Kurundotti
20	Solanum incanum	Solanaceae	Karimulli
21	Tragia involucrata	Euphorbiaceae	Kanchori
22	Tridax procumbens	Asteraceae	Kenathuppoond

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Sl. No.	Botanical name	Family	Local Name
23	Vinca rosea	Apocynaceae	Nithiyakalyani
Climber			
1	Asparagus racemosus	Asparagaceae	Tannir-vittan
2	Abrus precatorius	Fabaceae	Kundumani
3	Coccinia indica	Cucurbitaceae	Kovaikkai
4	Capparis rotundifolia	Capparaceae	Thoratti
5	Cissus quadrangularis	Vitaceae	Pirandai
6	Jasminum angustifolium	Oleaceae	Uccimalligai
Grasses			
1	Chloris barbata	Poaceae	Kodai pullu
2	Cyperus rotundus	Cyperaceae	korai pullu
3	Cynodon dactylon	Poaceae	Arugampillu
4	Kyllinga nemoralis	Cyperaceae	Velutta nirbasi
Crops			
1	Capsicum annum	Solanaceae	Red chilli
2	Gossypium hirsutum	Malvaceae	Paruththi
3	Musa paradisiaca	Musaceae	Valzhai
4	Sesbania grandiflora	Fabaceae	Agati
5	Sorghum vulgare	Poaceae	Solam

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 like Cows, Buffalos, Dogs, Cats etc., 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. The list of fauna within the study area is given in Table No – 3.27.

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Table 3.25: List of Fauna in the Buffer Zone

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

3.6 HYDROGEOLOGICAL STUDY:

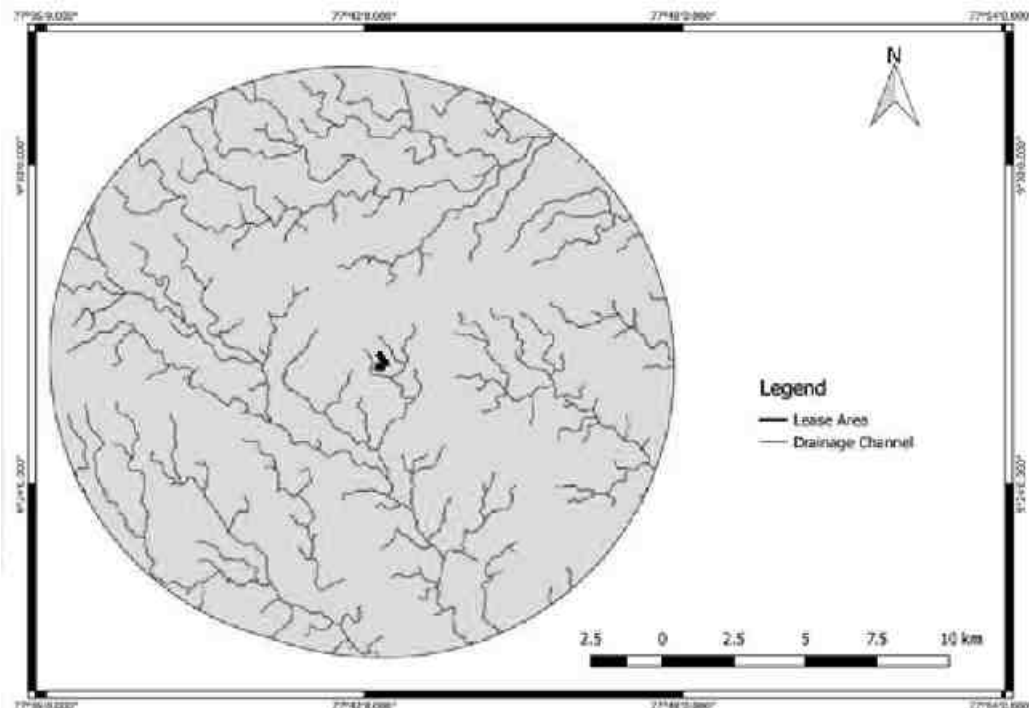
This section delves into the study of the hydrogeological scenario of the study area to evaluate the impact of mining activities on the nearby areas. The study area is considered to understand the nature of the general hydrogeological conditions of the area.

3.6.1 PHYSIOGRAPHY AND DRAINAGE:

Physiography: The area applied for mining lease is a gentle plain terrain. Part of the lease area has already been mined out.

Drainage: Dry patta drainage channel originating near the lease is passing through the north east corner of the lease area. Kanmai is located about 40m south of the lease area. North of this kanmai catchment area i.e SF No 922/5 is located for which 50m safety distance as per precise area letter and TOR condition is left. As such the kanmai is located about 90m south of the mine area. Further elaborate details of the same has been provided under section 4.3.3C, Chapter-IV. The drainage map prepared from the survey of India topographic maps shows the presence of few streams running in a dendritic pattern. These are mostly rainwater drains and It remains dry for most of the year.

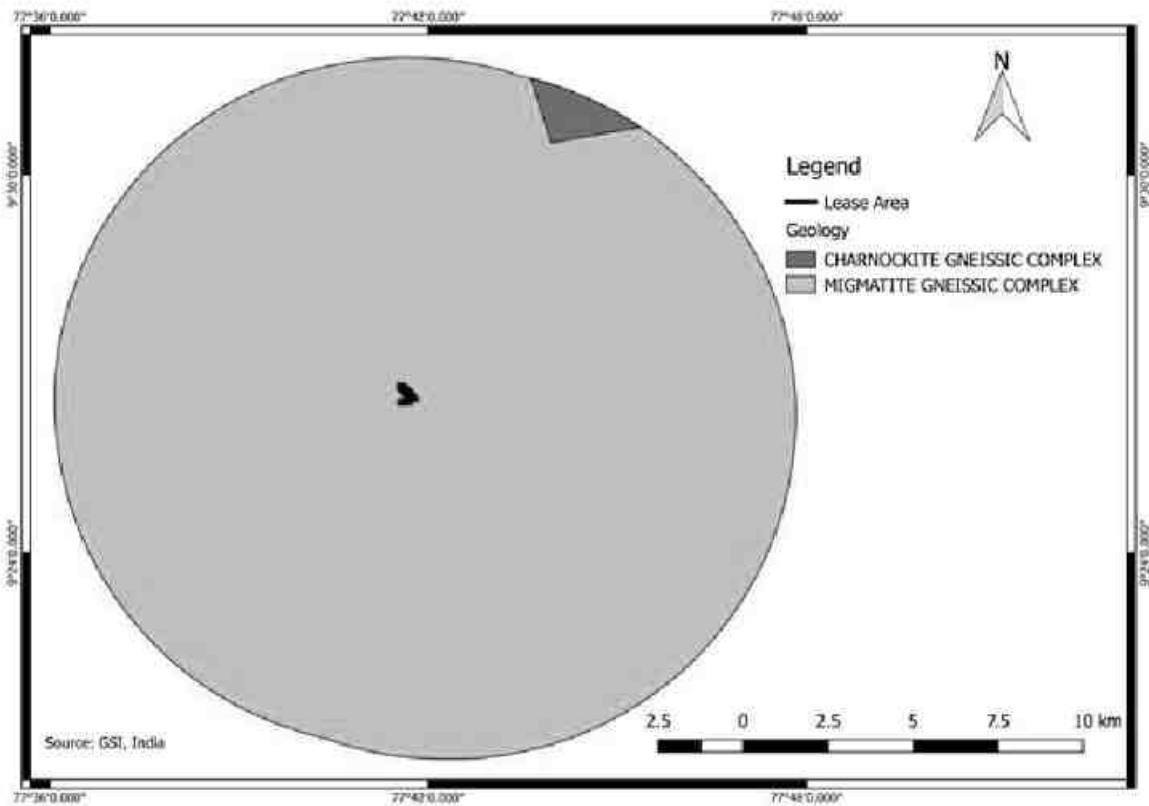
Figure 3.17: Drainage Map



3.6.2 GEOLOGY AND GEOMORPHOLOGY

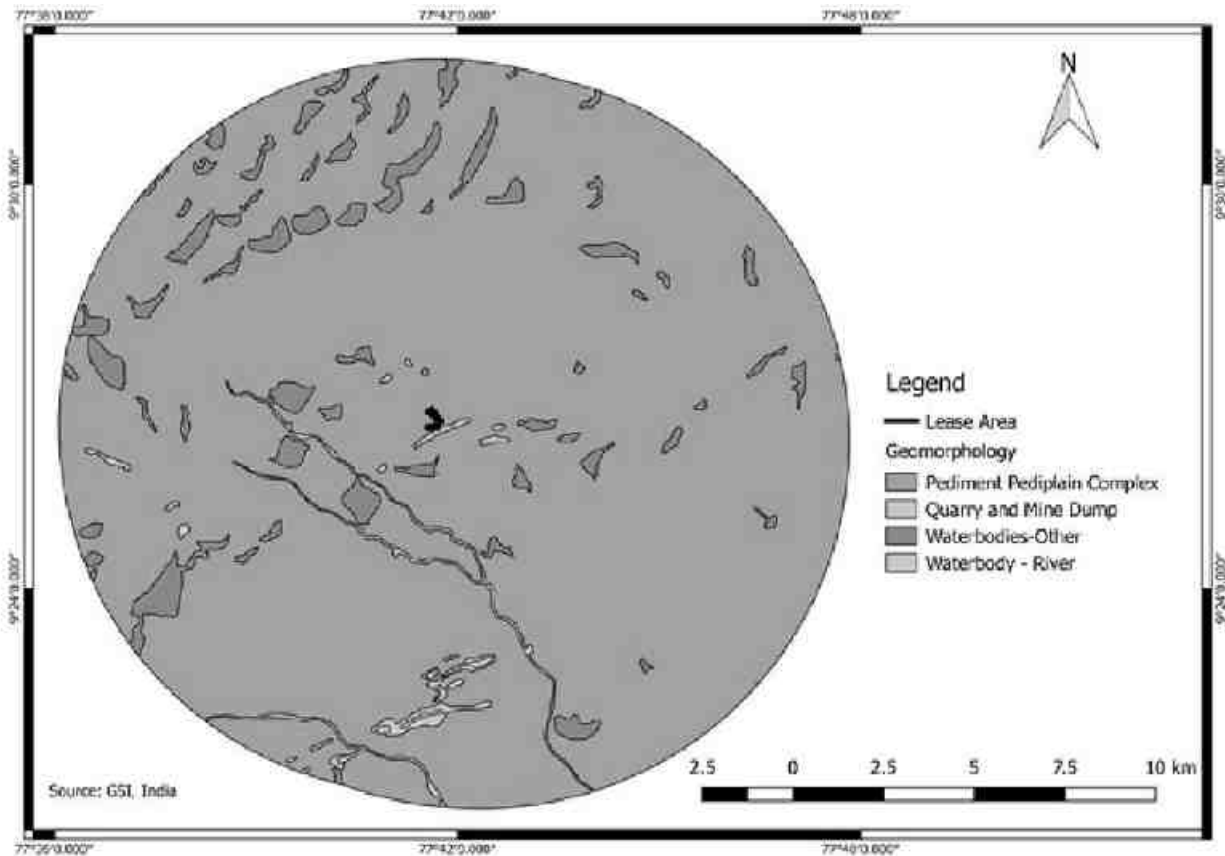
Geology: The type of rock formation in the study area is composed of Migmatite Gneissic complex and Charnockite Gneissic complex. The lease area falls under Migmatite Gneissic complex category. The geological map is provided below in Figure No.3.21.

Figure 3.18: Geology Map



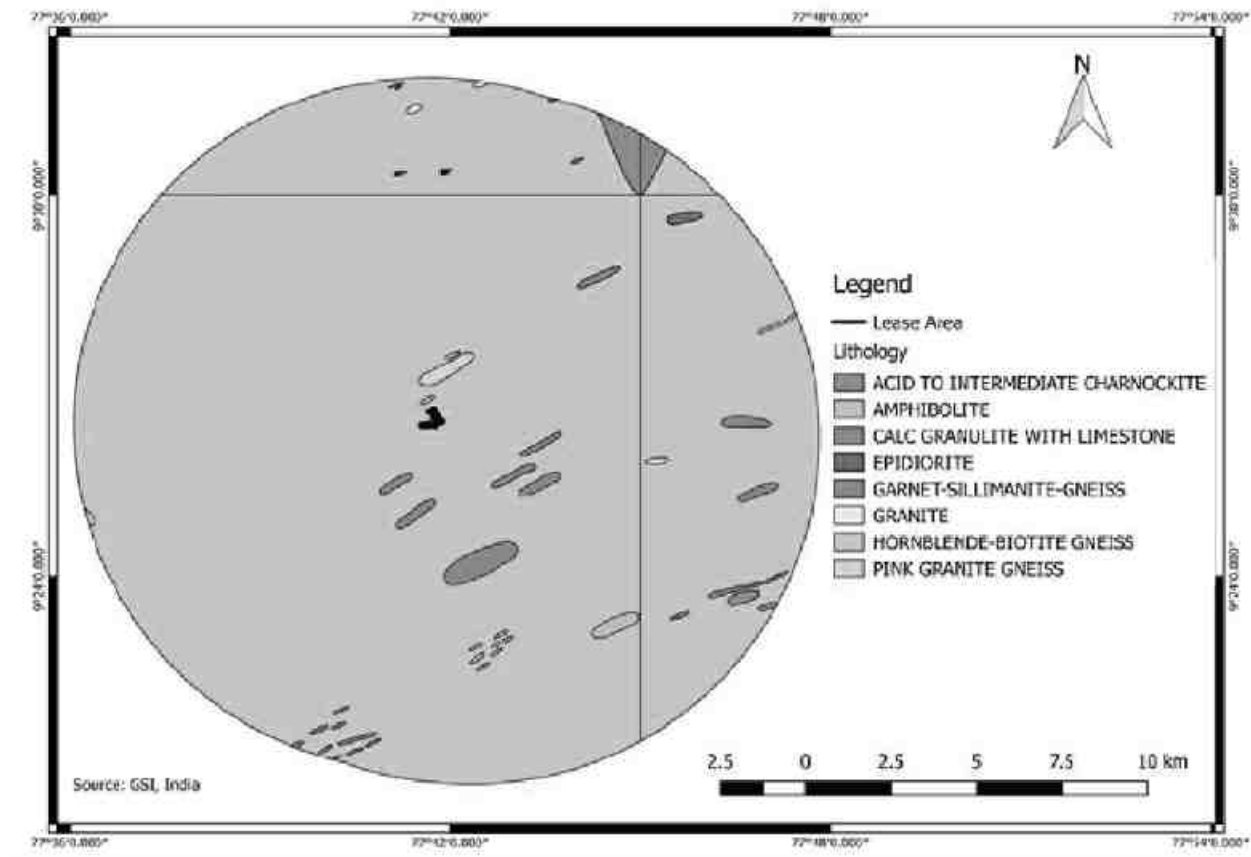
Geomorphology: The geomorphology map of the study derived from the satellite imagery using remote sensing and GIS technique. Predominantly the buffer zone is dominated by Pediment Plain complex, and it is the same category that the lease area also falls under.

Figure 3.19: Geomorphology Map



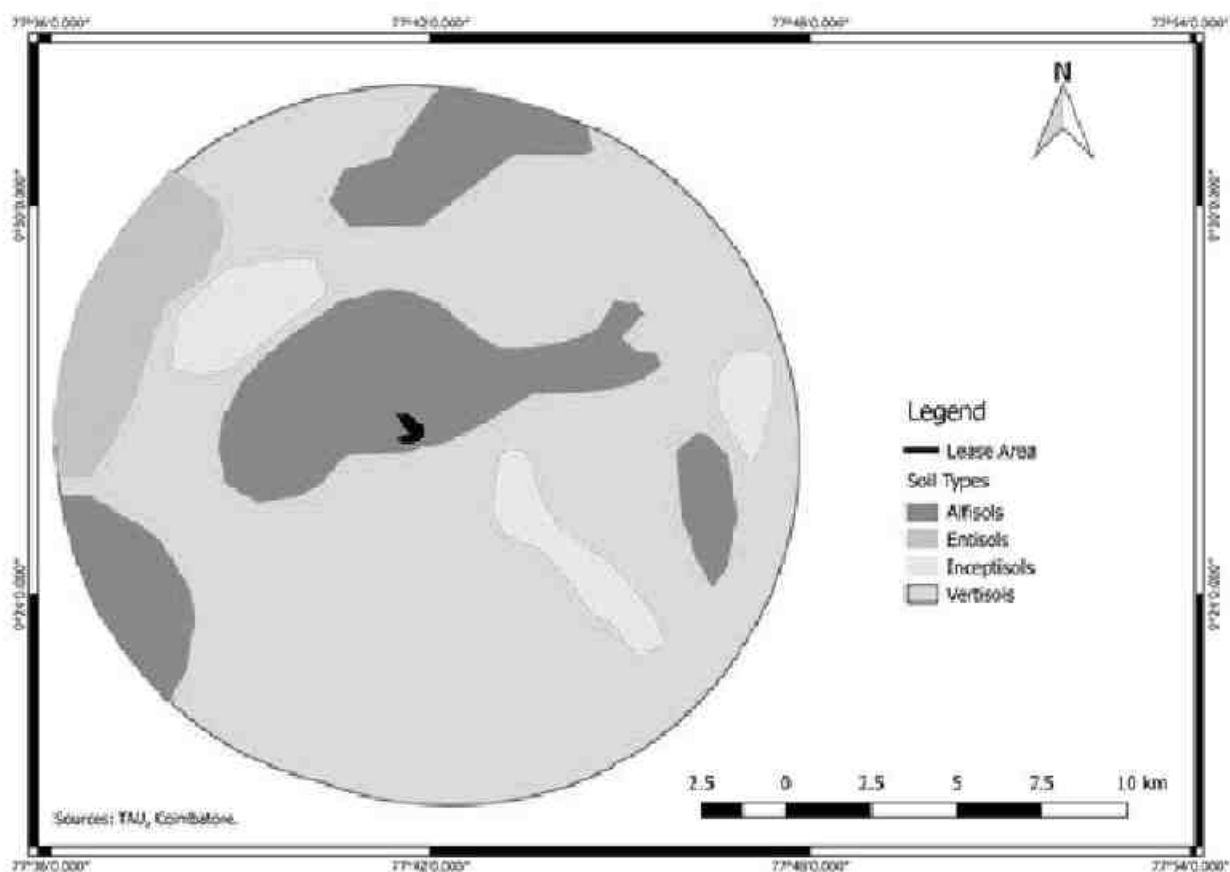
Lithology: The lithological map of the buffer zone has been provided in Figure No.3.23. From this, it is seen that the study area is mainly dominated by Hornblende Biotite Gneiss. The lease area falls under by Hornblende Biotite Gneiss with regards to lithology.

Figure 3.20: Lithology Map



Soil: The study area is characterized by Vertisols, Alfisols, Entisols and Inceptisol. The lease area falls under the category of Alfisols. The soil map is provided in Figure No.3.24.

Figure 3.21: Soil Map



3.6.3 WATER TABLE OF THE AREA:

Based on the depth to water level data obtained from the India-WRIS, Department of Water Resources, Ministry of Jal Shakti for Rajapalayam Block, Viruthunagar District, Tamil Nadu the following is observed.

Table 3.26: 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.3.26, and 3.27 and they indicate that the depth to water level in project area ranges between 5.0 to 20.0 m bgl during

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the pre-monsoon season(April) and 2.0 to 10.0 m bgl during the post monsoon season (November).

Figure 3.22: Pre-Monsoon Water Level

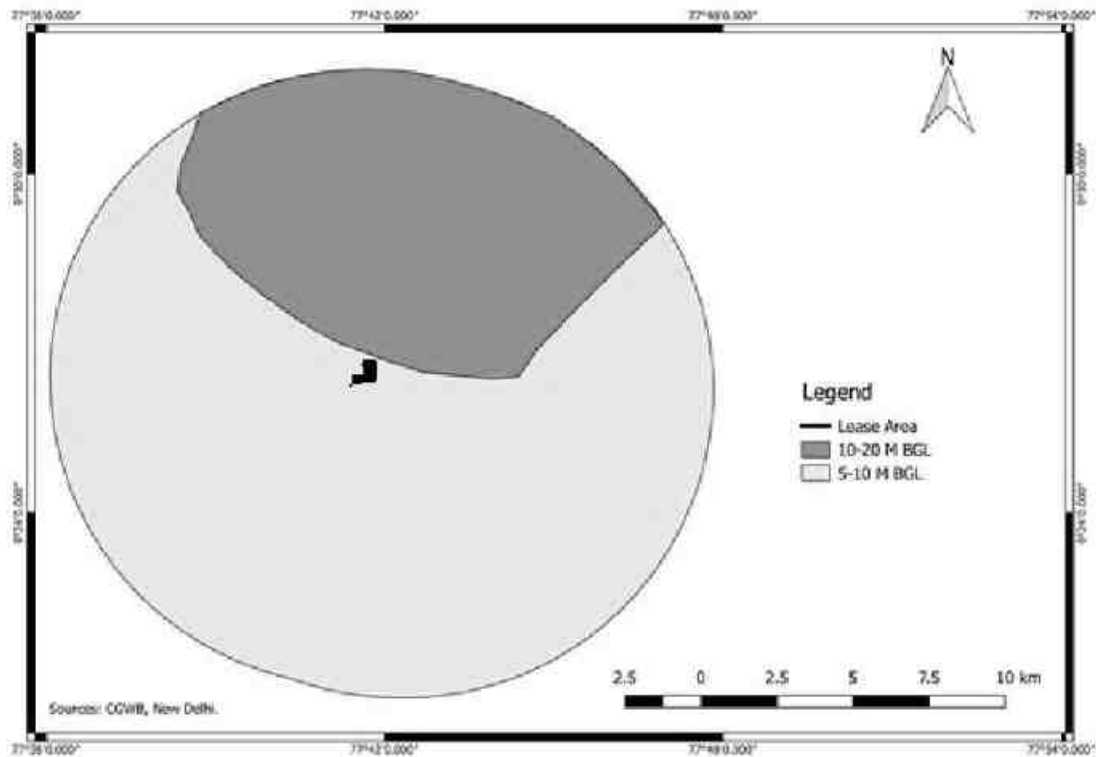
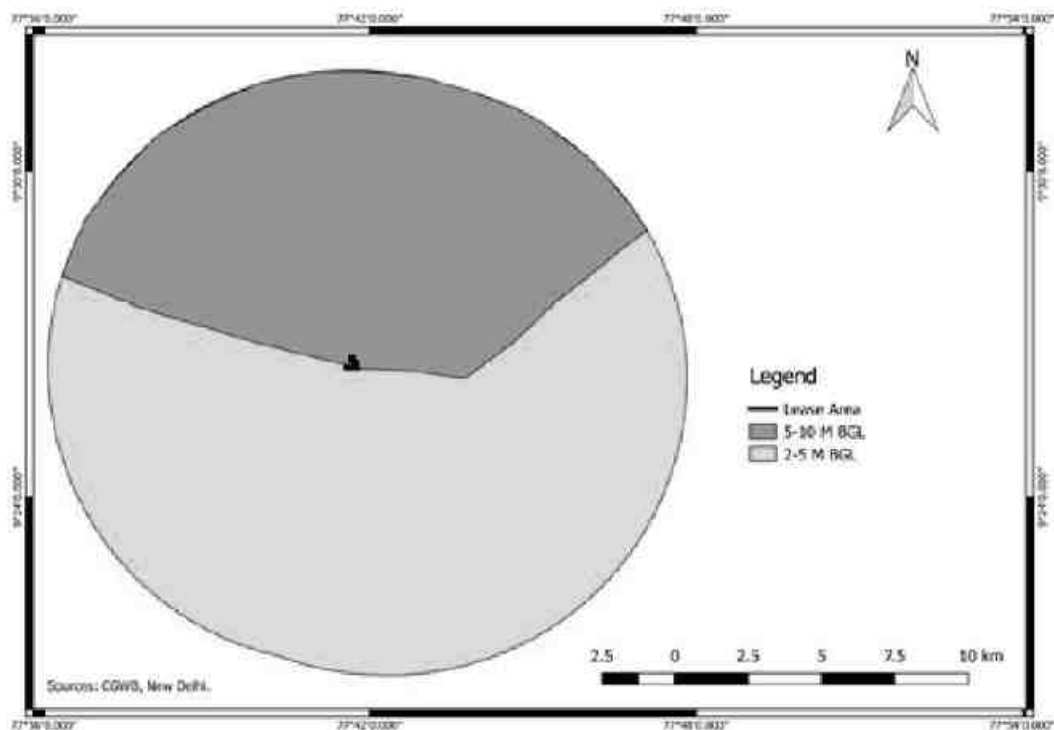


Figure 3.23: Post Monsoon Water Level



Well Inventory Data:

The water levels were studied in a total of 6 wells and 3 borewells. The map showing the location of these 9 study locations near the lease area has been depicted below in Figure No.3.28. The details of the depth of these wells and borewells, has been provided below in Table No.3.29.

Figure 3.24: Well Inventory Locations



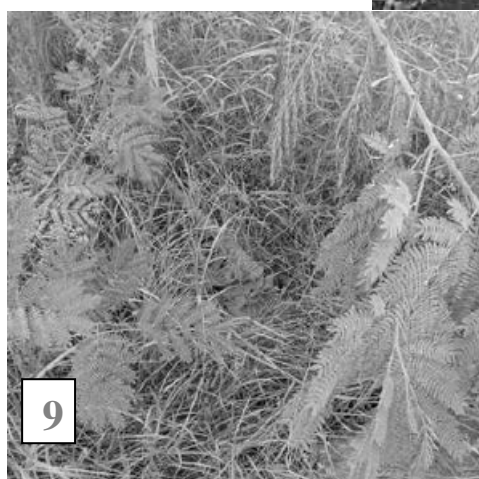
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Table 3.27: Well Inventory Data

ID No.	Well/Borewell	Coordinates		Depth of Well / Borewell (ft)
		Latitude	Longitude	
1	Well	9°26'21.05"N	77°40'55.71"E	30
2	Well	9°26'36.06"N	77°41'41.30"E	35
3	Well	9°26'36.73"N	77°42'8.04"E	38
4	Well	9°26'37.88"N	77°42'9.97"E	35
5	Well	9°26'13.32"N	77°42'11.74"E	35
6	Well	9°26'5.96"N	77°42'7.32"E	38s
7	Bore well	9°26'36.80"N	77°41'36.82"E	500
8	Bore well	9°26'36.60"N	77°41'37.00"E	480
9	Bore well	9°26'29.09"N	77°41'35.95"E	450



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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 500 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.

* * * * *



CHAPTER - IV

ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

CHAPTER 4

ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.1 GENERAL

In these projects 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 PM₁₀, 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 SO₂, 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, NO_x, CO may cause some health effect on the human



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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.
4	Transportation	Dust emanation, Gaseous Emission	Avoiding overloading of dumpers.
			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
5	Others	Dust emanation, Gaseous Emission	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.
			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, PM₁₀, 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	PM₁₀ (g/sec)	PM_{2.5} (g/sec)
Excavation	0.03	0.00
Drilling	0.13	0.05
Hauling	0.13	0.02
Total	0.29	0.07

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

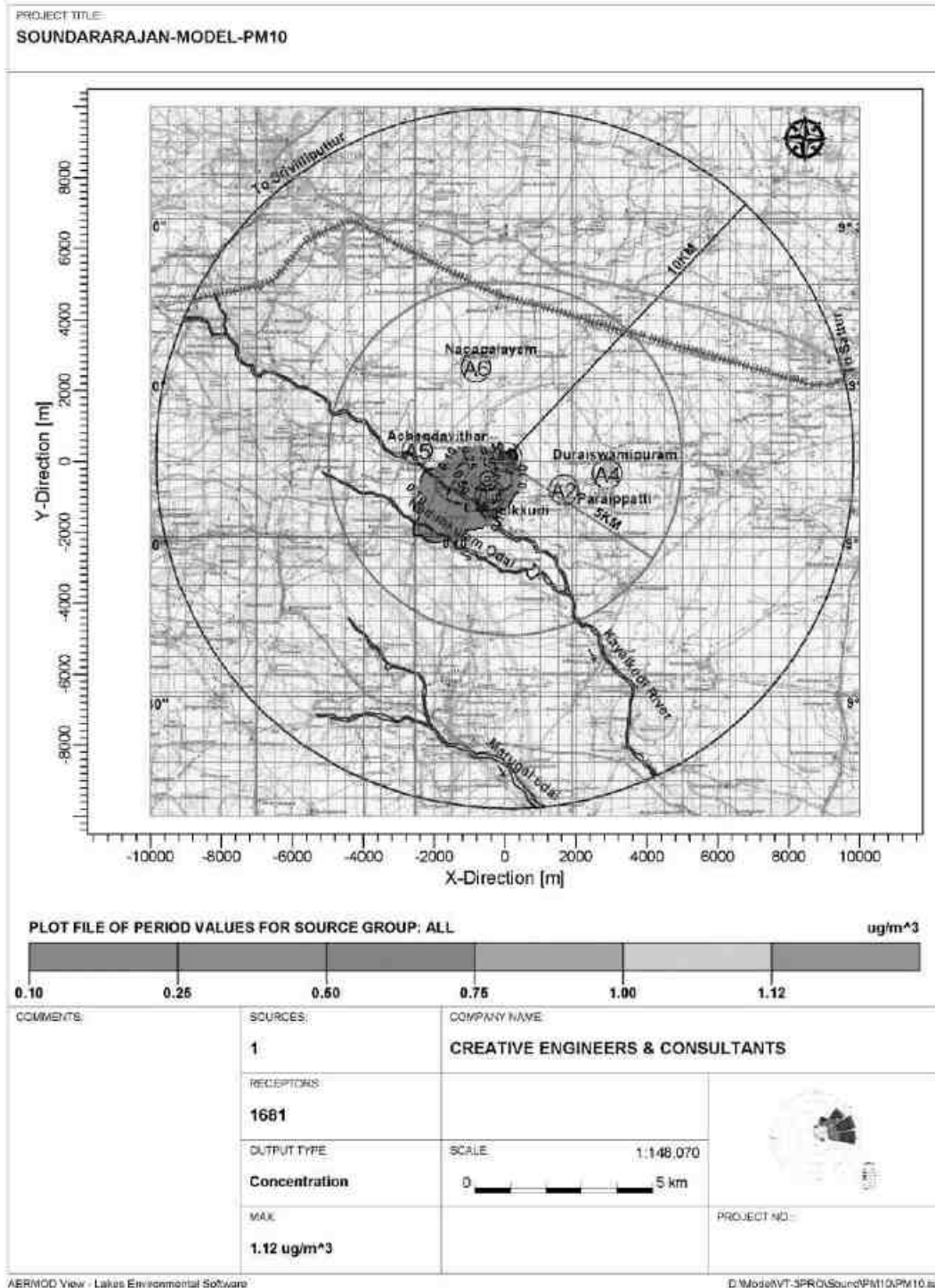
Table 4.5: Peak Incremental Concentration

S.No	Parameters	Peak incremental concentration µg/m³– Individual basis
1	PM ₁₀	1.12
2	PM _{2.5}	0.61

It is observed that the peak incremental concentration for PM₁₀, 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 PM₁₀, 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.

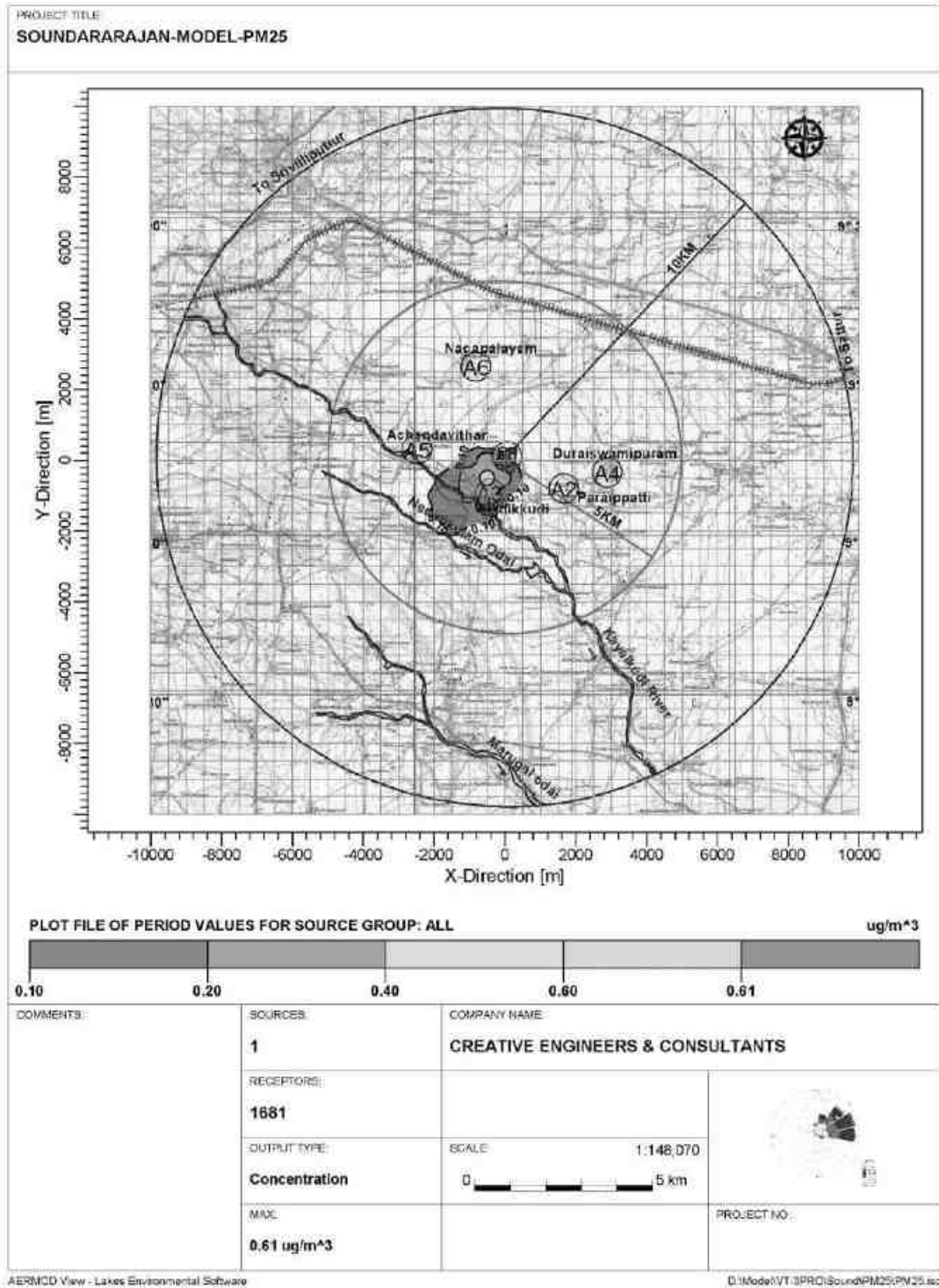
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Figure 4.1: Isopleth of GLC prediction – PM₁₀



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Figure 4.2: Isoleth of GLC prediction – PM_{2.5}



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Predicted Ambient Air Quality:

Table 4.6: Concentrations Of PM₁₀ after Project Implementation

Values in $\mu\text{g}/\text{m}^3$

S. No	Location	Background Concentration			Statutory Limits
			Incremental Conc	Post Project Conc	
1	A1- Mine Lease Area	76.7	1.12	77.82	-
2	A2-Parai Patti Village	61.4	<1.0	62.4	100
3	A3-Nathikudi Village	59.4	<1.0	60.4	
4	A4-M.Duraisampuram Village	57.3	<1.0	58.3	
5	A5-Achamthavirthan Village	53.5	<1.0	54.5	
6	A6- Nagapalayam Village	60.5	<1.0	61.5	

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

Values in $\mu\text{g}/\text{m}^3$

S. No	Location	Background Concentration			Statutory Limits
			Incremental Conc	Post Project Conc	
1	A1- Mine Lease Area	37.0	1.0	38.0	-
2	A2-Parai Patti Village	30.2	<1.0	31.2	60
3	A3-Nathikudi Village	27.7	<1.0	28.7	
4	A4-M.Duraisampuram Village	29.1	<1.0	30.1	
5	A5-Achamthavirthan Village	25.8	<1.0	26.8	
6	A6- Nagapalayam Village	29.2	<1.0	30.2	

It can be seen that, the resultant added concentrations with baseline figures with respect to PM₁₀ is in the range of 54.5 $\mu\text{g}/\text{m}^3$ to 77.8 $\mu\text{g}/\text{m}^3$ and with respect to PM_{2.5} are in the range of 26.8 $\mu\text{g}/\text{m}^3$ to 38.0 $\mu\text{g}/\text{m}^3$ which are within the stipulated statutory limits for the project.



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Additionally, cumulative impact due to working of **Thiru. S. Soundararajan** project and 2 proposed projects namely **Tmt. Thavamani & Thiru Jayaram** on ambient air quality is assessed, and the details regarding the same has been provided below:

Table 4.8: Emission Rate - Cumulative

Activities	PM ₁₀ (g/sec)	PM _{2.5} (g/sec)
Excavation	0.15	0.02
Drilling	0.70	0.28
Hauling	0.69	0.10
Total	1.54	0.40

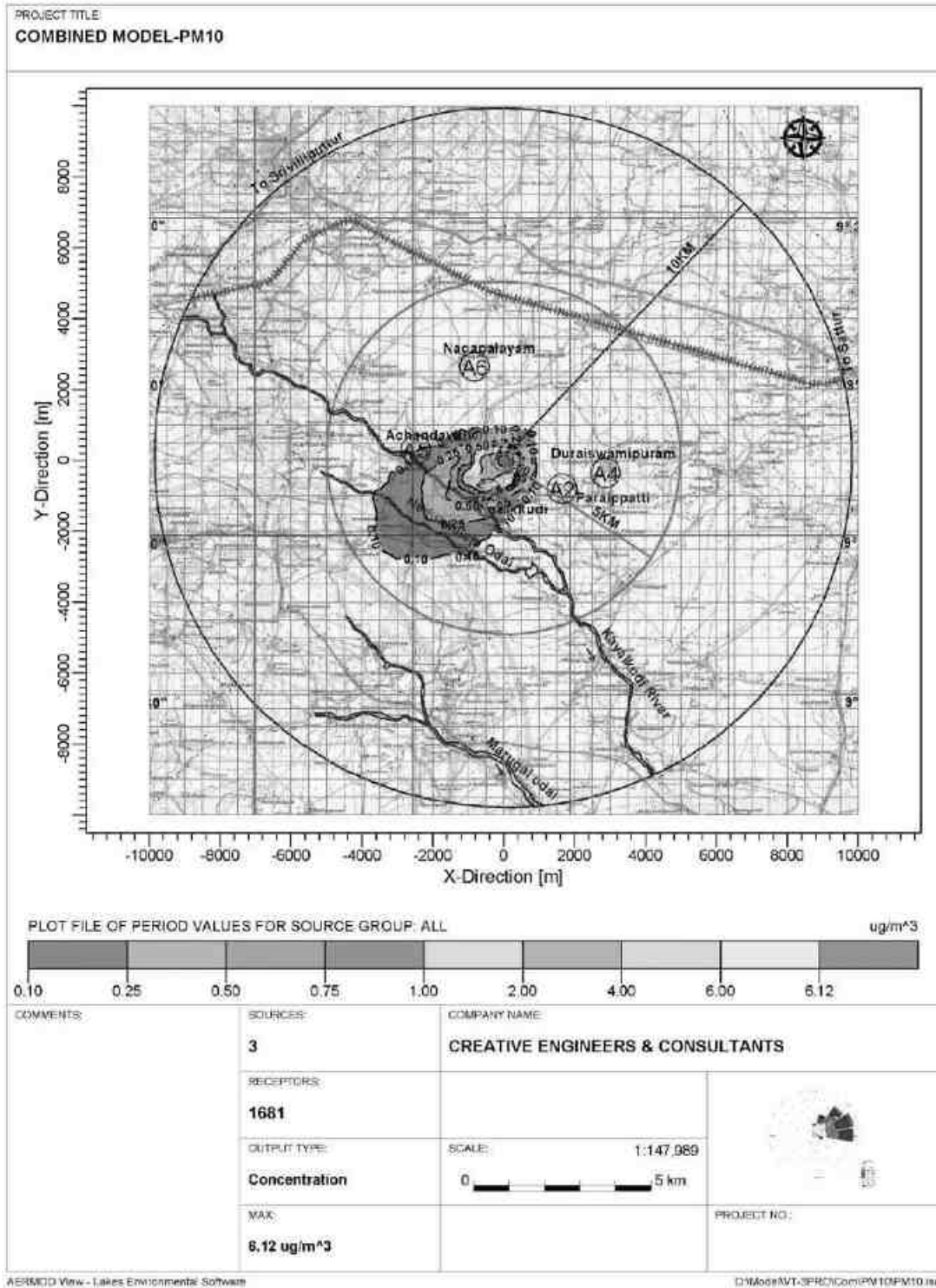
Table 4.9: Peak Incremental Concentration- Cumulative

Parameters	Peak incremental concentration $\mu\text{g}/\text{m}^3$
PM ₁₀	6.12
PM _{2.5}	3.71



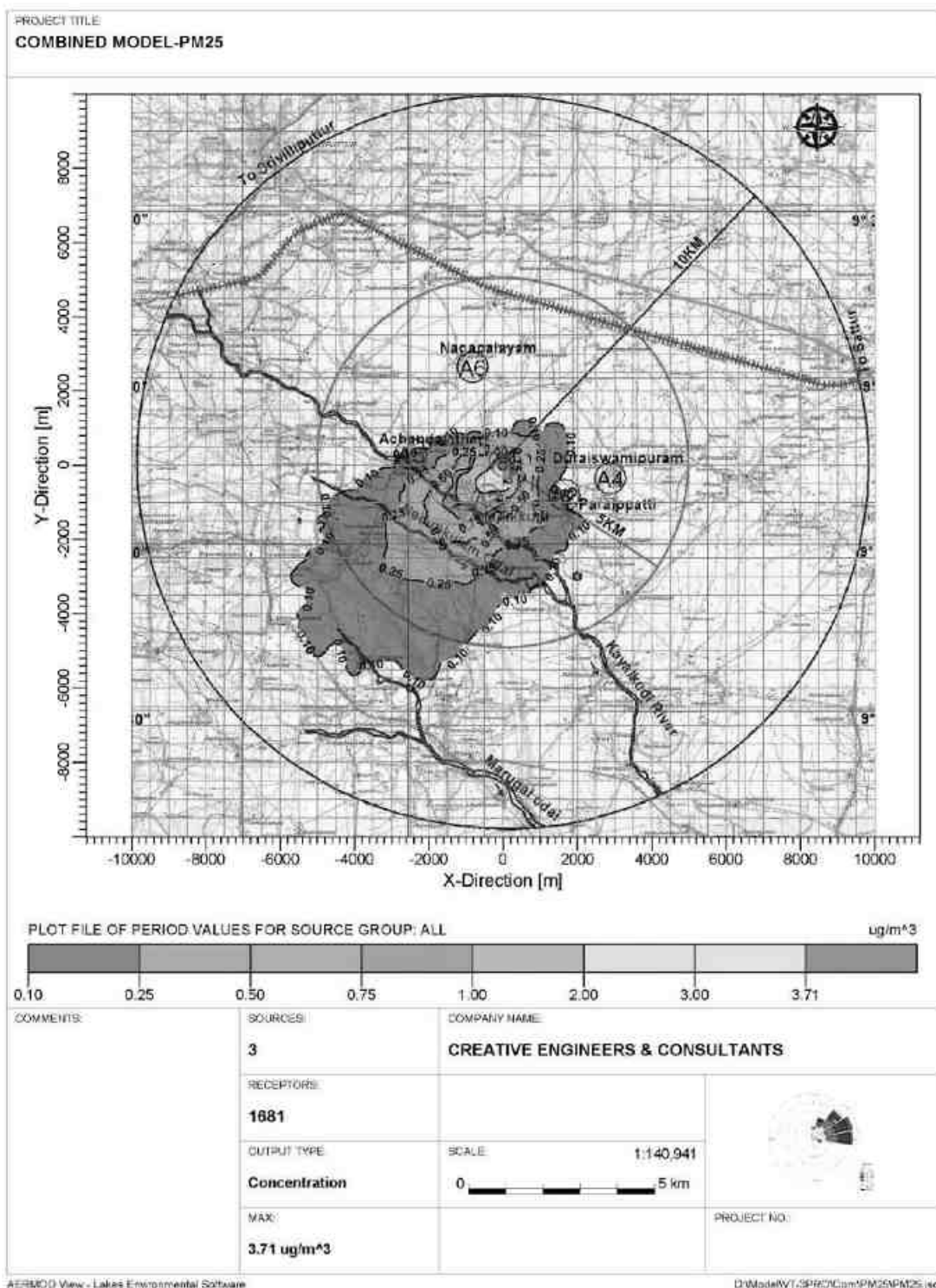
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Figure 4.3: Isopleth of GLC prediction – PM₁₀– Cumulative



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Figure 4.4: Isopleth of GLC prediction – PM_{2.5}– Cumulative



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The post project concentrations of PM₁₀, PM_{2.5}, (GLC) (base line + incremental) after adopting necessary control measures is provided below:

Table 4.10: Post Project Concentrations Of PM₁₀ -Cumulative

Values in µg/m³

S. No	Location	Background Concentration	Incremental Conc	Post Project Conc	Statutory Limits
1	A1- Mine Lease Area	76.7	6.1	82.8	-
2	A2-Parai Patti Village	61.4	<1.0	62.4	100
3	A3-Nathikudi Village	59.4	<1.0	60.4	
4	A4-M.Duraisampuram Village	57.3	<1.0	58.3	
5	A5-Achamthavirthan Village	53.5	<1.0	54.5	
6	A6- Nagapalayam Village	60.5	<1.0	61.5	

Table 4.11: Post Project Concentrations Of PM_{2.5} -Cumulative

Values in µg/m³

S. No	Location	Background Concentration	Incremental Conc	Post Project Conc	Statutory Limits
1	A1- Mine Lease Area	37.0	3.7	40.7	-
2	A2-Parai Patti Village	30.2	<1.0	31.2	60
3	A3-Nathikudi Village	27.7	<1.0	28.7	
4	A4-M.Duraisampuram Village	29.1	<1.0	30.1	
5	A5-Achamthavirthan Village	25.8	<1.0	26.8	
6	A6- Nagapalayam Village	29.2	<1.0	30.2	

The cumulative post project concentration with respect to PM₁₀ is in the range of 54.5 µg/m³ to 82.8 µg/m³ and with respect to PM_{2.5} are in the range of 26.8µg/m³ to 40.7 µg/m³ which are within the statutory limits in each case. For preservation of environment in this mine strict enforcement of management schemes and regular air quality monitoring 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.

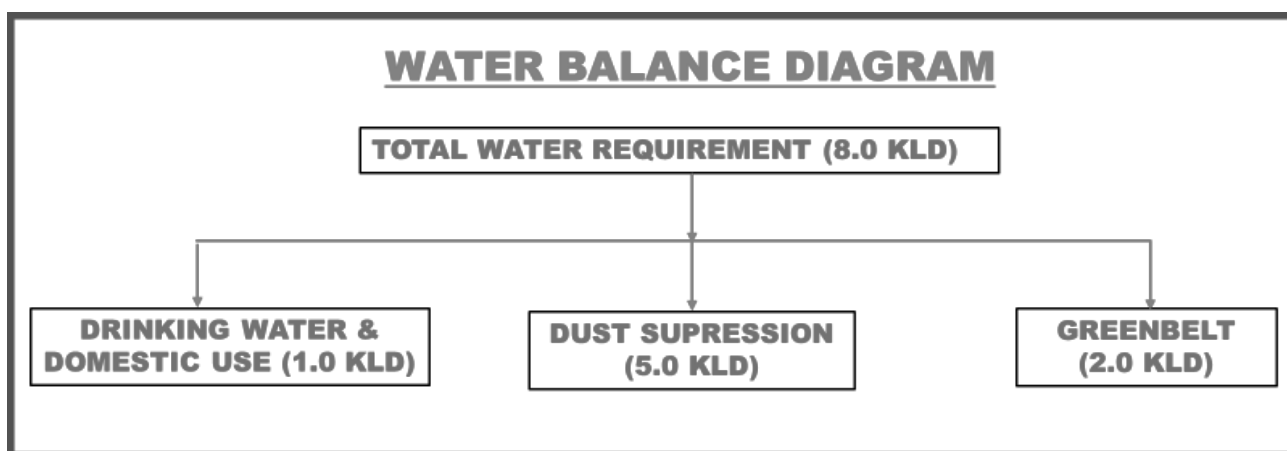


4.3 WATER ENVIRONMENT:

4.3.1 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 4.5: Water Balance Diagram



4.3.2 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. The 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.

4.3.3 TREATMENT SCHEME:

A. Generation of domestic effluent:

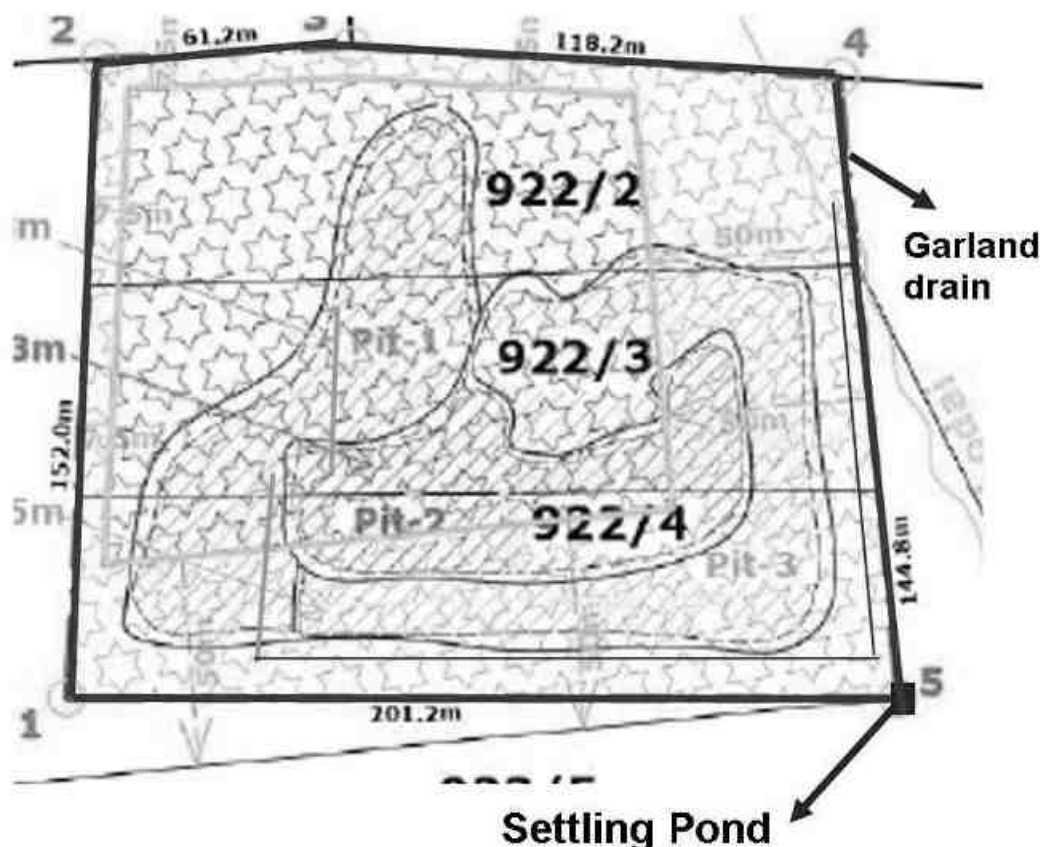
The domestic sewage to be generated from the projects will be collected in respective septic tank with soak pits.

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 680m 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 4.6: Surface Runoff Management Structures



C. Disturbance to drainage courses

Dry patta drainage channel originating near the lease is passing through the north east corner of the lease area. Sevalkulam Kanmai is located about 40m south of the lease area. North of this kanmai, catchment area i.e SF No 922/5 is located for which 50m safety distance as per precise area letter and TOR condition is left. As such the kanmai is located about 90m south of the mine area. There is a Seasonal Odai-180m-W, 300m-East. Due to scanty rainfall these drainage channels remains dry for most of the year. This kanmoi is more of a seasonal rainwater water harvesting structure with intake water mainly from the streams located 300m,E & 180m, W respectively from the lease area is originating west and east of the lease area only. In fact, mining activity in the southern side of the applied lease area was already carried out in the earlier lease period. Lease area is at an higher elevation and it does not farm as a water catchment area.

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Besides, the elevation of the tank varies from 114m RL to 120m RL with deeper portion south of the tank 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, the rainwater from the lease periphery will be channelized through the peripheral garland drain all around the lease area and then through settling pond to be located in the southern side of the lease area. Supernatant clear water will be discharged to the kanmoi on the southern side ensuring proper flow of rainwater for downstream users. The southern and eastern side of the lease area will be fenced and protective earthen embankment of atleast 2m height will be created in the safety zone on the southern & eastern side so that the kanmai and the Government poramboke land near the lease area the lease area is not disturbed. Besides, plantation will also be carried out in the safety zone and on the bund and it will be ensured there is no disturbance to these water bodies. 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 Surface runoff management arrangements & kanmai protection measures are shown in Figure 4.6 & Photographs of Kanmai is shown below:

PHOTOS OF DRY SEVALKULAM KANMAI



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 39 m for Rough stone and Gravel Quarry. The ground water table in this area is below this level. Hence, ground water intersection is 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.

4.3.3.1 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 Coastal Region – ‘District groundwater brochure, Virudhunagar District.’

Table 4.12: Ground Water Resources Estimation– Vembakottai Taluk (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 upto next 25 years (2029)	Allocation for Domestic and Industrial Requirement supply upto next 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.

4.3.4 REDUCING WATER CONSUMPTION OVER THE YEARS:

4.3.4.1 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.

4.3.4.2 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.

4.4 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 4.13: 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 4.14: 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.

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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 4.15: 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.	North West Corner	51.6	53.4	90
2.	North East Corner	51.5	54.2	90
3	South East Corner	51.5	53.5	90
4	South West Corner	51.5	53.0	90
5	Parai Patti Village	50.7	50.9	55
6	Nathikudi Village	48.6	48.8	55
7	M.Duraisampuram Village	47.5	47.6	55
8	Achamthavirthan Village	45.9	46.0	55
9	Nagapalayam Village	49.0	49.1	55

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. Flyrock is another possible damage causing outcome of blasting. There are many factors, which influence these, like long explosive column with little stemming column, improper burden, loose material or pebbles near holes and long water columns in the holes. Since the average daily rough stone production is less and only around 180m³ per day, blast induced ground vibration can be easily dealt with .

The following control measures will be implemented in the projects to reduce ground vibratory conditions to sustainable statutory limits:

- 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 as given below:

Table 4.16: 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.

4.5 LAND ENVIRONMENT:

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

Table 4.17: Land Use

Sl. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1.	Mining Area	1.25.00	1.41.00
2.	Infrastructure	Nil	0.01.00
3.	Roads	0.03.00	0.03.00
4	Green Belt	Nil	0.36.00
5	Fencing	Nil	0.07.00
6	Unutilized	1.64.00	1.04.00
Total		2.92.00	2.92.00

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 4.18: Land Use During Post Operational Period

S.No	Description	Land use (Ha.)			
		Plantation	Water body	Others	Total
1	Quarrying Pit	-	1.41.00	-	1.41.00
3	Green Belt	0.36.0	-	-	0.36.0
5	Others	--	-	1.15.00	1.15.00
	TOTAL	0.36.0	1.41.0	1.04.00	2.92.0

In the post mining stage, entire 1.41.00 Ha of mined out area will be left as water body. 0.03.0Ha will be the roads, 0.01.0 Ha will be the infrastructure, 0.36.0Ha will be covered with vegetation, 1.04.00 Ha will be undisturbed area and 0.07.0 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:

Part of the lease area is mined out void and the balance 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:



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Table 4.19: Impact on Biological Environment

S.No	ISSUES	OBSERVATIONS
1	Clearance of vegetation due to mining and allied activities	Part of lease area is already mined out area, so there will be no clearance of major 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



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		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 various 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 perennial water bodies nearby where in any marine ecosystem is observed, no effect on this front is expected.
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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 10m safety zone. about 1500 trees will be planted in and around the lease area..

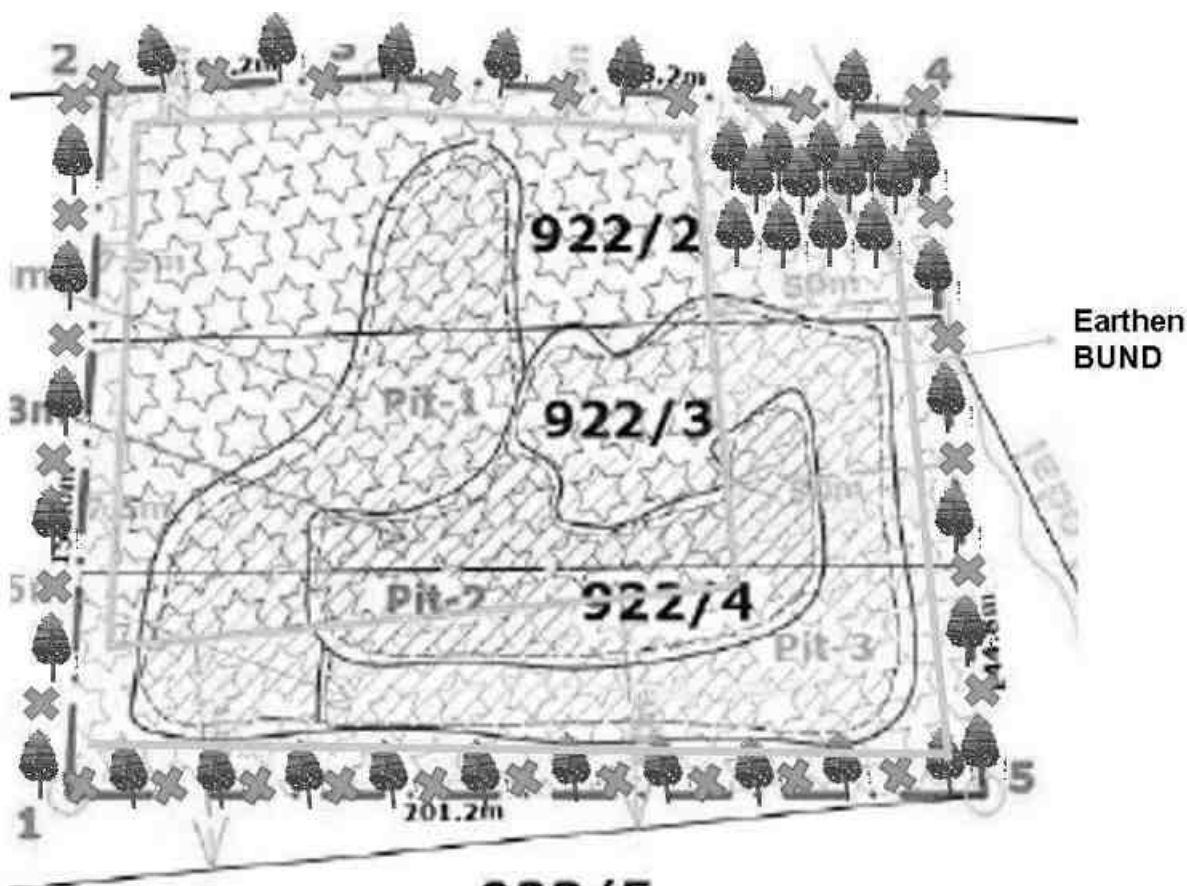
Table 4.20: Proposed Plantation

Year	No of trees	Name of the species
I	300	Pungai, Vagai, Vembu, Manjal konrai, Naval, Puvarasu, etc.,
II	300	
III	300	
IV	300	
V	300	
Total	1500	

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In the post mining stage, entire 1.41.0 Ha of mined out area will be left as water body. 0.03.0Ha will be the roads, 0.01.0 Ha will be the infrastructure, 0.36.0Ha will be covered with vegetation, 1.04.00Ha will be undisturbed area and 0.07.0 will be fencing

Figure 4.7: Mine Closure Plan



4.7 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 4.21: CER Cost

Project Name	Details
Project Cost (Rs.)	Rs. 44,93,940
CER Cost Requirement (2% of the Project Cost) (Rs.)	Rs. 89,878.8
CER cost allocated (Rs.)	Rs. 5.0 Lakhs

However, towards the socio-economic development of the surrounding area, Rs.5 Lakhs is allocated. The activities identified under CER will be implemented in a phased manner in provision of facilities in nearby Government School.

4.8 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 Metalliferous 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:

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

4.9 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 4.22: Details of Transportation

Sl.no	Particulars of activity	Details
A	Maximum Roughstone Transported (m3/year)	47,850
B	No of days in a year	300
C	Transport hours per day	8
D	Truck capacity in Cum	12.5
	Trips per hour	2 Trip/hr

From the above table it is seen that there will be about 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.
- ❖ Keeping traffic regulators at vulnerable locations.
- ❖ Distribution of transport vehicles for avoiding choking of roads
- ❖ Limiting of speed
- ❖ Installation of barriers at vulnerable locations
- ❖ Provision of tyre washing facility at the mine outlet

4.10 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.

* * * * *



CHAPTER - V

ANALYSIS OF ALTERNATIVES (TECHNOLOGY & SITE)

CHAPTER 5

ANALYSIS OF ALTERNATIVES

5.1 ALTERNATE TECHNOLOGY:

These are proposed Rough Stone and Gravel Quarries in which 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 - VI

ENVIRONMENTAL MONITORING PROGRAMME

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 quarries given below. However, based on the need and priority it may be suitably modified / improved in consultation with local authorities.

Since there are 3 separate proposed 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.



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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



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Table 6.3: National Ambient Air Quality Standards

[NEFT III] - [NEFT III]

[NEFT III] - [NEFT III]

3

NATIONAL AMBIENT AIR QUALITY STANDARDS
CENTRAL POLLUTION CONTROL BOARD
NOTIFICATION

New Delhi, the 18th November, 2009

No. B-29016/2009/PCI-I.—In exercise of the powers conferred by Sub-section (2) (b) 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 Areas	Ecologically Sensitive Areas (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur Dioxide (SO ₂), µg/m ³	Annual* 24 hours**	50 80	20 80	• Improved West and Gaeke • Ultraviolet fluorescence
2	Nitrogen Dioxide (NO ₂), µg/m ³	Annual* 24 hours**	40 80	30 80	• Modified Jacob & Hochheiser (Na-Arsenite) • Chemiluminescence
3	Particulate Matter (size less than 10µm) or PM ₁₀ , µg/m ³	Annual* 24 hours**	60 100	60 100	• Gravimetric • TOEM • Beta attenuation
4	Particulate Matter (size less than 2.5µm) or PM _{2.5} , µg/m ³	Annual* 24 hours**	40 60	40 60	• Gravimetric • TOEM • Beta attenuation
5	Ozone (O ₃), µg/m ³	8 hours** 1 hour**	100 180	100 180	• UV photometric • Chemiluminescence • Chemical Method
6	Lead (Pb), µg/m ³	Annual* 24 hours**	0.50 1.0	0.50 1.0	• AAS/ICP method after sampling on EPM 2000 or equivalent filter paper • ED-XRF using Teflon filter
7	Carbon Monoxide (CO), mg/m ³	8 hours** 1 hour**	02 04	02 04	• Non Dispersive Infra Red (NDIR) spectroscopy
8	Ammonia (NH ₃), µg/m ³	Annual* 24 hours**	100 400	100 400	• Chemiluminescence • Indophenol blue method



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4 THE GAZETTE OF INDIA : EXTRAORDINARY [PART III—Sec. 4]

(1)	(2)	(3)	(4)	(5)	(6)
9	Benzene (C ₆ H ₆) µg/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.



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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, <i>Max</i>	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)	pH 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, <i>Max</i>	1	5	Part 10	—
vi)	Total dissolved solids, mg/l, <i>Max</i>	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.



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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, <i>Max</i>	0.03	0.2	IS 3025 (Part 55)	—
ii)	Ammonia (as total ammonia-N), mg/l, <i>Max</i>	0.5	No relaxation	IS 3025 (Part 34)	—
iii)	Anionic detergents (as MBAS) mg/l, <i>Max</i>	0.2	1.0	Annex K of IS 13428	—
iv)	Barium (as Ba), mg/l, <i>Max</i>	0.7	No relaxation	Annex F of IS 13428* or IS 15302	—
v)	Boron (as B), mg/l, <i>Max</i>	0.5	1.0	IS 3025 (Part 57)	—
vi)	Calcium (as Ca), mg/l, <i>Max</i>	75	200	IS 3025 (Part 40)	—
vii)	Chloramines (as Cl ₂), mg/l, <i>Max</i>	4.0	No relaxation	IS 3025 (Part 26)* or APHA 4500-Cl G	—
viii)	Chloride (as Cl), mg/l, <i>Max</i>	250	1 000	IS 3025 (Part 32)	—
ix)	Copper (as Cu), mg/l, <i>Max</i>	0.05	1.5	IS 3025 (Part 42)	—
x)	Fluoride (as F) mg/l, <i>Max</i>	1.0	1.5	IS 3025 (Part 60)	—
xi)	Free residual chlorine, mg/l, <i>Min</i>	0.2	1	IS 3025 (Part 26)	To be applicable only when water is chlorinated. Tested at consumer end. When pro- tection against viral infec- tion is required, it should be minimum 0.5 mg/l Total concentration of man- ganese (as Mn) and iron (as Fe) shall not exceed 0.3 mg/l
xii)	Iron (as Fe), mg/l, <i>Max</i>	0.3	No relaxation	IS 3025 (Part 53)	—
xiii)	Magnesium (as Mg), mg/l, <i>Max</i>	30	100	IS 3025 (Part 46)	—
xiv)	Manganese (as Mn), mg/l, <i>Max</i>	0.1	0.3	IS 3025 (Part 59)	Total concentration of man- ganese (as Mn) and iron (as Fe) shall not exceed 0.3 mg/l
xv)	Mineral oil, mg/l, <i>Max</i>	0.5	No relaxation	Clause 6 of IS 3025 (Part 39) Infrared partition method	—
xvi)	Nitrate (as NO ₃), mg/l, <i>Max</i>	45	No relaxation	IS 3025 (Part 34)	—
xvii)	Phenolic compounds (as C ₆ H ₅ OH), mg/l, <i>Max</i>	0.001	0.002	IS 3025 (Part 43)	—
xviii)	Selenium (as Se), mg/l, <i>Max</i>	0.01	No relaxation	IS 3025 (Part 56) or IS 15303*	—
xix)	Silver (as Ag), mg/l, <i>Max</i>	0.1	No relaxation	Annex J of IS 13428	—
xx)	Sulphate (as SO ₄) mg/l, <i>Max</i>	200	400	IS 3025 (Part 24)	May be extended to 400 pro- vided that Magnesium does not exceed 30
xxi)	Sulphide (as H ₂ S), mg/l, <i>Max</i>	0.05	No relaxation	IS 3025 (Part 29)	—
xxii)	Total alkalinity as calcium carbonate, mg/l, <i>Max</i>	200	600	IS 3025 (Part 23)	—
xxiii)	Total hardness (as CaCO ₃), mg/l, <i>Max</i>	200	600	IS 3025 (Part 21)	—
xxiv)	Zinc (as Zn), mg/l, <i>Max</i>	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
1/2	102
1/4	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	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

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.

* * * * *



CHAPTER - VII

ADDITIONAL STUDIES

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 burst.	• Periodical preventative maintenance and replacement of worn out accessories in the compressor and drill equipment.



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S.No	Factors	Causes of risks	Control measures
		b) Down the hole drill rod may break due to improper maintenance of rod.	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**.



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7.6 CUMULATIVE IMPACT STUDY:

The lease area is located in Nathikudi Village, Vembakottai Taluk, Virudhunagar District, 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

Sl.No	Quarry detail	Taluk & Village	S.F. No.& Extent (Hect)	Proceedings No. & Lease Period
I	Existing Quarries:			
1.	J.Saipritham	Vembakottai & Nathikudi	919/1 2A(P) (3.33.50 Hectares)	KV1/033/2022, 10.01.2022 11.06.2024 to 10.06.2029
II	Abandoned Quarry :			
1.	Guruvammal	Vembakottai & Nathikudi	903/2 (1.35.00 Hectares)	KV1/705/2012, 04.08.2017 23.08.2017 to 22.08.2022
2.	P.Jeyaraman	Vembakottai & Nathikudi	916/4C1,916/7A 920/1A1,920/1A3 (2.975 Hectares)	KV1/424/2018 dated:29.01.2019 01.02.2019 to 31.01.2024
3.	P.Dhavamani	Vembakottai & Nathikudi	919/2B	Prior – 2003
4.	Sadharmasadana	Vembakottai & Nathikudi	807/4C (1.62.5 Hectares)	KVI/22055/2016 dt.01.02.2019 08.02.2019 to 07.02.2024
5.	Soundarrajan	Vernbakottai & Nathikudi	922/2,3,4 (2.92 Hectares)	KV1/10050/2017 Dated:10.06.2019 18.10,2019 to 17,10.2024
6.	Soundarrajan	Vernbakottai & Nathikudi	915/3,916/4B,4 C2,7B (2.80.00 Hectares)	KV1/753/2018 dated: 07.09.2018 20.09.2018 to 19,09.2020
7.	M.Pandi	Veillbakattai & Nathikudi	922/1 (2.85.00 Hectares)	KV1/26613/2013 dated: 16.09.2016 06.10.2016 to 05.10.2021
8.	Vishnuprasad	Vembakottai & Nathikudi	886/ 10 886/1A1 886/4 (3.47.00 Hectares)	KV1/825/2017 dated:01.02,2019 08.02.2019 to 07.02.2024



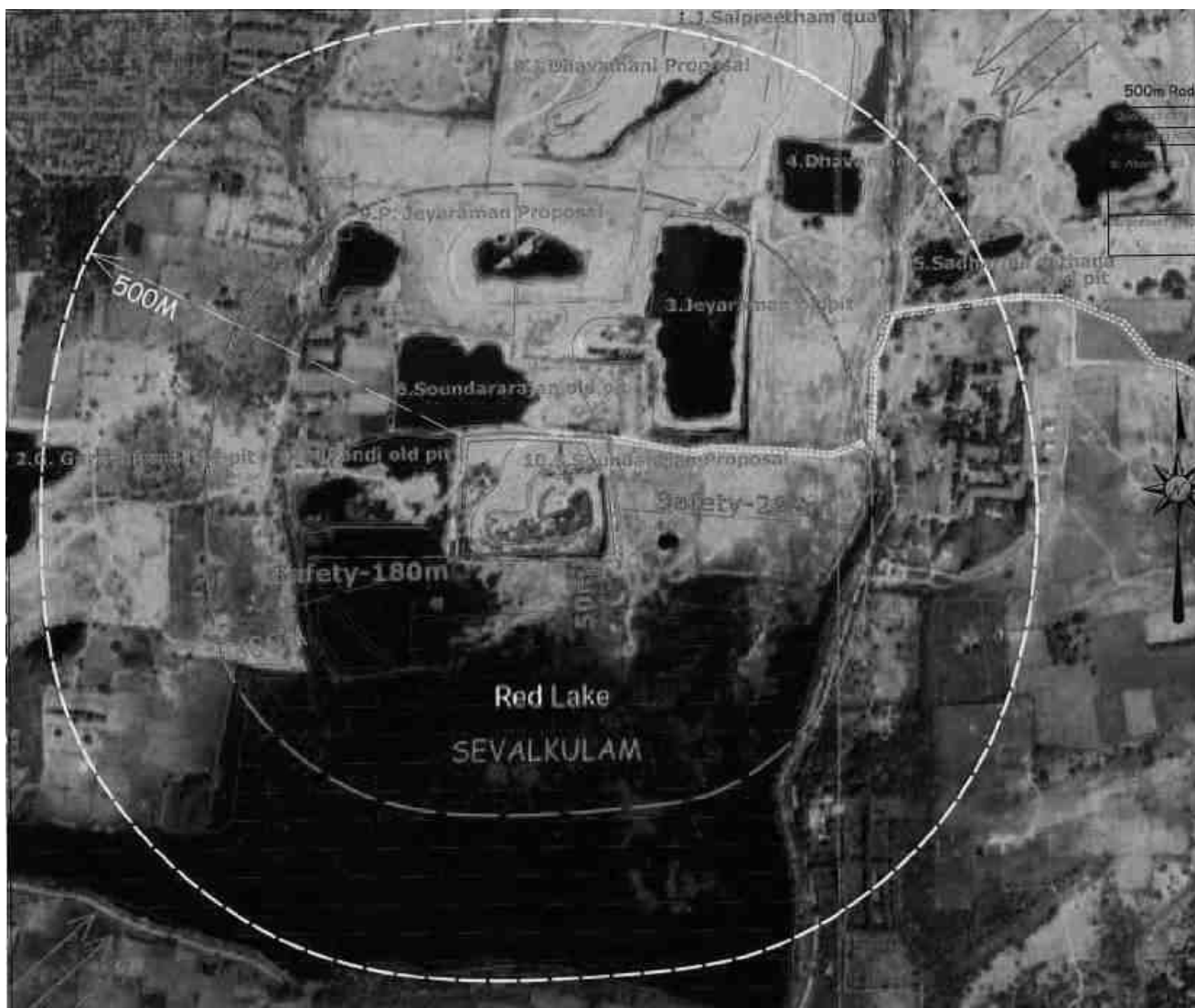
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III	Present Proposed Quarry :			
1.	J.Dhavamani	Vembakottai & Nathikudi	916/4A,8, 918/1,2,3,4 (6.65.00 Hectares)	KV1/698/2024
2.	P.Jeyaraman	Vembakottai & Nathikudi	913,914,915/2, etc., (4.97.50 Hectares)	KV1/720/2024
3.	S. Soundararajan	Vembakottai & Nathikudi	922/2,922/3,922/4 (2.92)	-

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:



Figure 7.1: Vicinity Map



The baseline monitoring carried out for this project reflects the cumulative impact of the existing quarries. The cumulative impacts of the proposed Rough stone and Gravel Quarries of **TMT. J. Dhavamani, THIRU. P.Jeyaraman & Thiru Soundarajan** are provided in detail in Chapter-IV of the EIA/EMP Report. From the study 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° 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 is 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.

* * * * *



CHAPTER - VIII

PROJECT BENEFITS

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 facilities 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.5.0 Lakhs each 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 - IX

ENVIRONMENTAL COST BENEFIT ANALYSIS

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 Roughstone and Gravel Quarry of was granted by SEIAA vide TOR Identification No. **TO24B0108TN5411304N** dated **02.05.2025**. Environmental cost benefit analysis is not prescribed in the terms of reference. Hence, it is not applicable.

* * * * *



CHAPTER - X

ENVIRONMENTAL MANAGEMENT PLAN

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, metalliferous 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:

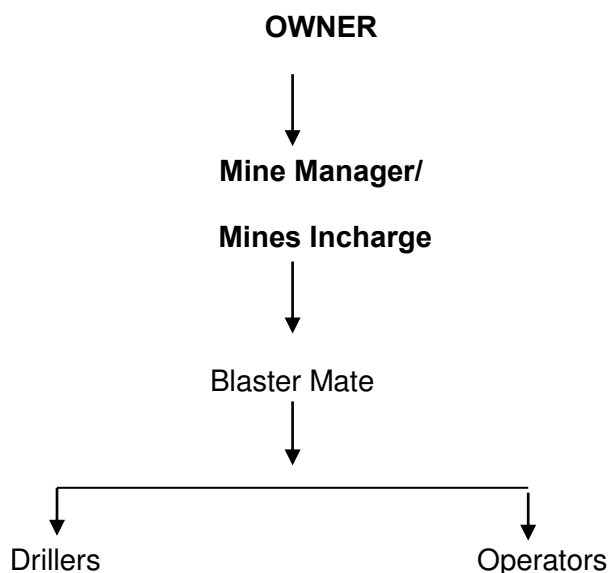
The Mines Manager/Mine Incharge of the respective mines will undertake effective monitoring and implementation of various environmental control measures promptly and effectively and to oversee various environmental management schemes for air quality control, water quality



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 these projects 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 aquatic 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 goals 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 a Kanmai located a distance of 90m on the south eastern side of lease area. 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 since part of the lease area is mined and the balance areas are free from major vegetation and contains bushes and shrubs only. However, good greenbelt and plantation programmes are planned within the lease area.



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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 proponents have earmarked an amount of Rs.5.0 Lakhs each 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	0.29	0.29
	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	0.01
	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 Governors @ Rs. 5000/- per Tipper/Dumper deployed - 2 Units	0.40	0.04
	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	0.58
	Installing wheel wash system near gate of quarry	Installation + Maintenance + Supervision	0.50	0.20
Sub-Total			9.44	1.85



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HECTARES IN NATHIKUDI VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR, TAMIL NADU**

Activities	Mitigation Measure	Provision for Implementation	Capital	Recurring
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 / Competent 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	4.57
Sub-Total			0.50	4.77
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	0.02
	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	0.29	0.15
	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	5.84	0.29
	3. Progressive Closure Activity Green belt development - 500 trees per one hectare - Proposal for 1500 Trees - (350 Inside Lease Area & 1150 Outside Lease Area)	Site clearance, preparation of land, digging of pits / trenches, soil amendmets, transplantation of saplings @ 200 per plant (capital) for plantation inside the lease area and @ 30 per plant maintenance (recurring)	0.35	0.11
		Avenue Plantation @ 300 per plant (capital) for plantation outside the lease area and @ 30 per plant maintenance (recurring)	1.73	0.35
	4. Implementation of Final Mine Closure Acty 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	1.23	0



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Activities	Mitigation Measure	Provision for Implementation	Capital	Recurring
		closure stage - Last Year		
	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 Budget and not necessarily implemented in the Project Site	3.17	0
Sub-Total			8.21	0.9
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	0.00
	Health check up for workers will be provisioned	IME & PME Health check up @ Rs. 1000/- per employee	0.00	0.16
	First aid facility will be provided	Provision of 2 Kits per Hectare @ Rs. 2000/-	0.00	0.27
	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	3.33	0.1
	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 (1 st Class / 2 nd Class / Mine Foreman) under regulation 34 / 34 (6) of MMR, 1961 and Mining Mate under regulation 116 of MMR, 1961 @ 40,000/- for Manager & @ 25,000/- for Foreman / Mate	0	7.8
Sub-Total			4.47	9.07
TOTAL			22.92	16.81

Towards EMP measures, Rs.22.92 Lakhs is allocated under capital cost and Rs.16.81 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:

A meticulously well planned Environmental Management Plan, with various programme schedules and timely execution objectives, as above, will ensure that the future environmental quality in the area will be 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-XI



SUMMARY AND CONCLUSION

CHAPTER 11

SUMMARY & CONCLUSION

11.1 INTRODUCTION:

Thiru. S. Soundararajan propose to operate Rough Stone and Gravel Quarry at Survey No. 922/2,922/3,922/4 over an area of 2.92.00 hectares In Nathikudi Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu. Revised production of 1,75,840m³ of rough stone and 22,080 m³ of Gravel up to depth of 39m for the period of 5 years and has initiated action towards obtaining environmental clearance.. Its details are as follows:

Table 11.1: Basic details of the project

1	Project Name	Rough stone and Gravel Quarry of Thiru. S. Soundararajan
2	Survey No.	922/2,922/3,922/4
3	Extent	2.92.00 Ha
4	Production	1,75,840m ³ of rough stone and 22,080 m ³ of Gravel of Gravel up to depth of 39m for the period of 5 years
5	Land ownership	Patta land in the name applicant wife, applicant got consent and registered

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. Apart from this proposal of Thiru. S. Soundararajan, there are other 2 proposals of Tmt. J. Dhavamani and Thiru. P.Jeyaraman are also falling in the cluster. As such combined impact prediction and individual EMP report preparation is carried out.

This EIA/EMP report for **Thiru. S. Soundararajan** is prepared based on standard and additional Terms of Reference issued by SEIAA, Tamil Nadu vide TOR Identification No. **TO24B0108TN5411304N dated 02.05.2025** and is in conformance of the generic structure prescribed by MOEF&CC in their notification of September 2006 and the approved mining plan.



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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 KV1/767/2024 dated 25.10.2024 (Annexure-1)
Mining Plan Approval	Approved Department of Geology & Mining vide KV1/767/2024 dated 20.11.2024 (Annexure-2)
Details of Quarries within 500m radius	Approved Department of Geology & Mining vide KV1/767/2024 dated 20.11.2024 (Annexure-3A)
B. Application for Environmental Clearance	
Terms of Reference	TO24B0108TN5411304N dated 02.05.2025
Baseline Data Collection	Carried out by Creative Engineers & Consultants , Chennai for Winter Season (Dec 2024 – Feb 2025)
C.Site Details	
Location	Nathikudi Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu.
Coordinates	Latitude: 9° 26' 00.31"N to 9° 26' 04.86"N Longitude: 77° 41' 27.96"E to 77° 41' 34.22"E
Nearest Village	Nathikudi – 850m (SW) side
Nearest Town	Sivakasi-11km - NE
Nearest Highway	SH-183-4.9Km– SE
Nearest Railway Station	Sivakasi-11km - NE
Nearest Airport	Madurai-62km-NE
Accessibility	Lease area is approachable from the existing road which is connected to Sivakasi to Srivilliputhur State highway road on the north.
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.
D. Environmental Setting of the Study Area	
Nearest Water Bodies	Sevalkulam Kanmai -90m-South from mine boundary, Seasonal Odai-180m-W, 300 m-East & >10m – East, , Kayalkudi River - 1.2km (SW), Marugal odai - 6.7km-(SW).
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



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Other industries	Other than crushers, Rough stone quarries, match box, fire works factories no other major industries are located in the study area.
E. Technical Description	
Past production details	Earlier worked by the applicant from 2019 to 2024 by EC Lr.no. DEIAA/VNR/OO4/EC.NO.58/2018 Dated 08.12.2018.Existing pit dimension – 110m x32mx13m (Max)
Geological Reserves	Rough stone - 9,85,808m ³ Gravel - 71,728 m ³
Mineable Reserves	Rough stone - 1,75,840 m ³ Gravel - 22,080 m ³
Mining Method	Opencast mechanized mining using jackhammer drilling, blasting, excavation through excavator & mineral transport through tippers will be carried out.
Production	It is proposed to mine out 1,75,840 m ³ of Rough Stone & 22,080 m ³ of Gravel up to depth of 39m for the period of 5 years
Waste Generation and Management	There is no waste generation anticipated in these quarries since the entire excavated material will be utilized.
Ultimate Depth	39m
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. 44,93,940

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 **Winter Season (December 2024 to February 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 Roughstone and gravel quarries are located in in Nathikudi Village, Vembakottai Taluk, Virudhunagar District. Based on 2011 census data, in the 10km radius there are 28 Rural villages and 7 urban areas from Three Taluks namely Rajapalayam, Sivakasi, Srivilliputhur.. 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	134570	49.67
Female Population	136384	50.33
Total	270954	100
B. Caste-wise population distribution		
Scheduled Caste	48390	17.86
Scheduled Tribes	292	0.11
Other	222272	82.03
Total	270954	100
C. Literate and Illiterate population		
Literate Males	107012	39.49
Literate Females	91000	33.59
Total Literate Population	198012	73.08
Others Males	27558	10.17
Others Females	45384	16.75
Others Population	72942	26.92
Total	270954	100
D. Occupational structure		

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Details	Population	Percentage
Main workers	119491	44.10
Marginal workers	10992	4.06
Total Workers	130,483	48.16
Total Non-workers	140471	51.84
Total	270954	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 °c	19.4	35.1	
Humidity in %	20.0	95.0	
Wind speed in km/hr	<1.8	35.6	
Predominant wind direction from	ENE		
B. Ambient Air Quality Data – 6 Locations			
Parameters	Core Zone	Buffer Zone	Limits
Particulate Matter (Size <10 µm)	54.6 – 76.7	41.8 – 61.4	100
Particulate Matter (Size <2.5 µm)	26.9 – 37.0	19.8 – 30.2	60
Sulphur Dioxide (as SO ₂)	6.0 – 8.0	4.9 – 8.7	80
Nitrogen Dioxide (as NO ₂)	7.8 – 10.8	5.7 – 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	7.42 – 7.92	6.5-8.5	
Total Dissolved Solids, mg/L	94 – 620	2000	
Chloride as Cl-, mg/L	35.80 – 348	1000	
Total Hardness (as CaCO3), mg/L	184 – 432	600	



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Total Alkalinity (as CaCO ₃), mg/L	151– 332	600
Sulphates as SO ₄ ²⁻ , mg/L	32.30 – 245	400
Iron as Fe, mg/L	0.04 – 0.12	0.3
Nitrate as NO ₃ , mg/L	1.97 – 4.37	45
Fluoride as F, mg/L	0.21 – 0.58	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	51.8	46.0 – 50.9	55
Night Equivalent	39.5	38.3 – 43.1	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 – 4 Locations

Parameter	Buffer Zone
pH	6.98 – 7.86
Electrical Conductivity (µmho/cm)	106.4 – 174
Organic matter (%)	1.27 – 1.65
Total Nitrogen (mg/kg)	324 - 705
Phosphorus (mg/kg)	1.02 – 1.58
Sodium (mg/kg)	212 – 307
Potassium (mg/kg)	589-764

Soil is of Silt 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	66.60	19.91
2	Fallow Land	167.12	49.97
3	Land With Scrub	66.87	19.99
4	Land Without Scrub	11.79	3.52
5	Water bodies	2.17	0.65
6	Mining	1.96	0.59
7	Settlement	17.93	5.36
	Total	334.44	100

From the above table it is seen that 49.97% of the buffer area is classified under fallow land, 19.91 % of Agriculture/ Plantation land, 19.99 % constitutes land with scrub, 3.52 % constitutes land without scrub and the balance falls under other land use categories.

Biological Environment:

Flora: The lease area is a non forest, private land partly mined & exposed with rock. Unmined area is mostly barren interspersed 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 are Prosopis juliflora, Sygygium cumuni, Borassus flabellifer, Albizia lebbeck, Acacia auriculiformis, Azadirachta indica, etc. Patches of coconut and casurina farms are also observed.. 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 like Cows, Buffalos, Dogs, Cats etc., 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. Part of the lease area is already mined. There are no perennial water courses in the lease areas. There is Sevalkulam Kanmai in South for which 50m safety distance has been left. Due to scanty rainfall this Sevalkulam Kanmai remains dry for most of the year. study area is composed of Migmatite Gneissic complex and Charnockite Gneissic complex.

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 500 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, NO_x, 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

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		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, PM₁₀, 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 54.5 µg/m³ to 77.8 µg/m³ and with respect to PM_{2.5} are in the range of 26.8µg/m³ to 38.0 µg/m³, which are within the stipulated statutory limits for the projects.

Additionally, cumulative impact due to working of **Thiru. S. Soundararajan** project and 2 proposed projects namely **Tmt. Thavamani & Thiru Jayaram** on ambient air quality is also assessed. The cumulative post project concentration with respect to PM₁₀ is in the range of 54.5 µg/m³ to 82.8 µg/m³ and with respect to PM_{2.5} are in the range of 26.8µg/m³ to 40.7 µg/m³ which are within the statutory limits in each case.

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 680 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 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	Dry patta drainage channel originating near the lease is passing through the north east corner of the lease area. Sevalkulam Kanmai is located about 40m south of the lease area. North of this kanmai, catchment area i.e SF No 922/5 is located for which 50m safety distance as per precise area letter and TOR condition is left. As such the kanmai is located about 90m south of the mine area. There is a Seasonal Odai-180m-W, 300m-East. Due to scanty rainfall these drainage channels remains dry for most of the year. This kanmoi is more of a seasonal rainwater water harvesting structure with intake water mainly from the streams located 300m,E & 180m, W respectively from the lease area is originating west and east of the lease area only. Infact, mining activity in the southern side of the applied lease area was already carried out in the earlier lease period . Lease area is at an higher elevation and it does not farm as a water catchment area. 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 then through settling pond to be located in the southern side of the lease area. The southern and eastern side of the lease area will be fenced and protective earthen embankment of atleast 2m height will be created in the safety zone



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			on the southern & eastern side so that the kanmai and the Government poramboke land near the lease area the lease area is not disturbed. Besides, plantation will also be carried out in the safety zone and on the bund and it will be ensured there is no disturbance to these water bodies. 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.
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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 39m for the two project. 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.
- 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.
- Provision of green net in lease periphery

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



11.4.5. VIBRATION:

The following control measures will be implemented in the projects to reduce ground vibratory conditions to sustainable statutory limits:

- 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 1.41.00 Ha of mined out area will be left as water body. 0.03.0Ha will be the roads, 0.01.0 Ha will be the infrastructure, 0.36.0Ha will be covered with vegetation, 1.04.00 Ha will be undisturbed area and 0.07.0 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 1500 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 in the name applicant wife, applicant got consent and registered.. 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 18 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.5.0 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 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.22.92 Lakhs is allocated under capital cost and Rs.16.81 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**.



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The baseline monitoring carried out for this project reflects the cumulative impact of the existing quarries. The cumulative impacts of the proposed Rough stone and Gravel Quarries of **Thiru Soundarajan , TMT. J. Dhavamani, & THIRU. P.Jeyaraman** are provided in detail in Chapter-IV of the EIA/EMP Report. From the study 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 here that, these proposed quarry leases are more of a substitute for the recently expired quarry leases and as such cumulatively no major additional pollution load is expected.

11.7 CONCLUSION:

By systematic and scientific mining adhering to all the statutory norms and enforcing and strictly implementing the above said mitigation measures mentioned in this report, no adverse impact is envisaged. The proposed mining project will benefit this region in the fields of potential employment opportunities, improved per capita income for local people, improved social welfare facilities in respect of education, medical healthcare systems, etc. in its own way and also revenue to Government through royalty, taxes etc. Besides, it will meet the raw material requirement of the construction industry also.

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CHAPTER - XII

DISCLOSURE OF CONSULTANTS ENGAGED

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



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF
THIRU. S. SOUNDARARAJAN AT SURVEY NOS. 922/2,922/3,922/4 OVER AN AREA OF 2.92.00
HECTARES IN NATHIKUDI VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR, TAMIL NADU**

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 12 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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ANNEXURES



புவியியல் மற்றும் சுரங்கத்துறை

ந.க.எண்: கேவி1/767/2024,

உதவி இயக்குநர் அலுவலகம்,
மாவட்ட ஆட்சியர் அலுவலக வளாகம்,
விருதுநகர்.
நாள்: 25.10.2024.

குறிப்பாணை

பொருள்: கலியங்கனம் குவாரிகளும் - விருதுநகர் மாவட்டம் - வெம்பக்கோட்டை வட்டம் - நதிக்குடி கிராமம் - மட்டா புல எண்கள்: 922/2 (0.97.0), 922/3 (0.97.0) மற்றும் 922/4 (0.98.0) மொத்த பரப்பு 2.92.0 ஹெக்டேர்ஸ் - ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமை வழங்கல் சரியான பரப்பு (Precise Area) தேர்வு செய்யப்பட்டது - சுரங்கத்திட்டம் மற்றும் மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்க கோருவது - தொடர்பாக.

- பார்வை:**
1. திரு.ச.சௌந்தராஜன் த/பெ கப்பையா, க.எண்: 2/115A2, மம்சாபுரம் மெயின்ரோடு, சிவகாசி மேற்கு, சிவகாசி வட்டம், விண்ணப்ப நாள்: 10.07.2024.
 2. இவ்வலுவலக கடிதம் எண் ந.க.கேவி1/767/2024, நாள்: 18.07.2024 (வருவாய் கோட்டாட்சியர், சாத்தூர் அவர்களுக்கு முகவரியிட்டது).
 3. சாத்தூர் வருவாய் கோட்டாட்சியர் கடித எண்.ந.க.எண்.மு.மு.அ2/3822/2024, நாள்: 04.10.2024.
 4. உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை அவர்களின் புலத்தணிக்கை அறிக்கை நாள்: 16.10.2024
 5. 1959 -ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 41 மற்றும் 42.
 6. அரசாணை எண்.168 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.

விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம், மட்டா புல எண். 922/2 (0.97.0), 922/3 (0.97.0) மற்றும் 922/4 (0.98.0) மொத்த பரப்பு 2.92.0 ஹெக்டேர்ஸ் நிலத்தில் 5 வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமை வழங்கக்கோரி விருதுநகர் மாவட்டம், சிவகாசி வட்டம், சிவகாசி மேற்கு, மம்சாபுரம் மெயின்ரோடு, க.எண்: 2/115A2 என்ற முகவரியில் வசித்து வரும் திரு.ச.சௌந்தராஜன் த/பெ கப்பையா என்பவர் பார்வை 1-ல் காணும் விண்ணப்பத்தினை சமர்ப்பித்துள்ளார்.

சாத்தூர் வருவாய் கோட்டாட்சியர் மற்றும் புவியியல் மற்றும் சுரங்கத்துறை, உதவி இயக்குநர் ஆகியோர் கீழ்க்காணும் நிபந்தனைகளுக்குட்பட்டு மேற்கண்ட புலங்களில் உடைகல், கிராவல் குவாரி குத்தகை உரிமை ஐந்தாண்டுகளுக்கு வழங்க பரிந்துரை செய்துள்ளனர்.

மனுதாரர் உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமை வேண்டி விண்ணப்பித்துள்ள வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம், மட்டா புல எண்கள். 922/2

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(0.97.0), 922/3 (0.97.0) மற்றும் 922/4 (0.98.0) மொத்த பரப்பு 2.92.0 ஹெக்டேர் மட்டா
மற்ற எண்: 2248 செளந்தர்ராஜன் மனைவி விஜயா என்பவர் பெயரில் தாக்கலாகியுள்ளது.

குவாரி உரிமம் வழங்கக் கோரிய புல எண்களுக்கு நான்குமால் விரும்பும்:-

வடக்கு - புல எண்: 915/3 செளந்தர்ராஜன் என்பவருக்கு
சொந்தமான செயல்படாத குவாரி, புல எண்: 916/4சீ2,
916/7பி செளந்தர்ராஜன் என்பவரின் நிலம்

தெற்கு - புல எண்: 922/1 மணிக்கண்ணன் நிலம் மற்றும் புல எண்:
922/5 - அரசு புறம்போக்கு நீர்ப்பிடிப்பு

கிழக்கு - புல எண்: 922/6, எஸ்.கே.கணேசன் நிலம், 922/5 அரசு
புறம்போக்கு நீர்ப்பிடிப்பு

மேற்கு - புல எண்: 922/1 மணிக்கண்ணன் நிலம்,

குவாரி உரிமம் கோரும் கூட்டுப்புலம் செளந்தர்ராஜன் மனைவி விஜயா
என்பவர் பெயரில் உள்ளதால், மனுதாரர் பெயரில் குத்தகை உரிமம் ஆவணமாக பதிவு
செய்யப்பட வேண்டும். உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்கக் கோரும்
புலங்களிலிருந்து 300 மீட்டர் சுற்றளவில் குடியிருப்புகள், பள்ளிகள், கோயில்கள், மருதிகள்,
கடுகாடு ஏதும் இல்லை. 50 மீட்டர் சுற்றளவில் தேசிய / மாநில நெடுஞ்சாலைகள், ஆறுகள்,
கட்டிடங்கள், உயர் மின்கம்பிகள் இல்லை. உயர்வகை மரங்கள் ஏதுவும் இல்லை.
வனத்துறையால் பாதுகாக்கப்பட்ட பகுதியாக அறிவிக்கப்பட்ட சரணாலயங்கள், தேசிய
பூங்காக்கள் சுற்றுச்சூழல் உணர் திறன் மிக்க பகுதிகள் (ECO-SENSITIVE ZONE), 1
கிமீட்டர் சுற்றளவில் காடுகள், 500 மீட்டர் சுற்றளவில் அருங்காட்சியக துறையின் மூலம்
பாதுகாக்கப்பட்ட பகுதிகளாக அறிவிக்கப்பட்ட இடங்கள் மற்றும் வரலாற்று சின்னங்கள்
எதும் இல்லை.

மனுதாரர் குவாரி உரிமம் வழங்கக் கோரும் புலத்திற்கு 500 மீட்டர் சுற்றளவில்
புராதான சின்னங்கள் மற்றும் பழமையான கல்வெட்டுகள் ஏதுமில்லை. 50 மீட்டர் சுற்றளவில்
இருப்புப்பாறை, சாலை, ஏதுமில்லை. மனுதாரர் கோரும் கூட்டுப்புலத்திற்குள் 40 மீட்டர்
சுற்றளவில் தெற்கு பகுதியில் புல எண்: 935-ல் அரசு புறம்போக்கு பொதுப்பணித்துறையின்
கட்டுப்பாட்டில் உள்ள செவல்குளம் கண்மாய் உள்ளது, மற்றும் புல எண்: 922/5-ல் அரசு
புறம்போக்கு செல்குளம் கண்மாய் நீர்ப்பிடிப்பு உள்ளது. மேலும், புல எண்: 922/2-ல்
தென்வடவாக கிழக்கு புறத்தில் ஓடை செல்கிறது.

மனுதாரர் குவாரி உரிமம் கோரும் புலங்களிலிருந்து 500 மீட்டர் சுற்றளவில் வடக்கு
பகுதியில் மனுதாரருக்கு சொந்தமான செயல்படாத குவாரியும், ஜெயராமன் மகன்
சாய்பிரித்தம் என்பவருக்கு சொந்தமான செயல்படும் குவாரியும், மற்றும் ஜெயராமன் மகன்
சாய்பிரித்தம் என்பவருக்கு சொந்தமான செயல்படாத குவாரியும், பெருமாள்சாமி மகன்
ஜெயராமன் என்பவருக்கு சொந்தமான செயல்படாத குவாரியும், சங்கம நாயக்கர் மகன்
இராதாகிருஷ்ணன் என்பவருக்கு சொந்தமான செயல்படும் குவாரியும், மேற்கு பகுதியில்
மணிக்கண்ணன் என்பவருக்கு சொந்தமான நிலத்தில் உள்ள செயல்படாத குவாரியும்,
கிழக்கு பகுதியில் புன்செய் நிலங்களும், தெற்கு பகுதியில் அரசு புறம்போக்கு நீர்ப்பிடிப்பு
மற்றும் செவல்குளம் கண்மாயும் உள்ளது. மேலும், 500 மீட்டர் சுற்றளவில் சீனிவாசன் மகன்
ரெங்கசாமி என்பவருக்கு சொந்தமான மட்டசு தொழிற்சாலையும் உள்ளது.

[Handwritten signature]



மேலும், விண்ணப்ப புலங்களான 922/2 (0.97.0), 922/3 (0.97.0) மற்றும் 922/4 (0.98.0) மொத்த பரப்பு 2.92.0 ஹெக்டேரில் விருதுநகர் மாவட்ட ஆட்சியர் அவர்களின் செயல்முறை ஆணைகள் ந.க.கேவி1/10050/2017 நாள்: 10.08.2019-ன்படி மனுதாரருக்கு ஏற்கனவே குவாரி குத்தகை உரிமம் வழங்கப்பட்டு, விண்ணப்ப புல எண்கள் முழுவதும் மேல்மண் அள்ளப்பட்டுள்ளது, பின்னர் 922/3 மற்றும் 922/4 ஆகியவற்றில் முழுமையாக குவாரி பணிகள் மேற்கொள்ளப்பட்டு தோராயமாக 10 முதல் 13 மீட்டர் ஆழம் வரை உடைகள் மற்றும் கிராவல் அள்ளப்பட்டுள்ளது. தெற்கு பகுதியில் குவாரிக்கு செல்ல பாதுகாப்பு இடைவெளி மற்றும் வண்டிப்பாதையாக பயன்படுத்தப்பட்டுள்ளது.

மேற்கண்ட குவாரி அளவு உள்ள கிராமத்தில் அ1 நோட்டீஸ் பிரகாரம் செய்யப்பட்டதில் பொதுமக்களிடமிருந்து நானது தேதி வரை ஆட்சேபனை ஏதும் வரப்பெறவில்லை. மனுதாரர் குவாரி உரிமம் வழங்கக் கோரிய புலங்களிலிருந்து கனிமங்கள் கொண்டு செல்ல திரு.ஜெயராமன் என்பவருக்கு சொந்தமான புலங்களை பயன்படுத்திக்கொள்ள பதிவு செய்யப்படாத பாதை ஒப்பந்தம் பத்திரம் ஏற்படுத்தப்பட்டுள்ளது. பிரஸ்தாப புலங்களில் கண்டிஷன் ஜூரி நிலங்களோ, தடை ஆணை நிலங்களோ ஏதுமில்லை.

மேலும், மேற்படி உரிமம் கோரும் கூட்டுடலத்திற்கு அருகில் ஊர் விலங்குகள் மற்றும் மான் சரணலாயம் ஏதுமில்லை. மேலும், மனுதாரரிடமிருந்து அரசுக்கு செலுத்த வேண்டிய வரி பாக்கி நிலுவை இனங்கள் ஏதுமில்லை. மேற்படி குவாரி அமையவுள்ள புலமானது நதிக்குடி ஊராட்சி, வெம்பக்கோட்டை ஊராட்சி ஒன்றியத்திற்கு உட்பட்டது ஆகும்.

எனவே, வருவாய் கோட்டாட்சியர்-சாத்தூர் மற்றும் உதவி புலியியலாளர், புலியியல் மற்றும் சுரங்கத்துறை அவர்களின் பரிந்துரையினை ஏற்றும் கீழ்க்கண்ட நிபந்தனைகளுக்கு உட்பட்டும், விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம், புல எண்கள்: 922/2 (0.97.0), 922/3 (0.97.0) மற்றும் 922/4 (0.98.0) மொத்த பரப்பு 2.92.0 ஹெக்டேர்ஸ் நிலத்திற்கு 1959-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.

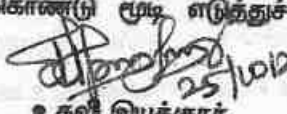
தமிழ்நாடு சிறுகனிம சலுகை விதிகள்-1959 விதி எண்: 41-ன்படி குவாரி பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்கத் திட்டத்தினை (Mining Plan) 90 தினங்களுக்குள் சமர்ப்பிக்குமாறும், விதி எண்: 42-ன்படி மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (State Level Environmental Impact Assessment Authority) இசைவினைப்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

நிபந்தனைகள்

- 1) அருகிலுள்ள மட்டா நிலங்களுக்கு 7.5 மீ பாதுகாப்பு இடைவெளி விடுத்து குவாரி செய்தல் வேண்டும்.
- 2) குவாரி குத்தகை உரிமம் கோரும் புல எண்களுக்கு அருகில் செயல்படும் மற்றும் செயல்படாத குவாரிகளுக்கு எவ்வித பாதிப்பும் ஏற்படாத வகையில் குவாரிப்பணி மேற்கொள்ள வேண்டும்.



- 3) புல எண்: 922/2 ல் கிழக்கு புறத்தில் தென்வடலாக செல்லும் ஓடைக்கு எந்தவித பாதிப்பும் ஏற்படாத வகையில் 10 மீ பாதுகாப்பு இடைவெளியிட்டு குவாரிப்பணிகள் செய்ய வேண்டும்.
- 4) மனுதாரர் கோரும் கூட்டுபுலத்திற்குள் 40 மீட்டர் சுற்றளவில் தெற்கு பகுதியில் புல எண்: 935-ல் அரசு புறம்போக்கு பொதுப்பணித்துறையின் கட்டுப்பாட்டில் உள்ள செவல்குளம் கண்மாய் மற்றும் விண்ணப்பித்துள்ள புலங்களுக்கு தெற்கு புறத்தில் உள்ள புல எண்: 922/5-ல் அரசு புறம்போக்கு செல்குளம் கண்மாய் நீர்ப்பிடிப்பு பகுதி ஆகியவற்றிற்கு எந்தவித பாதிப்பும் ஏற்படாத வகையில் 50 மீ பாதுகாப்பு இடைவெளியிட்டு குவாரிப்பணிகள் செய்ய வேண்டும்.
- 5) அருகில் உள்ள விவசாய நிலங்களுக்கு பாதிப்பு ஏற்படாத வண்ணம் உரிய பாதுகாப்பு இடைவெளி விட்டு குவாரிப்பணி மேற்கொள்ள வேண்டும்.
- 6) பொதுமக்கள் / விவசாய நிலங்களுக்கு பாதிப்பு ஏற்படாத வகையில் தகுதி வாய்ந்த அங்கீகரிக்கப்பட்ட நபர்கள் மூலம் வெடிமருந்துகள் சேமிக்கப்பட்டு குவாரியில் வெடித்தல் வேண்டும்.
- 7) குத்தகைதாரர், தமக்கு வழங்கப்பட்ட குத்தகை பகுதிக்கு அருகில் உள்ள விவசாய நிலங்களுக்கும் மற்றும் கிராம பொது மக்களுக்கும், சாலைகளுக்கும் பாதிப்பு ஏற்படாத வகையில் குவாரிப்பணி மேற்கொள்ள வேண்டும்.
- 8) சுரங்கத்திட்டம் மற்றும் சுற்றுச்சூழல் தடையில்லாச் சான்று குத்தகை உரிமம் வழங்குவதற்கு முன் சமர்ப்பிக்க வேண்டும்.
- 9) குவாரியில் வேலை செய்யும் தொழிலாளர்கள் தொழிலாளர் நலவாரியம் மற்றும் காப்பீடு திட்டத்தில் பதிவு செய்து தொழிலாளர் நலன் பேண்பட வேண்டும்.
- 10) குழந்தை தொழிலாளர்களை குவாரி பணியில் அமர்த்தக் கூடாது.
- 11) கனிமங்களை வாகனங்களில் கொண்டு செல்லும் போது பாதசாரிகள், பொது மக்கள் பாதிக்காதவண்ணம் தார்பாய்கள் கொண்டு மூடி எடுத்துச் செல்ல வேண்டும்.


25/11/24
உதவி இயக்குநர்,
புவிமியல் மற்றும் சுரங்கத்துறை,
விருதுநகர்

பெறுநர்

திரு.ச.சௌந்தராஜன்
த/பெ சுப்பையா,
க.எண்: 2/115A2,
மம்சாபுரம் பெயின்ரோடு,
சிவகாசி மேற்கு,
சிவகாசி வட்டம்,
விருதுநகர் மாவட்டம்.

தகவ்

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



From

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

To

Thiru.S.Soundararajan
S/o Sri.Subbaiah
D.No: 2/115A2,Main Road,
Mamsapuram, Sivakasi West (po),
Sivakasi Taluk,
Virudhunagar District.

Roc.No:KV1/767/2024, Dated:20.11.2024.

Sir,

Sub: Mines and Minerals - Minor Mineral - Virudhunagar District - Vembakottai Taluk -Nathikudi Village - Patta Land - S.F.Nos: 922/2 , 922/3 , & 922/4 Extent 2.92.00 Hectares - Quarry lease application preferred by Thiru. S.Soundararajan 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.KV1/10050/2017, Dated: 10.06.2019
2. Quarry lease application received from Thiru. S.Soundararajan dated:10.07.2024.
3. The Assistant Director, Geology and Mining, Virudhunagar Rc.No.KV1/767/2024, Dated: 25.10.2024.
4. Thiru. S.Soundararajan S/o Sri Subbiah letter, dated: 11.11.2024.

In the reference first cited, a quarry lease has been granted to Thiru. S.Soundararajan S/o Sri Subbiah for quarrying Rough stone and Gravel, over an extent of 2.92.00Hect, in S.F.Nos: 922/2 , 922/3 , & 922/4 of Nathikudi Village, Vembakottai Taluk, Virudhunagar District for a period of Five years valid from 18/10/2019 to 17/10/2024 under the Tamil Nadu Minor Mineral concession Rule (TNMMCR) - 1959. As per office records, the applicant has removed, 42687 cbm of Rough stone and 37872 cbm of Gravel as per Assistant Director, Department of Geology and Mining Virudhunagar office records from the proposed area.

2) In the reference Second cited Thiru. S.Soundararajan S/o Sri Subbiah has preferred an renewal application for the grant of quarrying Rough stone and Gravel, over an extent of 2.92.00Hect, in



S.F.Nos: 922/2 , 922/3 , & 922/4 of Nathikudi 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 was communicated to quarry Rough Stone and Gravel over an extent of 2.92.00 Hectares of Patta Land in S.F.Nos: 922/2 , 922/3 , & 922/4 for a period of 05 (Five) years vide 3rd cited.

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 9,85,808 cbm Roughstone and 71,728 cbm of Gravel. The mineable reserves is estimated as 2,69,0708 cbm of Roughstone and 48,256 cbm of Gravel upto a depth of 39 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 (m³)	Gravel Volume(m³)
PQ-AB	I	50	156	4	-	39,664
	Deduct old pit-1 = 140X36X3=					
	II	66	118	5	38,940	-15,808
I Year Excavation					38,940	24,544
PQ-AB	I	60	134	4	-	32,160
	Deduct old pit-2= 110X32X9=					-14,080
	II	60	118	5	35400	
	III	80	102	5	40,800	
	Deduct old pit-2= 110X32X9=				-31,680	
II Year Excavation					44,520	18,080


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Section	Bench	Length	Width	Height	Roughstone Voume (m³)	Gravel Volume(m³)
PQ-AB	I	40	134	4	-	21,440
	Deduct old pit-3= 247X16X4					-15,808
	II	32	118	5	18,880	
	III	62	102	5	31,620	
	IV	26	86	5	11,180	
	Deduct Old pit-3=247X16X1=				-3,952	
III Year Excavation					57,728	5,632
PQ-AB	IV	100	86	5	43,000	-
	V	55	70	5	19,250	
IV Year Excavation					62,250	-
PQ-AB	V	55	70	5	19,200	-
	VI	94	54	5	25,380	
	VII	78	38	5	14,820	
	VIII	62	22	5	6,820	
V Year Excavation					66,270	
Total Five Years Production					2,69,708	48,256

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.

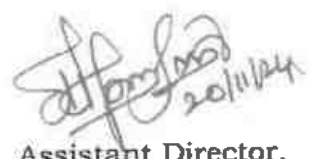
4) In view of the above, in exercise of the powers delegated under Rule 41 of Tamil Nadu Minor Mineral Concession Rules, 1959, I hereby approve the Mining Plan submitted by Thiru. S.Soundararajan S/o Sri Subbiah for quarrying Rough Stone and Gravel over an extent of 2.92.00 Hectares of Patta Land in S.F.Nos: 922/2 , 922/3 , & 922/4 of Nathikudi Village, Vembakottai Taluk & Virudhunagar District for a period of 05 (Five) years to obtain Environment Clearance from SEIAA, Chennai subject to the following conditions:

1. The Mining Plan is approved without prejudice to any other law applicable to the quarry permission from time to time where such Laws are made by the State Government or any other authority.



2. This approval of the Mining Plan does not in any way imply the approval of the Government in terms of any other provisions of the Tamil Nadu Minor Mineral Concession Rules, 1959.
3. The Mining Plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.
4. The approval of the Mining Plan does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development and Regulation) Amendment Act, 2015 or any other connected Laws including, Environment Protection.
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. 1 Jeenis Road,
Saidapet, Chennai-15.



From

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

To

Thiru.S.Soundararajan
S/o Sri.Subbaiah
D.No: 2/115A2,Main Road,
Mamsapuram, Sivakasi West (po),
Sivakasi Taluk,
Virudhunagar District.

Roc.No:KV1/767/2024, Dated:20.11.2024

Sir,

Sub: Mines and Minerals - Minor Mineral -
Virudhunagar District - Vembakottai Taluk -
Nathikudi Village - Patta Land - S.F.Nos: 922/2 ,
922/3 , & 922/4 Extent 2.92.00 Hectares - Quarry
lease application preferred by
Thiru.S.Soundararajan S/o Sri.Subbaiah 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.KV1/10050/2017, Dated:
10.06.2019.
 2. Quarry lease application received from Thiru.
S.Soundararajan dated:10.07.2024.
 3. The Assistant Director, Geology and Mining,
Virudhunagar Rc.No.KV1/767/2024, Dated:
25.10.2024.
 4. Thiru.S.Soundararajan S/o. Sri Subbiah
letter, dated: 11.11.2024.

In the reference first cited, a quarry lease has been granted to
Thiru. S.Soundararajan S/o Sri Subbiah for quarrying Rough stone
and Gravel, over an extent of 2.92.00Hect, in S.F.Nos: 922/2 , 922/3 , &
922/4 of Nathikudi Village, Vembakottai Taluk, Virudhunagar District
for a period of Five years valid from 18/10/2019 to 17/10/2024
under the Tamil Nadu Minor Mineral concession Rule (TNMMCR) -
1959. As per office records, the applicant has removed, 42687 cbm of
Rough stone and 37872 cbm of Gravel as per Assistant Director,



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Department of Geology and Mining Virudhunagar office records from the proposed area.

- 2) In the reference Second cited Thiru. S.Soundararajan S/o Sri Subbiah has preferred an renewal application for the grant of quarrying Rough stone and Gravel, over an extent of 2.92.00Hect, in S.F.Nos: 922/2 , 922/3 , & 922/4 of Nathikudi 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 was communicated to quarry Rough Stone and Gravel over an extent of 2.92.00 Hectares of Patta Land in S.F.Nos: 922/2 , 922/3 & 922/4 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) 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 9,85,808 cbm Roughstone and 71,728 cbm of Gravel. The mineable reserves is estimated as 2,69,0708 cbm of Roughstone and 48,256 cbm of Gravel upto a depth of 39 m below ground level for the period of five years.
- 5) The applicant Thiru. S.Soundararajan, 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.
- 6) As per his request the details of quarry situated within 500 meter radius from the proposed area for obtaining Environmental Clearance as detailed below:



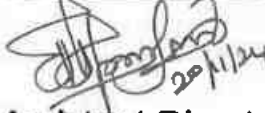
**Details of quarry situated within 500 meters radius from the
applied area**

S.N o	Quarry detail	Taluk & Village	S.F. No.& Extent (Hect)	Proceedings No. & Lease Period
I	Existing Quarries:			
1.	J.Saipritham	Vembakottai & Nathikudi	919/1,2A(P), (3.33.50 Hectares)	KV1/033/2022 10.01.2022 11.06.2024 to 10.06.2029
II	Abandoned Quarry :			
1.	Guruvammal	Vembakottai & Nathikudi	903/2 (1.35.00 Hectares)	KV1/705/2012,04.08.201 7 23.08.2017 to 22.08.2022
2.	P.Jeyaraman	Vembakottai & Nathikudi	916/4C1 916/7A 920/1A1 920/1A3 (2.975 Hectares)	KV1/424/2018,29.01.201 9 01.02.2019 to 31.01.2024
3.	P.Dhavamani	Vembakottai & Nathikudi	919/2B	Prior - 2003
4.	Sadharmasadana	Vembakottai & Nathikudi	807/4C (1.62.5 Hectares)	KV1/22055/2016 dt.01.02.2019 08.02.2019 to 07.02.2024
5.	Soundarrajan	Vembakottai & Nathikudi	915/3,916/4B, 4C2,7B (2.80.00 Hectares)	KV1/753/2018 dated: 07.09.2018 20.09.2018 to 19.09.2020
6.	M.Pandi	Vembakottai & Nathikudi	922/1 (2.85.00 Hectares)	KV1/26613/2013 dated: 16.09.2016 06.10.2016 to 05.10.2021
7.	Vishnuprasad	Vembakottai & Nathikudi	886/10 886/1A1 886/4 (3.47.00)	KV1/825/2017 dated:01.02.2019 08.02.2019 to 07.02.2024
III	Present Proposed Quarry :			
1.	J.Dhavamani	Vembakottai & Nathikudi	916/4A,8, 918/1,2,3,4 (6.65.00 Hects)	KV1/698/2024
2.	P.Jeyaraman	Vembakottai & Nathikudi	913,914,915/2, etc., (2.92.00 Hects)	KV1/720/2024
5.	Soundarrajan	Vembakottai & Nathikudi	922/2,3,4 (2.92 Hects)	KV1/10050/2017, Dated:10.06.2019 18.10.2019 to 17.10.2024
		TOTAL	17.88.00 Hects	

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	140	36	3
Pit-II	110	32	13
Pit-III	247	16	5

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/ 004/EC.No.58/ 2018, Dated: 08.12.2018.	Rc.No.KV1/10050 /2017, Dated: 10.06.2019 18/10/2019 to 17/10/2024	1,97,050 cbm	72,450 cbm	42687 cbm	37872 cbm	Pit I- 3m Pit II-13m Pit III -5m


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

Copy to :

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



MINES LAND PHOTO



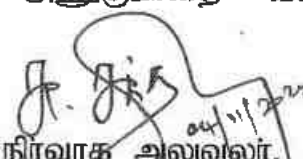
விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம் பட்டா புலன்கள். 922/2, 922/3, 922/4 ஆக மொத்தம் 2-92.0 ஹெக்டேரில் மட்டும் 5 வருடங்களுக்கு உதவிஇயக்குனர், புவியியல் மற்றும் சுரங்கத்துறை, விருதுநகர் மாவட்ட ஆட்சியர் அலுவலக வளாகம், விருதுநகர் அவர்களின் செயல்முறை ஆணை எண். கே.வி.1/767/2024 நாள் 25.10.2024ன் படி திரு. சு. செளந்தரராஜன், த/பெ. சுப்பையா அவர்கள் மனு செய்துள்ளார்கள். மேற்படி இடம் உடைகல் மற்றும் கிராவல் வெட்டி எடுப்பதற்கு அங்கீகரிக்கப்பட்ட இடம் என்பதை இதன் மூலம் சான்றளிக்கிறேன்.

மேற்படி இடத்திற்கு செல்வதற்கு அனுசூபாதை வசதி உள்ளது என்றும் சான்றளிக்கிறேன்.

இடம்:

நாள்:

மனுதாரர் கையெப்பம்


 கிராம நிர்வாக அலுவலர்.
 Village Administrative Officer
 Nathikudi Village
 Vembakkottai (T.K)



கிராம நிர்வாக அலுவலரின் சான்று

விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம் பட்டா புலங்களி. 922/2, 922/3, 922/4 ஆக மொத்தம் 2-92.0 ஹெக்டேரில் மட்டும் 5 வருடங்களுக்கு உதவிஇயக்குனர், புவியியல் மற்றும் கரங்கத்துறை, விருதுநகர் மாவட்ட ஆட்சியர் அலுவலக வளாகம், விருதுநகர் அவர்களின் செயல்முறை ஆணை எண். கே.வி.1/767/2024 நாள் 25.10.2024ன் படி திரு. க. சௌந்தரராஜன், த/பெ. சுப்பையா அவர்கள் மனு செய்துள்ளார்கள். இவர்கள் ஆரம்பிக்க உள்ள உடைகல் மற்றும் கிராவல் குவாரி இடத்திற்கு செல்ல போதிய அனுகுபாதை வசதி உள்ளது மேலும் நிலத்தை சுற்றி 300மீட்டர் சுற்றளவில் குடியிருப்புகள், கோயில்கள், பள்ளிக்கூடம் ஏதும் இல்லை.

மேற்படி புல எண்கள். மேற்படி கிராம கணக்கு தடை ஆணை புத்தகத்தில் இடம் பெறவில்லை. மேலும் 10கி.மீ. சுற்றளவில் பிற மாநில எல்லை இடம்பெறவில்லை. மேற்படி சான்று கனிமவளத்துறைக்கு அளிக்கும் வகைக்காக வழங்கப்படுகிறது.


கிராம நிர்வாக அலுவலர்.
Village Administrative Officer
Nathikudi Village
Vembakkottai (T.K)



POPULATION BREAKUP & LITERACY LEVEL WITHIN THE BUFFER ZONE AS PER 2011 CENSUS

Sl.No	No. of Villages	Name of village	Rural / urban	HOUSE HOLDS	POPULATION			POPULATION BELOW 6 AGE GROUP			SCHEDULE CASTE			SCHEDULE TRIBE			LITRERATES			ILLITRERATES		
					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,Sivakasi Sub-District, Virudhunagar District																						
1	1	Nadukkudi	Rural	1348	4797	2383	2414	575	296	279	2439	1231	1208	0	0	0	3122	1717	1405	1675	666	1009
		total (A)		1348	4797	2383	2414	575	296	279	2439	1231	1208	0	0	0	3122	1717	1405	1675	666	1009
2-5 km,Srivilliputhur Sub-District, Virudhunagar District																						
2	1	Deyvendri	Rural	277	943	477	466	125	65	60	336	166	170	0	0	0	593	341	252	350	136	214
3	2	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																						
4	1	Thiruthangal (Part)	Rural	2604	9504	4743	4761	1012	495	517	1505	737	768	17	10	7	7115	3810	3305	2389	933	1456
5	2	Vendurayapuram	Rural	661	2383	1195	1188	285	155	130	528	266	262	0	0	0	1445	837	608	938	358	580
		total (B)		5423	19195	9605	9590	2044	1032	1012	3788	1872	1916	17	10	7	13387	7358	6029	5808	2247	3561
5-10 km,Rajapalayam Sub-District, Virudhunagar District																						
6	1	Keelrajakularaman	Rural	2575	8986	4487	4499	817	413	404	2319	1160	1159	40	23	17	6302	3459	2843	2684	1028	1656
7	2	Melarajakularaman (Part)	Rural	5238	16652	8394	8258	1617	843	774	2978	1502	1476	96	46	50	12060	6744	5316	4592	1650	2942
Srivilliputhur Sub-District, Virudhunagar District																						
8	1	Viluppanur	Rural	1557	5304	2719	2585	544	285	259	2864	1431	1433	1	0	1	3843	2152	1691	1461	567	894
9	2	Nallingaperi	Rural	159	532	265	267	37	24	13	187	94	93	0	0	0	390	207	183	142	58	84
10	3	Muthuvenkatarayapuram	Rural	561	1862	915	947	175	103	72	770	393	377	0	0	0	1161	647	514	701	268	433
11	4	Vadakkusrivilliputhur	Rural	604	2157	1070	1087	261	123	138	1318	647	671	0	0	0	1551	847	704	606	223	383
12	5	Athikulam Sengulam	Rural	1033	3542	1775	1767	370	198	172	1919	966	953	0	0	0	2730	1470	1260	812	305	507
13	6	Thilakulam	Rural	368	1289	652	637	127	76	51	271	129	142	0	0	0	899	494	405	390	158	232
14	7	Mullikulam	Rural	466	1658	803	855	176	92	84	608	306	302	0	0	0	1099	608	491	559	195	364
15	8	Tadagannai Managaseri	Rural	602	2143	1049	1094	210	109	101	719	351	368	0	0	0	1380	771	609	763	278	485
16	9	Malli	Rural	1681	5839	2940	2899	594	312	282	1454	718	736	1	0	1	4092	2279	1813	1747	661	1086
17	10	Pillaiyarkulam (part)	Rural	1913	6271	3119	3152	649	329	320	928	461	467	0	0	0	4325	2391	1934	1946	728	1218
18	11	Srivilliputtur R.F.	Rural	20	71	35	36	19	10	9	0	0	0	68	34	34	19	14	5	52	21	31
Sivakasi Sub-District, Virudhunagar District																						
19	1	Krishnaperi	Rural	223	776	390	386	90	50	40	87	47	40	0	0	0	526	301	225	250	89	161
20	2	Injar	Rural	1901	7386	3637	3749	739	377	362	1028	514	514	0	0	0	5068	2754	2314	2318	883	1435
21	3	Anaiyur (Part)	Rural	1364	4919	2408	2511	610	288	322	2630	1281	1349	0	0	0	3523	1882	1641	1396	526	870
22	4	Maraneri	Rural	2706	9746	4733	5013	1046	508	538	4251	2110	2141	0	0	0	6555	3519	3036	3191	1214	1977
23	5	Paranayakkanpatti	Rural	783	2715	1351	1364	274	151	123	554	277	277	0	0	0	1900	1066	834	815	285	530
24	6	Edirkottai	Rural	1203	4329	2129	2200	465	254	211	331	156	175	0	0	0	3086	1656	1430	1243	473	770
25	7	Kongankulam	Rural	318	1050	507	543	87	44	43	138	64	74	0	0	0	761	409	352	289	98	191
26	8	Alangulam (Part)	Rural	508	1924	1004	920	164	95	69	480	247	233	0	0	0	1473	812	661	451	192	259
27	9	Kundayiruppu	Rural	1846	6812	3365	3447	852	424	428	1677	820	857	0	0	0	4602	2498	2104	2210	867	1343
28	10	Surarpatti	Rural	406	1523	751	772	195	103	92	999	496	503	0	0	0	933	525	408	590	226	364
Rajapalayam Sub-District, Virudhunagar District																						
29	1	Ramalingapuram (CT)	Urban	1391	4505	2252	2253	477	240	237	416	213	203	0	0	0	3233	1810	1423	1272	442	830
Srivilliputhur Sub-District, Virudhunagar District																						
30	1	Srivilliputhur (M)	Urban	21411	75396	37423	37973	6884	3466	3418	4681	2291	2390	10	5	5	58687	31263	27424	16709	6160	10549
31	2	Padikkasu vaithanpatti (CT)	Urban	2807	9538	4797	4741	1047	515	532	2170	1084	1086	0	0	0	6951	3890	3061	2587	907	1680
Sivakasi Sub-District, Virudhunagar District																						
32	1	Sengamalanachiarpatti (CT)	Urban	3614	13811	6740	7071	1443	721	722	2579	1228	1351	14	8	6	10509	5408	5101	3302	1332	1970
33	2	Anaiyur (CT)	Urban	6884	24436	12060	12376	2620	1349	1271	2142	1047	1095	8	3	5	17469	9344	8125	6967	2716	4251
34	3	Sithurajapuram (CT)	Urban	4728	16860	8337	8523	1748	875	873	858	418	440	36	21	15	12567	6665	5902	4293	1672	2621
35	4	Alangulam (CT)	Urban	1364	4930	2475	2455	456	236	220	807	398	409	1	1	0	3809	2052	1757	1121	423	698
		total (C)		70234	246962	122582	124380	24793	12613	12180	42163	20849	21314	275	141	134	181503	97937	83566	65459	24645	40814
		Grand Total (A+B+C)		77005	270954	134570	136384	27412	13941	13471	48390	23952	24438	292	151	141	198012	107012	91000	72942	27558	45384

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

OCCUPATIONAL STRUCTURE WITHIN THE BUFFER ZONE AS PER 2011 CENSUS

Sl.No	No. of Villages	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,Sivakasi Sub-District, Virudhunagar District																	
1	1	Nadukkudi	Rural	1327	1156	109	69	154	164	9	23	1055	900	117	152	939	1106
		total (A)		1327	1156	109	69	154	164	9	23	1055	900	117	152	939	1106
2-5 km,Srivilliputhur Sub-District, Virudhunagar District																	
2	1	Deyvendri	Rural	233	153	6	3	47	43	0	1	180	106	45	52	199	261
3	2	Achchandavilthan	Rural	1866	1380	285	177	408	653	54	59	1119	491	84	163	1240	1632
Sivakasi Sub-District, Virudhunagar District																	
4	1	Thiruthangal (Part)	Rural	2733	1553	72	46	98	86	32	59	2531	1362	95	78	1915	3130
5	2	Vendurayapuram	Rural	719	513	55	29	72	65	11	5	581	414	12	49	464	626
		total (B)		5551	3599	418	255	625	847	97	124	4411	2373	236	342	3818	5649
5-10 km,Rajapalayam Sub-District, Virudhunagar District																	
6	1	Keelrajakularaman	Rural	2521	1357	293	120	610	622	12	13	1606	602	167	261	1799	2881
7	2	Melarajakularaman (Part)	Rural	5173	3317	246	186	417	550	158	277	4352	2304	130	325	3091	4616
Srivilliputhur Sub-District, Virudhunagar District																	
8	1	Viluppanur	Rural	1520	1217	98	67	494	694	22	20	906	436	36	84	1163	1284
9	2	Nallingaperi	Rural	153	113	68	40	28	51	0	1	57	21	1	6	111	148
10	3	Muthuvenkatarayapuram	Rural	244	106	42	7	17	14	2	4	183	81	331	427	340	414
11	4	Vadakkusrivilliputhur	Rural	624	526	24	19	77	115	57	82	466	310	4	11	442	550
12	5	Athikulam Sengulam	Rural	845	593	41	18	166	199	12	9	626	367	197	263	733	911
13	6	Thilakulam	Rural	355	198	30	10	53	77	3	3	269	108	29	66	268	373
14	7	Mullikulam	Rural	505	341	36	16	104	147	4	10	361	168	13	47	285	467
15	8	Tadagannai Managaseri	Rural	374	369	26	15	70	83	3	4	275	267	249	161	426	564
16	9	Malli	Rural	1668	1071	126	70	243	315	30	55	1269	631	103	214	1169	1614
17	10	Pillaiyarkulam (part)	Rural	1577	780	42	22	256	237	17	19	1262	502	237	394	1305	1978
18	11	Srivilliputtur R.F.	Rural	17	17	0	0	2	2	0	0	15	15	0	1	18	18
Sivakasi Sub-District, Virudhunagar District																	
19	1	Krishnaperi	Rural	219	168	18	23	19	22	1	5	181	118	1	1	170	217
20	2	Injar	Rural	1800	1272	141	104	265	353	28	54	1366	761	68	81	1769	2396
21	3	Anaiyur (Part)	Rural	1406	1113	73	29	103	90	7	55	1223	939	21	43	981	1355
22	4	Maraneri	Rural	2806	2315	97	53	96	78	44	94	2569	2090	24	24	1903	2674
23	5	Paranayakkanpatti	Rural	792	669	11	14	4	1	12	7	765	647	15	24	544	671
24	6	Edirkottai	Rural	1178	836	70	34	44	37	11	5	1053	760	131	182	820	1182
25	7	Kongankulam	Rural	320	271	11	7	197	222	1	0	111	42	3	1	184	271
26	8	Alangulam (Part)	Rural	547	340	21	6	42	58	9	14	475	262	9	9	448	571
27	9	Kundayiruppu	Rural	1707	1406	141	87	344	472	26	19	1196	828	220	251	1438	1790
28	10	Surarpatti	Rural	274	254	4	7	34	22	0	0	236	225	185	195	292	323
Rajapalayam Sub-District, Virudhunagar District																	
29	1	Ramalingapuram (CT)	Urban	1327	754	33	9	70	110	7	10	1217	625	35	54	890	1445
Srivilliputhur Sub-District, Virudhunagar District																	
30	1	Srivilliputhur (M)	Urban	20490	9780	109	25	715	526	1300	1826	18366	7403	1289	997	15644	27196
31	2	Padikkasu vaiathanpatti (CT)	Urban	2601	1739	39	17	211	320	13	22	2338	1380	208	210	1988	2792
Sivakasi Sub-District, Virudhunagar District																	
32	1	Sengamalanachiarpatti (CT)	Urban	3948	2076	31	17	69	77	46	100	3802	1882	91	106	2701	4889
33	2	Anaiyur (CT)	Urban	6745	3957	33	17	61	57	85	98	6566	3785	471	337	4844	8082
34	3	Sithurajapuram (CT)	Urban	4677	2522	22	19	24	9	42	89	4589	2405	451	436	3209	5565
35	4	Alangulam (CT)	Urban	1350	618	98	11	191	232	61	24	1000	351	103	112	1022	1725
		total (C)		67763	40095	2024	1069	5026	5792	2013	2919	58700	30315	4822	5323	49997	78962
		Grand Total (A+B+C)		74641	44850	2551	1393	5805	6803	2119	3066	64166	33588	5175	5817	54754	85717

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

EDUCATIONAL FACILITIES IN THE STUDY AREA

Sl.No	No. of Villages	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,Sivakasi Sub-District, Virudhunagar District																
1	1	Nadukkudi	1	3	3	1	0	0	0	0	0	0	0	0	3	0
		total (A)		3	3	1	0	0	0	0	0	0	0	0	3	0
2-5 km,Srivilliputhur Sub-District, Virudhunagar District																
2	1	Deyvendri	1	1	0	0	0	0	0	0	0	0	0	0	0	0
3	2	Achchandavilthan	1	2	5	1	0	0	0	0	0	0	0	0	5	0
Sivakasi Sub-District, Virudhunagar District																
4	1	Thiruthangal (Part)	1	6	5	3	0	0	0	0	0	0	0	0	5	0
5	2	Vendurayapuram	1	9	6	2	2	0	0	0	0	0	0	0	6	0
		total (B)		18	16	6	2	0	0	0	0	0	0	0	16	0
5-10 km,Rajapalayam Sub-District, Virudhunagar District																
6	1	Keelrajakularaman	1	8	8	4	2	1	0	0	0	0	0	0	8	0
7	2	Melarajakularaman (Part)	1	12	7	2	2	2	0	0	0	0	0	0	7	0
Srivilliputhur Sub-District, Virudhunagar District																
8	1	Viluppanur	1	3	6	1	2	2	0	0	0	0	0	1	6	0
9	2	Nallingaperi	1	1	1	0	0	0	0	0	0	0	0	0	1	0
10	3	Muthuvenkatarayapuram	1	2	2	0	0	0	0	0	0	0	0	0	2	0
11	4	Vadakkusrivilliputhur	1	0	1	0	0	0	0	0	0	0	0	0	1	0
12	5	Athikulam Sengulam	1	4	3	1	0	0	0	0	0	0	0	0	3	0
13	6	Thilakulam	1	0	1	0	0	0	0	0	0	0	0	0	1	0
14	7	Mullikulam	1	1	2	0	0	0	0	0	0	0	0	0	2	0
15	8	Tadagannai Managaseri	1	5	4	1	1	0	0	0	0	0	0	0	4	0
16	9	Malli	1	7	7	1	1	0	0	0	0	0	0	0	7	0
17	10	Pillaiyarkulam (part)	1	3	3	0	0	0	0	0	0	0	0	0	3	0
18	11	Srivilliputtur R.F.	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Sivakasi Sub-District, Virudhunagar District																
19	1	Krishnaperi	1	2	1	0	0	0	0	0	0	0	0	0	1	0
20	2	Injar	1	5	6	1	1	0	0	0	0	0	0	0	5	0
21	3	Anaiyur (Part)	1	9	6	2	1	0	0	0	0	0	0	0	6	0
22	4	Maraneri	1	2	3	1	0	0	0	0	0	0	0	0	3	0
23	5	Paranayakkanpatti	1	1	1	1	0	0	0	0	0	0	0	0	1	0
24	6	Edirkottai	1	2	2	0	0	0	0	0	0	0	0	0	2	0
25	7	Kongankulam	1	1	0	0	0	0	0	0	0	0	0	0	0	0
26	8	Alangulam (Part)	1	5	3	3	2	2	0	0	0	0	0	0	3	0
27	9	Kundayiruppu	1	3	3	1	0	0	0	0	0	0	0	0	3	0
28	10	Surarpatti	1	2	3	1	0	0	0	0	0	0	0	0	3	0
		total (C)		78	73	20	12	7	0	0	0	0	0	1	72	0
		Grand Total (A+B+C)		99	92	27	14	7	0	0	0	0	0	1	91	0

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

MEDICAL FACILITIES IN THE STUDY AREA

Sl.No	No. of Villages	Name of village	Medical Facilities (A(1)/NA(2))	Community Health Centre (Numbers)	Primary Health Centre (Numbers)	Primary Health Sub Centre (Numbers)	Maternity And Child Welfare Centre (Numbers)	TB Clinic (Numbers)	Hospital Allopathic (Numbers)	Hospital Alternative Medicine (Numbers)	Dispensary (Numbers)	Veterinary Hospital (Numbers)	Mobile Health Clinic (Numbers)	Family Welfare Centre (Numbers)
0-2 km,Sivakasi Sub-District, Virudhunagar District														
1	1	Nadukkudi	1	0	0	1	0	0	0	0	0	0	0	0
		total (A)		0	0	1	0	0	0	0	0	0	0	0
2-5 km,Srivilliputhur Sub-District, Virudhunagar District														
2	1	Deyvendri	2	0	0	0	0	0	0	0	0	0	0	0
3	2	Achchandavilthan	1	0	0	1	1	0	0	0	0	0	0	0
Sivakasi Sub-District, Virudhunagar District														
4	1	Thiruthangal (Part)	1	0	1	1	1	1	0	0	1	1	0	1
5	2	Vendurayapuram	2	0	0	3	0	0	0	0	0	0	0	0
		total (B)		0	1	5	2	1	0	0	1	1	0	1
5-10 km,Rajapalayam Sub-District, Virudhunagar District														
6	1	Keelrajakularaman	1	1	1	1	1	1	0	0	1	1	0	1
7	2	Melarajakularaman (Part)	1	0	1	3	1	1	0	0	1	1	0	1
Srivilliputhur Sub-District, Virudhunagar District														
8	1	Viluppanur	1	0	0	1	0	0	0	0	0	0	0	0
9	2	Nallingaperi	2	0	0	0	0	0	0	0	0	0	0	0
10	3	Muthuvenkatarayapuram	2	0	0	0	0	0	0	0	0	0	0	0
11	4	Vadakkusrivilliputhur	2	0	0	0	0	0	0	0	0	0	0	0
12	5	Athikulam Sengulam	1	0	0	1	0	0	0	0	0	1	0	0
13	6	Thilakulam	2	0	0	0	0	0	0	0	0	0	0	0
14	7	Mullikulam	2	0	0	0	0	0	0	0	0	0	0	0
15	8	Tadagannai Managaseri	1	0	1	1	1	1	0	0	1	0	0	1
16	9	Malli	1	0	0	1	0	0	0	0	0	1	0	0
17	10	Pillaiyarkulam (part)	1	0	0	1	1	0	0	0	0	0	0	0
18	11	Srivilliputtur R.F.	2	0	0	0	0	0	0	0	0	0	0	0
Sivakasi Sub-District, Virudhunagar District														
19	1	Krishnaperi	2	0	0	0	0	0	0	0	0	0	0	0
20	2	Injar	1	0	0	1	1	0	0	0	0	0	0	0
21	3	Anaiyur (Part)	1	0	0	1	1	0	0	0	0	0	0	0
22	4	Maraneri	1	0	1	1	1	1	0	0	1	1	0	1
23	5	Paranayakkanpatti	2	0	0	0	0	0	0	0	0	0	0	0
24	6	Edirkottai	1	0	0	1	0	0	0	0	0	0	0	0
25	7	Kongankulam	1	0	0	1	0	0	0	0	0	0	0	0
26	8	Alangulam (Part)	1	1	1	1	1	1	0	0	1	1	0	1
27	9	Kundayiruppu	1	0	0	3	0	0	0	0	0	0	0	0
28	10	Surarpatti	2	0	0	0	0	0	0	0	0	0	0	0
		total (C)		2	5	18	8	5	0	0	5	6	0	5
		Grand Total (A+B+C)		2	6	24	10	6	0	0	6	7	0	6

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

Note : A: Available, NA- Not Available

INFRASTRUCTURAL FACILITIES AVAILABLE IN THE STUDY AREA

Sl.No	No. of Villages	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,Sivakasi Sub-District, Virudhunagar District																			
1	1	Nadukkudi	1	2	1	2	1	2	2	2	1	2	1	1	1	2	2	1	1
2-5 km,Srivilliputhur Sub-District, Virudhunagar District																			
2	1	Deyvendri	1	1	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
3	2	Achchandavilthan	1	2	1	1	2	2	2	2	1	2	1	1	1	2	2	1	1
Sivakasi Sub-District, Virudhunagar District																			
4	1	Thiruthangal (Part)	1	2	1	1	2	2	2	2	1	2	1	1	1	2	2	2	1
5	2	Vendurayapuram	1	2	1	1	2	2	2	2	1	2	1	1	1	1	1	2	2
5-10 km,Rajapalayam Sub-District, Virudhunagar District																			
6	1	Keelrajakularaman	1	2	1	1	2	2	2	1	1	1	1	1	1	2	2	1	1
7	2	Melarajakularaman (Part)	1	1	1	1	1	2	2	2	1	2	1	1	1	2	1	1	1
Srivilliputhur Sub-District, Virudhunagar District																			
8	1	Viluppanur	1	2	1	2	2	2	2	2	1	2	1	1	1	2	1	1	1
9	2	Nallingaperi	1	2	1	1	1	2	2	2	2	2	1	1	1	2	2	2	2
10	3	Muthuvenkatarayapuram	1	1	1	1	2	2	2	2	1	2	1	1	1	2	2	2	2
11	4	Vadakkusrivilliputhur	1	2	2	1	2	2	2	2	1	2	1	1	1	2	1	1	1
12	5	Athikulam Sengulam	1	2	2	1	2	2	2	2	1	2	1	1	1	1	2	1	1
13	6	Thilakulam	1	2	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
14	7	Mullikulam	1	1	2	1	2	2	2	2	2	2	1	1	2	2	2	2	2
15	8	Tadagannai Managaseri	1	2	2	1	2	2	2	2	1	2	1	1	2	2	2	2	2
16	9	Malli	1	1	1	1	2	2	2	2	1	2	1	1	1	2	2	2	1
17	10	Pillaiyarkulam (part)	1	1	1	1	2	2	2	1	2	1	1	1	1	2	2	1	1
18	11	Srivilliputtur R.F.	1	2	2	1	1	2	2	2	2	2	2	1	2	2	2	2	2
Sivakasi Sub-District, Virudhunagar District																			
19	1	Krishnaperi	1	2	1	1	2	2	2	2	2	2	1	1	1	2	2	2	2
20	2	Injar	1	2	1	1	2	2	2	2	1	2	1	1	1	2	2	1	2
21	3	Anaiyur (Part)	1	1	1	1	2	2	2	2	1	2	1	1	1	2	2	1	1
22	4	Maraneri	1	1	1	1	2	2	2	2	1	2	1	1	2	2	1	2	1
23	5	Paranayakkanpatti	1	2	1	1	2	2	2	2	2	2	1	1	1	2	2	2	2
24	6	Edirkottai	1	1	2	2	2	2	2	2	1	2	1	1	1	2	2	1	1
25	7	Kongankulam	1	2	1	1	2	1	2	2	2	2	1	1	1	2	2	2	1
26	8	Alangulam (Part)	1	1	1	1	2	2	2	1	1	1	1	1	1	2	1	1	1
27	9	Kundayiruppu	1	2	2	1	2	2	2	2	1	2	1	1	1	2	2	2	1
28	10	Surarpatti	1	2	1	1	2	2	2	2	2	2	1	1	1	2	2	2	2

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

Note : A: Available, NA- Not Available, A(1) , NA(2))



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Annexure 10

AMBIENT AIR QUALITY

Project	:	Combined Rough Stone and Gravel Quarries Of Thiru. S. Soundararajan
Name of the Location	:	Mine Lease Area
Station Code	:	A1

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	03.12.2024	68.2	32.8	7.2	9.0
2	04.12.2024	72.2	34.6	7.8	9.7
3	14.12.2024	66.5	31.9	6.9	9.1
4	15.12.2024	55.0	26.9	6.2	8.4
5	17.12.2024	60.0	28.9	6.3	8.3
6	18.12.2024	65.6	31.4	6.8	8.7
7	28.12.2024	74.1	35.7	8.0	9.9
8	29.12.2024	70.2	33.5	7.4	9.4
9	31.12.2024	57.0	28.7	6.0	8.9
10	01.01.2025	62.3	29.8	6.6	8.7
11	11.01.2025	54.6	27.4	6.1	7.8
12	12.01.2025	61.0	29.3	6.3	8.4
13	14.01.2025	67.4	32.4	7.1	9.1
14	15.01.2025	72.6	34.9	7.8	9.7
15	25.01.2025	58.6	28.1	6.2	8.3
16	27.01.2025	64.1	30.7	6.9	8.9
17	28.01.2025	69.0	33.1	7.3	9.3
18	01.02.2025	75.2	36.0	8.0	9.9
19	11.02.2025	71.0	34.1	7.5	9.5
20	12.02.2025	59.4	28.4	6.2	8.4
21	14.02.2025	63.1	30.3	6.8	8.8
22	15.02.2025	57.8	27.7	6.1	8.2
23	25.02.2025	76.7	37.0	8.0	10.8
24	26.02.2025	73.1	35.1	7.5	9.8
	MIN	54.6	26.9	6.0	7.8
	AVE	65.6	31.6	7.0	9.0
	MAX	76.7	37.0	8.0	10.8

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

Prepared by



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AMBIENT AIR QUALITY

Project	:	Combined Rough Stone and Gravel Quarries Of Thiru. S. Soundararajan
Name of the Location	:	Parai Patti Village
Station Code	:	A2

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	03.12.2024	54.8	26.2	7.2	8.8
2	04.12.2024	52.4	25.3	6.8	8.4
3	14.12.2024	58.5	28.4	8.1	9.4
4	15.12.2024	54.4	26.1	7.2	8.8
5	17.12.2024	59.4	28.5	8.2	9.6
6	18.12.2024	56.0	26.8	7.4	8.9
7	28.12.2024	50.9	24.4	6.5	8.2
8	29.12.2024	48.2	23.0	6.1	7.7
9	31.12.2024	59.3	28.3	8.3	9.6
10	01.01.2025	56.8	27.2	7.8	9.0
11	11.01.2025	48.2	23.6	6.3	7.9
12	12.01.2025	51.4	24.5	6.5	8.2
13	14.01.2025	54.5	26.1	7.2	8.9
14	15.01.2025	58.2	27.9	8.0	9.3
15	25.01.2025	50.5	24.2	6.5	8.1
16	27.01.2025	48.8	23.4	6.3	7.8
17	28.01.2025	48.9	23.5	6.2	8.0
18	01.02.2025	52.8	25.3	6.8	8.5
19	11.02.2025	56.9	27.3	7.8	9.2
20	12.02.2025	53.4	25.6	7.0	8.6
21	14.02.2025	61.4	30.2	8.5	10.4
22	15.02.2025	57.6	27.8	8.0	9.2
23	25.02.2025	55.1	26.3	7.3	9.0
24	26.02.2025	52.4	25.2	6.8	8.5
	MIN	48.2	23.0	6.1	7.7
	AVE	54.2	26.0	7.2	8.8
	MAX	61.4	30.2	8.5	10.4

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

Prepared by



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AMBIENT AIR QUALITY

Project	:	Combined Rough Stone and Gravel Quarries Of Thiru. S. Soundararajan
Name of the Location	:	Nathikudi Village
Station Code	:	A3

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	05.12.2024	49.2	23.1	7.6	9.4
2	06.12.2024	50.8	23.8	8.2	9.9
3	12.12.2024	46.6	22.0	6.9	8.5
4	13.12.2024	51.1	24.0	8.3	10.1
5	19.12.2024	47.9	22.5	7.3	9.1
6	20.12.2024	46.8	21.9	6.9	8.6
7	26.12.2024	49.9	23.5	7.9	9.7
8	27.12.2024	47.6	22.3	7.2	8.9
9	02.01.2025	50.4	23.7	8.1	9.8
10	03.01.2025	47.5	22.3	7.2	8.7
11	09.01.2025	48.0	21.2	6.7	8.5
12	10.01.2025	48.9	22.9	7.5	9.3
13	16.01.2025	51.4	24.2	8.4	10.3
14	17.01.2025	47.9	22.5	7.3	9.2
15	23.01.2025	56.1	26.4	8.7	10.9
16	24.01.2025	54.5	25.6	8.3	10.5
17	02.02.2025	49.4	23.2	7.7	9.6
18	03.02.2025	51.0	23.9	8.2	10.1
19	09.02.2025	48.4	22.7	7.5	9.3
20	10.02.2025	52.1	24.4	8.2	10.3
21	16.02.2025	59.4	27.7	8.7	11.6
22	17.02.2025	53.1	25.0	8.2	10.5
23	23.02.2025	55.2	25.9	7.8	10.8
24	24.02.2025	52.2	24.6	8.6	10.5
	MIN	46.6	21.2	6.7	8.5
	AVE	50.6	23.7	7.8	9.8
	MAX	59.4	27.7	8.7	11.6

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	:	Combined Rough Stone and Gravel Quarries Of Thiru. S. Soundararajan
Name of the Location	:	M.Duraisampuram Village
Station Code	:	A4

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	05.12.2024	57.3	29.1	7.6	9.9
2	06.12.2024	52.5	25.4	6.5	8.9
3	12.12.2024	53.0	25.6	6.5	8.9
4	13.12.2024	50.4	24.2	6.0	8.4
5	19.12.2024	46.0	21.2	5.4	7.6
6	20.12.2024	49.3	23.8	5.7	8.2
7	26.12.2024	45.2	20.9	5.3	7.5
8	27.12.2024	48.0	22.0	5.5	7.9
9	02.01.2025	55.0	26.7	7.0	9.4
10	03.01.2025	47.5	22.0	5.5	7.8
11	09.01.2025	53.2	25.8	6.5	9.1
12	10.01.2025	50.5	24.3	5.9	8.4
13	16.01.2025	46.1	21.5	5.4	7.6
14	17.01.2025	48.3	22.2	5.9	8.0
15	23.01.2025	54.7	26.4	6.9	9.3
16	24.01.2025	51.7	25.0	6.3	8.6
17	02.02.2025	54.9	27.3	6.9	9.5
18	03.02.2025	51.8	25.0	6.2	8.7
19	09.02.2025	46.1	21.1	5.6	7.6
20	10.02.2025	47.1	21.5	5.3	7.7
21	16.02.2025	45.2	20.7	6.0	7.4
22	17.02.2025	49.2	23.7	6.3	8.1
23	23.02.2025	53.8	26.0	6.6	9.2
24	24.02.2025	50.8	24.6	6.1	8.6
	MIN	45.2	20.7	5.3	7.4
	AVE	50.3	24.0	6.1	8.4
	MAX	57.3	29.1	7.6	9.9

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

Prepared by



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AMBIENT AIR QUALITY

Project	:	Combined Rough Stone and Gravel Quarries Of Thiru. S. Soundararajan
Name of the Location	:	Achamthavirthan Village
Station Code	:	A5

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	07.12.2024	44.7	21.3	5.3	7.8
2	08.12.2024	47.9	23.2	6.3	8.6
3	10.12.2024	42.4	20.0	5.4	7.2
4	11.12.2024	45.9	22.0	5.9	8.1
5	21.12.2024	49.0	23.9	6.6	9.0
6	22.12.2024	43.5	20.6	5.5	7.5
7	24.12.2024	42.5	19.9	5.2	7.4
8	25.12.2024	44.5	21.2	5.6	7.7
9	04.01.2025	43.4	20.6	5.9	7.5
10	05.01.2025	49.1	24.0	6.6	8.8
11	07.01.2025	41.8	19.8	5.1	7.3
12	08.01.2025	45.1	21.6	5.7	7.9
13	18.01.2025	50.0	24.5	6.9	9.2
14	19.01.2025	47.3	22.9	6.1	8.4
15	21.01.2025	49.8	24.4	6.9	9.1
16	22.01.2025	46.3	22.2	5.9	8.3
17	04.02.2025	53.5	25.8	7.4	10.6
18	05.02.2025	47.9	23.2	6.4	8.6
19	07.02.2025	42.8	20.3	5.1	7.4
20	08.02.2025	46.5	22.4	5.9	8.2
21	18.02.2025	47.0	22.7	6.1	8.4
22	19.02.2025	44.3	21.1	5.3	7.6
23	21.02.2025	50.2	24.6	6.9	9.3
24	22.02.2025	48.4	23.5	6.4	8.8
	MIN	41.8	19.8	5.1	7.2
	AVE	46.4	22.3	6.0	8.3
	MAX	53.5	25.8	7.4	10.6

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

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AMBIENT AIR QUALITY

Project	:	Combined Rough Stone and Gravel Quarries Of Thiru. S. Soundararajan
Name of the Location	:	Nagapalayam Village
Station Code	:	A6

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	07.12.2024	48.4	22.9	5.4	6.2
2	08.12.2024	51.9	24.6	6.1	6.9
3	10.12.2024	53.9	25.6	6.1	7.1
4	11.12.2024	49.7	23.6	5.8	6.5
5	21.12.2024	51.1	24.2	5.9	6.7
6	22.12.2024	47.5	22.5	5.4	6.1
7	24.12.2024	45.8	21.8	5.0	5.7
8	25.12.2024	50.3	23.7	5.8	6.5
9	04.01.2025	45.9	23.2	5.2	7.2
10	05.01.2025	48.4	22.9	5.5	6.1
11	07.01.2025	50.5	24.3	5.8	6.8
12	08.01.2025	46.6	22.1	5.3	6.4
13	18.01.2025	45.4	21.5	5.0	6.2
14	19.01.2025	47.3	22.4	5.2	5.9
15	21.01.2025	49.2	23.3	5.7	6.4
16	22.01.2025	53.7	25.6	6.2	7.2
17	04.02.2025	55.9	26.5	6.2	7.6
18	05.02.2025	46.2	21.9	4.9	5.7
19	07.02.2025	60.5	29.2	7.4	9.6
20	08.02.2025	54.4	25.8	6.2	7.2
21	18.02.2025	50.7	24.2	5.9	6.7
22	19.02.2025	55.5	26.3	6.7	7.4
23	21.02.2025	54.6	25.9	6.1	7.4
24	22.02.2025	56.9	27.1	6.9	7.8
	MIN	45.4	21.5	4.9	5.7
	AVE	50.8	24.2	5.8	6.8
	MAX	60.5	29.2	7.4	9.6

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

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WATER QUALITY DATA

Project Name	:	Combined Rough Stone and Gravel Quarries Of Thiru. S. Soundararajan							
Location Name	:	Location Code				Location Name			
		W1				Mine Lease Area			
		W2				Parai Patti Village			
		W3				Nathikudi Village			
		W4				M.Duraisampuram			
		W5				Achamthavirthan Village			
		W6				Nagapalayam Village			

S. No.	Parameter	Unit	W1	W 2	W 3	W 4	W 5	W 6	*Permissible Limits
1	pH	-	7.87	7.92	7.85	7.78	7.92	7.42	6.5-8.5
2	Electrical Conductivity	µmhos/cm	442.6	1638	535.7	997.5	1032	625	-
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	184	356	210	398	432	298	600
6	Calcium Hardness CaCO ₃	mg/L	112	167.0	144	234	217	174	-
7	Magnesium Hardness CaCO ₃	mg/L	72.0	189	66.0	164	215	124	-
8	Calcium Ca	mg/L	44.8	66.8	57.6	93.6	86.8	69.6	200
9	Magnesium	mg/L	17.3	45.4	15.8	39.4	51.6	29.8	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	151	332	201	266	324	202	600
11	Chloride Cl ⁻	mg/L	35.8	348	45.6	122	90.4	54.6	1000
12	Sulphate SO ₄ ²⁻	mg/L	32.3	245	64.8	147	165	89.7	400
13	Iron Fe	mg/L	0.05	0.11	0.04	0.12	0.06	BDL(D.L-0.01)	0.3
14	Nitrate NO ₃	mg/L	BDL(D.L-1.0)	2.56	1.97	3.42	2.65	4.37	45
15	Fluoride F	mg/L	0.21	0.58	0.46	0.37	0.42	0.54	1.5
16	Total Dissolved Solids	mg/L	266	94	320	600	620	376	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.

[Handwritten Signature]

Prepared by



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LAND USE PATTERN OF THE STUDY AREA WITHIN 10 KM RADIUS

Sl.No	No. of Villages	Name of village	Total Geographical Area (in Hectares)	Forest Area (in Hectares)	Area under Non-Agricultural Uses (in Hectares)	Barren & Uncultivable 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,Sivakasi Sub-District, Virudhunagar District													
1	1	Nadukkudi	2384.77	0	353.28	0	4.1	114.9	4.93	1071.64	273.41	373.85	188.66
		total (A)	2384.77	0	353.28	0	4.1	114.9	4.93	1071.64	273.41	373.85	188.66
2-5 km,Srivilliputhur Sub-District, Virudhunagar District													
2	1	Deyvendri	564.99	0	93.82	0	0	89.05	4.77	83.08	0	144.42	149.85
3	2	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													
4	1	Thiruthangal (Part)	790.2	0	50.32	80.31	10.55	60.05	120.5	113.63	200.15	42.27	112.42
5	2	Vendurayapuram	1252.3	0	158.1	0	5.36	0	0	0	887.28	23.41	178.15
		total (B)	4555.12	0	329.49	85.17	19.72	149.1	130.87	502.98	1967.41	879.38	491
5-10 km,Rajapalayam Sub-District, Virudhunagar District													
6	1	Keelrajakularaman	2394.68	0	308.98	0	0	0.2	1.18	1248.11	83.48	217	535.73
7	2	Melarajakularaman (Part)	2016.59	0	332.29	2.27	0	165.24	0	994.33	0	24.59	497.87
Srivilliputhur Sub-District, Virudhunagar District													
8	1	Viluppanur	2238.39	0	300.98	16.95	0	0	5.42	0	1617.65	87.41	209.98
9	2	Nallingaperi	116.8	0	26.59	0	0	0	1.02	0	72.74	0.69	15.76
10	3	Muthuvenkatarayapuram	600.63	0	179.71	0	0	0.16	20.51	162.64	100.98	0.05	136.58
11	4	Vadakkusrivilliputhur	630.4	0	245	0	0	0	0	0	213.3	6.1	166
12	5	Athikulam Sengulam	541.47	0	237.64	0	0	0.9	4.01	80.53	35.56	3.06	179.77
13	6	Thilakulam	125.5	0	34.8	0	0	0	0	0	49.2	8.8	32.7
14	7	Mullikulam	301.35	0	57.23	0	0	0	0	0	158.18	2.77	83.17
15	8	Tadagannai Managaseri	473.38	0	113.33	0	0	0	0.34	0	215.43	10.39	133.89
16	9	Malli	1983.32	0	554.23	0	0	3.2	81.4	969.23	83.98	29.4	261.88
17	10	Pillaiyarkulam (part)	1694.33	0	357.47	82	6.96	0	0	0	945.66	29.54	272.7
18	11	Srivilliputtur R.F.	14369	14369	0	0	0	0	0	0	0	0	0
Sivakasi Sub-District, Virudhunagar District													
19	1	Krishnaperi	256.17	0	43.69	0	0	6.99	0.37	107.29	44.38	24.35	29.1
20	2	Injar	2321.22	0	120	210	75	40	84	260.22	1301	179	52
21	3	Anaiyur (Part)	1834.27	0	265.66	0	23.43	0	24.45	1332.08	108.4	42.37	37.88
22	4	Maraneri	1936.44	0	202.97	4.31	18.41	17	15.2	1491.12	49.56	86.97	50.9
23	5	Paranayakkanpatti	382.57	0	97.23	0	4.59	0	0.03	273.31	0.73	6.66	0.02
24	6	Edirkottai	1916	0	151.39	0	1.8	8.81	9.1	1459.59	68.06	188.48	28.77
25	7	Kongankulam	128.59	0	5.81	0	0	0.01	0.51	16.29	27.43	65.95	12.59
26	8	Alangulam (Part)	1491.2	0	102.14	20	3.4	38.05	5.21	944.23	157.45	196.89	23.83
27	9	Kundayiruppu	1464.07	0	225.42	0	3.09	15	2	768.64	205.16	205.59	39.17
28	10	Surarpatti	486.8	0	75.29	0	4.7	21.1	3.04	317.57	13.25	47.85	4
		total (C)	39703.17	14369	4037.85	335.53	141.38	316.66	257.79	10425.18	5551.58	1463.91	2804.29
		Grand Total (A+B+C)	46643.06	14369	4720.62	420.7	165.2	580.66	393.59	11999.8	7792.4	2717.14	3483.95

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



**MINING PLAN AND ENVIRONMENT
MANAGEMENT PLAN FOR QUARRYING
ROUGHSTONE & GRAVEL**

**PREPARED UNDER RULE 19 (1) & 20 and 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 RENEWAL AREA

EXTENT	:	2.92.00 Hectares
SURVEY Nos.	:	922/2, 922/3 & 922/4
VILLAGE	:	NATHIKUDI
TALUK	:	VEMBAKOTTAI
DISTRICT	:	VIRUDHUNAGAR

FOR APPLICANT :

**S. SOUNDARARAJAN,
S/o. Shri. Subbiah,
D.No.2/115A2, Main Road,
Mamsapuram, Sivakasi West (Post),
Sivakasi Taluk,
Virudhunagar District – 626125.**

PREPARED BY

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



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S/o Shri. Subbiah,
D.No. 2/115A2, Main Road,
Mamsapuram, Sivakasi West (Post),
Sivakasi Taluk,
Virudhunagar District – 626 124.
Mobile No. 99766 42587

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 2.92.0 Hectares in S.F.Nos: 922/2, 922/3 & 922/4 of Nathikudi Village, Vembakottai Taluk, Virudhunagar District, vide The Assistant Director, Geology and Mining, Virudhunagar, Letter No. KV1/767/2024 - dated 25.10.2024 and submit by
Sri. M. Dharmalingam, M.Sc (Geol.), FCC (Mining),
Recognized Qualified Person,.

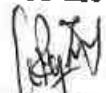
I request the Assistant director, Geology & Mining, Virudhunagar to make further correspondence regarding the modification of the Mining Plan with said Recognized Qualified Person at his following address :

Shri. M. Dharmalingam, M.Sc.,(Geol.), FCC (Mining),
No.28, Pol Pettai,
Thoothukudi – 628002.
Cell : 99528 08328

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 in all respect.

Place : Virudhunagar
Date : 09.11.2024

Signature of the Applicant.


(S. Soundararajan)



S. SOUNDARARAJAN,
S/o Shri. Subbiah,
D.No. 2/115A2, Main Road,
Mamsapuram, Sivakasi West (Post),
Sivakasi Taluk,
Virudhunagar District – 626 124.
Mobile No. 99766 42587

DECLARATION OF THE APPLICANT

The Mining Plan in respect of the quarry lease approval of **Rough stone & Gravel** over an extent of **2.92.0 Hectares** in S.F.Nos: 922/2, 922/3 & 922/4 of **Nathikudi 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 : 09.11.2024

Signature of the Applicant.


(S. Soundararajan)

This Mining is approved based on guidelines/ instructions issued in the CGM, Letter No.3868/LC/2012 dated 19-11-2012 and incorporation of the particulars specified in the latter Roc.No.....KV.1-767-2024.

Dated.....19.11.24.....of the Deputy Director of Geology and Mining, Virudhunagar and subject to further Fulfillment of the conditions laid down under rule 41,42 of Tamil Nadu Minor Mineral Concession Rules 1959


Assistant Director of Geology & Mining
Virudhunagar

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

KV1-767-2024

Letter Roc. No.

19.11.24
Dated



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

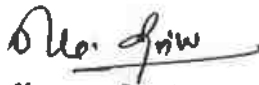
CERTIFICATE FROM THE RECOGNIZED QUALIFIED PERSON

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. Soundararajan, S/o. Shri. Subbiah over an extent of 2-92.00 Hectares in
S.F.Nos: 922/2, 922/3 & 922/4 of Nathikudi 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 : 7.11.2024


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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LIST OF ANNEXURES

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1	COPY OF PRECISE AREA COMMUNICATION	I
2	COPY OF RQP CERTIFICATE	II
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12	PREVIOUS TNPCB- AIR & WATER CONSENT ORDER COPY	XII

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2	ROUTE MAP	I A	Not to Scale
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8	ENVIRONMENT CUM SATILITE IMAGERY PLAN	VII	1 : 5000
9	PROGRESSIVE MINE CLOSURE PLAN	VIII	1 : 2000

[Signature]



**MINING PLAN INCLUDING ENVIRONMENT MANAGEMENT PLAN
FOR ROUGH STONE & GRAVEL QUARRY OVER AN EXTENT OF
2.92.00 Ha IN NATHIKUDI 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. Soundararajan, S/o. Shri. Subblah**, residing at D.No. 2/115A2, Main Road, Sivakasi West (Post), Sivakasi Taluk, Virudhunagar District -626124.
2. The application was processed by The Assistant Director, Department of Geology and Mining, Virudhunagar, Letter. No. KV1/767/2024 - dated 25.10.2024 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 2.92.00 Hectares of patta lands in S.F.Nos. 922/2, 922/3 & 922/4 of Nathikudi Village, Vembakottai Taluk, Virudhunagar District of Tamil Nadu State for a period of Five years.

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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 **9,85,808 m³** of Rough Stone, **71,728 m³** Gravel and Mineable Reserves is estimated at **2,69,708 m³** of **Rough Stone** and **48,256 m³** 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 **2,69,708 m³** of **Rough Stone** and **48,256 m³** 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 10 Kms radius from the project site area under the Wildlife (Protection) Act, 1972.Therefore the project seeks clearance only from State Level Environmental Impact Assessment Authority (SEIAA).

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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.

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EXECUTIVE SUMMARY:

a.	Name of the Village Panchayat	: Nathikudi
b.	Name of the Panchayat Union	: Vembakottai
c.	The proposed total Mineable Reserves	: 2,69,708 m ³ of Rough Stone and 48,256 m ³ of Gravel
d.	The proposed quantity of reserves (level of production) for ten years to be mined is (Recoverable reserves)	: 2,69,708 m ³ of Rough Stone and 48,256 m ³ of Gravel
e.	Total extent of the area	: 2-92.00 Ha
f.	Proposed Period of mining	: Five years
g.	Existing depth	: Previous workings in some places from 3 to 13mtrs shown in the plan
h.	Proposed Depth of mining	: 39 m 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. 17,93,940/- (14,43,940+3,50,000) Rs. 24,00,000/- Rs. 3,00,000/- Total Project cost (A+B+C)= Rs. 44,93,940/-

[Signature]



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

Corners	Co- ordinates		Distance between the corners
	Latitude	Longitude	
1	9°26'00.34"N	77°41'27.96"E	1-2= 152.0m
2	9°26'05.24"N	77°41'28.36"E	2-3 = 61.2m
3	9°26'05.33"N	77°41'30.36"E	3-4= 118.2m
4	9°26'04.86"N	77°41'34.22"E	4-5= 144.8m
5	9°26'00.09"N	77°41'34.60"E	5-1= 201.2m

2.0 General Information:

2.1	a.	Name of the Applicant	:	Thiru. S. Soundararajan
	b.	Address of the Applicant with phone No and e-mail id if any	:	S. Soundararajan, S/o. Shri. Subbiah, D.No. 2/115A2, Main Road, Mamsapuram, Sivakasi West (Post), Sivakasi Taluk, Virudhunagar District – 626124. Mobile No.: 99766 42587
	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 Mining letter vide No. KV1/767/2024 - dated 25.10.2024.
	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

(Signature)



3.LOCATION:

a. Details of the Area:

State	District	Taluk	Village	S.F.No	Extent in hectares
Tamil Nadu	Virudhunagar	Vembakottai	Nathikudi	922/2,	0.97.00
				922/3,	0.97.00
				922/4	0.98.00
				Total	2.92.00

b.	Classification of the Area (Ryotwari/poramboke/ others)	:	Patta land
c.	Ownership / Occupancy of the Applied area (Surface rights)	:	Applicant made agreement with pattadars
d.	Toposheet No. with Latitude and Longitude	:	Topo Sheet No: 58 G/11 Latitude: 09°26'00.31"N to 09°26'04.86"N Longitude: 77°41'27.96"E to 77°41'34.22"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 Malliputhur to Paraipatti 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 Sivakasi at a distance of 15 Km. The nearest airport is at Madurai in 80 Km distance..

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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 existing workings and nearby quarries. 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. <table><tr><td>AGE</td><td></td><td>FORMATION</td></tr><tr><td>Recent</td><td>-</td><td>Quaternary weathered Rock Formation</td></tr><tr><td></td><td>.....</td><td>Unconformity</td></tr><tr><td>Archaean</td><td>-</td><td>Charnockite</td></tr><tr><td></td><td></td><td>Peninsular Gneiss complex.</td></tr></table> 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^oC to a maximum of 35^oC during summer. Rainfall of this area is about 700mm to 800mm during the both NE & SW monsoons. <i>C. S. S.</i>	AGE		FORMATION	Recent	-	Quaternary weathered Rock Formation			Unconformity	Archaean	-	Charnockite			Peninsular Gneiss complex.
AGE		FORMATION																
Recent	-	Quaternary weathered Rock Formation																
		Unconformity																
Archaean	-	Charnockite																
		Peninsular Gneiss complex.																

(Signature)



		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	: No exploration was carried out, the rough stone formation are studied from existing working pits and nearby quarries 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 two sections have been drawn, one section drawn length wise as (P-Q) and another one sections drawn width wise as (A-B) to cover maximum area considered for lease. The Plans and Sections have been drawn with a scale of 1:2000. Please refer plate no. IV.

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a. Geological Resources

The quarrying is estimated up to a depth of 49m 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	192	152	4	-	1,16,736
	Deduct old pit-1= 140 x 36 x 3 =				- 15,120
	Deduct old pit-2= 110 x 32 x 4 =				-14,080
	Deduct old pit-3= 247 x 16 x 4=				- 15,808
	Total				- 45,008
PQ -AB	192	152	35	10,21,440	-
	Deduct old pit-2= 110 x 32 x 9 =			-31,680	
	Deduct old pit-3= 247 x 16 x 1=			- 3,952	
	Total			- 35,632	
TOTAL GEOLOGICAL RESERVES				9,85,808	71,728

The Geological Resources have been computed as 9,85,808m³ of rough stone, 71,728m³ gravel up to depth of 39 m from the below ground level.

(Signature)

b. Mineable Reserve

The available mineable reserves are calculated entire life of the mine by leaving 7.5 m safety distance 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	174	134	4	-	93,264
	Deduct old pit-1= 140 x 36 x 3 =					- 15,120
	Deduct old pit-2= 110 x 32 x 4 =					-14,080
	Deduct old pit-3= 247 x 16 x 4=					- 15,808
	II	158	118	5	93,220	
	III	142	102	5	72,420	
	IV	126	86	5	54,180	
	V	110	70	5	38,500	
	VI	94	54	5	25,380	
	VII	78	38	5	14,820	
VIII	62	22	5	6,820		
Deduct old pit-2= 110 x 32 x 9 =				-31,680		
Deduct old pit-3= 247 x 16 x 1=				- 3,952		
Total Minalbe reserves					2,69,708	48,256

The mineable reserve is computed as **2,69,708m³** of **Rough Stone** and **48,256m³** of **Gravel** for the below ground level up to a depth of 39m.

(Signature)

5.0 Mining:

5.1	Method Mining of	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 Regulation 106(2) (b) as above is seldom possible due to various inherent petrogenetic factors coupled with mining difficulties. Hence it is proposed to obtain relaxation to the provisions of the above regulation from the Director of mines safety for which necessary provision is available with the regulation 106 (2) (b) of MMR-1961, under Mine Act-1952.
5.2	Mode Working of	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(M³)	GRAVEL VOLUME(M³)
PQ-AB	I	74	134	4	-	39,664
	Deduct old pit-1= 140 x 36 x 3 =					-15,120
	II	66	118	5	38,940	
I YEAR EXCAVATION					38,940	24,544
PQ-AB	I	60	134	4	-	32,160
	Deduct old pit-2= 110 x 32 x 4 =					-14,080
	II	60	118	5	35,400	
	III	80	102	5	40,800	
	Deduct old pit-2= 110 x 32 x 9 =				-31,680	
II YEAR EXCAVATION					44,520	18,080
PQ-AB	I	40	134	4	-	21,440
	Deduct old pit-3= 247 x 16 x 4=					-15,808
	II	32	118	5	18,880	
	III	62	102	5	31,620	
	IV	26	86	5	11,180	
	Deduct old pit-3= 247 x 16 x 1=				-3,952	
III YEAR EXCAVATION					57,728	5,632
PQ-AB	IV	100	86	5	43,000	-
	V	55	70	5	19,250	
IV YEAR EXCAVATION					62,250	-
PQ-AB	V	55	70	5	19,250	-
	VI	94	54	5	25,380	
	VII	78	38	5	14,820	
	VIII	62	22	5	6,820	
V YEAR EXCAVATION					66,270	-
TOTAL FIVE YEARS PRODUCTION					2,69,708	48,256

The applicant has proposed to carry out 2,69,708 m³ of Rough Stone and 48,256 m³ Gravel up to a depth of 39m below ground level for the period of Five years.



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 8Nos 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 ten years of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructures etc. Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc. Ultimate Pit dimension is given as under, <table border="1"> <thead> <tr> <th>Description</th><th>Length (Max) (m)</th><th>Width (Max) (m)</th><th>Depth (m)</th></tr> </thead> <tbody> <tr> <td>End of the lease period</td><td></td><td></td><td></td></tr> <tr> <td>PQ – AB</td><td>174</td><td>134</td><td>39</td></tr> </tbody> </table> Afforestation has been proposed on all along the boundary barrier by planting trees.	Description	Length (Max) (m)	Width (Max) (m)	Depth (m)	End of the lease period				PQ – AB	174	134	39
Description	Length (Max) (m)	Width (Max) (m)	Depth (m)												
End of the lease period															
PQ – AB	174	134	39												

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

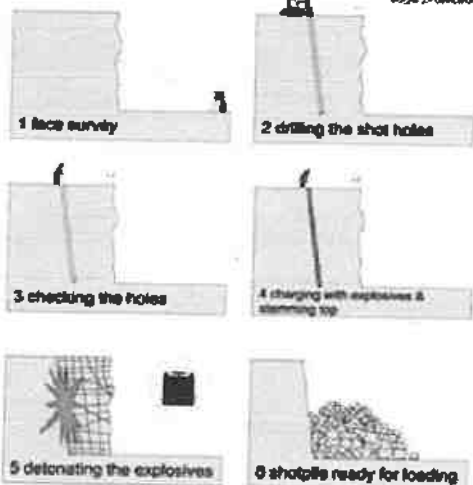
6.0Blasting:

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.

ROCK BLASTING





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 Roughstone. No deep hole drilling or primary blasting is proposed.															
6.3	Measures proposed to minimize ground vibration due to blasting	: Controlled blasting measures will be adopted for minimizing ground vibration and fly rock. Shallow depths jackhammer drilling and blasting is proposed to be carried out with minimum use of explosive mainly to give shattering effect in rough stone for easy excavation and to control fly rock. <table border="1"> <tr> <td>Number of holes</td><td>:</td><td>50</td></tr> <tr> <td>Powder factor</td><td>:</td><td>6Ts/Kg of explosives</td></tr> <tr> <td>Total explosive required</td><td>:</td><td>25Kg slurry explosives</td></tr> <tr> <td>Charge / hole</td><td>:</td><td>0.5Kg</td></tr> <tr> <td>Blasting time</td><td>:</td><td>12-2 Pm</td></tr> </table>	Number of holes	:	50	Powder factor	:	6Ts/Kg of explosives	Total explosive required	:	25Kg slurry explosives	Charge / hole	:	0.5Kg	Blasting time	:	12-2 Pm
Number of holes	:	50															
Powder factor	:	6Ts/Kg of explosives															
Total explosive required	:	25Kg slurry explosives															
Charge / hole	:	0.5Kg															
Blasting time	:	12-2 Pm															
6.4	Storage of Explosives and safety measures to be taken while blasting.	: The applicant will engage an authorized explosive agency to carry out the small amount of blasting and it will be supervised by competent and statutory foreman/ mines manager. (Agreement with explosive dealer for blasting is enclosed).															



7.0 Mine Drainage:

7.1	Depth of Water table	: The quarry operation is up to a depth of 39m 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 10 km.
8.9	Any Other Structures	: Nil

[Signature]



9.0 Employment 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	2 No
				3.	Unskilled	Muzdoor Labours	4 Nos
				Total =			10 Nos
				Allowing 10% absenteeism, the no. of men of roll will be around 9. 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.			

(Signature)



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 Sivakasi at distance of 16km. 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.

(Signature)



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 39m 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.

Table No-5

Sl. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1.	Mining	1.25.00	2.33.00
2.	Infrastructure	Nil	0.01.00
3.	Roads	0.03.00	0.03.00
4.	Green Belt	Nil	0.36.00
5.	Fencing	Nil	0.07.00
6.	Unutilized	1.64.00	0.12.00
	Total =	2.92.00	2.92.00

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 39m below ground level and hence, it will not affect the ground water depletion of this area.

10.3 Flora and Fauna

: Except Acacia bushes, no other valuable trees are noticed in the applied area. Further, neither flora of botanical interest nor fauna of zoological interest is noticed in this area.

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10.4	Climatic conditions	: Generally subtropical climatic condition prevails throughout the year and there is no sharp variation in climate. This District receives rain both in south west and north east monsoon. The average rainfall is about 700mm to 800mm and the temperature ranges from 18°C during winter and to a maximum of 42°C during the summer.																				
10.5	Human Settlement	: The nearest habitations with the population is given as under Table No-6 <table border="1"><thead><tr><th>DIRECTION</th><th>VILLAGE</th><th>POPULATION</th><th>DISTANCE</th></tr></thead><tbody><tr><td>North</td><td>Mayathevanpatti</td><td>150</td><td>3.4 Km</td></tr><tr><td>SE</td><td>Paraipatti</td><td>100</td><td>1.4 Km</td></tr><tr><td>NW</td><td>Nariyankulam</td><td>60</td><td>2.1 Km</td></tr><tr><td>SW</td><td>Nathikudi</td><td>500</td><td>0.84 Km</td></tr></tbody></table>	DIRECTION	VILLAGE	POPULATION	DISTANCE	North	Mayathevanpatti	150	3.4 Km	SE	Paraipatti	100	1.4 Km	NW	Nariyankulam	60	2.1 Km	SW	Nathikudi	500	0.84 Km
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SE	Paraipatti	100	1.4 Km																			
NW	Nariyankulam	60	2.1 Km																			
SW	Nathikudi	500	0.84 Km																			
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.																				
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.																				

[Signature]



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 62,000 m³ to 65,000 m³/year is planned. Besides One working Quarries and No villages in the surrounding radius of 500 metres.

Details of quarries around 500m radius of proposed quarry

Quarries	Sl. no	Name	Village	s.f.no.	Extent (Ha)	Distance (m)
Existing	1.	J.Saipreetham	Nathikudi	919/1, 2A(P)	3.33.50	280
Abandoned	2.	Guruvammal	Nathikudi	903/2	Prior-2022	460
	3.	P.Jeyaraman	Nathikudi	920/1B1	Prior-2012	45
	4.	P.Dhavamani	Nathikudi	919/2B	Prior-2018	345
	5.	SatharmaSathana	Nathikudi	807/4C	Prior-2018	400
	6.	Soundararajan	Nathikudi	915,916,etc.,	Prior-2020	15
Present proposed	7.	M.Pandi	Nathikudi	922/1	Prior-2021	15
	8.	J.Dhavamani	Nathikudi	916/4A,8etc.,	6.65.00	115
	9.	P.Jeyaraman	Nathikudi	913,914,etc.,	4.97.50	117
	10.	S.Soundararajan	Nathikudi	922/2,3,4	2.92.00	Applied
Total extent in Hectares					17-88.00	

(Signature)

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 39m 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 39m depth, fencing will be constructed around the quarried pits to prevent inherent entry of the public and cattle.																																				
10.11	Program for Afforestation	:	The 7.5m, safety distance along the lease boundary has been identified to be utilized for afforestation. Appropriate native species of neem trees will be planted in a phased manner as described below. Table - 7 <table border="1"> <thead> <tr> <th>Year</th> <th>No. of trees proposed to be planted</th> <th>Survival %</th> <th>Area to be covered Sq.m</th> <th>Name of the species</th> <th>No. of trees expected to be grown</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>20</td> <td>80%</td> <td>720</td> <td>Neem</td> <td>18</td> </tr> <tr> <td>II</td> <td>20</td> <td>80%</td> <td>720</td> <td>Neem</td> <td>18</td> </tr> <tr> <td>III</td> <td>20</td> <td>80%</td> <td>720</td> <td>Neem</td> <td>18</td> </tr> <tr> <td>IV</td> <td>20</td> <td>80%</td> <td>720</td> <td>Neem</td> <td>18</td> </tr> <tr> <td>V</td> <td>20</td> <td>80%</td> <td>720</td> <td>Neem</td> <td>18</td> </tr> </tbody> </table> Nearly 7200 Sqm area is proposed to use under afforestation by planting 100 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.	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
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IV	20	80%	720	Neem	18																																		
V	20	80%	720	Neem	18																																		



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

Sl.n o.	Details	All Figures are in Rs.
1.	<u>LAND INVESTMENT COST</u> Total Applied SF Nos. 922/2,3,4 = 2-92.0Ha. (Rs.4,94,500/Ha. Guideline value of Tamilnadu) (Refer – http://tnreginet.gov.in) = 2.92Ha x Rs.4,94,500/-	Rs. 14,43,940
2.	<u>FIXED INVESTMENT COST</u>	
i)	Labour shed	Rs. 1,00,000
ii)	First aid room and accessories	Rs. 75,000
iii)	Toilet room with septic tank Facility construction & sanitary facility	Rs. 50,000
iv)	Drinking water for staffs & Labour from water vendors	Rs. 1,25,000
	TOTAL FIXED INVESTMENT COST =	Rs. 3,50,000
3.	<u>OPERATIONAL COST</u> (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.) <u>Machinery to be used for Hired basis</u> Total Number of Excavator = 1Nos (Rs.13,00,000/1No.) Tractor Mounted Jack Hammer =1 No. (Rs 4,00,000) <u>Compressor with Drilling used for hired basis</u> Total Number of compressor with Drilling Machine used for quarrying = 1Nos (Rs.7,00,000 /1No.) =	
	TOTAL OPERATIONAL COST =	Rs.24,00,000

[Handwritten Signature]



4. EMP COST				
Sl.no.	Details	Cost per Month (Rs.)	Total Cost per Year (Rs.)	Total cost for 5years lease period (Rs.)
i)	Greenbelt development (plantation & maintenance)	1000	12,000	60,000
ii)	Fencing arrangements & wind net arrester	-	-	90,000
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 Monitoring	6,000 (bi-annual)	12,000	60,000
Total EMP Cost=				Rs. 3,00,000

1.	Land Investment Cost	Rs. 14,43,940
2.	Fixed Investment Cost	Rs. 3,50,000
3.	Operational Cost	Rs. 24,00,000
4.	EMP Cost	Rs. 3,00,000
TOTAL PROJECT COST		Rs. 44,93,940
CER @ 2% Project cost Carrying out provisions of Drinking water with dispensations Toilet/sanitary especially for girls students in Mamsapuram Government School, Vembakottai Taluk, Virudhunagar District.		Rs. 90,000

(Signature)



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 : 7/11/2024

Prepared by

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

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



புவியியல் மற்றும் சுரங்கத்துறை

ந.க.எண்: கேவி1/767/2024,

உதவி இயக்குநர் அலுவலகம்,
மாவட்ட ஆட்சியர் அலுவலக வளாகம்,
விருதுநகர்.
நாள்: 25.10.2024.

குறிப்பாணை

பொருள்: கலியங்கனம் குவாரிகளும் - விருதுநகர் மாவட்டம் - வெம்பக்கோட்டை வட்டம் - நதிக்குடி கிராமம் - மட்டா புல எண்கள்: 922/2 (0.97.0), 922/3 (0.97.0) மற்றும் 922/4 (0.98.0) மொத்த பரப்பு 2.92.0 ஹெக்டேர்ஸ் - ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமை வழங்கல் சரியான பரப்பு (Precise Area) தேர்வு செய்யப்பட்டது - சுரங்கத்திட்டம் மற்றும் மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்க கோருவது - தொடர்பாக.

- பார்வை:**
1. திரு.ச.சௌந்தராஜன் த/பெ கப்பையா, க.எண்: 2/115A2, மம்சாபுரம் மெயின்ரோடு, சிவகாசி மேற்கு, சிவகாசி வட்டம், விண்ணப்ப நாள்: 10.07.2024.
 2. இவ்வலுவலக கடிதம் எண் ந.க.கேவி1/767/2024, நாள்: 18.07.2024 (வருவாய் கோட்டாட்சியர், சாத்தூர் அவர்களுக்கு முகவரியிட்டது).
 3. சாத்தூர் வருவாய் கோட்டாட்சியர் கடித எண்.ந.க.எண்.மு.மு.அ2/3822/2024, நாள்: 04.10.2024.
 4. உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை அவர்களின் புலத்தணிக்கை அறிக்கை நாள்: 16.10.2024
 5. 1959 -ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 41 மற்றும் 42.
 6. அரசாணை எண்.168 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.

விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம், மட்டா புல எண். 922/2 (0.97.0), 922/3 (0.97.0) மற்றும் 922/4 (0.98.0) மொத்த பரப்பு 2.92.0 ஹெக்டேர்ஸ் நிலத்தில் 5 வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமை வழங்கக்கோரி விருதுநகர் மாவட்டம், சிவகாசி வட்டம், சிவகாசி மேற்கு, மம்சாபுரம் மெயின்ரோடு, க.எண்: 2/115A2 என்ற முகவரியில் வசித்து வரும் திரு.ச.சௌந்தராஜன் த/பெ கப்பையா என்பவர் பார்வை 1-ல் காணும் விண்ணப்பத்தினை சமர்ப்பித்துள்ளார்.

சாத்தூர் வருவாய் கோட்டாட்சியர் மற்றும் புவியியல் மற்றும் சுரங்கத்துறை, உதவி இயக்குநர் ஆகியோர் கீழ்க்காணும் நிபந்தனைகளுக்குட்பட்டு மேற்கண்ட புலங்களில் உடைகல், கிராவல் குவாரி குத்தகை உரிமை ஐந்தாண்டுகளுக்கு வழங்க பரிந்துரை செய்துள்ளனர்.

மனுதாரர் உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமை வேண்டி விண்ணப்பித்துள்ள வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம், மட்டா புல எண்கள். 922/2

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(0.97.0), 922/3 (0.97.0) மற்றும் 922/4 (0.98.0) மொத்த பரப்பு 2.92.0 ஹெக்டேர் மட்டா
மற்ற எண்: 2248 செளந்தர்ராஜன் மனைவி விஜயா என்பவர் பெயரில் தாக்கலாகியுள்ளது.

குவாரி உரிமம் வழங்கக் கோரிய புல எண்களுக்கு நான்குமால் விபரம்:-

வடக்கு - புல எண்: 915/3 செளந்தர்ராஜன் என்பவருக்கு
சொந்தமான செயல்படாத குவாரி, புல எண்: 916/4சீ2,
916/7பி செளந்தர்ராஜன் என்பவரின் நிலம்

தெற்கு - புல எண்: 922/1 மணிக்கண்ணன் நிலம் மற்றும் புல எண்:
922/5 - அரசு புறம்போக்கு நீர்ப்பிடிப்பு

கிழக்கு - புல எண்: 922/6, எஸ்.கே.கணேசன் நிலம், 922/5 அரசு
புறம்போக்கு நீர்ப்பிடிப்பு

மேற்கு - புல எண்: 922/1 மணிக்கண்ணன் நிலம்,

குவாரி உரிமம் கோரும் கூட்டுப்புலம் செளந்தர்ராஜன் மனைவி விஜயா
என்பவர் பெயரில் உள்ளதால், மனுதாரர் பெயரில் குத்தகை உரிமம் ஆவணமாக பதிவு
செய்யப்பட வேண்டும். உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்கக் கோரும்
புலங்களிலிருந்து 300 மீட்டர் சுற்றளவில் குடியிருப்புகள், பள்ளிகள், கோயில்கள், மருதிகள்,
கடுகாடு ஏதும் இல்லை. 50 மீட்டர் சுற்றளவில் தேசிய / மாநில நெடுஞ்சாலைகள், ஆறுகள்,
கட்டிடங்கள், உயர் மின்கம்பிகள் இல்லை. உயர்வகை மரங்கள் ஏதுவும் இல்லை.
வனத்துறையால் பாதுகாக்கப்பட்ட பகுதியாக அறிவிக்கப்பட்ட சரணாலயங்கள், தேசிய
பூங்காக்கள் சுற்றுச்சூழல் உணர் திறன் மிக்க பகுதிகள் (ECO-SENSITIVE ZONE), 1
கிமீட்டர் சுற்றளவில் காடுகள், 500 மீட்டர் சுற்றளவில் அருங்காட்சியக துறையின் மூலம்
பாதுகாக்கப்பட்ட பகுதிகளாக அறிவிக்கப்பட்ட இடங்கள் மற்றும் வரலாற்று சின்னங்கள்
எதும் இல்லை.

மனுதாரர் குவாரி உரிமம் வழங்கக் கோரும் புலத்திற்கு 500 மீட்டர் சுற்றளவில்
புராதான சின்னங்கள் மற்றும் பழமையான கல்வெட்டுகள் ஏதுமில்லை. 50 மீட்டர் சுற்றளவில்
இருப்புப்பாறை, சாலை, ஏதுமில்லை. மனுதாரர் கோரும் கூட்டுபுலத்திற்குள் 40 மீட்டர்
சுற்றளவில் தெற்கு பகுதியில் புல எண்: 935-ல் அரசு புறம்போக்கு பொதுப்பணித்துறையின்
கட்டுப்பாட்டில் உள்ள செவல்குளம் கண்மாய் உள்ளது, மற்றும் புல எண்: 922/5-ல் அரசு
புறம்போக்கு செல்குளம் கண்மாய் நீர்ப்பிடிப்பு உள்ளது. மேலும், புல எண்: 922/2-ல்
தென்வடலாக கிழக்கு புறத்தில் ஓடை செல்கிறது.

மனுதாரர் குவாரி உரிமம் கோரும் புலங்களிலிருந்து 500 மீட்டர் சுற்றளவில் வடக்கு
பகுதியில் மனுதாரருக்கு சொந்தமான செயல்படாத குவாரியும், ஜெயராமன் மகன்
சாய்பிரித்தம் என்பவருக்கு சொந்தமான செயல்படும் குவாரியும், மற்றும் ஜெயராமன் மகன்
சாய்பிரித்தம் என்பவருக்கு சொந்தமான செயல்படாத குவாரியும், பெருமாள்சாமி மகன்
ஜெயராமன் என்பவருக்கு சொந்தமான செயல்படாத குவாரியும், சங்கம நாயக்கர் மகன்
இராதாகிருஷ்ணன் என்பவருக்குச் சொந்தமான செயல்படும் குவாரியும், மேற்கு பகுதியில்
மணிக்கண்ணன் என்பவருக்குச் சொந்தமான நிலத்தில் உள்ள செயல்படாத குவாரியும்,
கிழக்கு பகுதியில் புன்செய் நிலங்களும், தெற்கு பகுதியில் அரசு புறம்போக்கு நீர்ப்பிடிப்பு
மற்றும் செவல்குளம் கண்மாயும் உள்ளது. மேலும், 500 மீட்டர் சுற்றளவில் சீனிவாசன் மகன்
ரெங்கசாமி என்பவருக்கு சொந்தமான மட்டசு தொழிற்சாலையும் உள்ளது.



மேலும், விண்ணப்ப புலங்களான 922/2 (0.97.0), 922/3 (0.97.0) மற்றும் 922/4 (0.98.0) மொத்த பரப்பு 2.92.0 ஹெக்டேரில் விருதுநகர் மாவட்ட ஆட்சியர் அவர்களின் செயல்முறை ஆணைகள் ந.க.கேவி1/10050/2017 நாள்: 10.08.2019-ன்படி மனுதாரருக்கு ஏற்கனவே குவாரி குத்தகை உரிமம் வழங்கப்பட்டு, விண்ணப்ப புல எண்கள் முழுவதும் மேல்மண் அள்ளப்பட்டுள்ளது, பின்னர் 922/3 மற்றும் 922/4 ஆகியவற்றில் முழுமையாக குவாரி பணிகள் மேற்கொள்ளப்பட்டு தோராயமாக 10 முதல் 13 மீட்டர் ஆழம் வரை உடைகள் மற்றும் கிராவல் அள்ளப்பட்டுள்ளது. தெற்கு பகுதியில் குவாரிக்கு செல்ல பாதுகாப்பு இடைவெளி மற்றும் வண்டிப்பாதையாக பயன்படுத்தப்பட்டுள்ளது.

மேற்கண்ட குவாரி அளவு உள்ள கிராமத்தில் அ1 நோட்டீஸ் பிரகாரம் செய்யப்பட்டதில் பொதுமக்களிடமிருந்து நானது தேதி வரை ஆட்சேபனை ஏதும் வரப்பெறவில்லை. மனுதாரர் குவாரி உரிமம் வழங்கக் கோரிய புலங்களிலிருந்து கனிமங்கள் கொண்டு செல்ல திரு.ஜெயராமன் என்பவருக்கு சொந்தமான புலங்களை பயன்படுத்திக்கொள்ள பதிவு செய்யப்படாத பாதை ஒப்பந்தம் பத்திரம் ஏற்படுத்தப்பட்டுள்ளது. பிரஸ்தாப புலங்களில் கண்டிஷன் ஜூரி நிலங்களோ, தடை ஆணை நிலங்களோ ஏதுமில்லை.

மேலும், மேற்படி உரிமம் கோரும் கூட்டுடலத்திற்கு அருகில் ஊர் விலங்குகள் மற்றும் மான் சரணலாயம் ஏதுமில்லை. மேலும், மனுதாரரிடமிருந்து அரசுக்கு செலுத்த வேண்டிய வரி பாக்கி நிலுவை இனங்கள் ஏதுமில்லை. மேற்படி குவாரி அமையவுள்ள புலமானது நதிக்குடி ஊராட்சி, வெம்பக்கோட்டை ஊராட்சி ஒன்றியத்திற்கு உட்பட்டது ஆகும்.

எனவே, வருவாய் கோட்டாட்சியர்-சாத்தூர் மற்றும் உதவி புலியியலாளர், புலியியல் மற்றும் சுரங்கத்துறை அவர்களின் பரிந்துரையினை ஏற்றும் கீழ்க்கண்ட நிபந்தனைகளுக்கு உட்பட்டும், விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம், புல எண்கள்: 922/2 (0.97.0), 922/3 (0.97.0) மற்றும் 922/4 (0.98.0) மொத்த பரப்பு 2.92.0 ஹெக்டேர்ஸ் நிலத்திற்கு 1959-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.

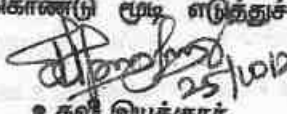
தமிழ்நாடு சிறுகனிம சலுகை விதிகள்-1959 விதி எண்: 41-ன்படி குவாரி பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்கத் திட்டத்தினை (Mining Plan) 90 தினங்களுக்குள் சமர்ப்பிக்குமாறும், விதி எண்: 42-ன்படி மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (State Level Environmental Impact Assessment Authority) இசைவினைப்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

நிபந்தனைகள்

- 1) அருகிலுள்ள மட்டா நிலங்களுக்கு 7.5 மீ பாதுகாப்பு இடைவெளி விடுத்து குவாரி செய்தல் வேண்டும்.
- 2) குவாரி குத்தகை உரிமம் கோரும் புல எண்களுக்கு அருகில் செயல்படும் மற்றும் செயல்படாத குவாரிகளுக்கு எவ்வித பாதிப்பும் ஏற்படாத வகையில் குவாரிப்பணி மேற்கொள்ள வேண்டும்.



- 3) புல எண்: 922/2 ல் கிழக்கு புறத்தில் தென்வடலாக செல்லும் ஓடைக்கு எந்தவித பாதிப்பும் ஏற்படாத வகையில் 10 மீ பாதுகாப்பு இடைவெளியிட்டு குவாரிப்பணிகள் செய்ய வேண்டும்.
- 4) மனுதாரர் கோரும் கூட்டுபுலத்திற்குள் 40 மீட்டர் சுற்றளவில் தெற்கு பகுதியில் புல எண்: 935-ல் அரசு புறம்போக்கு பொதுப்பணித்துறையின் கட்டுப்பாட்டில் உள்ள செவல்குளம் கண்மாய் மற்றும் விண்ணப்பித்துள்ள புலங்களுக்கு தெற்கு புறத்தில் உள்ள புல எண்: 922/5-ல் அரசு புறம்போக்கு செல்குளம் கண்மாய் நீர்ப்பிடிப்பு பகுதி ஆகியவற்றிற்கு எந்தவித பாதிப்பும் ஏற்படாத வகையில் 50 மீ பாதுகாப்பு இடைவெளியிட்டு குவாரிப்பணிகள் செய்ய வேண்டும்.
- 5) அருகில் உள்ள விவசாய நிலங்களுக்கு பாதிப்பு ஏற்படாத வண்ணம் உரிய பாதுகாப்பு இடைவெளி விட்டு குவாரிப்பணி மேற்கொள்ள வேண்டும்.
- 6) பொதுமக்கள் / விவசாய நிலங்களுக்கு பாதிப்பு ஏற்படாத வகையில் தகுதி வாய்ந்த அங்கீகரிக்கப்பட்ட நபர்கள் மூலம் வெடிமருந்துகள் சேமிக்கப்பட்டு குவாரியில் வெடித்தல் வேண்டும்.
- 7) குத்தகைதாரர், தமக்கு வழங்கப்பட்ட குத்தகை பகுதிக்கு அருகில் உள்ள விவசாய நிலங்களுக்கும் மற்றும் கிராம பொது மக்களுக்கும், சாலைகளுக்கும் பாதிப்பு ஏற்படாத வகையில் குவாரிப்பணி மேற்கொள்ள வேண்டும்.
- 8) சுரங்கத்திட்டம் மற்றும் சுற்றுச்சூழல் தடையில்லாச் சான்று குத்தகை உரிமம் வழங்குவதற்கு முன் சமர்ப்பிக்க வேண்டும்.
- 9) குவாரியில் வேலை செய்யும் தொழிலாளர்கள் தொழிலாளர் நலவாரியம் மற்றும் காப்பீடு திட்டத்தில் பதிவு செய்து தொழிலாளர் நலன் பேண்பட வேண்டும்.
- 10) குழந்தை தொழிலாளர்களை குவாரி பணியில் அமர்த்தக் கூடாது.
- 11) கனிமங்களை வாகனங்களில் கொண்டு செல்லும் போது பாதசாரிகள், பொது மக்கள் பாதிக்காதவண்ணம் தார்பாய்கள் கொண்டு மூடி எடுத்துச் செல்ல வேண்டும்.


25/11/24
உதவி இயக்குநர்,
புவிமியல் மற்றும் சுரங்கத்துறை,
விருதுநகர்

பெறுநர்

திரு.ச.சௌந்தராஜன்
த/பெ சுப்பையா,
க.எண்: 2/115A2,
மம்சாபுரம் பெயின்ரோடு,
சிவகாசி மேற்கு,
சிவகாசி வட்டம்,
விருதுநகர் மாவட்டம்.

தகவ்

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





Dr. J. S. Jaiswal

अर्हता प्राप्त व्यक्ति के रूप में मान्यता प्रमाण पत्र
(खनिज खनियान 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 खनिज खनियान 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.

उत्पत्तीपंजीयनसंख्या 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 स्थिति 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

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

130



இந்திய அரசாங்கம்
Government of India



சு. 19/11

- 1. ஆதார் அடையாளத்திற்கான சான்று, குடியுரிமைக்கு அல்ல.
- 2. பாதுகாப்பான QR குறியீடு, ஆன்லைன் XML / ஆன்லைன் அங்கீகரிக்கத்தக்க பயன்படுத்தி அடையாளத்தை சரிபார்க்கவும்.

- 3. Aadhaar is a proof of identity, not of citizenship.
- 4. Verify identity using Secure QR Code / Offline XML / Online Authentication.

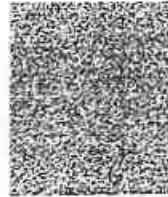
பதிவு அடையாளம் / Enrolment No. : 2726/11313/61625

To
S Soundararajan
செனத்திராஜன்
2/115A2, MAIN ROAD,
Mamasapuram,
VTC: Sivakasi, PO: Sivakasi West,
Sub District: Sivakasi, District: Virudhunagar,
State: Tamil Nadu, PIN Code: 626124,
Mobile: 9678642587

34451971



KP314519712F1



உங்கள் ஆதார் எண் / Your Aadhaar No. :

9657 9086 8411

எனது ஆதார், எனது அடையாளம்

- 1. ஆதார் நாடு முழுவதிலும் செல்லுபடியாகும்.
- 2. பல்வேறு அரசு மற்றும் அரசு சார்பு சேவைகளை எளிதில் பெற ஆதார் உதவுகிறது.
- 3. உங்கள் மொபைல் எண் மற்றும் மின்னஞ்சல் இடையை ஆதார் உறுப்பிக்கும்.
- 4. எல்லா சேவையினைப் பயன்படுத்தி உங்கள் ஸ்மார்ட் போனில் ஆதார் எடுத்துச் செல்லுங்கள்.
- 5. Aadhaar is valid throughout the country.
- 6. Aadhaar helps you avail various Government and non-Government services easily.
- 7. Keep your mobile number & email ID updated in Aadhaar.
- 8. Carry Aadhaar in your smart phone - use mAadhaar App.



இந்திய அரசாங்கம்
Government of India



செனத்திராஜன்
S Soundararajan
2/115A2, MAIN ROAD,
Mamasapuram,
VTC: Sivakasi, PO: Sivakasi West,
Sub District: Sivakasi, District: Virudhunagar,
State: Tamil Nadu, PIN Code: 626124,
Mobile: 9678642587

9657 9086 8411

எனது ஆதார், எனது அடையாளம்



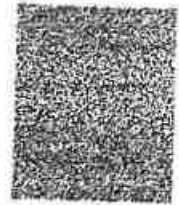
இந்திய தனித்துவ அடையாள ஆணையம்
Unique Identification Authority of India



Print Date: 18/12/2020

முகவரி: 2/115A2, மேயின் ரோடு, மம்சபுரம், சிவகாசி,
விருதுநகர் தாலிக்குடி, 626124

Address: 2/115A2, MAIN ROAD,
Mamasapuram, Sivakasi, Virudhunagar, Tamil
Nadu, 626124



9657 9086 8411



1947



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www.uidai.gov.in



आयकर विभाग
INCOME TAX DEPARTMENT



भारत सरकार
GOVT. OF INDIA

SOUNDARA RAJAN S
SUBBAIAH

24/11/1985

Permanent Account Number
BCKPS9721B

Signature



In case this card is lost / found, please inform / return to:
Income Tax PAN Services Unit, UTIISL
Plot No. 3, Sector 11, CBD Belapur,
Navi Mumbai - 400 614.

इस कार्ड के खोने/प्राप्त होने पर कृपया सूचित करें/वापस करें।
आयकर पैन सेवा यूनिट, यूटीआईएसएल
प्लॉट नं. 3, सेक्टर 11, सीबीडी बेलपुर,
नवी मुंबई - 400 614.

133

அளவு. 1 க. மீ : 1000 க. மீ நேரத்தின் படி மூலம்
13536

MINES LAND PHOTO



விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம் பட்டா புலன்கள். 922/2, 922/3, 922/4 ஆக மொத்தம் 2-92.0 ஹெக்டேரில் மட்டும் 5 வருடங்களுக்கு உதவிஇயக்குனர், புவியியல் மற்றும் சுரங்கத்துறை, விருதுநகர் மாவட்ட ஆட்சியர் அலுவலக வளாகம், விருதுநகர் அவர்களின் செயல்முறை ஆணை எண். கே.வி.1/767/2024 நாள் 25.10.2024ன் படி திரு. க. செளந்தரராஜன், த/பெ. சுப்பையா அவர்கள் மனு செய்துள்ளார்கள். மேற்படி இடம் உடைகல் மற்றும் கிராவல் வெட்டி எடுப்பதற்கு அங்கீகரிக்கப்பட்ட இடம் என்பதை இதன் மூலம் சான்றளிக்கிறேன்.

மேற்படி இடத்திற்கு செல்வதற்கு அணுகுபாதை வசதி உள்ளது என்றும் சான்றளிக்கிறேன்.

இடம்:

நாள்:

மனுதாரர் கையெப்பம்

கிராம நிர்வாக அலுவலர்.
Village Administrative Officer
Nathikudi Village
Vembakkottai (T.K)



கிராம நிர்வாக அலுவலரின் சான்று

விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம் பட்டா புலங்களி. 922/2, 922/3, 922/4 ஆக மொத்தம் 2-92.0 ஹெக்டேரில் மட்டும் 5 வருடங்களுக்கு உதவிஇயக்குனர், புவியியல் மற்றும் கரங்கத்துறை, விருதுநகர் மாவட்ட ஆட்சியர் அலுவலக வளாகம், விருதுநகர் அவர்களின் செயல்முறை ஆணை எண். கே.வி.1/767/2024 நாள் 25.10.2024ன் படி திரு. க. சௌந்தராஜன், த/பெ. சுப்பையா அவர்கள் மனு செய்துள்ளார்கள். இவர்கள் ஆரம்பிக்க உள்ள உடைகல் மற்றும் கிராவல் குவாரி இடத்திற்கு செல்ல போதிய அனுகுபாதை வசதி உள்ளது மேலும் நிலத்தை சுற்றி 300மீட்டர் சுற்றளவில் குடியிருப்புகள், கோயில்கள், பள்ளிக்கூடம் ஏதும் இல்லை.

மேற்படி புல எண்கள். மேற்படி கிராம கணக்கு தடை ஆணை புத்தகத்தில் இடம் பெறவில்லை. மேலும் 10கி.மீ. சுற்றளவில் பிற மாநில எல்லை இடம்பெறவில்லை. மேற்படி சான்று கனிமவளத்துறைக்கு அளிக்கும் வகைக்காக வழங்கப்படுகிறது.


கிராம நிர்வாக அலுவலர்.
Village Administrative Officer
Nathikudi Village
Vembakkottai (T.K)





தமிழ்நாடு அரசு

வருவாய்த் துறை

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

மாவட்டம் : விடுதலைநகர்

வட்டம் : வெம்பக்கோட்டை

வருவாய் கிராமம் : நதிக்குடி

பட்டா எண் : 2248

உரிமையாளர்கள் பெயர்

1. செளந்தரராஜன்

மனைவி

விஜயா

சு-

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
790	-	0 - 84.50	1.66	--	--	--	--	05-11-2004
791	1	0 - 48.00	0.95	--	--	--	--	
800	1A	0 - 14.00	0.30	--	--	--	--	05-11-2004
805	3	1 - 72.00	3.44	--	--	--	--	05-11-2004
922	2	0 - 97.00	1.94	--	--	--	--	10-09-2002
922	3	0 - 97.00	1.94	--	--	--	--	10-09-2002
922	4	0 - 98.00	1.96	--	--	--	--	10-09-2002
		6 - 10.50	12.19					

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 25/09/2024 முதல் 10/10/2024 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 30-03-2024 அன்று 08:33:03 AM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

(Handwritten signature)



கி. எண். 3. நதிக்குடி.

1	2	3	4	5	6	7	8	9	10	11	
							ரு. பை.	ஹெ. ஏர்ஸ்.	ரு. பை.		
920	3	920-3	ர	4	...	7-3	4	2 00	0 08.5	0 17	228 வெ. கிருஷ்ண சாமி நாயக்கர்.
	4	-4	ர	4	...	7-3	4	2 00	0 26.0	0 52	884 பெருமாள்சாமி நாயக்கர்.
								6 40.0	12 80		
921	1	921-1	ர	4	...	7-3	4	2 00	1 36.0	2 72	884 பெருமாள்சாமி நாயக்கர்.
	2	-2	ர	4	...	7-3	4	2 00	2 02.5	4 05	169 கந்தசாமி பிள்ளை.
								3 38.5	6 77		
922	1	922-1	ர	4	...	7-3	4	2 00	2 85.0	5 69	1552 ப. கருப்ப சாமி (1), கருப்பையா (2).
	2	-2	ர	4	...	7-3	4	2 00	0 97.0	1 94	439 பி. ஜானகி அம்மாள்.
	3	-3	ர	4	...	7-3	4	2 00	0 97.0	1 94	532 அ. சீனிவாசகம்.
	4	-4	ர	4	...	7-3	4	2 00	0 98.0	1 96	467 அ. சின்ன அழகர்சாமி நாயக்கர்.
	5	-5	அ	4	...	...	...	...	1 60 0	...	...
	6	-6	ர	4	...	7-3	4	2 00	1 22.0	2 45	26 கெர. அருணாசல நாடார்.
								8 59.4	13 98		
923	1	923-1	ர	4	...	7-3	4	2 00	0 99.5	1 98	26 கெர. அருணாசல நாடார்.
	2	-2	அ	4	...	...	...	...	0 11.5	...	...
								1 11.0	1 98		
924		924	ர	4	...	7-3	4	2 00	0 88.5	1 77	850 கா. பாண்டியன்.
925	1A	925-1A	ர	4	...	7-3	4	2 00	0 50.0	1 00	155 கணபதி தேவர்.
	1B	-1B	ர	4	...	7-3	4	2 00	0 28.5	0 57	155 கணபதி தேவர்.

அருணாசல மாவட்டத்தில் உள்ள இடங்கள்

அருணாசல மாவட்ட நிர்வாகம்

விருதுநகர்

Village Administrator, Rongankulam Village



தமிழ்நாடு தமிழ்நாடு TAMILNADU

9.7.2024

EA 816057



E.K. சிவகுருநாதன்

முத்திரைத்தான் விற்பனையாளர்
ஸ்ரீவில்லிபுத்தூர், தமிழ்நாடு.
உரிமம் எண்: R.O.C. 12517/70

செளந்தரராஜன்
சிவகாசி

குத்தகை ஒப்பந்த பத்திரம்

விருதுநகர் மாவட்டம், சிவகாசி வட்டம், சிவகாசி மேற்கு, மம்சாபுரம், மெயின் ரோடு, கதவு எண். 2/115A2 என்ற முகவரியில் வசித்து வரும் திரு S. செளந்தரராஜன் அவர்களுடைய மனைவியாகிய திருமதி விஜயா ஆகிய நான் 1-வது பார்ட்டியாகவும்

விருதுநகர் மாவட்டம், சிவகாசி வட்டம், சிவகாசி மேற்கு, மம்சாபுரம், மெயின் ரோடு, கதவு எண். 2/115A2 என்ற முகவரியில் வசித்து வரும் திரு சுப்பையா அவர்களுடைய மகனாகிய க. செளந்தரராஜன் ஆகிய நான் 2-வது பார்ட்டியாகவும்

1. S. விஜயா
S. Vijaya

2. S. செளந்தரராஜன்
S. Sundararajan



C. SUNDARARAJAN
Advocate & Notary Public
7, South Main Road
Srivilliputhur - 626 125
Virudhunagar District



மேற்படியார்கள் இன்று 09.07.2024 தேதியிலிருந்து பிறப்பித்துக் கொண்ட குத்தகை ஒப்பந்த பத்திரம் என்னவென்றால் இதன் அடியில் கண்ட சொத்து நம்மில் 1-வது பார்ட்டிக்கு கிரைய பத்திரம் மூலம் பாத்தியப்பட்டதாகும்

தபசில் சொத்தினை 15 வருடத்திற்கு உடைகல் மற்றும் கிராவல் குவாரி செய்து கொள்ள 1-வது பார்ட்டி 2-வது பார்ட்டியிடம் 15 வருட குத்தகையாக ரூபாய் இரண்டு லட்சம் மட்டும் பெற்றுக் கொண்டு 2-வது பார்ட்டி அரசின் சட்ட திட்டங்களுக்கு உட்பட்டும் மற்றும் தமிழ்நாடு சிறு கனீம சலுகை விதிகளுக்கு உட்பட்டும் 15 வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி செய்து கொள்ள 1-வது பார்ட்டி மனப்பூர்வமாக சம்மதித்து 2-வது பார்ட்டிக்கு குத்தகைக்கு விட்டுள்ளார்கள்

மேற்படி குத்தகை ஒப்பந்த பத்திரத்தை மேற்படியார்கள் எந்தவித துண்டுதலும் இன்றி ஒப்புக்கொண்டு நோட்டரி பப்ளிக் முன்பாக படித்துப் பார்த்தும் படிக்க கேட்டும் சரியென ஒப்புக்கொண்டு கையெழுத்து செய்கிறார்கள்

தபசில் சொத்து விவரம்

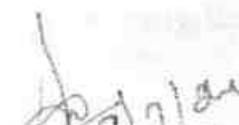
விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி வருவாய் கிராமம், கீழே கண்டுள்ளபடி

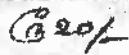
S No.	Survey Number	Area (in Ha)	Patta/Name
1	922/2	0.97.00	2248/ S Vijaya
2	922/3	0.97.00	2248/ S Vijaya
3	922/4	0.98.00	2248/ S Vijaya
	Total	2.92.00	

S. Vijaya
2. S. விஜயா


2. S. செளந்தரராஜன்




C. SUNDARARAJAN S.S.L., B.L.
Advocate & Notary Public
7, South Car Street
Srivilliputtur - 626 126
Virudhunagar District



S. Seetharaman

S. சீதாராமன்

முத்திரைத்தாள் விற்பனையாளர்
உரிமம் எண் 827/10/D/92 நாள் 7-5-92
கீழ்க்கண்டவர்கள். தமிழ்நாடு.

தமிழ்நாடு எண். 3524

26-10-94

8. 12. 18
8/നവം 616400/18 ✓

1994ம் வருஷம் அக்டோபர் மாதம் 26ம்
 தேதிக்குள்ளே படிப்பதற்கு உரியதாகும். இம்
 தேதிக்குள் தான் தரவேண்டும், தாமதமாகிவிட்டால்
 கிராமம் பற்றா பட்சாயத்தின் பேரால் எந்த
 ஏதாவதும் சி. நெருங்கியும் அவர்கள் பாரி
 சி. விஜயம் அவர்களுக்கு இன்ன
 நியூயார்க் சென்ட்ரல் கொரிசன் அ. அ. அ. அ.
 சார்ஜ் தரக்கூடாது. இவர்களுக்கு அப்போதின்
 கிராமம் பற்றா பட்சாயத்தின் பேரால் 2. நியூயார்க்
 பாரிசின் இன்ன பரிமாணம் 10ன் இன்னவற்றின் காரணமாக உரியதாய்வு
 1. ஏதாவது கம்மீட்டர் 3. இன்ன (A. S. N. I. V. A. N.)

L. F. Haynes
A. A. ARSAMY)

4 சீ. கிருஷ்ணப் பிள்ளை

145



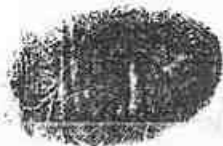
105
1828
4P3

மாண்புமிகு உறுப்பினர்
வி.வகு.கமிட்டி
பரிந்துரை: 249P4

செய்தியை
பெற்ற
1828
இந்த உறுப்பினர்
பெட்டி-வகு.கமிட்டி
பரிந்துரை: 249P4

105
1828
4P3

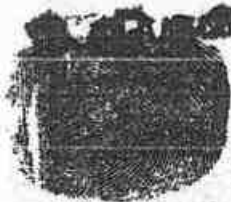
மாண்புமிகு உறுப்பினர்
வி.வகு.கமிட்டி
பரிந்துரை: 249P4
19P4
26
165.00
A. P. S.



- ஏதாங்கும் மாண்புமிகு உறுப்பினர்
வி.வகு.கமிட்டி
செய்தியை



- A. P. S. 1300 2007



- சிவசுந்தரி
செய்தியை



- சி.கி.சு. அம்மாணி 3000 2007



மாண்புமிகு உறுப்பினர்

K. SUBBURAJ, 2/0 R. KONDAPPANACHAR, MAMBAKURAI 7

146



S. சீதாராமன்

முத்திரைத்தாள் கித்பாண்டியாள்
உயிமை எண் 827110/DI92 நாள் 7-5-9.
கீழரசகுலதாமஸ், தமிழ்நாடு.

தமிழ்நாடு எண்: 3525

26-10 94

2.

[illegible]

2H. Also $\underline{\underline{S}}$.

4. சி. கிருஷ்ணம் பாரி

147

[Handwritten signature]



£20/-

உரிதர்பா

1010 247 10

S. Seetharaman

S. சீதாராமன்

முத்திரைத் தாள் விநியோகம்
உரிமை எண் 827/10/D/92 நாள்: 7-5-92
மேலாட்சுலரமன். தமிழ்நாடு.

100-443887-100

பெருந்தாள் நூல்; 3526

26-10 94

3

[illegible]

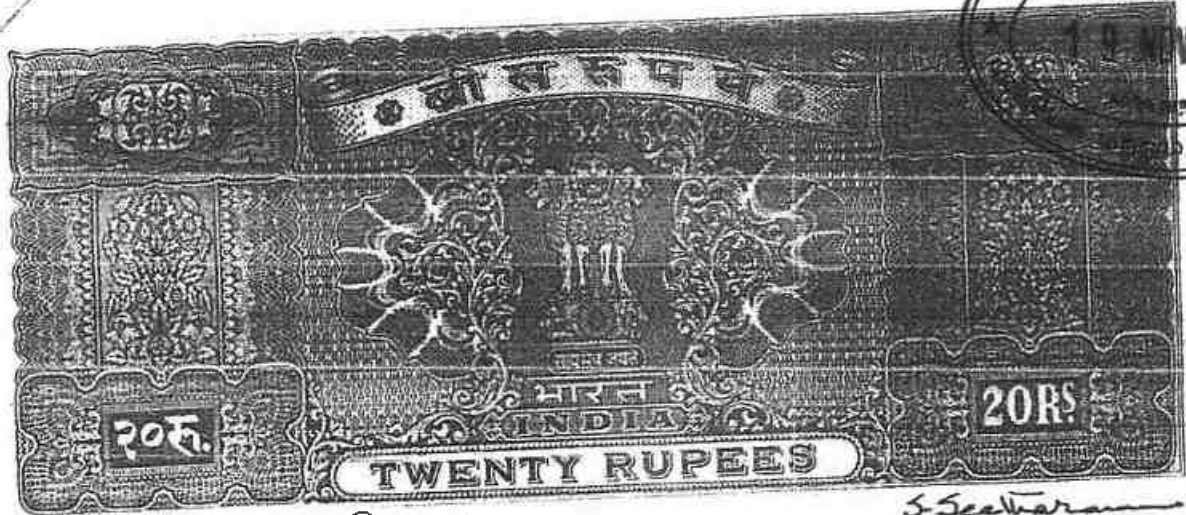
3 Birney

24. Allyl

4 சீ. திருந்ணம்மாள்

[Signature]

148



₹ 20/-

விஜய்
மங்களம்

S. Seetharaman
S. சீதாராமன்

முதலமைச்சர் அலுவலகம்
பெரிய கோட்டை 600 009
தேவநகர்
தமிழ்நாடு



3527
26-10-94

4

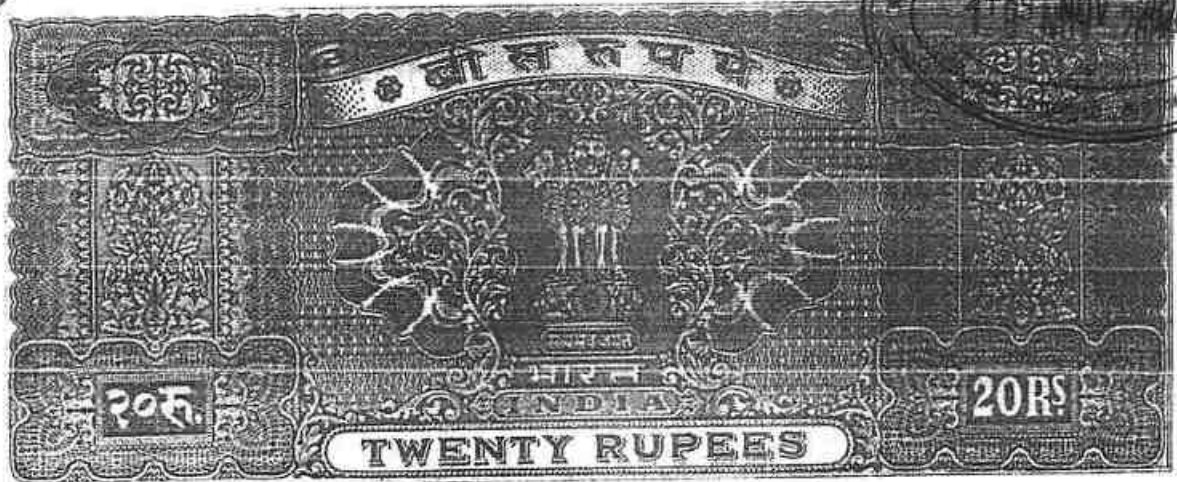
சென்னை நகரில் உள்ள பழைய கட்டிடம்
புதுப்பிக்கப்பட்டுள்ளதில் பகுதியிலுள்ள
புது கட்டிடம் பழைய கட்டிடம் போலவே
புது கட்டிடம் போல இருக்கவும் திட்டமிட்டு
புது கட்டிடம் போல இருக்கவும் திட்டமிட்டு
புது கட்டிடம் போல இருக்கவும் திட்டமிட்டு
புது கட்டிடம் போல இருக்கவும் திட்டமிட்டு
புது கட்டிடம் போல இருக்கவும் திட்டமிட்டு
புது கட்டிடம் போல இருக்கவும் திட்டமிட்டு

1. ஏரங்கம்மாள்

3. சிவசாமி

2. அழகன்

4. சி. சிவசாமி



620/

மாண்புமிகு

S. Sentharam
S. Sentharam

3529
26-10-44

சென்னை நகராட்சி
பெரிய தெரு 827/10. D/92 தர 7-5
கேள்விக்குவருவாயின். கமிட்டி.

6

பெறு 0.97.0 க்கு ரூ 2 (இரண்டு) ரூ 40
(நியூ) புரட்சி புரட்சி ரூ 4 (நா
ன்கு) ரூ 82 (நியூ) ரூ 40
புரட்சி ரூ 40 (நியூ) ரூ 40
16400/ரூ 40. நியூ ரூ 40
பெறு 0.97.0 க்கு ரூ 2 (இரண்டு) ரூ 40
ரூ 40

1 ரூ 40 மட்டும்

3 ரூ 40

2 A. Al

4 சி. கிருஷ்ணம்மா

சுருதி

S. Soundararajan s/o B. Subbaiah Naidu, Mamsapuram.

சுருதி

சுருதி
3/0. சுருதி
பெரிய தெரு 827/10. D/92 தர 7-5
கேள்விக்குவருவாயின். கமிட்டி.

K. SUBBURAO
S/o R. KONDAPPAN NAIDU, MAMSAURAM

சுருதி



20 Rs.



₹ 20/-

விக்ரம்
மம் 2426

S. Sentharam
S. சீதாராமன்



தபிதாபி 3530
நாள்: - 26-10-94

முத்திரைத்தாள் நிதிப்பணியாளர்
உரிமம் எண் 827/10/D/92 நாள் 7-5-5
கீழாட்சுலராமன். தமிழ்நாடு.

1968ம் ஆண்டு தபிதாபி கட்டப்பட்டிருக்கின்றது
உடன் வந்த சென்னை 311 மபபி அங்கு வந்த

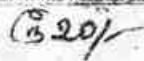
மபபி கட்டப்பட்டது

பகுதி	அளவு	அளவு	அளவு	மொத்தம்
1	2	3	4	5
1	922/4	2.42	43 மீ	₹ 8240.00
2	922/3	2.40	4	₹ 8160.00
மொத்தம்		4.82	47	₹ 16400.00

1. எழுந்தருளும் மாள்
2. அ. அ. அ. அ.
3. அ. அ. அ. அ.
4. சி. கி. அ. அ. அ. அ.

மபபி கட்டப்பட்டது

152



S. சீதாராமன்

MAKSA

Donu 638160)

மதுராசூரம், நந்திபுரம் காவல் நிலையம்
 ① பிள்ளைகள் பெரும்பாலும் பள்ளிச் சென்ற
 குழந்தைகள் ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿
 புகார் விவரம் ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿

3. निम्नलिखित

2007/07





88
882
967

Handwritten text in Tamil script, including the number '24318'.

Handwritten text and a signature.

Handwritten text in Tamil script.



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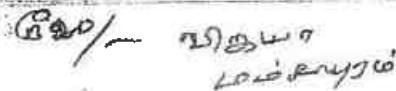
Handwritten text in Tamil script, including the name 'S. Soundararajan'.

Handwritten text in Tamil script.

Handwritten signature.

Handwritten signature.

Handwritten number '157'.



S. Seetharami
S. SEETHARAMI

முதலியானவர்கள் விதிகளைப்பற்றி
உரிமம் எண் 827/10/192 நா.ச. 7-59
கீழ்க்கருவரமன். தமிழகம்.

FILE NO: 3532
DATE: 2-6-10-94

2

[illegible]

1. අනුමැතිය

3. ΔABC is a triangle

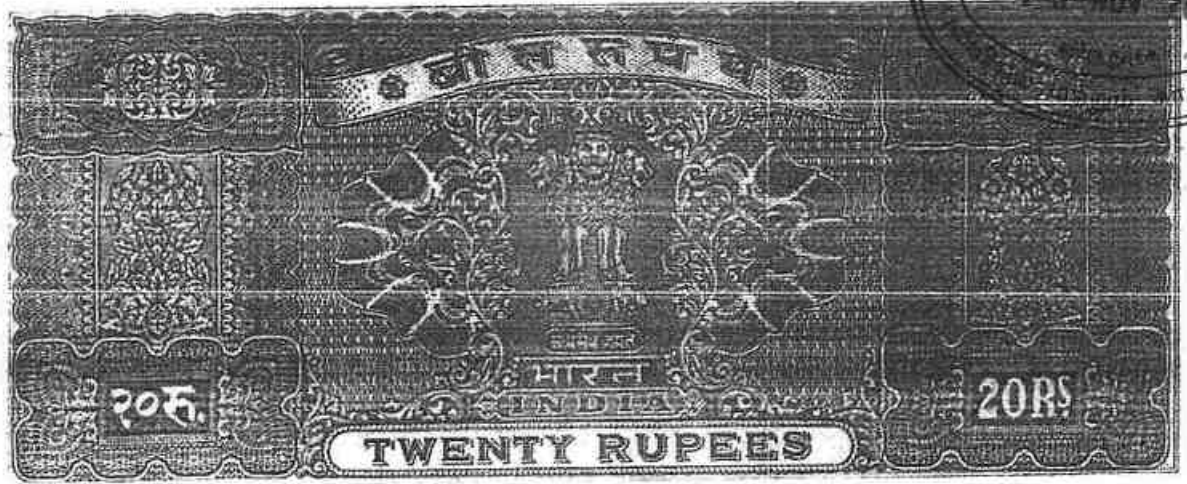
2-05070

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155

156

உதவி இயக்குநர் அலுவலகம்
 நெடுஞ்செழியன் மாவட்டம்
 1 020 RS-774



ரூ. 20/- வாங்கியது
 லட்சுமீ
 S. Seetharam
 S. சீதாராம்
 முத்திரைத் தாள் விநியோகம்
 உரிமம் எண் 827110/D/92 தாள் 7-5-97
 கீழ்க்கண்டவரின் கையொப்பம்

4
 ரூ. 0.97.00க்கு ஏதாவது 2 (அல்லது)
 ரூ. 40 (நிமிஷ) யுரஸ் அல்லது
 2) ஏதாவது 2 ரூ. 8160/க்கு
 1 குதிரை
 3 ரூ. 8160/க்கு
 2 குதிரை

[Handwritten signature]

20 Rs.



C20/—

കുറുപ്പ്

S. Satharam

La. 8-17-76

S. சீதாராமன்

குதிரைத்தாள் விற்பனையாளர்
உரிமம் எண் 827(10)D/92 நாள் 7-5-9
கீழரசகுலராஜன், தமிழ்நாடு.

கீழரசகுலராமன், தமிழ்நாடு.



3535

26-10-94

5-

மதுரையில் பஞ்சவர்ணத்தின் கீழ் உட்கார்ந்து
உள்ளவர்களுக்கு உதவியாக உருவாக்கப்பட்ட
இந்த புத்தகம் உங்களுக்கு உதவியாக இருக்க
வாறு என்று நம்புகிறேன்.

205272

Dr. Exner

L (S) S Soundararajan 4/0 B. Subbaiah Saider Mamapuram.

$\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$

செய்தியை... 100: Five...
3/0. நுகர்ப்பு நுகர்ப்பு, 1951-52 நிதியாண்டு
மாண்புமிகு...
உதயம் எஸ். பி. 275 / 14 / 84

உதயம் எண், 275. 1914

W. J. F.

1105



பெறுநர்:

திரு. மு.சிவகுமார்., பி.எஸ்.சி.,
வருவாய் கோட்டாட்சியர்,
சாத்தூர்.

பெறுநர்:

மாவட்ட ஆட்சியர்
விருதுநகர்.

மூ.மு.அ2 / 3822 / 2024, நாள்: 04.10.2024.

ஐயா,

பொருள் :

கனிமங்களும் சுரங்கங்களும் - சிறுகனிமம் - உடைகல் மற்றும் கிராவல் - விருதுநகர் மாவட்டம் - வெம்பக்கோட்டை வட்டம் - நதிக்குடி கிராமம் - புல எண்கள். 922/2 (0.97.0), 922/3 (0.97.0), 922/4 (0.98.0) மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர் பரப்பில் - 5 (ஐந்து) ஆண்டுகளுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் கோரி - திரு.சௌந்தரராஜன் என்பவர் மனு செய்தது - அறிக்கை கோரியது - தொடர்பாக.

பார்வை:

1. உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, விருதுநகர் கடிதம் எண்.ந.க.கேவி1/767/2024, நாள்: 18.07.2024.

2. வெம்பக்கோட்டை வருவாய் வட்டாட்சியர் கடிதம் எண்.ந.க.ஆ 1/3004/2024, நாள்: 23.09.2024.

விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம், புல எண்கள். 922/2 (0.97.0), 922/3 (0.97.0), 922/4 (0.98.0) மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர் பரப்பில் ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் கோரி திரு.சௌந்தரராஜன், த/பெ. சுப்பையா என்பவர் மனு செய்தது தொடர்பாக, புலத்தணிக்கை செய்து எனதறிக்கையினை கீழ்க்கண்டவாறு சமர்ப்பிக்கிறேன்.

மனுதாரர் உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்கக் கோரிய புலங்கள் வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம், புல எண்.922/2, 922/3, 922/4 விஸ்தீரணங்கள் முறையே 0.97.00, 0.97.00, 0.98.00 ஹெக்டேர் பரப்பில் சௌந்தரராஜன் மனைவி விஜயா பெயரில் கிராமக் கணக்கில் தாக்கலாகியுள்ளது.

மேற்படி புல எண்கள் மனுதாரரின் (சௌந்தரராஜன்) மனைவி விஜயா என்பவருக்கு கீழாங்குலராஜன் சார்புதிவக கிரைய ஆவண எண்கள். 947/1994, 976/1994-ன்படி நிலத்தில் முழுமையாக மாத்தியம் உள்ளது என்பது தெரியவருகிறது.

நான்முமால் விபரம்:-

உட்கு - புல எண்.915/3 - சௌந்தரராஜன் என்பவருக்கு சொந்தமான செயல்படாத குவாரி, புல எண்.918/4சி2, 918/7பி - சௌந்தரராஜன் நிலம்,

தெற்கு - புல எண்.922/5 - அரசு புறம்போக்கு நீர்விடிப்பு,

கிழக்கு - புல எண்.922/6 - எஸ்.கே.கணேசன் நிலம், 922/5 அரசு புறம்போக்கு நீர்விடிப்பு,

மேற்கு - புல எண்.922/1 - மணிக்கண்ணன் நிலம்,

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 300 மீட்டர் சுற்றளவில் குடியிருப்புகள் ஏதுமில்லை. 50 மீட்டர் சுற்றளவில் கோவில், மசூதி, நினைவுச் சின்னங்கள், உயர் மின்னழுத்த கம்பி பாதைகள் மற்றும் இடுகாடு ஏதுமில்லை. மேலும் இருப்புப்பாதை, சாலை ஏதுமில்லை. பிரஸ்தாப புலங்களிலிருந்து 500 மீட்டர் சுற்றளவில் புராதானச் சின்னங்கள் மற்றும் பழமையான கல்வெட்டுகள் ஏதுமில்லை. மனுதாரர் கோரும் கூட்டுப்புலத்திற்குள் 40 மீட்டர் சுற்றளவில் தெற்கு பகுதியில் புல எண்.935-ல் அரசு புறம்போக்கு

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தமிழ்நாடு சட்டமன்றப் பேரவையின் கூட்டுப்பாட்டில் உள்ள செவல்குளம் கண்மாய் உள்ளது மற்றும் புல எண்.922/5-
மேலும், மேற்படி கூட்டுப்புலத்திற்குள்
த/பெ. இராமபக்தன் என்பவர் ஆட்சேபனை மனு அளித்துள்ளார். வட்டாட்சியர் முன்பாக
ஆட்சேபனைதாரர் திரு.பாண்டி என்பவர் ஆட்சேபனை கடிதத்தினை திரும்ப பெற்றுக்கொள்வதாக
தெரிவித்துள்ளார்.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திலிருந்து கனிமங்கள் கொண்டு வர புல எண்.922/6
மற்றும் 921/1-ல் பட்டாதாரர்களின் சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது. மேற்படி
பட்டாதாரர்களிடமிருந்து சம்மதக் கடிதம் தற்போது பெற்றுள்ளார். மேலும், மேற்கண்ட புல எண்களின்
வழியாக வந்து புல எண்.808/3-ல் உள்ள அரசு புறம்போக்கு ஓடை வழியாக சென்று மனுதாரரின்
சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது. மனுதாரர் உரிமம் கோரும் புலங்களில் ஜாரி
நிலங்களோ தடை ஆணை நிலங்களோ இல்லை.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்தில் ஏற்கனவே விருதுநகர் மாவட்ட ஆட்சியர்
அவர்களின் நடவடிக்கைகள் ந.க.கே.வி1/10050/2017, நாள்: 10.06.2019 காலம் 18.10.2019 முதல்
17.10.2024 வரை ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி செயல்பட்டு வருகிறது.
மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு 500 மீட்டர் சுற்றளவில் வடக்குப் பகுதியில் மனுதாரருக்கு
சொந்தமான செயல்படாத குவாரியும், ஜெயராமன் மகன் சாய்பிரித்தும் என்பவருக்குச் சொந்தமான
செயல்படும் குவாரியும், மற்றும்மொரு ஜெயராமன் மகன் சாய்பிரித்தும் என்பவருக்குச் சொந்தமான
நிலத்தில் செயல்படாத குவாரியும், பெருமாள்சாமி மகன் ஜெயராமன் என்பவருக்கு சொந்தமான
செயல்படாத குவாரியும், சங்கம நாயக்கர் மகன் இராதாகிருஷ்ணன் என்பவருக்குச் சொந்தமான
செயல்படும் குவாரியும், மேற்குப் பகுதியில் மணிக்கண்ணன் என்பவருக்குச் சொந்தமான நிலத்தில்
உள்ள செயல்படாத குவாரியும், கீழ்க்குப் பகுதியில் புன்செய் நிலங்களும், தெற்குப் பகுதியில் அரசு
புறம்போக்கு நீர்ப்பிடிப்பு மற்றும் செவல்குளம் கண்மாய் உள்ளது. மேலும், 500 மீ சுற்றளவில் சீனிவாசன்
மகன் ரெங்கசாமி என்பவருக்குச் சொந்தமான பட்டாசு தொழிற்சாலையும் உள்ளது. மேற்படி உரிமம்
கோரும் புலங்களுக்கு அருகில் வன விலங்குகள் மற்றும் மான் சரணாலயம் ஏதுமில்லை.
மனுதாரரிடமிருந்து அரசுக்கு செலுத்த வேண்டிய வரி பாக்கி நிலுவை இனங்கள் ஏதுமில்லை. மனுதாரர்
உரிமம் கோரும் கூட்டுப்புலமானது வெம்பக்கோட்டை ஊராட்சி ஒன்றியத்தையும், நதிக்குடி ஊராட்சிக்கு
உட்பட்டதாகும்.

எனவே, விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம், புல எண்.922/2
(0.97.00), 922/3 (0.97.00), 922/4 (0.98.00) மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர் பரப்பில் ஐந்து
வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் திரு.சௌந்தரராஜன், த/பெ. சுப்பையா
என்பவருக்கு தமிழ்நாடு சிறுகனிய விதிகளின்படி வழங்க பரிந்துரை செய்கிறேன் என்பதைப் பணிவுடன்
தெரிவித்துக்கொள்கிறேன்.

இணைப்பு: மேற்கண்டவாறு.

ஓம்/ மு.சிவகுமார்,
வருவாய் கோட்டாட்சியர்,
சாத்தூர்.

/உத்தரவுப்படி/

24/10/24
தேமுதிக உதவியாளர்



புலத்தணிக்கைக்குறிப்பு

புலத்தணிக்கை அலுவலர் பெயர் மற்றும் பதவி	திரு. மு.சிவகுமார்., பி.எஸ்.சி., வருவாய் கோட்டாட்சியர், சாத்தூர்.
தணிக்கை செய்த இடம்	வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம்
புல எண்கள்	புல எண்கள். 922/2 (0.97.0), 922/3 (0.97.0), 922/4 (0.98.0) மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர்
தணிக்கை நாள்	03.10.2024
புலத்தணிக்கையின் நோக்கம்	5 வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்கக் கோரி கோரியது - தொடர்பாக.

விருதுநகர் மாநகர், வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம், புல எண்கள். 922/2 (0.97.0), 922/3 (0.97.0), 922/4 (0.98.0) மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர் பரப்பில் ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் கோரி திரு.சௌந்தரராஜன், த/பெ. சுப்பையா என்பவர் மனு செய்தது தொடர்பாக, இன்று (03.10.2024) புலத்தணிக்கை மேற்கொள்ளப்பட்டது. புலத்தணிக்கையின்போது வெம்பக்கோட்டை வட்டாட்சியர், மண்டல துணை வட்டாட்சியர், வருவாய் ஆய்வாளர், குறுவட்ட அளவன் மற்றும் கிராம நிர்வாக அலுவலர் ஆகியோர் உடனிருந்தனர்.

மனுதாரர் உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்கக் கோரிய புலங்கள் வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம், புல எண்.922/2, 922/3, 922/4 விஸ்தீரணங்கள் முறையே 0.97.00, 0.97.00, 0.98.00 ஹெக்டேர் பரப்பில் சௌந்தரராஜன் மனைவி விஜயா பெயரில் கிராமக் கணக்கில் தரக்கலாகியுள்ளது.

மேற்படி புல எண்கள் மனுதாரரின் (சௌந்தரராஜன்) மனைவி விஜயா என்பவருக்கு கீழராஜகுலராமன் சார்பதிவக கிரைய ஆவண எண்கள். 947/1994, 976/1994-ன்படி நிலத்தில் முழுமையாக பாத்தியம் உள்ளது என்பது தெரியவருகிறது.

நான்குமால் விபரம்:-

வடக்கு - புல எண்.915/3 - சௌந்தரராஜன் என்பவருக்கு சொந்தமான செயல்படாத குவாரி, புல எண்.918/4சி2, 916/7பி - சௌந்தரராஜன் நிலம், தெற்கு - புல எண்.922/5 - அரசு புறம்போக்கு நீர்ப்பிடிப்பு, கிழக்கு - புல எண்.922/6 - எஸ்கே.கணேசன் நிலம், 922/5 அரசு புறம்போக்கு நீர்ப்பிடிப்பு, மேற்கு - புல எண்.922/1 - மணிக்கண்ணன் நிலம்,

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 300 மீட்டர் சுற்றளவில் குடியிருப்புகள் ஏதுமில்லை.. 50 மீட்டர் சுற்றளவில் கோவில், மதத்தி, நினைவுச் சின்னங்கள், உயர் மின்னழுத்த கம்பி பாதைகள் மற்றும் இடுகாடு ஏதுமில்லை. மேலும் இருப்புப்பாதை, சாலை ஏதுமில்லை. பிரஸ்தாப புலங்களிலிருந்து 500 மீட்டர் சுற்றளவில் புராதானச் சின்னங்கள் மற்றும் பழமையான கல்வெட்டுகள் ஏதுமில்லை. மனுதாரர் கோரும் கூட்டுப்புலத்திற்குள் 40 மீட்டர் சுற்றளவில் தெற்கு பகுதியில் புல எண்.935-ல் அரசு புறம்போக்கு



பொதுப்பணித்துறையின் கட்டுப்பாட்டில் உள்ள செவல்குளம் கண்மாய் உள்ளது மற்றும் புல எண்.922/5-ல் அரசு புறம்போக்கு செவல்குளம் கண்மாய் நீர்ப்பிடிப்பு உள்ளது. மேலும், மேற்படி கட்டுப்பாட்டிற்குள் நீர்தலைகள், நிலவியல் ஓடைகள் ஏதுமில்லை. பிரஸ்தாப புலத்தில் குவாரி உரிமம் வழங்க திரு.பாண்டி, த/பெ. இராமபக்தன் என்பவர் ஆட்சேபனை மனு அளித்துள்ளார். வட்டாட்சியர் முன்பாக ஆட்சேபனைதாரர் திரு.பாண்டி என்பவர் ஆட்சேபனை கடிதத்தினை திரும்ப பெற்றுக்கொள்வதாக தெரிவித்துள்ளார்.

மனுதாரர் உரிமம் கோரும் கட்டுப்புலத்திலிருந்து கனிமங்கள் கொண்டு வர. புல எண்.922/6 மற்றும் 921/1-ல் பட்டாதாரர்களின் சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது. மேற்படி பட்டாதாரர்களிடமிருந்து சம்மதக் கடிதம் தற்போது பெற்றுள்ளார். மேலும், மேற்கண்ட புல எண்களின் வழியாக வந்து புல எண்.808/3-ல் உள்ள அரசு புறம்போக்கு ஓடை வழியாக சென்று மனுதாரரின் சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது. மனுதாரர் உரிமம் கோரும் புலங்களில் ஜனரி நிலங்களோ தடை ஆணை நிலங்களோ இல்லை.

மனுதாரர் உரிமம் கோரும் கட்டுப்புலத்தில் ஏற்கனவே விருதுநகர் மாவட்ட ஆட்சியர் அவர்களின் நடவடிக்கைகள் ந.க.கே.வி1/10050/2017, நாள்: 10.06.2019 காலம் 18.10.2019 முதல் 17.10.2024 வரை ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி செயல்பட்டு வருகிறது. மனுதாரர் உரிமம் கோரும் கட்டுப்புலத்திற்கு 500 மீட்டர் சுற்றளவில் வடக்குப் பகுதியில் மனுதாரருக்கு சொந்தமான செயல்படாத குவாரியும், ஜெயராமன் மகன் சாய்பிரித்தம் என்பவருக்குச் சொந்தமான செயல்படும் குவாரியும், மற்றுமொரு ஜெயராமன் மகன் சாய்பிரித்தம் என்பவருக்குச் சொந்தமான நிலத்தில் செயல்படாத குவாரியும், பெருமாள்சாமி மகன் ஜெயராமன் என்பவருக்கு சொந்தமான செயல்படாத குவாரியும், சங்கம நாயக்கர் மகன் இராதாகிருஷ்ணன் என்பவருக்குச் சொந்தமான செயல்படும் குவாரியும், மேற்குப் பகுதியில் மணிக்கண்ணன் என்பவருக்குச் சொந்தமான நிலத்தில் உள்ள செயல்படாத குவாரியும், கிழக்குப் பகுதியில் புன்செய் நிலங்களும், தெற்குப் பகுதியில் அரசு புறம்போக்கு நீர்ப்பிடிப்பு மற்றும் செவல்குளம் கண்மாய் உள்ளது. மேலும், 500 மீ சுற்றளவில் சீனிவாசன் மகன் ஜெங்குசாமி என்பவருக்குச் சொந்தமான பட்டாக தொழிற்சாலையும் உள்ளது. மேற்படி உரிமம் கோரும் புலங்களுக்கு அருகில் வன விலங்குகள் மற்றும் மான் சரணாலயம் ஏதுமில்லை. மனுதாரரிடமிருந்து அரசுக்கு செலுத்த வேண்டிய வரி பாக்கி நிலுவை இனங்கள் ஏதுமில்லை. மனுதாரர் உரிமம் கோரும் கட்டுப்புலமானது வெம்பக்கோட்டை ஊராட்சி ஒன்றியத்தையும், நதிக்குடி ஊராட்சிக்கு உட்பட்டதாகும்.

எனவே, விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி கிராமம், புல எண்.922/2 (0.97.00), 922/3 (0.97.00), 922/4 (0.99.00) மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர் பரப்பில் ஐந்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் திரு.சௌந்தராஜன், த/பெ. சுப்பையா என்பவருக்கு தமிழ்நாடு சிறுகனிம விதிகளின்படி வழங்க அனுமதி வழங்கலாம்.


வருவாய் கோட்டாட்சியர்,
சாத்தூர்.



" 005408

25/9/24



அனுப்பநர்

திரு.ந.கலைவாணி, பி.காம்.,
வருவாய் வட்டாட்சியர்,
வெம்பக்கோட்டை வட்டம்,
வெம்பக்கோட்டை.

பெறுநர்

வருவாய் கோட்டாட்சியர்,
சாத்தூர் வருவாய் கோட்டம்,
சாத்தூர்.

ந.க.ஆ.1/3004/2024 நாள்: 09.2024.

மதிப்பிற்குரிய அய்யா,

பொருள்:

கணிமங்களும் சுரங்கங்களும் - சிறுகனிமம் - உடைகல் மற்றும் கிராவல் - விருதுநகர் மாவட்டம் - வெம்பக்கோட்டை வட்டம் - நதிக்குடி வருவாய் கிராமத்தில் புல எண். 922/2 (0.97.00), 922/3 (0.97.00), 922/4 (0.98.00), மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர் பரப்பில் - 05 (ஐந்து) ஆண்டுகளுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் கோரி திரு.சுப்பையா மகன் செளந்தரராஜன் என்பவர் மனு செய்தது - அறிக்கை கோரியது — அறிக்கை சமர்ப்பித்தல் - தொடர்பாக.

பார்வை:

1. உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, விருதுநகர் கடிதம் எண்.ந.க.கேவி1/767/2024, நாள்: 18.07.2024.
2. சாத்தூர் வருவாய் கோட்டாட்சியர் அவர்களின் கடித எண்.ந.க.அ2/3481/2024, நாள்: 08.07.2024.
3. மண்டல துணைவட்டாட்சியர் அறிக்கை நாள்: 12.08.2024
4. குறுவட்ட வருவாய் ஆய்வாளர், ஆலங்குளம் அறிக்கை நாள்: 12.08.2024
5. குறுவட்ட நில அளவர், ஆலங்குளம் அறிக்கை நாள்: 23.08.2024
6. கிராம நிர்வாக அலுவலர், நதிக்குடி அறிக்கை நாள்: 12.08.2024.
7. திரு.பாண்டி த/பெ. இராசபக்தன் என்பவர் மனு நாள்: 16.08.2024

விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், நதிக்குடி வருவாய் கிராமத்தில் புல எண். 922/2 (0.97.00), 922/3 (0.97.00), 922/4 (0.98.00), மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர் பரப்பில் - 05 (ஐந்து) ஆண்டுகளுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் கோரி திரு.சுப்பையா மகன் செளந்தரராஜன் என்பவர் மனு செய்துள்ளதன்பேரில் பார்வை 1-ல் காணும் கடிதத்தில் பிரேரணை அனுப்ப அறிவுறுத்தப்பட்டுள்ளது. அதனடிப்படையில் அறிக்கை சமர்ப்பிக்க கேட்டதின் பேரில் பார்வை 3 முதல் 6 வரையிலான அறிக்கைகள் வரப்பெற்றன. மேற்படி மனுதாரரின் கோரிக்கை தொடர்பாக 09.2024 அன்று புலத்தனிக்கை செய்து எனதறிக்கையினை கீழ்க்கண்டவாறு சமர்ப்பிக்கிறேன்.

மேற்படி புல எண்கள் நதிக்குடி கிராமக்கணக்கில் பட்டா எண்கள்.2248-ல் புல எண்கள்.922/2, 922/3, 922/4 விஸ்தீரணங்கள் முறையே 0.97.00, 0.97.00, 0.98.00 ஹெக்டேர் பரப்பில் செளந்தரராஜன் மனைவி விஜயா பெயரில் தாக்கலாகியுள்ளது.

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மேற்படி புல எண்கள் மனுதாரரின் (சௌந்தராஜன்) மனைவி விஜயா என்பவருக்கு கீழராஜகுலராமன் சார் புதிதாக கிரைய ஆவண எண்கள் 947/1994, 976/1994 —ன்படி நிலத்தில் முழுமையாக பாத்தியம் உள்ளது என்பது தெரியவருகிறது.

குவாரி உரிமம் கோரும் புலஎண்ணின் நான்குமால் விபரம் கீழ்க்கு

புலஎண். 922/6 - எஸ்.கே.சுனேசன் நிலம்

புலஎண். 922/5 - அரசு புறம்போக்கு நீர்ப்பிடிப்பு

மேற்கு

புலஎண். 922/1 - மணிக்கண்ணன் நிலம்

வடக்கு

புலஎண். 915/3 - மனுதாரரான சௌந்தராஜன் என்பவருக்கு சொந்தமான செயல்படாத குவாரி

புல எண். 918/4சி2- மனுதாரரான சௌந்தராஜன் நிலம்

புல எண். 916/7பி - மனுதாரரான சௌந்தராஜன் நிலம்

தெற்கு

புலஎண். 922/5 - அரசு புறம்போக்கு நீர்ப்பிடிப்பு

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 300 மீட்டர் சுற்றளவில் குடியிருப்புகள் ஏதுமில்லை என்பதும்,

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 50 மீட்டர் சுற்றளவில் கோவில், மதுதி நினைவுச்சின்னங்கள், உயர் மின்னழுத்த கம்பி பாதைகள் மற்றும் இடுகாடு ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரியவருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு 500 மீட்டர் சுற்றளவில் புரதானசின்ங்கள் மற்றும் பழையபான கல்வெட்டுகள் ஏதுமில்லை என்பதும்

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 50 மீட்டர் சுற்றளவில் இருப்புப்பாதை, சாலை ஏதுமில்லை என்பதும்

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 50 மீட்டர் சுற்றளவில் தெற்குப்பகுதியில் புல எண் 935-ல் அரசு புறம்போக்கு பொதுப்பணித்துறையின் கூட்டுப்பாட்டில் உள்ள செவல்குளம் கண்மாய் உள்ளது என்பதும் மற்றும் புல எண். 922/5-ல் அரசு புறம்போக்கு செவல்குளம் கண்மாய் நீர்ப்பிடிப்பு உள்ளது என்பதும் புலத்தணிக்கையில் தெரியவருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்குள் நீர்நிலைகள், நிலவியல் ஓடைகள் ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு பார்வையில் 7-ல் காணும் ஆட்சபனை மறு வரப்பெற்றது.

மேற்படி விசாரணை நோட்டீஸ் சார்வு செய்யப்பட்டு மனுதாரர் இவ்வலுவலகத்தில் ஆஜராகி கல்குவாரி விண்ணப்பத்தாரர் திரு.கப்பையா மகன் சௌந்தராஜன் என்பவர் நிர்வகித்து கால்வாய்



மற்றும் நீரிடிப்பு பகுதிகளுக்கு எந்தவித இடையூறும் இல்லாமல் எதிர்காலத்தில் கல்குவாரி தொழில் செய்வேன் என்று உறுதி கொடுத்துள்ளார் என்றும் மேற்படி ஆட்சேபனை கடிதத்தை திரும்ப பெற்றுக்கொள்கிறேன் என மனுதாரர் திரு.பாண்டி என்பவர் வாக்குமூலம் அளித்துள்ளார் மேற்படி திரு.பாண்டி என்பவர் அளித்த வாக்குமூலம் இணைக்கப்பட்டுள்ளது.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திலிருந்து கணிமங்கள் கொண்டு வர புல எண்.922/6 மற்றும் 921/1-ல் பட்டாதாரர்களின் சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது என்பதும், மேற்படி பட்டாதாரர்களிடமிருந்து சம்மதக்கடிதம் மற்றும் சம்மத வாக்குமூலம் ஏதும் மனுதாரர் பெறவில்லை. மேலும் மேற்கண்ட புல எண்களின் வழியாக வந்து புல எண்.808/3-ல் உள்ள அரசு புறம்போக்கு ஒடை வழியாக சென்று மனுதாரரின் சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலம் கண்டிசன் ஜூரி நிலங்களோ தடை ஆணை நிலங்களோ ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்தில் ஏற்கனவே விருதுநகர் மாவட்ட ஆட்சியர் அவர்களின் நடவடிக்கைகள் ந.க.கே.வி1/10050/2017 தேதி 10.06.2019 னால் 18.10.2019 முதல் 17.10.2024 வரை 5 (ஐந்து) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி செயல்பட்டு வருகிறது என்ற விபரத்தை தெரிவித்துக்கொள்கிறேன்.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு 500 மீட்டர் சுற்றளவில் வடக்குப்பகுதியில் மனுதாரருக்கு சொந்தமான செயல்படாத குவாரியும், ஜெயராமன் மகன் சாய்பிரித்தம் என்பவருக்குச் சொந்தமான செயல்படும் குவாரியும், மற்றுமொரு ஜெயராமன் மகன் சாய்பிரித்தம் என்பவருக்குச் சொந்தமான நிலத்தில் செயல்படாத குவாரியும், பெருமாள்சாமி மகன் ஜெயராமன் என்பவருக்கு சொந்தமான செயல்படாத குவாரியும், சங்கம நாயக்கர் மகன் இராதாகிருஷ்ணன் என்பவருக்கு சொந்தமான செயல்படும் குவாரியும், மேற்குப்பகுதியில் மணிக்கண்ணன் என்பவருக்கு சொந்தமான நிலத்தில் உள்ள செயல்படாத குவாரியும், கிழக்குப்பகுதியில் புன்செய் நிலங்களும், தெற்குப் பகுதியில் அரசு புறம்போக்கு நீரிடிப்பு மற்றும் செவ்வஞ்சம் கணியாய் உள்ளது என்பதும், மேலும் 500 மீ சுற்றளவில் சீனிவாசன் மகன் ரெங்கசாமி என்பவருக்கு சொந்தமான பட்டாசு தொழிற்சாலையும், உள்ளது என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திலிருந்து கணிமங்கள் கொண்டு வர புல எண்கள் 920/1௭1, 1௭3 மற்றும் 921/1-ல் பட்டாதாரர்களின் சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது என்பதும், மேற்கண்ட புல எண்களின் வழியே கணிமங்கள் கொண்டு செல்ல பாதையாக பயன்படுத்த பட்டாதாரரிடமிருந்து மனுதாரர் தற்போது சம்மதக் கடிதம் பெற்றுள்ளார்.

மேலும் மேற்படி உரிமம் கோரும் கூட்டுப்புலத்திற்கு அருகில் வன விலங்குகள் மற்றும் மான் சரணாலயம் ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரியவருகிறது.

மேலும் மனுதாரரிடமிருந்து அரசுக்கு செலுத்த வேண்டிய வரி பாக்கி நிலுவை இனங்கள் ஏதுமில்லை என்பதையும்,

மேலும் மனுதாரர் கோரும் கூட்டுப்புலமானது வெம்பக்கோட்டை ஊராட்சி ஒன்றியத்தைச் சேர்ந்த நதிக்குடி ஊராட்சிக்கு உட்பட்டது.


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மேற்படி புலத்தணிக்கையின்படியும், கிராம நிர்வாக அலுவலர் அறிக்கையின்படியும், திரு.சௌந்தராஜன் த/பெ.சுப்பையா என்பவர் நதிக்கு கிராமம், புலணை- 922/2 (0.97.00), 922/3 (0.97.00), 922/4 (0.98.00), மொத்த விஸ்தீரணம் 2.82.0 ஹெக்டேர் பரப்பில் - 05 (ஐந்து) ஆண்டுகளுக்கு உடைகல் மற்றும் கிராமக் குவாரி உரிமை வழங்க பரிந்துரை செய்கிறேன் என்பதைப்பணிவுடன் தெரிவித்துக்கொள்கிறேன்
இணைப்பு : தொடர்புடைய ஆவணங்கள்.

/உத்தரவுப்படி/

(ஆம்).ந.கலைவாணி
வருவாய் வட்டாட்சியர்,
வெம்பக்கோட்டை.

சீதா-சாமி

23.9.24
வட்டாட்சியருக்காக

23/9/24

சீதா



**விருதுநகர் மாவட்டம் வெம்பக்கோட்டை வருவாய் வட்டாட்சியரின்
புலத்தணிக்கை அறிக்கை**

1.	குத்தகை உரிமம் கோரிய விண்ணப்பம் பெறப்பட்ட தேதி	:	10.07.2024.			
2.	அ) புலத்தணிக்கை செய்த நாள்	:	17.09.2024			
	ஆ) புலத்தணிக்கையின் போது உடனிருந்த அலுவலர்கள் பற்றிய விவரம்	:	குறுவட்ட வருவாய் ஆய்வாளர், நதிக்குடி கிராம நிர்வாக அலுவலர் மற்றும் உதவியாளர்			
3.	குத்தகை உரிமம் கோரும் விண்ணப்பதாரரின் பெயர் மற்றும் முகவரி	:	திரு.சௌந்தராஜன் த/பெ.சுப்பையா மம்சாபுரம் சிவகாசி வட்டம், விருதுநகர் மாவட்டம்.			
4.	குத்தகை உரிமம் கோரும் கனிமங்களின் பெயர்	:	உடைகல் மற்றும் கிராவல் உரிமம்			
5.	குத்தகை உரிமம் கோரும் கால அளவு	:				
6.	குத்தகை உரிமம் கோரும் இடம் அமைந்துள்ளது பற்றிய விவரம்	:				
வ. எண்	வட்டம்	கிராமம்	புல எண்கள்	மொத்த பரப்பு (ஹெக்ட)	குத்தகை உரிமம் கோரும் பரப்பு (ஹெக்ட)	வகைப்பாடு
1	வெம்பக்கோட்டை	நதிக்குடி	922/2 922/3 922/4	0.97.00 0.97.00 0.98.00	2.92.0	பட்டா நிலம்
			மொத்தம்		2.92.0	
7.	அ) குத்தகை உரிமம் கோரும் புல எண்கள், விண்ணப்பதாரரின் பெயரில் பட்டா நிலங்களாக இருப்பின் அது பற்றிய விவரம்			கனிம சேமிப்பு மையம் அமைக்கக்கோரும் புல எண்கள் அனைத்தும் நதிக்குடி கிராமக்கணக்கில் பட்டா எண்.2248-ல் சௌந்தராஜன் மனைவி விஜயா பெயரில் தாக்கலாகியுள்ளது		
	ஆ) பட்டாதாரரிடமிருந்து குத்தகை ஒப்பந்தம் பெறப்பட்டிருப்பின் அதுபற்றிய விவரம்			ஆவணம் இணைக்கப்பட்டுள்ளது		
	இ) குத்தகை கோரும் புல எண்கள் தாழ்த்தப்பட்டோர் / பழங்குடியினருக்கு ஒதுக்கீட்டின் அடிப்படையில் பட்டா வழங்கப்பட்டிருப்பின் அதுபற்றிய விவரம்			இல்லை.		

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இறுதிக்கே உரிமம் கோரும் புல எண்களின் நான்கு எல்லைகள்.		புல எண்	வடக்கு	தெற்கு	கிழக்கு	மேற்கு
		922/2 922/3 922/4	915/3, 918/4C 2 916/7B	922/5	922/6 922/5	922/1
8.	குத்தகை உரிமம் கோரும் புல எண்களுக்கு ஏற்கனவே குத்தகை உரிமம் வழங்கப்பட்டிருப்பின் அது பற்றிய விவரம்.	இல்லை.				
10.	குத்தகை உரிமம் கோரும் புல எண்களுக்கு அருகில் பாதுகாப்பு இடைவெளிக்குள் அமைந்துள்ள நிரந்தர அமைப்புகள் ஒதுக்கப்பட வேண்டிய பாதுகாப்பு இடைவெளி பற்றிய விவரம்	மேற்படி புல எண்களுக்கு அருகில் உள்ள குவாரிகள், பட்டா நிலங்களுக்கு, ஒடைகளுக்கு போதிய பாதுகாப்பு இடைவெளி விட வேண்டும்.				
11.	அ) குத்தகை உரிமம் கோரும் புல எண்களிலிருந்து 500 மீட்டர் சுற்றளவுக்குள் குடியிருப்பு பகுதிகள் / அங்கீகரிக்கப்பட்ட வீட்டுமனைப்பிரிவுகள் மற்றும் புராதனச் சின்னங்கள் அமைந்துள்ள விவரம்	500 மீட்டர் சுற்றளவுக்குள் குடியிருப்பு பகுதிகள் / அங்கீகரிக்கப்பட்ட வீட்டுமனைப் பிரிவுகள் மற்றும் புராதனச் சின்னங்கள் ஏதும் இல்லை.				
	ஆ) குத்தகை உரிமம் கோரும் பகுதிக்கு பாதை வசதி உள்ளது பற்றிய விவரம்	பாதை வசதி உள்ளது.				
12.	குத்தகை உரிமம் கோரும் புல எண்கள் அமைந்துள்ள கிராமம், மலையிலை 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.				
17.	குத்தகை உரிமம் வழங்குவது தொடர்பாக "அ1" நோட்டீஸ் விளம்பரம் செய்யப்பட்டு பொது மக்களிடமிருந்து ஆட்சேபணை ஏதும் பெறப்பட்டுள்ளதா?	"அ1" நோட்டீஸ் விளம்பரம் 27.07.2024 அன்று பிரசுரம் செய்யப்பட்டு ஆட்சேபணைகள்				

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18.	குத்தகை உரிமம் கோரும் புல எண்களின் பேரில் வருவாய்துறை பரிந்துரை செய்கின்றதா?	:	ஆம்
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19) குத்தகை உரிமம் கோரும் விண்ணப்பத்தின் பேரில் வெவ்வேறான வரவாய் வட்டாட்சியரின் அறிக்கையும் பரிந்துரையும்.

திரு.சௌந்தரராஜன் என்ற நிறுவனம் விண்ணப்பித்துள்ள புல எண்கள் பட்டா நிலங்கள் என்ற அடிப்படையிலும் நதிக்குடி கிராம நிர்வாக அலுவலர், ஆலங்குளம் குறுவட்ட வருவாய் ஆய்வாளர் மற்றும் வெவ்வேறான மண்டலத் துணை வட்டாட்சியர் ஆலியோர் மனுதாரர் நிறுவனத்திற்கு கனரிம சேமிப்பு மையம் உரிமம் வழங்க பரிந்துரை செய்துள்ளதன் அடிப்படையிலும் மனுதாரர் நிறுவனத்தாருக்கு தமிழ்நாடு சிறுகனரிம சலுகை விதிகள் 1959, விதி 19 மற்றும் 20-ன் கீழ் கீழ்க்கண்ட நிபந்தனைகளுக்கு உட்பட்டு உரிமம் வழங்கலாம்.

1. குவாரி செய்ய அனுமதிக்கப்பட்ட குறிப்பிட்ட புல எண் மற்றும் குறிப்பிட்ட விஸ்தீரணத்திற்குள் தான் குவாரி செய்ய வேண்டும்.
2. குத்தகைதாரர் குவாரியை வேறுபாருக்கும் உள் குத்தகைக்கு விடலாகாது.
3. ஒப்பந்தப் பத்திரத்தில் கண்டுள்ள நிபந்தனைகளுக்கு அவர் கட்டுப்பட்டு நடக்க வேண்டும்.
4. குத்தகை ஒப்பந்தப் பத்திரம் நிறைவேற்றப்பட்ட பின்புதான் குவாரியில் வேலை செய்ய தொடங்க வேண்டும்.
5. குத்தகை பற்றிய முழுவிபரங்கள் அடங்கிய தகவல் பலகை ஒன்று குவாரியில் கண்டிப்பாக வைத்திருக்க வேண்டும்.
6. சொந்த செலவிலும் முயற்சியாலும் குவாரிக்குச் செலலும் சாலைகள் மற்றும் பாதைகள் மற்றும் வசதிகள் அமைத்துக் கொள்ள வேண்டும்.
7. தன் சொந்த செலவிலேயே குவாரியில் குத்தகை வழங்கப்பட்ட விஸ்தீரணத்தை வட்ட அளவர் மூலம் அளந்து நான்கு எல்லைக்கும் கல்தூண்கள் நட்டு அமைத்துப் பராமரித்து வர வேண்டும்.
8. குவாரிக்குரிய நடைசீட்டுகளை கண்டிப்பாக குவாரியில் இருந்து தான் வழங்க வேண்டும். நடைசீட்டுக்களின் அடிக்கட்டைகளை குவாரியில் வைத்திருக்க வேண்டும்.
9. குவாரிக்கு அருகில் வீடுகள், சாலைகள், பாதைகள், மின்சாரக் கம்பிகள், மின்சார டிரான்ஸ்பார்மர்கள் கோவில், ஓடை, குடிநீர் ஆதாரங்கள் மற்றும் சரித்திரப் புகழ் பெற்ற ஸ்தலங்கள் போன்ற அமைந்திருந்தால் அவைகளுக்கு சேதம் ஏற்படாதவாறு தேவையான அளவு பாதுகாப்பு இடைவெளி விட்டு குவாரி செய்ய வேண்டும்.
10. அனுமதிபெறாமல் குவாரியில் வெடிமருந்துகள் பயன்படுத்தக் கூடாது. வெடிபொருட்கள் சட்டம் கண்டிப்பாக கடைபிடிக்கப்பட வேண்டும். குறைந்த அழுத்தமுள்ள வெடிமருந்துகளை பயன்படுத்தி குவாரிப் பணி செய்ய வேண்டும்.
11. குவாரியில் வேலை செய்யும் தொழிலாளர்களின் நலன் பேணப்படவேண்டும். குழந்தைத் தொழிலாளர்களை குவாரிப் பணியில் ஈடுபடுத்தக் கூடாது.

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12. திருச்சி இன் ட்டா நிலங்களுக்கு 7.5 மீ பாதுகாப்பு இடைவெளி விட வேண்டும்

13. E.B Line மற்றும் கிணற்றுக்கு 50 மீ பாதுகாப்பு இடைவெளி விட வேண்டும்

14. புல எண்களுக்கு அருகில் உள்ள குவாரிகளுக்கு போதிய பாதுகாப்பு தூரம் விட வேண்டும்.

15. கனிமம் எடுத்தச் செல்லும் வாகனங்களால் பொதுமக்களுக்கு எந்த ஒரு பாதிப்பும் இல்லாமல் தார்பாய் போட்டு மூடி எடுத்துச் செல்ல வேண்டும்.

மேற்படி புலத்தனிக்கையின்படியும், கிராம நிர்வாக அலுவலர் அறிக்கையின்படியும், நதிக்குடி வருவாய் கிராமத்தில் புல எண். 922/2 (0.97.00), 922/3 (0.97.00), 922/4 (0.98.00), மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர் பரப்பில் - 05 (ஐந்து) ஆண்டுகளுக்கு திரு.செனந்திராஜன் என்பவருக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் கோரி வழங்க பரிந்துரை செய்கிறேன் என்பதை பணிபுடன் தெரிவித்துக்கொள்கிறேன்.

வருவாய் வட்டாட்சியர்
லொம்பக்கோட்டை

(சு)



வெம்பக்கோட்டை மண்டலத்துணை வட்டாட்சியர் அறிக்கை பணிநிறுத்தப்படுகிறது.

வெம்பக்கோட்டை வட்டம், நதிக்குடி வருவாய் கிராமத்தில் புல எண். 922/2 (0.97.00), 922/3 (0.97.00), 922/4 (0.97.00), 922/4 (0.98.00), மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர் பரப்பில் - (5 (ஐந்து) ஆண்டுகளுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் கோரி திரு.சுப்பையா மகன் செளந்தரராஜன் என்பவர் மனு செய்தது தொடர்பாக ஆலங்குளம் வருவாய் ஆய்வாளர், கிராம நிர்வாக அலுவலர், குறுவட்ட நில அளவர் ஆகியோருடன் புலத்தணிக்கை செய்து எனது அறிக்கையினை கீழ்க்கண்டவாறு சமர்ப்பிக்கிறேன்.

மேற்படி புல எண்கள் நதிக்குடி கிராமக்கணக்கில் பட்டா எண்கள்.2248-ல் புல எண்கள்.922/2, 922/3, 922/4 விஸ்தீரணங்கள் முறையே 0.97.00, 0.97.00, 0.98.00 ஹெக்டேர் பரப்பில் செளந்தரராஜன் மனைவி விஜயா பெயரில் தாக்கலாகியுள்ளது.

மேற்படி புல எண்கள் மனுதாரரின் (செளந்தரராஜன்) மனைவி விஜயா என்பவருக்கு (5 கீழராஜகுலராமன் சார் பதிவக கிரைய ஆவண எண்கள் 947/1994, 976/1994 —ன்படி நிலத்தில் முழுமையாக பாத்தியம் உள்ளது என்பது தெரியவருகிறது.

குவாரி உரிமம் கோரும் புலஎண்ணின் நான்குமால் விபரம்

கிழக்கு

புலஎண். 922/6 - எஸ்.கே.கணேசன் நிலம்

புலஎண். 922/5 - அரசு புறம்போக்கு நீர்ப்பிடிப்பு

மேற்கு

புலஎண். 922/1 - மணிக்கண்ணன் நிலம்

வடக்கு

புலஎண்.915/3 - மனுதாரரான செளந்தரராஜன் என்பவருக்கு சொந்தமான செயல்படாத குவாரி

புல எண்.918/4சி2- மனுதாரரான செளந்தரராஜன் நிலம்

புல எண்.916/7பி - மனுதாரரான செளந்தரராஜன் நிலம்

தெற்கு

புலஎண்.922/5 - அரசு புறம்போக்கு நீர்ப்பிடிப்பு

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 300 மீட்டர் சுற்றளவில் குடியிருப்புகள் ஏதுமில்லை என்பதும்,

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 50 மீட்டர் சுற்றளவில் கோவில், மதத்தி நினைவுச்சின்னங்கள், உயர் மின்னழுத்த கம்பி பாதைகள் மற்றும் இடுகாடு ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரியவருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு 500 மீட்டர் சுற்றளவில் புரதானசின்ங்கள் மற்றும் பழமையான கல்வெட்டுகள் ஏதுமில்லை என்பதும்

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 50 மீட்டர் சுற்றளவில் இருப்பப்பாதை,சாலை ஏதுமில்லை என்பதும்

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மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 50 மீட்டர் சுற்றளவில் தெற்குப்பகுதியில் புல எண்935-ல் அரசு புறம்போக்கு பொதுப்பணித்துறையின் கட்டுப்பாட்டில் உள்ள செவல்குளம் கண்மாய் உள்ளது என்பதும் மற்றும் புல எண்.922/5-ல் அரசு புறம்போக்கு செவல்குளம் கண்மாய் நீர்ப்பிடிப்பு உள்ளது என்பதும் புலத்தணிக்கையில் தெரியவருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்குள் நீர்நிலைகள், நிலவியல் ஓடைகள் ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு நாளது தேதிவரை ஆட்சேபனை ஏதும் பொதுமக்களிடம் இருந்து வரப்பெறவில்லை.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திலிருந்து கனிமங்கள் கொண்டு வர புல எண்.922/6 மற்றும் 921/1-ல் பட்டாதாரர்களின் சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது என்பதும், மேற்படி பட்டாதாரர்களிடமிருந்து சம்மதக்கடிதம் மற்றும் சம்மத வாக்குமூலம் ஏதும் மனுதாரர் பெறவில்லை. மேலும் மேற்கண்ட புல எண்களின் வழியாக வந்து புல எண்.808/3-ல் உள்ள அரசு புறம்போக்கு ஓடை வழியாக சென்று மனுதாரரின் சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலம் கண்டிசன் ஜாரி நிலங்களோ தடை ஆணை நிலங்களோ ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்தில் ஏற்கனவே விருதுநகர் மாவட்ட ஆட்சியர் அவர்களின் நடவடிக்கைகள் ந.க.கே.வி1/10050/2017 தேதி 10.06.2019 காலம் 18.10.2019 முதல் 7.10.2024 வரை 5 (ஐந்து) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி செயல்பட்டு வருகிறது என்ற விபரத்தை தெரிவித்துக்கொள்கிறேன்.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு 500 மீட்டர் சுற்றளவில் வடக்குப்பகுதியில் மனுதாரருக்கு சொந்தமான செயல்படாத குவாரியும், ஜெயராமன் மகன் சாய்பிரித்தம் என்பவருக்குச் சொந்தமான செயல்படும் குவாரியும், மற்றுமொரு ஜெயராமன் மகன் சாய்பிரித்தம் என்பவருக்குச் சொந்தமான நிலத்தில் செயல்படாத குவாரியும், பெருமாள்சாமி மகன் ஜெயராமன் என்பவருக்கு சொந்தமான செயல்படாத குவாரியும், சங்கம நாயக்கர் மகன் இராதாகிருஷ்ணன் என்பவருக்கு சொந்தமான செயல்படும் குவாரியும், மேற்குப்பகுதியில் மணிக்கண்ணன் என்பவருக்கு சொந்தமான நிலத்தில் உள்ள செயல்படாத குவாரியும், கிழக்குப்பகுதியில் புன்செய் நிலங்களும், தெற்குப் பகுதியில் அரசு புறம்போக்கு நீர்ப்பிடிப்பு மற்றும் செவல்குளம் கண்மாய் உள்ளது என்பதும், புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மேற்படி உரிமம் கோரும் கூட்டுப்புலத்திற்கு அருகில் வன விலங்குகள் மற்றும் மான் சுரணாலயம் ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரியவருகிறது.

மேலும் மனுதாரரிடமிருந்து அரசுக்கு செலுத்த வேண்டிய வரி பாக்கி நிலுவை இனங்கள் ஏதுமில்லை என்பதையும்,

மேலும் மனுதாரர் கோரும் கூட்டுப்புலமானது வெம்பக்கோட்டை ஊராட்சி ஒன்றியத்தைச் சேர்ந்த பகுதிக்கு ஊராட்சிக்கு உட்பட்டது.

(Handwritten signature)



மேற்படி புலத்தனிக்கையின்படியும், கிராம நிர்வாக அலுவலர் அறிக்கையின்படியும், விருதுநகர் மாவட்டம், சிவகாசி வட்டம், மம்சாபுரம் கிராமத்தைச் சேர்ந்த திரு.சௌந்தரராஜன் த/பெ.சுப்பையா என்பவர் குவாரி உரிமம் வழங்க பரிந்துரை செய்கிறேன் என்பதை பணிவுடன் தெரிவித்துக்கொள்கிறேன்.


மண்டல துணைவட்டாபித்யா
வெம்பக்கோட்டை


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வெம்பக்கோட்டை வட்டாட்சியர் அவர்களுக்கு ஆலங்குளம் குறுவட்ட வருவாய் ஆய்வாளர் அறிக்கை பணிந்து அனுப்பப்படுகிறது:

வெம்பக்கோட்டை வட்டம் நதிக்குடி வருவாய் கிராமத்தில் புல எண்கள் 922/2 (0.97.00), 922/3 (0.97.00), 922/4 (0.98.00) ஆக மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர்ஸ் பரப்பில் 5 (ஐந்து) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் கோரி திரு. சுப்பையா மகன் செளந்தரராஜன் என்பவர் மனு செய்தது தொடர்பாக வெம்பக்கோட்டை வருவாய் வட்டாட்சியர் அலுவலக குறிப்பாணை எண்.ந.க.ஆ/3004/2024 தேதி 25.07.2024ன் படி ஆலங்குளம் குறுவட்ட வருவாய் ஆய்வாளராகிய எனது அறிக்கையாவது, மனுதாரர் உடைகல் மற்றும் கிராவல் குவாரி உரிமம் கோரும் புல எண்கள் நதிக்குடி கிராமக்கணக்கில் பட்டா எண்கள் 2248 ல் புல எண்கள் 922/2, 922/3, 922/4 விஸ்தீரணங்கள் முறையே 0.97.00, 0.97.00, 0.98.00 ஹெக்டேர்ஸ் பரப்பில் செளந்தரராஜன் மனைவி விஜயா பெயரில் தாக்கலாகியுள்ளது.

மேற்கண்ட புல எண்கள் மனுதாரரின் (செளந்தரராஜன்) மனைவி விஜயா என்பவருக்கு கீழராஜகுலராமன் சார் பதிவுக கிரைய ஆவண எண்கள் 947/1994, 978/1994 ன் படி நிலத்தில் முழு பாத்தியம் உள்ளது என்பது தெரிய வருகிறது.

குவாரி உரிமம் கோரும் கூட்டுப்புலம் மனுதாரரின் (செளந்தரராஜன்) மனைவி விஜயா பெயரில் உள்ளதால் குத்தகை உரிமம் ஆவணமாக பதிவு செய்யப்பட வேண்டும்.

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 300 மீட்டர் சுற்றளவில் குடியிருப்புகள் ஏதுமில்லை என்பதும்,

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 50 மீட்டர் சுற்றளவில் கோவில், மததி, நினைவுச் சின்னங்கள், உயரழுத்த மற்றும் தாழ்வழுத்த மின் பாதைகள் மற்றும் இடுகாடு ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு 500 மீட்டர் சுற்றளவில் புராதான சின்னங்கள் மற்றும் பழமையான கல்வெட்டுகள் ஏதுமில்லை என்பதும்,

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 50 மீட்டர் சுற்றளவில் இருப்புப் பாதை, சாலை, ஏதுமில்லை என்பதும்,



மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 50 மீட்டர் சுற்றளவில் தெற்குப்பகுதியில் புல எண்.935 ல் அரசு புறம்போக்கு பொதுப்பணித்துறையின் கட்டுப்பாட்டில் உள்ள செவல்குளம் கண்மாய் உள்ளது என்பதும் மற்றும் புல எண் 922/5 ல் அரசு புறம்போக்கு செவல்குளம் கண்மாய் நீர்ப்பிடி உள்ளது என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்குள் நீர்நிலைகள், நிலவியல் ஓடைகள் ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு நாளது தேதி வரை ஆட்சேபனை ஏதும் பொதுமக்களிடம் இருந்து வரப்பெறவில்லை.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திலிருந்து கனிமங்கள் கொண்டு வர புல எண் 922/6 மற்றும் 921/1 ல் பட்டாதாரர்களின் சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது என்பதும், மேற்படி பட்டாதாரர்களிடமிருந்து சம்மதக்கடிதம் மற்றும் சம்மத வாக்குமூலம் ஏதும் மனுதாரர் பெறவில்லை. மேலும் மேற்கண்ட புல எண்களின் வழியாக வந்து புல எண் 808/3 ல் உள்ள அரசு புறம்போக்கு ஓடை வழியாக சென்று மனுதாரரின் சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது.

மனுதாரர் உரிமம் கூட்டுப்புலம் கண்டிசன் ஜாரி நிலங்களோ தடை ஆணை நிலங்களோ ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்தில் ஏற்கனவே விருதுநகர் மாவட்ட ஆட்சியர் அவர்களின் நடவடிக்கைகள் ந.க.கேவி1/10050/2017 தேதி.10.06.2019 காலம்.18.10.2019 முதல் 17.10.2024 வரை 5(ஐந்து) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி செயல்பட்டு வருகிறது என்ற விபரத்தையும் தெரிவித்துக் கொள்கிறேன்

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு 500 மீட்டர் சுற்றளவில் வடக்குப் பகுதியில் மனுதாரருக்குச் சொந்தமான செயல்படாத குவாரியும், ஜெயராமன் மகன் சாய்பிரித்தம் என்பவருக்குச் சொந்தமான செயல்படும் குவாரியும், மற்றுமொரு ஜெயராமன் மகன் சாய்பிரித்தம் என்பவருக்குச் சொந்தமான நிலத்தில் உள்ள செயல்படாத குவாரியும், பெருமாள்சாமி மகன் ஜெயராமன் என்பவருக்குச் சொந்தமான செயல்படாத குவாரியும், சங்கம நாயக்கர் மகன் இராதாகிருஷ்ணன் என்பவருக்குச் சொந்தமான செயல்படும் குவாரியும், மேற்குப் பகுதியில் மணிக்கண்ணன் என்பவருக்குச் சொந்தமான

[Handwritten signature]

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நிலத்தில் உள்ள செயல்படாத குவாரியும், கிழக்குப் பகுதியில் புன்செய் நிலங்களும், தெற்குப் பகுதியில் அரசு புறம்போக்கு நீர்ப்பிடிப்பு மற்றும் செவல்குளம் கண்மாய் உள்ளது என்பதும், புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மேற்படி உரிமம் கோரும் கூட்டுப்புலத்திற்கு அருகில் வன விலங்குகள் மற்றும் மான் சரணாலயம் ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மனுதாரரிடமிருந்து அரசுக்கு செலுத்த வேண்டிய வரி பாக்கி நிலுவை இனங்கள் ஏதுமில்லை என்பதையும்,

மேலும் மனுதாரர் கோரும் கூட்டுப்புலமானது வெம்பக்கோட்டை ஊராட்சி ஒன்றியத்தைச் சேர்ந்த நதிக்குடி ஊராட்சிக்கு உட்பட்டது என்ற விபரத்தையும் பணிவுடன் தெரிவித்துக் கொள்கிறேன்.


REVENUE INSPECTOR 12/11/24
ALANGULAM FIRKA,
VEMBAKOTTAI-TALUKA
VIRUDHUNAGAR DIST





வெம்பக்கோட்டை வட்டாட்சியர் அவர்களுக்கு பணிந்து அனுப்பப்படுகிறது:

வெம்பக்கோட்டை வட்டம் நதிக்குடி வருவாய் கிராமத்தில் புல எண்கள் 922/2 (0.97.00), 922/3 (0.97.00), 922/4 (0.98.00) ஆக மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர்ஸ் பரப்பில் 5 (ஐந்து) வருடங்களுக்கு உடைகல் மற்றும் கிரர்வல் குவாரி குத்தகை உரிமம் கோரும் கூட்டுப்புலத்திற்கு நான்குமால் விபரம்,

கிழக்கு - புல எண் 922-6 - எஸ்.கே.கணேசன் நிலம்

922-5 - அரசு புறம்போக்கு நீர்ப்பிடி

மேற்கு - புல எண் 922-1 - மணிக்கண்ணன் நிலம்

வடக்கு - புல எண்கள் 915-3 - மனுதாரரான செளந்தரராஜன் என்பவருக்குச்

சொந்தமான செயல்படாத குவாரி

916-4C2 - மனுதாரரான செளந்தரராஜன் நிலம்

916-7B - மனுதாரரான செளந்தரராஜன் நிலம்

தெற்கு - புல எண் 922-5 - அரசு புறம்போக்கு நீர்ப்பிடி

மேற்கண்ட விபரத்தை பணிவுடன் தெரிவித்துக் கொள்கிறேன்.


REVENUE INSPECTOR
ALANGULAM FIRKA,
VEMBAKOTTAI-TALUKA
VIRUDHUNAGAR DIST





பணி நிறைவுப்பெற்றது:-

செயல்பாட்டுக்கான வட்டம், நடுத்தகம்

உருவாய் கிராமத்தில் 450 ஏக்கர்கள் : 922/2, 922/3, 922/4
கிராமிய பகுதிகள் : 0.97.00, 0.97.00, 0.098.00 சதுர மைல்கள்
கிராமிய பகுதி 2.92.00 ஏக்கர்கள் பகுதியில் 5 ஏக்கர்
உருவாய்க்கு உரியதில் பற்றாமை கிராமிய இவாதி கித்தனை
உருவாய் கிராமிய திட்ட. சம்பந்தமாக மகன் கிராமிய இவாதி கித்தனை
மகன் கிராமிய இவாதி கித்தனை.

உதற்காண்துல் மன்துதின் அழிப்தாடலில்

[illegible]

23/08/24
ஹி சார் ஆய்வாளர்
ஹெப்க்கோட்டை

[Signature]



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தனிமனிதன் தொண்டு தரும்
புதிய பாதையில் பயணிப்பதில் பட்டாபிரதீபம் கொண்டு
தீர்ப்பாக சிவந்த சிவந்த உத்தேசங்கள் என்ற உட்புத்தகம்
பணியை தீர்வுதரும் தொண்டு.

J. J. J.
Village Administrative Officer
Nathikudi Village
Pambakottai (T.K.)

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வெம்பக்கோட்டை வட்டாட்சியர் அவர்களுக்கு பணிந்து அனுப்பப்படுகிறது:

வெம்பக்கோட்டை வட்டம் நதிக்குடி வருவாய் கிராமத்தில் புல எண்கள் 922/2 (0.97.00), 922/3 (0.97.00), 922/4 (0.98.00) ஆக மொத்த விஸ்தீரணம் 2.92.0 ஹெக்டேர்ஸ் பரப்பில் 5 (ஐந்து) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் கோரி திரு. சுப்பையா மகன் செளந்தரராஜன் என்பவர் மனு செய்தது தொடர்பாக வெம்பக்கோட்டை வருவாய் வட்டாட்சியர் அலுவலக குறிப்பாணை எண்.ந.க.ஆ.1/2004/2024 தேதி 28.07.2024ன் படி நதிக்குடி கிராம நிர்வாக அலுவலராகிய எனது அறிக்கையாவது, மனுதாரர் உடைகல் மற்றும் கிராவல் குவாரி உரிமம் கோரும் புல எண்கள் நதிக்குடி கிராமக்கணக்கில் பட்டா எண்கள் 2248 ல் புல எண்கள் 922/2, 922/3, 922/4 விஸ்தீரணங்கள் முறையே 0.97.00, 0.97.00, 0.98.00 ஹெக்டேர்ஸ் பரப்பில் செளந்தரராஜன் மனைவி விஜயா பெயரில் தாக்கலாகியுள்ளது.

மேற்கண்ட புல எண்கள் மனுதாரரின் (செளந்தரராஜன்) மனைவி விஜயா என்பவருக்கு கீழராஜகுலராமன் சார் பதிவக கிரைய ஆவண எண்கள், 947/1994, 978/1994 ன் படி நிலத்தில் முழு பாத்தியம் உள்ளது என்பது தெரிய வருகிறது.

குவாரி உரிமம் கோரும் கூட்டுப்புலம் மனுதாரரின் (செளந்தரராஜன்) மனைவி விஜயா பெயரில் உள்ளதால் குத்தகை உரிமம் ஆவணமாக பதிவு செய்யப்பட வேண்டும்.

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 300 மீட்டர் சுற்றளவில் குடியிருப்புகள் ஏதுமில்லை என்பதும்,

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 50 மீட்டர் சுற்றளவில் கோவில், மததி, நினைவுச் சின்னங்கள், உயரமுத்த மற்றும் தாழ்வழுத்த மின் பாதைகள் மற்றும் இடுகாடு ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு 500 மீட்டர் சுற்றளவில் புராதான சின்னங்கள் மற்றும் பழமையான கல்வெட்டுகள் ஏதுமில்லை என்பதும்,

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 50 மீட்டர் சுற்றளவில் இருப்புப் பாதை, சாலை, ஏதுமில்லை என்பதும்,

மனுதாரர் கோரும் கூட்டுப்புலத்திற்கு 50 மீட்டர் சுற்றளவில் தெற்குப்பகுதியில் புல எண்.335 ல் அரசு புறம்போக்கு பொதுப்பணித்துறையின் கட்டுப்பாட்டில் உள்ள

(8)



(2)

செவல்குளம் கண்மாய் உள்ளது என்பதும் மற்றும் புல எண் 922/5 ல் அரசு புறம்போக்கு செவல்குளம் கண்மாய் நீர்ப்பிடி உள்ளது என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்குள் நீர்நிலைகள், நிலவியல் ஓடைகள் ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு நாளது தேதி வரை ஆட்சேபனை ஏதும் பொதுமக்களிடம் இருந்து வரப்பெறவில்லை.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திலிருந்து கனிமங்கள் கொண்டு வர புல எண் 922/6 மற்றும் 921/1 ல் பட்டாதாரர்களின் சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது என்பதும், மேற்படி பட்டாதாரர்களிடமிருந்து சம்மதக்கடிதம் மற்றும் சம்மத வாக்குமூலம் ஏதும் மனுதாரர் பெறவில்லை. மேலும் மேற்கண்ட புல எண்களின் வழியாக வந்து புல எண் 808/3 ல் உள்ள அரசு புறம்போக்கு ஓடை வழியாக சென்று மனுதாரரின் சொந்த நிலத்தின் வழியாக பாதை வசதி உள்ளது.

மனுதாரர் உரிமம் கூட்டுப்புலம் கண்டிசன் ஜாரி நிலங்களோ தடை ஆணை நிலங்களோ ஏதுமில்லை என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்தில் ஏற்கனவே விருதுநகர் மாவட்ட ஆட்சியர் அவர்களின் நடவடிக்கைகள் ந.க.கேவி1/10050/2017 தேதி.10.06.2019 காலம்.18.10.2019 முதல் 17.10.2024 வரை 5(ஐந்து) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி செயல்பட்டு வருகிறது என்ற விபரத்தையும் தெரிவித்துக் கொள்கிறேன்

மேலும் மனுதாரர் உரிமம் கோரும் கூட்டுப்புலத்திற்கு 500 மீட்டர் சுற்றளவில் வடக்குப் பகுதியில் மனுதாரருக்குச் சொந்தமான செயல்படாத குவாரியும், ஜெயராமன் மகன் சாய்பிரித்தம் என்பவருக்குச் சொந்தமான செயல்படும் குவாரியும், மற்றுமொரு ஜெயராமன் மகன் சாய்பிரித்தம் என்பவருக்குச் சொந்தமான நிலத்தில் உள்ள செயல்படாத குவாரியும், பெருமாள்சாமி மகன் ஜெயராமன் என்பவருக்குச் சொந்தமான செயல்படாத குவாரியும், சங்கம நாயக்கர் மகன் இராதாகிருஷ்ணன் என்பவருக்குச் சொந்தமான செயல்படும் குவாரியும், மேற்குப் பகுதியில் மணிக்கண்ணன் என்பவருக்குச் சொந்தமான நிலத்தில் உள்ள செயல்படாத குவாரியும், கிழக்குப் பகுதியில் புன்செய்

... 3 ...

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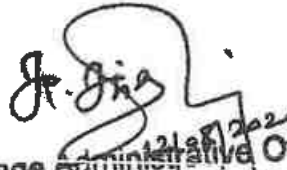
3

நிலங்களும், தெற்குப் பகுதியில் அரசு புறம்போக்கு நீர்ப்பிடிப்பு மற்றும் செவல்குளம் கண்மாய் உள்ளது என்பதும், புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மேற்படி உரிமம் கோரும் கூட்டுப்புலத்திற்கு அருகில் வன விலங்குகள் மற்றும் மான் சரணாலயம் எதுமில்லை என்பதும் புலத்தணிக்கையில் தெரிய வருகிறது.

மேலும் மனுதாரரிடமிருந்து அரசுக்கு செலுத்த வேண்டிய வரி பாக்கி நிலுவை இனங்கள் ஏதுமில்லை என்பதையும்,

மேலும் மனுதாரர் கோரும் கூட்டுப்புலமானது வெம்பக்கோட்டை ஊராட்சி ஒன்றியத்தைச் சேர்ந்த நதிக்குடி ஊராட்சிக்கு உட்பட்டது என்ற விபரத்தையும் பணிவுடன் தெரிவித்துக் கொள்கிறேன்.


Village Administrative Officer
Nathikudi-Kongankulam Village
Vembakottai Taluk



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வெம்பக்கோட்டை வட்டாட்சியர் அவர்களுக்கு பணிந்து அனுப்பப்படுகிறது:

வெம்பக்கோட்டை வட்டம் நதிக்குடி வருவாய் கிராமத்தில் புல எண்கள் 922/2 (0.97.00), 922/3 (0.97.00), 922/4 (0.98.00) ஆக மொத்த விஸ்தீரணம் 2.92.0

ஹெக்டேர்ஸ் பரப்பில் 5 (ஐந்து) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் கோரும் கூட்டுப்புலத்திற்கு நான்குமால் விபரம்,

கிழக்கு - புல எண் 922-6 - எஸ்.கே.கணேசன் நிலம்

922-5 - அரசு புறம்போக்கு நீர்ப்பிடி

மேற்கு - புல எண் 922-1 - மணிக்கண்ணன் நிலம்

வடக்கு - புல எண்கள் 915-3 - மனுதாரரான செளந்தரராஜன் என்பவருக்குச்

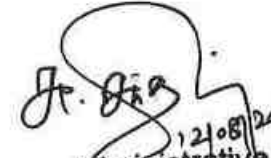
சொந்தமான செயல்படாத குவாரி

916-4C2 - மனுதாரரான செளந்தரராஜன் நிலம்

916-7B - மனுதாரரான செளந்தரராஜன் நிலம்

தெற்கு - புல எண் 922-5 - அரசு புறம்போக்கு நீர்ப்பிடி

மேற்கண்ட விபரத்தை பணிவுடன் தெரிவித்துக் கொள்கிறேன்.


12/08/2024
Village Administrative Officer
Nathikudi-Kongankulam Village
Vembakottai Taluk



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செய்து கொள்ளும் விண்ணப்பம் குறித்து

இருக்கிற சிப்துபபு அமைச்சர்
 408 அண்ணா - 928/1 - பணித்திட்டங்கள் தீர்மானம்
 எண்பவர் 928/5 - அமைச்சர்
 408 அண்ணா - 916/4B, 7B
 916/5 - - அமைச்சர் - கரு.

4வ் எண் - 922/1 - மணிநீர்நீரணை திட்டம்
4வ் எண்ணின் - 922/6 - என். டி. கலெக்டர் திட்டம்
922/5 - அருள். புதுமலைக்கு செல்லுதல் திட்டத்திற்கு மேற்கிலும்,

கிராம நிர்வாக அதிகாரி

② 15 H 1300 50 00 20
90 00 00 00 00
100 00 00 00 00

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- ② S. S. S. S. S.
- ③ Mr. S. S. S.
- ④ K. S. S. S.
- ⑤ M. S. S. S.
- ⑥ K. S. S. S.
- ⑦ R. S. S. S.
- ⑧ S. S. S. S.

பெருங்குடி கிராமம் கிராமம் 150 நாள் தேதி உறுதி
செய்துள்ள ஏதும் உறுதிப்படுத்துவது

J. S. S. S.
Village Administrative Officer
Nathikudi-Kongankulam Village
Vembakottai Taluk

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தமிழ்நாடு தமிழ்நாடு TAMILNADU

11/11/2024

சு. செமத் குமாரன்
மம்சபுரம்

EN 906084

ச. சந்திரசேகரன்

சு. சந்திரசேகரன்
மம்சபுரம்
LMA 1822/0/9

AGREEMENT

This Agreement made on the day of Licence to be granted Mr. S. SOUNDARARAJAN S/O SUBBAIYA Door No :2/115 A2 Main Road Mamsapuram,sivakasi (west) ,Sivakasi (taluk) , Virudhunagar (Dist) Tamilnadu (herein after called the owner of quarry) and Licensee Mr. G. Vikramathith poopathi S/O . Gunasekaran , M/S NEW PRINCE EXPLOSIVES 7/72, MIDDLE , STREET, Elayirampennai (Post) VEMBAKOTTAI (TALUK) VIRUDHUNAGAR (DISTRICT) Licence No E/SC/TN/22/817 (E149583) from 22 (Herein after called as Dealer of Explosives)

For New Prince Explosives


Partner





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Where as the owner of the quarry having Licence to be granted for survey No.922/2, (0.97.0), 922/3 (0.97.0), 922/4 (0.98.0) Total Hectares (2.92.0) the survey number are within Village, **NATHIKUDI** village Vembakottai (Taluk) Virudhunagar (District) KV1/767/2024 Date:25-10-2024.

And where as the dealer of Explosives have agree to carry our the blasting operation in skillful scientific shot firer till the valid date

Where as the party of the second part has decided to entrust the work of conduction blasting operation in his/her quarry work to the party of the first part on contract basic as per mutually agreed terms and condition.

Where as the part of the first part is responsible or blasting operation and also making his own agreement for the explosives and exploding machines/equipments required for the work. The entire blasting in the above quarry and the possesment of blasting equipments will be handle by the party of the first part having valid Licence and short firer permit under the explosives Rules, 2008 issued by the Department of Explosives and hereby undertake the responsibility for the work entrusted.

Where as payments will be made periodically by the party of the second part for the Explosives used and hours and time of the exploding equipments put into use calculations will be made and elements will be arrived at on the completion of blasting operations.

For New Prince Explosives


Partner





अनुज्ञापि प्रारूप फॉर्म ई-3 | LICENCE FORM E-3

(विस्फोटक नियम, 2008 की अनुसूची 4 के भाग 4 के अनुच्छेद 3(क) से (घ) देखिए);
(See article 3(a) to (d) of Part 4 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 मेशजीन में वर्ग 6 के विस्फोटक
Licence to possess (1) for use explosives of class 1, 2, 3, 4, 5, 6 or 7 in a magazine

अनुज्ञापि सं. (Licence No.): E/SC/TN/22/817(E149583)

वार्षिक फीस रुपये (Annual Fee Rs): 7400/-

Licence is hereby granted to

M/s. New Prince Explosives (अधिभोगी / Occupier: G. Vikramathithabospathy), 771, Middle Street, Elayirampennai P.O.
Town Village - Velurakottai TK, District-VIRUDHUNAGAR, State-Tamil Nadu, Pincode - 626201



को अनुज्ञापि अनुदत्त की जाती है।

2. अनुज्ञापिधारी की प्रारूपिता Status of licensee: Partnership Firm

अनुज्ञापि निम्नलिखित प्रयोजनों के लिए विधिमार्ग है।

Licence is valid only for the following purpose.

अनुज्ञापि विस्फोटकों के निम्नलिखित किस्मों, प्रकार और मात्रा के लिए विधिमार्ग है।

Licence is valid for the following kinds and quantity of explosives: - (क) (a)

possess for use of Nitrate mixture - Slurry and Emulsion Explosives, Safety Fuse,
Detonating Fuse, Electric and/or Ordinary Detonators, के उपयोग के लिए

क्र. सं. 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 - Slurry and Emulsion Explosives	2.8	0	2500 Kg.
2.	Safety Fuse	6.1	0	5490 Mtrs.
3.	Detonating Fuse	6.2	0	15000 Mtrs.
4.	Electric and/or Ordinary Detonators	6.3	0	44000 Nos.

(ख) किसी एक कैलेंडर भास में खरीदी जाने वाले विस्फोटक की मात्रा (अनुच्छेद 3(ख) और (ग) के अधीन अनुज्ञापि के लिए)

(b) Quantity of explosives to be purchased in a calendar month (applicable for licence under article 3(b) and (c)):

3 times
no above.

3. निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञापि परिसर की पुष्टि होती है।

The licensed premises shall conform to the following drawings:-

रेखाचित्र क्र. (Drawing No.): E/SC/TN/22/817(E149583)
दिनांक (Date): 08/11/2023

अनुज्ञापि परिसर निम्नलिखित पते पर स्थित हैं। The licensed premises are situated at following address:

Survey No. 1759/2 (MAG 3), ग्राम (Town/Village): DURMANABETI RAM (VILL), SIVAKASI (TK)

जिला (District): VIRUDHUNAGAR राज्य (State): Tamil Nadu

दूरभाष (Phone): ई मेल (E-Mail):

पिनकोड (Pincode): 626124

फैक्स (Fax):

अनुज्ञापि परिसर में निम्नलिखित सुविधाएं अंतर्भूत हैं।

The licensed premises consist of following facilities:

MAIN MAGAZINE ROOM, LOBBY, DETONATOR ROOM

4. अनुज्ञापि समय - समय पर गद्यासंशोधित विस्फोटक अधिनियम, 1884 और उनके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधों, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपायबद्धों 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, 2004 framed there under and the conditions, additional conditions and the following Annexures:

1. उपर्युक्त क्रम सं. 5 में दिया कथित रेखाचित्र, स्थान, सन्निरमाण संबंधी और अन्य विवरण दर्शित करते हुए।

Drawings showing site, constructional and other details as stated in serial No. 5 above.

2. अनुज्ञापि प्राधिकारी द्वारा हस्ताक्षरित इस अनुज्ञापि की शर्तों और अतिरिक्त शर्तों।

Conditions and Additional Conditions of this licence signed by the licensing authority.

3. दूरी प्रारूप DE-2 Distance Form DE-2

यह अनुज्ञापि तारीख 31 मार्च 2026 तक विधिमार्ग रहेगी। This licence shall remain valid till 31st day of March 2026.

यह अनुज्ञापि, अधिनियम या उसके अधीन विरचित नियमों या अनुसूची 4 के भाग 4 के प्रति निर्दिष्ट सेट VII के अधीन तथा उपबंधित इस अनुज्ञापि को शर्तों का अधिकरण करने या यदि अनुज्ञापि परिसर योजना या उससे संलग्न उपबंध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निरस्त या प्रतिबंधित की जा सकती है, जहां कोई ताम्र 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 Annexures attached hereto.

तारीख The Date: 08/11/2023

संयुक्त मुख्य विस्फोटक नियंत्रक; Joint Chief Controller of Explosives
South Circle, Chennai

नवीनीकरण के पृष्ठांकन के लिए स्थान
Space for Endorsement of Renewal

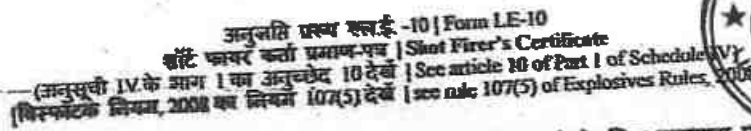
नवीकरण की तारीख
Date of Renewal

समाप्ति की तारीख
Date of Expiry

अनुज्ञापन प्राधिकारी के हस्ताक्षर और स्टाम्प
Signature of licensing authority and stamp

कानूनी चेतावनी: विस्फोटकों को गलत ढंग से दलाने या उनका दुरुपयोग विधि के अधीन गंभीर दंडित 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.



(खान अधिनियम, 1951 के अधीन न आने वाले क्षेत्र में विस्फोट करने के लिए सक्षमता प्रमाणपत्र) (MMD)

(Certificate of competency to carry out blasting of explosives in area not coming under the Mines Act, 1951)



मानित किया जाता है कि श्री P. Prince Nisul Dass,
 जन्म 16/04/1976 को हुआ था, जो 7/182 Middle St, Elayirampennai, VIRUDHUNAGAR, Tamil Nadu - 626201 के निवासी है
 और उसके अधीन विरचित नियमों के उपबंधों के
 अधीन रहते हुए ब्लास्टिंग ऑपरेशन्स को प्रारंभ करने के लिए अधिकृत है।
 [This is to certify that Shri P. Prince Nisul Dass,
 born on 16/04/1976, resident of 7/182 Middle St, Elayirampennai, VIRUDHUNAGAR, Tamil Nadu - 626201 passed the shotfirer's examination held on conducted by Sivakasi
 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.]

विस्फोटक के प्राधिकृत वर्ग, प्रवर्ग और प्रकार :
वर्ग (क), श्रेणी: असोमित, सभी प्रकार का ब्लास्टरिंग

Authorised class, category and type of blasting :
Class : (A), Category: Unlimited, All types of blasting

विद्यमान 107 का उप-नियम (5) का स्पष्टीकरण देखें | See explanation of sub-rule (5) of rule 107]

यह प्रमाणपत्र 31/03/2011 (जारी करने की तारीख से पांच वर्ष) तक विद्यमान रहेगा।
This certificate shall remain valid till 31/03/2011 (five years from the date of issue)

This certificate shall remain valid for the period of one year from the date of issue. If the applicant is found to be in violation of 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, this certificate shall remain valid for the period of one year from the date of issue.

उप मुख्या विस्फोटक नियंत्रक | Dr. Chd. Controller of Explosiv
सिवाकाशी | Sivaki

स्थान | Place : सिवकासी | Sivakasi
दिनांक | Date : 11/12/2006

पुनर्विधिवान्वयकरण के लिए पृष्ठांकन
Enrolment for revalidation

पुनर्विधिवानुमोदन की तारीख Date of Revalidation	समाप्ति की तिथि Date of Expiry	अनुमति प्राप्तिपत्री के हस्ताक्षर Signature of Licensing authority
23/11/2020	31/03/2025	Jt. Chief Controller of Explosives, South Circle, Chennai

कानूनी चेतावनी : विस्फोटकों को गलत ढंग से चलाने या उनका दुरुपयोग कानून के अर्थोपभोग अधिकार का गंभीर अपराध होता है।
Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law. Application of this document does not require signature. Applicant's signature is not required.

Note :- This is system generated document does not require signature. Applicant may take printout for their records.

[Signature]

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अनुज्ञप्ति प्रारूप एचई-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 : सड़क वैन में विस्फोटकों के परिवहन के लिए
Licence to : transport explosives in a road van



अनुज्ञप्ति संख्या / Licence No. : E/SC/TN/25/1370(E110077)
वार्षिक फीस रकम / Annual Fee Rs : 2500/-

1. अनुज्ञप्ति एतद्वारा जारी की जाती है

Licence is hereby granted to : J. Prince Nimal Doss (Occupier : J.Prince Nimal Doss)
7/71, Middle Street, Elayirampallam, Sattur (Tk).
District-VIRUDHUNAGAR, State-Tamil Nadu, Pincode-626201

2. अनुज्ञप्तिधारी की प्रकृति / Status of licensee : Individual

3. सड़क वैन की विविधियाँ / Particulars of the road van:

पंजीकरण संख्या / Registration No.	TN-67/BF-4312
यान का मेक एवं मॉडल / Make and model of vehicle	Mahindra and Mahindra Ltd
सड़क सहित वजन / Unladen weight	1860 Kg(s)
सड़क सहित अधिकतम वजन / Maximum laden weight	2960 Kg(s)
परिवहन के लिए अनुज्ञेय विस्फोटकों की अधिकतम मात्रा Maximum quantity of explosives permitted for transport	1100 Kg(s)
इंजिन संख्या / Engine No.	TBHF1K51351
चैसिस संख्या / Chassis No.	MA1ZR2TBKH1K79250
अन्य फिटिंग्स का विवरण / Description of Other Findings	As per approved plan attached
वाहन के लिए अनुमत विस्फोटकों की मात्रा / Quantity of Explosives permitted to carry	1100 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/25/1370(E110077) दिनांक / dated : 30/07/2018

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 यथासंशोधित 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 2023 तक विधिवान्य रहेगी / This licence shall remain valid till 31st day of March 2023

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 उपापद्धतों में दर्शाए गए विवरण के अनुरूप नहीं पाए जाने पर निलम्बित या प्रतिसंहत 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: 30/07/2018

संयुक्त मुख्य विस्फोटक नियंत्रक / Joint Chief Controller of Explosives
दक्षिण वृत्त, चेन्नई / South Circle, Chennai

अनुज्ञप्ति के नवीनीकरण हेतु पूर्वांकन / Endorsement for renewal of licence:

नवीनीकरण की तिथि
Date of Renewal

21/02/2023

वैधता समाप्ति की तिथि
Date of Expiry

31/03/2028

अनुज्ञापन प्राधिकारी के हस्ताक्षर
Signature of Licensing authority

J. Chief Controller of Explosives, South Circle, Chennai

वैधानिक चेतावनी : विस्फोटकों का सार्वजनिक से प्रयोग या दुरुपयोग, विधि के अधीन गंभीर दण्डित अपराध होगा।
Statutory Warning : Mis-handling 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.

19/

Digitally signed by AMIN NANDI
Reason: Licence No. E/SC/TN/25/1370
Location: Chennai [E110077]



புவியியல் மற்றும் சுரங்கத்துறை, விருதுநகர்
TN-VNR-32

இசைவாணைச்சீட்டு எண்: 89571

நாள்: 06/05/2024

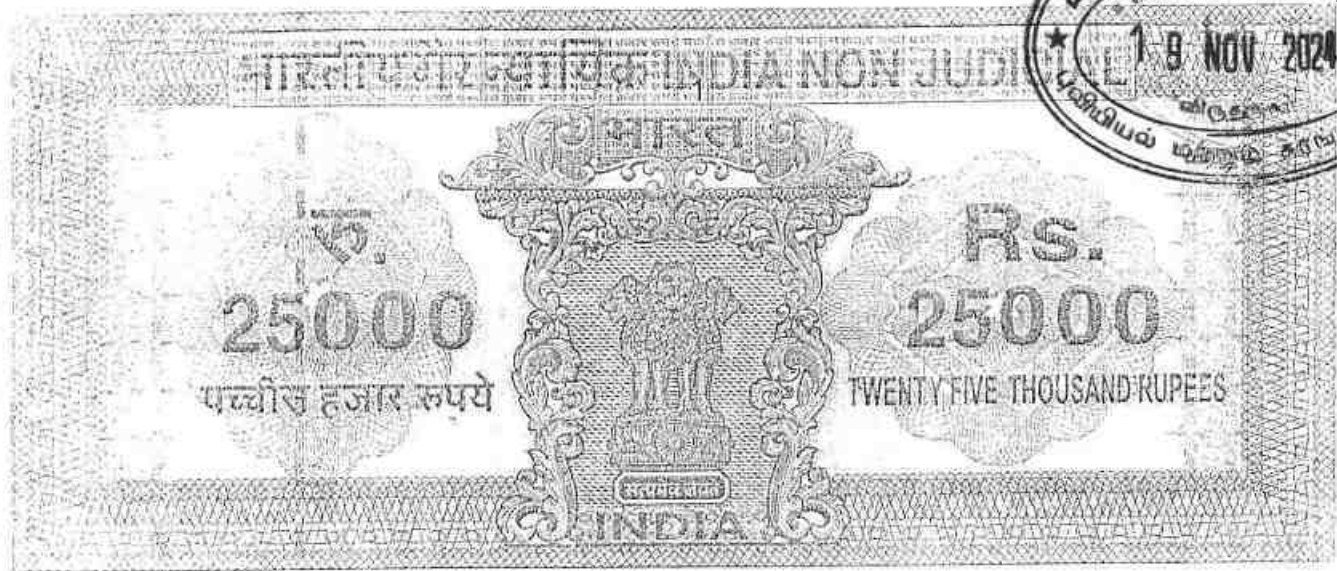
சிறுவகை கனிமங்களை குவாரியிலிருந்து எடுத்துச்செல்வதற்கான இசைவாணைச்சீட்டு
(விதி எண்: 36-ஆ கான்க)

1. சுரங்க குத்தகைதாரர் / அனுமதி பெற்றவர் பெயர் மற்றும் முகவரி			சு.சௌந்தராஜன் 2/10, வடக்குத்தெரு, டி.மம்சாபுரம் அஞ்சல் சிவகாசி வட்டம், விருதுநகர் மாவட்டம்																						
2. குவாரி குத்தகை வழங்கப்பட்ட அடிசை / செயல்முறை ஆணை எண் மற்றும் நாள்			10050/கே.வி1/2017, நாள்: 10.06.2019																						
3. குத்தகை அனுமதி செல்லுபடியாகும் காலம்			18/10/2019 முதல் 17/10/2024 முடிய																						
4. சுரங்கம் அமைந்துள்ள இடம் பற்றிய தகவல்கள்																									
மாவட்டம்	வட்டம்	கிராமம்	புல எண்	மரப்பு	நில வகை																				
விருதுநகர்	வெப்பக்கோட்டை	நதிக்குடி	922/4, 922/2, 922/3	2.92.0	மட்டா																				
					கனிமம்																				
					உடைகல் மற்றும் கிராவல்																				
5. சுரங்க திட்டத்தின் வரைபடத்தில் சுற்றுச்சூழல் இசைவு / அனுமதி பெற்ற கனிம அளவு			உடைகல் : 197050 க.மீ. (மீதி:154363 க.மீ.) கிராவல் : 72450 க.மீ. (மீதி:34578.25 க.மீ.)																						
(அ) சுரங்கத்திலிருந்து எடுத்துச்செல்ல அனுமதி கோரும் கனிமத்தின் பெயரும் மற்றும் அளவும்			20 லாரி 170 க.மீ. உடைகல் 25 டிராக்டர் 106.25 க.மீ. உடைகல் 25 லாரி 212.5 க.மீ. கிராவல் 5 டிராக்டர் 21.25 க.மீ. கிராவல்																						
(ஆ) சுரங்கத்திலிருந்து எடுத்துச்செல்லும் கனிமத்திற்கு செலுத்தவேண்டிய உரிம வரி மற்றும் பிறவரிகள் செலுத்திய தகவல்கள் (அளவு செலுத்திய தொகை மற்றும் செலுத்திய நாள் முதலியவற்றுடன்)			<table border="1"> <thead> <tr> <th></th> <th>கனிமத் தொகை</th> <th>மாகஅ.</th> <th>பகமம்</th> </tr> </thead> <tbody> <tr> <td>முன் இருப்புத் தொகை</td> <td>: ரூ. 1</td> <td>8</td> <td>3</td> </tr> <tr> <td>செலுத்திய தொகை</td> <td>: ரூ. 37965</td> <td>3800</td> <td>3797</td> </tr> <tr> <td>தற்போது மீதி இருப்பு</td> <td>: ரூ. 37965</td> <td>3797</td> <td>3797</td> </tr> <tr> <td></td> <td>: ரூ. 1</td> <td>11</td> <td>3</td> </tr> </tbody> </table>				கனிமத் தொகை	மாகஅ.	பகமம்	முன் இருப்புத் தொகை	: ரூ. 1	8	3	செலுத்திய தொகை	: ரூ. 37965	3800	3797	தற்போது மீதி இருப்பு	: ரூ. 37965	3797	3797		: ரூ. 1	11	3
	கனிமத் தொகை	மாகஅ.	பகமம்																						
முன் இருப்புத் தொகை	: ரூ. 1	8	3																						
செலுத்திய தொகை	: ரூ. 37965	3800	3797																						
தற்போது மீதி இருப்பு	: ரூ. 37965	3797	3797																						
	: ரூ. 1	11	3																						
			ரூ. 37965/- (SBI, விருதுநகர், நாள்: 06/05/2024)																						
6. செலுத்திய மாகஅ. தொகை(10%) செலுத்திய பகமம் நிதி தொகை(10%)			ரூ. 3800/- (SBI, விருதுநகர், நாள்: 06/05/2024) ரூ. 3797/- (SBI, விருதுநகர், நாள்: 06/05/2024)																						
7. வழங்கப்பட்ட நடைச்சீட்டுகளின் எண்ணிக்கை			மொத்தம் 75																						
8. நடைச்சீட்டுகளின் வரிசை எண்			10451 முதல் 10525 முடிய																						
9. இசைவாணைச்சீட்டின் செயல்திறன் காலம்			06/05/2024 முதல் 10/05/2024 முடிய																						
10. ஆய்வு செய்த அலுவலரின் பதவி மற்றும் ஆய்வுநாள்			-----																						
11. ஹோலோகிராம் வரிசை எண்			135979839 முதல் 135979913 முடிய																						



அலுவலக முத்திரை மற்றும் நாள்

For துணை இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
விருதுநகர்.



தமிழ்நாடு அனுமதி TAMILNADU

கட்டிடம் : 25000

வாங்க : 201905

தேதி : 24/7/2019

ச. சௌந்தராஜன்
மெசுகடம்

ச. சந்திரசேகரன்

சென்னை மாநகராட்சி நிர்வாகம்
பி.பி. 1922/0/20

C 958899

APPENDIX V

[See Rules 19A and 33]

FORM OF JOINT AGREEMENT FOR QUARRYING AND CARRYING AWAY MINOR MINERALS BY LESSEE IN RYOTWARI LANDS IN WHICH THE MINERALS BELONG TO THE GOVERNMENT.

Collector's Proceedings No. KV1/10050/2017, Dated: 10.06.2019

THIS AGREEMENT MADE THE 18 day of October 2019 between
Tmt S.Vijaya, W/o Soundrarajan residing at No.2/10, North Street,
D.Mamsapuram, Sivakasi Taluk, Virudhunagar District (hereinafter referred to
as "the registered holders" which expression shall where the context so admits
include his heirs, executors, administrators, legal representatives and assigns)
of the FIRST PART and Thiru S. Soundrarajan, S/o. Subbiah residing at

S. Vijaya

REGISTERED HOLDER

S. Soundrarajan

LESSEE

S. Subbiah

LESSOR

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Registering Officer.



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S. Soundrarajan

சென்னை இயக்குகை அலுவலகம்
19 NOV 2021
பதிவு செய்யும் மற்றும் சுரங்கத்துறை



தமிழ்நாடு தமில்நாடு TAMILNADU

அளவு : 25000

பாதி : 2021

திகதி : 24.7.2019

சென்னை இயக்குகை அலுவலகம்

சென்னை

C 958900

S. சந்திரசேகரன்

சென்னை இயக்குகை அலுவலகம்
சென்னை தமிழ்நாடு
பதிவு 1922/D/30

2/10, North Street, D.Mamsapuram, Sivakasi Taluk, Virudhunagar (hereinafter referred to as "the lessee" which expression shall where the context so admits include his heirs, executors, administrators, legal representatives and assigns) of the SECOND PART and the Governor of Tamil Nadu represented by the District Collector, Virudhunagar (hereinafter referred to as the Government which expression shall where the context so admits shall include his successors in office and assigns) of the THIRD PART.

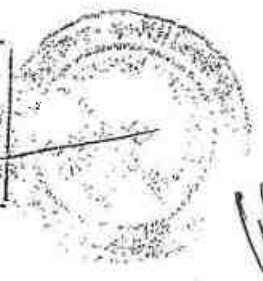
WHEREAS, the registered holder holds the lands described in the schedule hereto and intended to lease out to the lessee of the said lands for the purpose of quarrying Roughstone, Gravel and Jelly in the said lands and to deposit mining waste in the said lands and has lodged with the Collector the lease and accurate map or sketch of the said lands.

S. vijaya
REGISTERED HOLDER

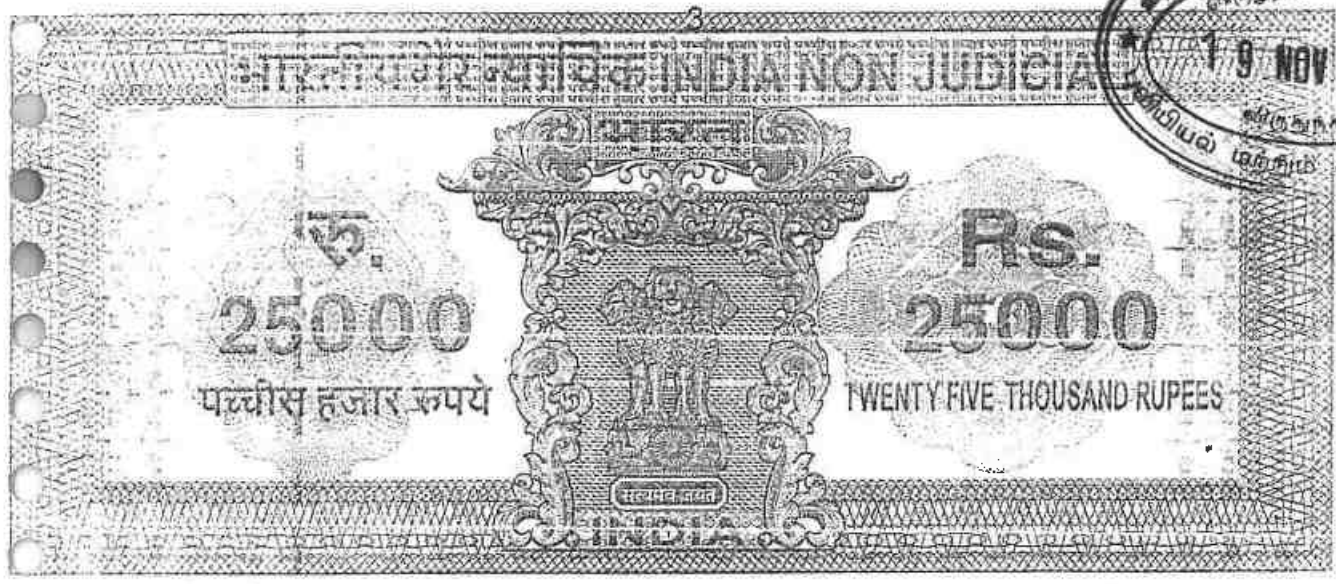
LESSEE

LESSOR

Document No. 349 of 2019 of Book
Contains 24 Sheets 2 Sheet
Registering Officer.



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தமிழ்நாடு தமில்நாடு TAMILNADU

மதிப்பு : 25000
பேரகர : 20127
திகதி : 24-7-2019

ச. விஜயா
மென்சாவு

C 958901
ச. சந்திரசேகரன்
முதலமைச்சர் அலுவலகம்
தமிழ்நாடு
பி.எம். 1922/0/20

AND WHEREAS, the lessee to tenant of 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, Gravel and Jelly in the said lands and to deposit mining waste in the said lands and has lodged with the Collector an accurate map or sketch of said lands;

AND WHEREAS, the Collector, acting for and on behalf of the Government has granted a quarrying lease to the lessee or tenant of the registered holder and allowed him to commence quarrying operations for Roughstone, Gravel and Jelly in the said lands and to deposit mining waste thereon by the lessee or tenant of the registered holder.

AND WHEREAS, the Collector is prepared to allow the said registered holder or lessee to commence mining operations and to deposit mining waste

S. Vijaya
REGISTERED HOLDER

LESSEE

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Registering Officer

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தமிழ்நாடு தமிழ்நாடு TAMILNADU

20000
 22128
 24.7.2019

S-செயற்கை மரணம்
மம் சாத்திரம்

C 958902
5. சந்திரசேகரன்
முதலியவர்கள் விடுதலைப் புலிகள்
சேனாபதி தமிழ்நாடு
பி.எ. 1022 / D / 30

inor on the said lands described in the schedule for a term of **Five Years** beginning on 18 day of *October* 2019 and expired on 17 day of *October* 2024 upon the registered holder and the lessee entering into the agreement here in contained.

AND WHEREAS, the registered holder has deposited with the Collector, the sum of Rs.10000/- as security in the form of Challan No: NIL dated 17.06.2019 (State Bank of India, Sivakasi) for the due performance of the covenants, agreements and provisos or damage which may be incurred by the Government by reason of any of the said lands described in the schedule hereto being rendered unfit for cultivation by the mining operations therein or by the deposit of mining waste thereon by either the registered holder or the lessee.

S. Vijaya
REGISTERED HOLDER

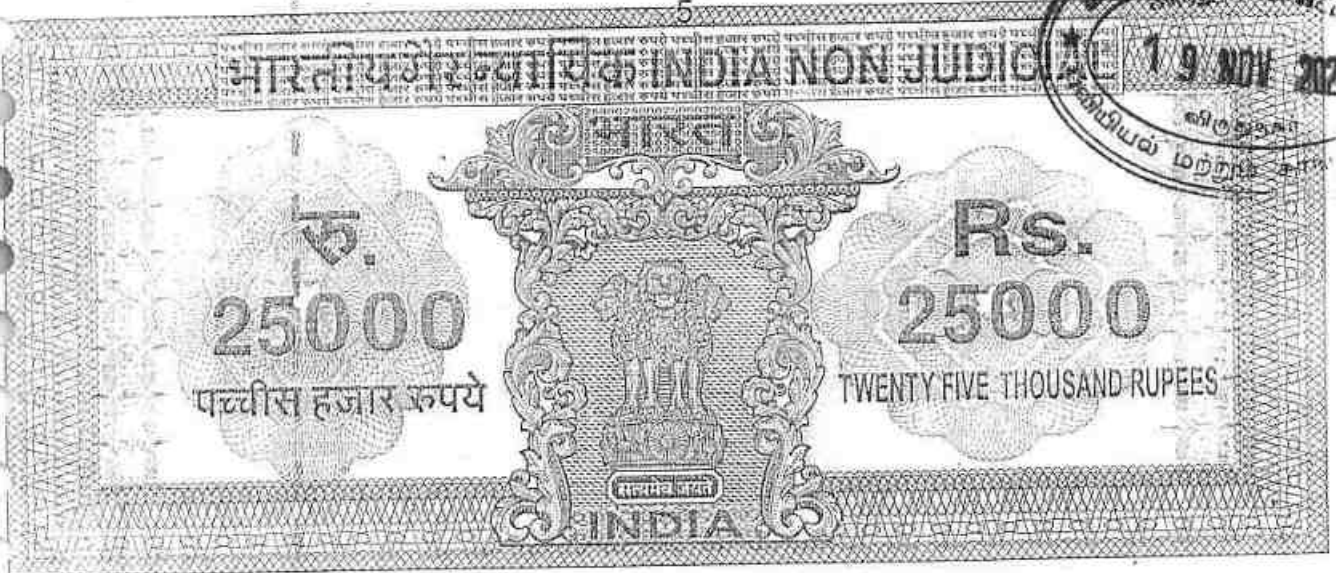

LESSEE


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தமிழ்நாடு தமில்நாடு TAMILNADU

அளவு : 25000
மதிப்பு : 22/29
தேதி : 24.7.2019

சென்னை நகராட்சி
மேயர் அலுவலகம்

C 958903
S. சந்திரசேகரன்
முதல் முத்தையார் தொழிலாளர்
சங்கம் தமிழ்நாடு
LMA 1922 / O / 50

AND WHEREAS, the lessee has at the request of the registered holder and in consideration of such approval by the Collector of the mining operations as herein before recited agreed to join in these presents for the purpose of entering into covenants, agreements and provisos hereinafter contained as surety for the registered holder.

NOW THESE PRESENTS WITNESS and registered holder and the lessee do hereby jointly and severally and each of them doth individually hereby covenant and agree with the Government as follows: -

- 1) To carry on mining operations during the said term in a proper and workman like manner and to deposit mining waste on the lands described in the schedule hereto and to answer and to account at all reasonable times to Government for all acts and defaults committed by any servants, agents or workmen employed by the registered

S. Vijaya
REGISTERED HOLDER

LESSEE

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தமிழ்நாடு तमिलनाडु TAMILNADU

தமிழ்நாடு : 19/11/2019
 மதிப்பு : 15000
 காலம் : 24/7/2019

ச. விஜயகுமாரன்
 மட்டு சபாநாயகர்

B 166490
 ச. சந்திரசேகரன்
 மதுரை மதுரை மதுரை
 சிவகாசி தமிழ்நாடு
 L.No. 1922 / D / 80

holder or lessee in carrying on such operations or in making such deposits.

- 2) The land assessment for the time being payable in respect of the said lands seigniorage on the minerals mined at the rates prescribed by the Government from time to time.
- 3) To abide by the rules prescribed by the Government from time to time regarding quarrying of minor minerals.
- 4) To 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 or the lessee from the said lands and also the number of persons employed in carrying on the said mining operations therein and to prepare and maintain from time to time when so directed by the said collector complete and correct plans of all mines and working in the said

S. Vijaya
 REGISTERED HOLDER

LESSEE

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தமிழ்நாடு தமிழ்நாடு TAMILNADU

மதிப்பு : 100
நாள் : 22131
தேதி : 24-11-2019

8-ஏம்.டி.கே.என்.என்
1018-41490

DV 531047

S. சந்திரசேகரன்
தமிழ்நாடு அரசு
1. No. 1522 / D / 60

lands and to allow any officer thereunto authorized by the Commissioner of Geology and Mining, Tamil Nadu, from time to time and at all times to examine such accounts and any such plans and to supply and furnish when so required all such information and returns regarding all or any of the matters aforesaid as the Government may from time to time required and direct.

- 5) To allow any officer authorized by the Director of Geology and Mining, Tamil Nadu in that behalf from time to time and at all times to enter upon any part of the said lands where mining operations may be carried on for the purpose of inspecting the same.
- 6) To forthwith send to the Collector a report of any accident which may occur at or in the said land and also of the discovery therein of any minerals other than Roughstone, Jelly and Gravel.

S-Vijaya
REGISTERED HOLDER

LESSEE

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தமிழ்நாடு தமில்நாடு TAMILNADU

BV 531048

மதிப்பு : ரூ0

சு- ௧௯௮௩௪௦௦௦௦௦

நாள் : 22/32

10 ம் நாள்

திகதி : 24-7-2019

ச. சந்திரசேகரன்

சுத்தியைத் தராத விற்றபவையாக
விவகாசி தமிழ்நாடு
பி.நா. 1822/D/90

- 7) Not to claim 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 of the assessment thereon has been deducted under proviso.
- 8) Not to claim 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 of the assessment thereon has been deducted under proviso here under.

PROVIDED ALWAYS and it is hereby further agreed by and between the parties as follows: -

S. Vijaya
REGISTERED HOLDER

LESSEE

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தமிழ்நாடு தமில்நாடு TAMILNADU

BV 531049

மதிப்பு : 100
பேரம் : 22183
திகதி : 24-7-2019

ச. சந்திரசேகரன்
மஹாசுவாமி

ச. சந்திரசேகரன்
தமிழ்நாடு வட்டியுள்ள நிலம்
கிளாசு தமிழ்நாடு
L.No. 1922/D/56

PROVIDED ALWAYS and it is hereby further agreed by and between the parties as follows: -

- 1) That it shall be lawful for the registered holder or lessee as the case may be at any time to cease mining operations under these presents provided the registered holder or lessee shall pay the Government or the Collector the land assessment, cess and seigniorage payable by the registered holder or the lessee under these presents up to the end of the year in which the registered holder or the lessee shall cease such mining operations and shall restore the said lands fence or fill in abandoned pits and excavations therein if required by the collector as next hereinafter provided and upon, the registered holder or the lessee so doing these presents shall cease and determine.
- 2) That in case the registered holder shall relinquish the whole or part of the said lands in case of the expiry or sooner determination of this agreement

S. Vijaya
REGISTERED HOLDER

LESSEE

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then and in any such case, the registered holder in the case of relinquishment and the registered holder and the lessee in other cases shall restore said lands or the area relinquished or so much thereof as the Collector shall required to be restored to a state fit for cultivation and shall securely and permanently fence or fill in all abandoned pits and excavation therein as the Collector shall require to be so fenced or filled in and incase the registered holder or the lessee shall fail, or neglect any such lands with the registered holder or the lessee be required to restore to a state fit for cultivation or to so fence or fill in any such abandoned pit or excavation which the registered holder or the lessee shall be required to so fence or fill them and in any such case it shall be lawful for the Collector to so restore any such lands or as the case may be so fence or fill in any pit or excavation at the expense of the registered holder or lessee 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 sufficient to cover the cost of such restoration or fencing or filling as the case may be or to meet thirty times the assessment of the area rendered uncultivable, it shall be lawful for the Government to recover the balance by resort to Civil Court.

- 3) That all land assessment, cess and seigniorage payable under these presents shall be recoverable under the provisions of the Tamilnadu Revenue Recovery Act, 1864, or any subsisting statutory modification thereof, as if the same were arrear of land revenue.
- 4) That in the event of any breach of the registered holder of any of the conditions of these presents, it shall be lawful for the Government to levy enhanced seigniorage subject to the maximum of five times the normal rate 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

S. V. Jaya
REGISTERED HOLDER

LESSEE

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the registered holder in respect of any antecedent claim or breach of covenant or condition.

- 5) That any notice to be given to registered holder may be 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.
- 6) Should any question or dispute arise regarding an agreement executed in pursuance of these rules or any matter or thing connected therewith or the powers of the registered holders thereunder, 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 /registered holders, lessee / lessees, is / are not satisfied with decision of the Director of Geology and Mining, the matter shall be referred to the State Government.

விருதுநகர் மாவட்ட ஆட்சித்தலைவர் அவர்களின் செயல்முறைகளின்படி குத்தகை நிபந்தனைகள் ந.க.கே.வி.1/10050/2017, நாள்: 10.06.2019

- 1) 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
- 2) 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
- 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.

S. Vijaya
REGISTERED HOLDER

LESSEE

LESSOR

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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 பத்திர 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 வர 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) அனுமதி பெறாமல் குவாரியில் வெடிமருந்துகள் பயன்படுத்தக்கூடாது. வெடிபொருட்கள் சட்டம் கண்டிப்பாக கடைப்பிடிக்கப்படவேண்டும். குறைந்த அழுத்தமுள்ள வெடிமருந்துகளை பயன்படுத்தி குவாரிப்பணி செய்யவேண்டும்.
- 14) குவாரியில் வேலை செய்யும் தொழிலாளர்களின் நலன் பேணப்படவேண்டும். குழந்தைத் தொழிலாளர்களை குவாரிப் பணியில் ஈடுபடுத்தக்கூடாது.
- 15) அனுமதிதாரர் புராதனச் சின்னங்களுக்கோ, அரசாங்க சொத்துக்களுக்கோ எவ்வித சேதமும் இன்றி குவாரி செய்ய வேண்டும். அருகாமையில் உள்ள பட்டா நிலங்களுக்கு எவ்வித சேதமுமின்றி குவாரி செய்ய வேண்டும்.
- 16) அருகில் அமைந்துள்ள விவசாய நிலங்களுக்கு எவ்வித பாதிப்பும் இல்லாத வகையில் குவாரிப்பணி மேற்கொள்ள வேண்டும்.
- 17) அருகில் உள்ள நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி தூரம் கடைப்பிடிக்க வேண்டும்.

S. Vijaya
REGISTERED HOLDER

LESSEE

LESSOR

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- For the purpose of stamp duty the anticipated Seigniorage Fee for a period of Five Years from the demised land is Rs. 1,40,29,000/-.

In the Village of Nathikudi, Vembakkottai Taluk, Virudhunagar District and Sub-Registration Office at Keelarajakularaman of within the registration District of Virudhunagar.

Survey No	Lease granted Area in Hectares	Four Boundaries			
		North	South	East	West
922/2	0.97.0	915, 916	922/3	922/6	922/1
922/3	0.97.0	922/2	922/4	922/5 இரு மரங்கள் பக்கம்	922/1
922/4	0.98.0	922/3	922/1	922/5 இரு மரங்கள் பக்கம்	922/1
TOTAL	2.92.0				

LESSOR

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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. Soundraraajan, S/o. Subbiah residing at 2/10, North Street, D.Mamsapuram, Sivakasi Taluk, Virudhunagar the lessee (Aadhar Card No:9657 9086 8411) and Tmt S.Vijaya, W/o Soundrarajan residing at No.2/10, North Street, D.Mamsapuram, Sivakasi Taluk, Virudhunagar District and the registered holders (Aadhar Card No:5935 2797 2403) have hereunto set their respective hands.

S. Vijaya
Registered Holder
Signed by the above named in
the presence of

[Signature]
LESSEE

[Signature]
LESSOR
COLLECTOR,
VIRUDHUNAGAR DISTRICT
Signed by the above named in the
presence of

Witness

Witness

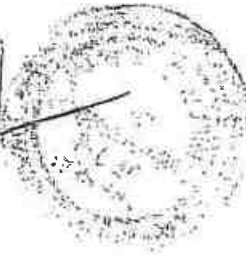
1 கருப்பசாமி
S/o கருப்பசாமி
2/205 வடக்கு கிளர்
ப. திருவள்ளூர்
நகரம் (P.O.)
தொண்டி கிளர் (TK)

2 திரு. கருப்பசாமி
2/21 திருவள்ளூர்
கிளர் (P.O.)
தொண்டி (TK)

1 *[Signature]*
ASSISTANT DIRECTOR
GEOLOGY AND MINING
VIRUDHUNAGAR DIST,
VIRUDHUNAGAR

2 *[Signature]*
தலைவர் கருப்பசாமி
தொண்டி கிளர் (P.O.)
தொண்டி (TK)

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Registering Officer.



[Signature]



CERTIFICATE UNDER SECTION 42 OF THE INDIAN STAMP ACT 1899

S No 1586 of 2019

I hereby certify that a sum of ₹ 25,361/- (Rupees Twenty Five Thousand Three Hundred and Sixty One only) on account of deficit stamp duty has been levied under section 41 of the Stamp Act in respect of this instrument from Mrs. விஜயா residing at 2/10 NORTH STREET D.MANSAPURAM, DURAISWAMPURAM, Sivakasi, Virudhunagar, Tamil Nadu, India, 626124.

Sub Registrar: KeelaRajakularaman
Date: 20/11/2019



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

Presented in the office of the Sub Registrar of KeelaRajakularaman and fee of ₹ 20,400/- paid at 11:52 AM on the 20/11/2019 by

Left Thumb



S. Vijaya

Additions as per recitals of document

I have satisfied myself as to the execution of the instrument by Mr. சிவஞானம், விருதுநகர், Virudhunagar, Tamil Nadu, India, 626002 (மாவட்ட ஆட்சியர், Virudhunagar) who is exempted from personal appearance under section 88(1) of the registration act.

Sub Registrar: KeelaRajakularaman

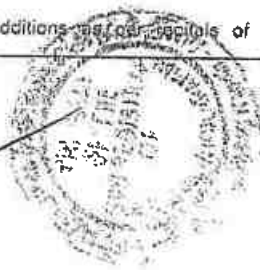
Claim admitted by
Left Thumb



S. Vijaya

Additions as per recitals of document

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Registering Officer.



Signature of Registering Officer



R/KeelaRajakularaman/Book-1/3199/2019

Claim admitted by

பதிவுசெய்து



[Signature]

Additions as per recitals of document

Identified By

1 *[Signature]*

Mr. SRINIVASAN Son of THIRUVALLI 22A NORTH RATHA STREET
MADAVARVILAGAM, Sriviliputhur, Virudhunagar, Tamil Nadu, India, 626125.

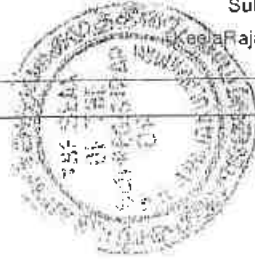
2 *[Signature]*

Mr. MUTHURAMALINGAM Son of IRULAPATHEVAR 4/16 MIDDLE STREET,
KEELRAJAGULARAMAN, VEMBAKKOTTAI, Virudhunagar, Tamil Nadu, India,
626136.

20th day of November 2019

[Signature]

Ananthan R
Sub Registrar
KeelaRajakularaman

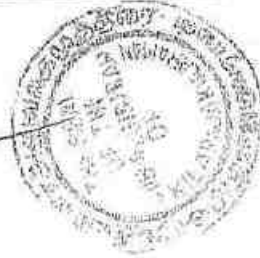


Registered as Number R/KeelaRajakularaman/Book-1/3199/2019

Date: 20/11/2019
KeelaRajakularaman

Ananthan R
Sub Registrar

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Registering Officer.



[Signature]



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/004/EC.No.58/2018. Dated. 08.12.2018

To

Thiru.S.Soundararajan
S/o. Subbiah Naicker,
D/o.2/10, North Street,
D.Mamsapuram (Po),
Sivakasi Taluk,
Virudhunagar District.- 626 124.

Sir,

Sub: DEIAA -TN - Proposed Rough stone quarry in SF. No: 922/2, 922/3 & 922/4
Nathikudi Village, Vembakottai Taluk, Virudhunagar District by
Thiru.S.Soundararajan Environmental Clearance Reg.

- Ref: 1) Your Application for Environmental Clearance dated:10.04.2018
2) Minutes of the 6th DEAC meeting held on 15.05.2018
3) Minutes of the 6th DEIAA meeting held on 19.07.2018

Details of Minor Mineral Activity :-

This has reference to your application first cited. The proposal is for obtaining Environmental Clearance for mining/ quarrying Minor Minerals based on the particulars furnished in your application as shown below:

1	Name of Project Proponent and Address	Thiru.S.Soundararajan S/o. Subbiah Naicker, D/o.2/10, North Street, D.Mamsapuram (Po), Sivakasi Taluk, Virudhunagar District
2	Location of the proposed Activity	
	Survey Number	922/2, 922/3 & 922/4
	Village	Nathikudi
	Taluk	Vembakottai
	District	Virudhunagar.

[Signature]
THE CHAIRPERSON
DEIAA-TN-VNR



**DISTRICT LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY
VIRUDHUNAGAR DISTRICT (TAMIL NADU)**

	Latitude	09° 26' 32.02.7" N
	Longitude	77° 41' 31.3" E
3	Proposed Activity	
	i. Minor mineral	Rough Stone, Jelly and Gravel
	ii. Mining Lease Area	2.92.0 Hectares
	iii. Approved Quantity	1,97,050 Cu.m of Rough Stone & 72,450 Cu.m of Gravel
	iv. Depth of Mining	13 Meters
	v. Type of Mining	Opencast Semi Mechanized Method
	vi. Category (B1/B2)	B2
	vii. Precise Area Communication	District Collector, Virudhunagar letter No. KV1/10050/2017, dated: 17.03.2018
	viii. Mining Plan Approval	Deputy Director of Geology & Mining, Virudhunagar letter No. KV1/10050/2017, dated: 06.04.2018
	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 :	10 Employees
6	Utilities	
	i. Source of Water	Water vendors / Existing bore wells
	ii. Quantity of Water Requirement in KLD	
	a. Domestic in KLD	1.300 KLD
	b. Industrial in KLD	
	c. Green Belt & Dust Suppression	2.200 KLD
	iii Power Requirement:	
	a. Domestic Purpose	TNEB
	b. Industrial Purpose	5,25,000 ltrs of HSD
7	Cost	
	i. Project Cost	Rs. 3,11,94,688/-
	ii. EMP Cost	Rs. 6,00,000/-
8	Public Consultation	Not required as per O.M. dated 24.12.2013 of MoEF, Gol.
9	Date of Appraisal by DEAC :- Agenda No.	15.05.2018 6/10
10	Date of Review/ Discussion by DEIAA and the Remarks :-	The proposal was placed before the DEIAA in its 6 th Meeting held on 19.07.2018 and the Authority after careful examination, decided to grant Environmental Clearance to the said project of quarrying Rough stone, Jelly 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 quarry Rough Stone, Jelly & Gravel for the production of 1,97,050 cb.m of Rough Stone & 72,450 cb.m of Gravel for the period of 5 years from the date of execution of the Mining Lease Deed.

[Signature] 2

[Signature]
THE CHAIRPERSON
DEIAA-TN-VNR

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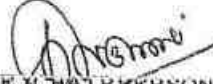
[Signature]



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 Clearance letter 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 issue/ renewal of mining/ 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 36 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 also kept 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 any excavation area.
14. Depth of quarrying shall be 2.00mts 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
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DISTRICT LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY
VIRUDHUNAGAR DISTRICT (TAMIL NADU)

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 Parameters 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 location to be conducted and records kept for inspection.
21. The Proponent shall take appropriate measures to ensure that the GLC 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 pslopes.
29. Waste oils, used oil generated from the EM machines, mining operations, 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

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THE CHAIRPERSON
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DISTRICT LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY
VIRUDHUNAGAR DISTRICT (TAMIL NADU)

33. 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 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.
34. 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.
35. No tree-felling shall be done in the leased area, except only with the permission from Competent Authority.
36. 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.
37. 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.
38. 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 habitation located within 500m radius from the periphery of the quarry site.
39. Ground Water Quality Monitoring should be conducted once in 3 months.
40. Transportation of the quarried materials shall not cause any hindrance to the Village People/Existing Village Road.
41. Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GoI at Chennai
42. Air Sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GoI at Chennai
43. Bunds to be provided at the boundary of the Project Site.
44. 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.
45. At least 10 Neem trees should be planted around the boundary of the quarry site.
46. Floor of excavated pit to be leveled and sides to be sloped with gentle slope (Except for Granite quarries) in the Mine Closure Phase.
47. The Project Proponent shall ensure a minimum of 2.5% of the annual turnover will be utilized for the Community Social Responsibility (CSR) Activity.
48. The CSR funds should be channalized for planting programme nature conservation support, Tribal Development and activities that support Forest and Environment.
49. The Project Proponent shall provided solar lighting system to the nearby villages .
50. The Project Proponent shall comply with the mining/ quarrying and other relevant Rules and Regulations where ever applicable.
51. Rainwater shall be pumped out Via Settling Tank only.



DISTRICT LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY
VIRUDHUNAGAR DISTRICT (TAMIL NADU)

52. Earthen Bunds and Barbed Wire Fencing around the pits with green belt all along the boundary shall be developed and maintained.
53. 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.
54. 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.
55. Safety equipments to be provided to all the employees.
56. Safety distance of 50m has to be provided in case of Railway, Reservoir, Canal/Odai
57. 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.
58. 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.
59. 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.
60. 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.
61. 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.
62. Heavy earth machinery equipments if utilized, after getting approval from the Competent Authority.
63. 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.
64. The Project Proponent is also directed to strictly adhere to the sustainable Sand Mining Management Guidelines, 2016, wherever applicable.
65. 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

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THE CHAIRPERSON
DEIAA-TN-VNR

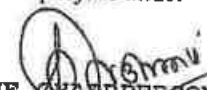
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DISTRICT LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY
VIRUDHUNAGAR DISTRICT (TAMIL NADU)



- 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 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 handling 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 contractions due to exposure to dust and take corrective measures, if needed.
 12. Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination 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 sworn 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 would 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 CHAIRPERSON
DEIAA-TN-VNR

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**DISTRICT LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY
VIRUDHUNAGAR DISTRICT (TAMIL NADU)**

the provisions of EIA Notification, 2006, at any stage of the validity of this Environmental Clearance, if it is found or if it comes to the knowledge of this DEIAA, Virudhunagar that the Project Proponent has deliberately concealed and / or submitted false or misleading information or inadequate data for obtaining the Environmental Clearance.

1. Failure to comply with any of the conditions mentioned above may result in withdrawal of this Clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
2. 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, along 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 Law relating to the subject matter.
3. The Environmental Clearance shall not be used as a document to obtain any other clearance unless it is specifically prescribed by the Issuing Authority.
4. Any other conditions stipulated by other Statutory/ Government Authorities shall be complied.
5. 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 CHAIRPERSON
DEIAA-TN-VNR**

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, NEPC 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. El Division, Ministry of Environment & Forests, Paryavar Bhawan, New Delhi.
7. The Commissioner, of Geology and Mining, Guindy, Chennai-32.
8. Stock File of EC.
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TAMIL NADU POLLUTION CONTROL BOARD

CONSENT ORDER NO. 1905220401035

DATED: 25/03/2019.

PROCEEDINGS NO.F.1611VDR/RS/DEE/TNPCB/VDR/A/2019 DATED: 25/03/2019

SUB: Tamil Nadu Pollution Control Board –CONSENT TO OPERATE –DIRECT –M/s. S SOUNDARARAJAN ROUGH STONE AND GRAVEL QUARRY, S.F.No. 922/2 922/3 922/4, NATHIKUDI village Vempakottai 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. 20401035 Dated 22-02-2019
2.IR.No : F.1611VDR/RS/AEE/VDR/2019 dated 22/03/2019
3.Minutes of the 148th DLCCC Meeting held on 22.03.2019 vide item no. 148-06

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 . S SOUNDARARAJAN ROUGH STONE AND GRAVEL QUARRY
S.F.No.922/2 922/3 922/4,
NATHIKUDI 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, 2023

**District Environmental Engineer,
Tamil Nadu Pollution Control Board,
VIRUDHUNAGAR**

To
The Proprietor,
M/s.S SOUNDARARAJAN ROUGH STONE AND GRAVEL QUARRY,
Nathikudi Village, Vempakottai Taluk Virudhunagar District,
Pin: 626137

Copy to:

- 1.The Commissioner, VEMBAKKOTTAI-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

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 at SF No.922/2,922/3,922/4, Nathikudi Village,Vembakottai Taluk , Depth: 13 meters, Extent: 2.92.0 Hect, Latitude 09°26'32.02.7"N Longitude 77°41'31.3"E Over a Period of 5 yrs	197050	Cu.m of Rough Stone Over a period of 5 years
2.	Gravel at SF No.922/2,922/3,922/4, Nathikudi Village,Vembakottai Taluk , Depth: 13 meters, Extent: 2.92.0 Hect, Latitude 09°26'32.02.7"N Longitude 77°41'31.3"E Over a Period of 5 yrs	72450	Cu.m of Gravel 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 and Vehicle Movements	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
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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 (SO ₂)	Annual 24 hours	microgram/m ³ microgram/m ³	50 80	20 80
2.	Nitrogen Dioxide (NO ₂)	Annual 24 hours	microgram/m ³ microgram/m ³	40 80	30 80
3.	Particulate Matter (Size Less than 10 micro M) or PM ₁₀	Annual 24 hours	microgram/m ³ microgram/m ³	60 100	60 100
4.	Particulate Matter (Size Less than 2.5 micro M) or PM _{2.5}	Annual 24 hours	microgram/m ³ microgram/m ³	40 60	40 60
5.	Ozone (O ₃)	Annual 24 hours	8 Hours 1 Hour	100 180	100 180

[Signature]

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
Residential Area	55	45

- 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.
- 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.
- 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.
- 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.
- 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.
- 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:

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1. The unit shall maintain the effective safeguard measures including water sprinkling arrangements to 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 drifting 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 quarrying 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 District Level Environment Impact Assessment Authority, vide DEIAA/VNR/04/ EC No.58/2018 Dated 08.12.2018.
6. The consents do not absolve from obtaining permission/clearance from other authorities or other statutes as applicable. This is computer generated inspection report. Signature is not required.
7. The Consents issued are subject to the final outcome of NGT (SZ) 165/2013. 8. The unit shall not use 'use and throw plastics' such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bags and plastic flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.
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,
VIKRAMNAGAR

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 Poramboke 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****

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TAMIL NADU POLLUTION CONTROL BOARD

CONSENT ORDER NO. 1905120401035

DATED: 25/03/2019.

PROCEEDINGS NO.F.1611VDR/RS/DEE/TNPCB/VDR/W/2019

DATED: 25/03/2019

SUB: Tamil Nadu Pollution Control Board –CONSENT TO OPERATE – DIRECT -M/s. S SOUNDARARAJAN ROUGH STONE AND GRAVEL QUARRY , S.F.No. 922/2 922/3 922/4, NATHIKUDI village Vempakottai 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. 20401035 Dated 22-02-2019
2.IR.No : F.1611VDR/RS/AEE/VDR/2019 dated 22/03/2019
3.Minutes of the 148th DLCCC Meeting held on 22.03.2019 vide item no. 148-06

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 . S SOUNDARARAJAN ROUGH STONE AND GRAVEL QUARRY
S.F No.922/2 922/3 922/4,
NATHIKUDI 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, 2023

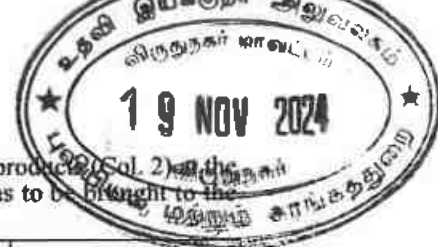
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
VIRUDHUNAGAR

To
The Proprietor,
M/s.S SOUNDARARAJAN ROUGH STONE AND GRAVEL QUARRY,
Nathikudi Village, Vembakottai Taluk Virudhunagar District,
Pin: 626137

Copy to:

- 1.The Commissioner, VEMBAKOTTAI-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 at SF No.922/2,922/3,922/4, Nathikudi Village, Vembakottai Taluk, Depth: 13 meters, Extent: 2.92.0 Hect, Latitude 09°26'32.02.7"N Longitude 77°41'31.3"E Over a Period of 5 yrs	197050	Cu.m of Rough Stone Over a period of 5 years
2.	Gravel at SF No.922/2,922/3,922/4, Nathikudi Village, Vembakottai Taluk, Depth: 13 meters, Extent: 2.92.0 Hect, Latitude 09°26'32.02.7"N Longitude 77°41'31.3"E Over a Period of 5 yrs	72450	Cu.m of Gravel 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	1.0	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.
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.

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14. In the case of zero liquid discharge of effluent units, the occupier shall adhere the following conditions

as laid under
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.
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 the 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 District Level Environment Impact Assessment Authority, vide DEIAA/VNR/04/ EC No.58/2018 Dated 08.12.2018

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. The unit shall not use 'use and throw plastics' such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bags and plastic flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.

10. 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

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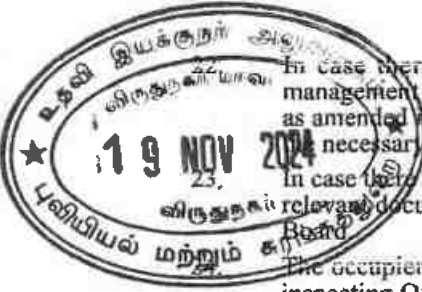
GENERAL CONDITIONS



1. The occupier shall make an application along with the prescribed consent fee for grant of renewal 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 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 Poramboke 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.

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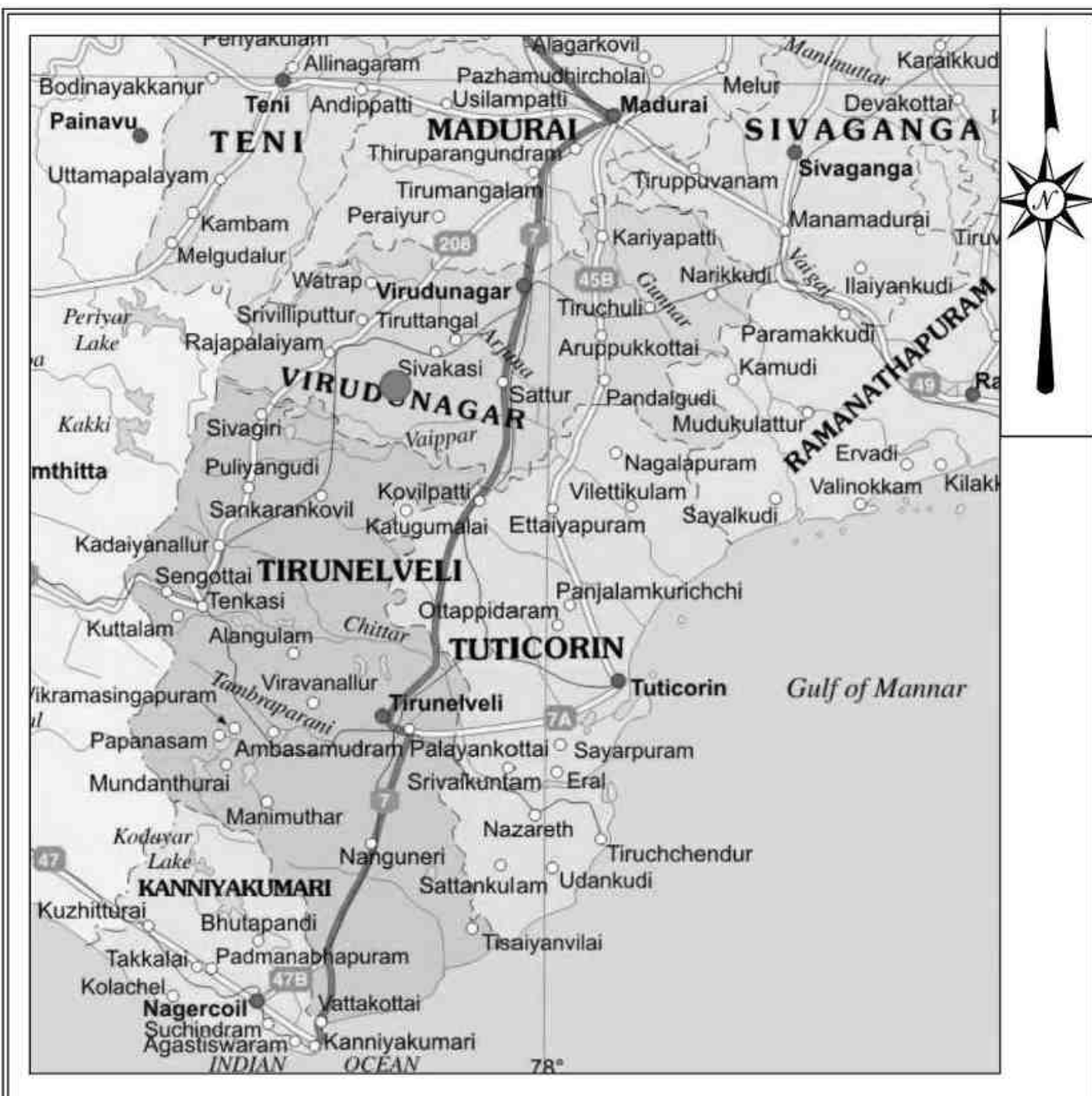
In case there is any change in the constitution of the management, the occupier of the new management shall file fresh application under Water (Prevention and Control of Pollution) Act, 1974, as amended in Form-II alongwith relevant documents of change of management immediately and get the necessary amendment with renewal of consent order.

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.

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****



NAME OF THE APPLICANT:

**SRI. S. SOUNDARARAJAN, S/o. SUBBIAH,
D.No. 2/115A2, MAIN ROAD, MAMAPURAM,
SIVAKASI WEST (Post), SIVAKASI TALUK,
VIRUDHUNAGAR DISTRICT - 626124.**

PLATE NO. I

ROUGH STONE AND GRAVEL QUARRY

LOCATION PLAN

SCALE:- 1CM = 12.5KMs

INDEX:-

MINING LEASE RENEWAL AREA

● State capital	— Golden Quadrilateral
● District headquarters	— North-South & East-West Corridors
○ Other town	— National Highway
45 National Highway number	— Railway

PREPARED BY:-

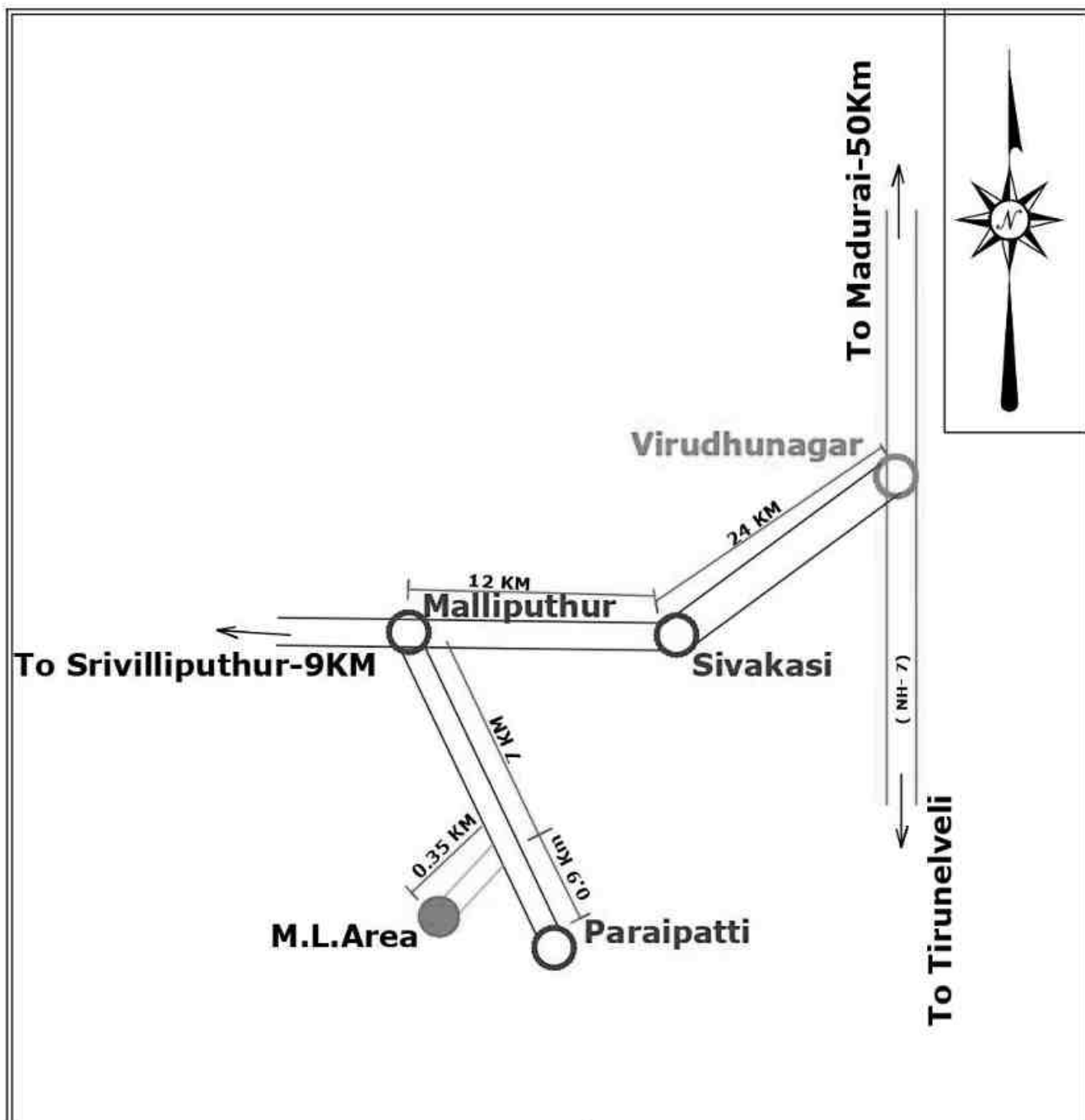
M. Dharmalingam

M. DHARMALINGAM

M.Sc.,(Geol.) FCC.,(Mining)

Qualified Person

ROP / MAS / 260 / 2014 / A



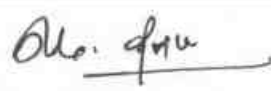
NAME OF THE APPLICANT: SRI. S. SOUNDARARAJAN, S/o. SUBBIAH, D.No. 2/115A2, MAIN ROAD, MAMSAPURAM, SIVAKASI WEST (Post), SIVAKASI TALUK, VIRUDHUNAGAR DISTRICT - 626124.	PLATE NO. IA <u>ROUGH STONE AND GRAVEL QUARRY</u> KEY MAP <u>SCALE:- NOT TO SCALE</u>
INDEX:- MINING LEASE APPLIED AREA  NATIONAL HIGHWAY  MAIN ROAD & VILLAGE ROAD  APPROACH ROAD (PROMBOKE ROAD) 	PREPARED BY:-  M. DHARMALINGAM M.Sc.,(Geol.) FCC.,(Mining) Qualified Person ROP / MAS / 260 / 2014 / A

PLATE NO. II

NAME OF THE APPLICANT:

SRI. S. SOUNDARARAJAN, S/o. SUBBIAH,
D.No. 2/115A2, MAIN ROAD, MAMSAPURAM,
SIVAKASI WEST (Post), SIVAKASI TALUK,
VIRUDHUNAGAR DISTRICT - 626124.

TOPO SHEET No.58-G/11

LATITUDE : 9° 26' 00.31" To 9° 26' 04.86"

LONGITUDE : 77° 41' 27.96" To 77° 41' 34.22"

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, unmetalled according to importance	
Unmetalled road, cart track, track road with cross, foot path	
Streams with rock in bed, unfilled canal	
Canal, masonry or rock lined, earthen, open	
River, dry with water channel, with island & more, tide river	
Submerged rocks, shoal, swamp, Roads	
Wells, river, unlined, tube-well, Spring, Tanks, perennial, dry	
Enclosed area, road or rail, bank, broken ground	
Railways, broad gauge, double, single with station, other symbols	
Railways, other gauges, double, single with distance stone, etc.	
Mineral line or boundary, 10th, Cutting with tunnel	
Contours with sub-relations, flood, slopes, Cuts	
Bound features, (Rail, Road, Mangrove, etc.) (Shaded with stippling)	
Towns or villages, inhabited, deserted, Fort	

ROUGH STONE AND GRAVEL QUARRY

TOPO SKETCH - 10KM RADIUS

SCALE:- 1: 1,00,000

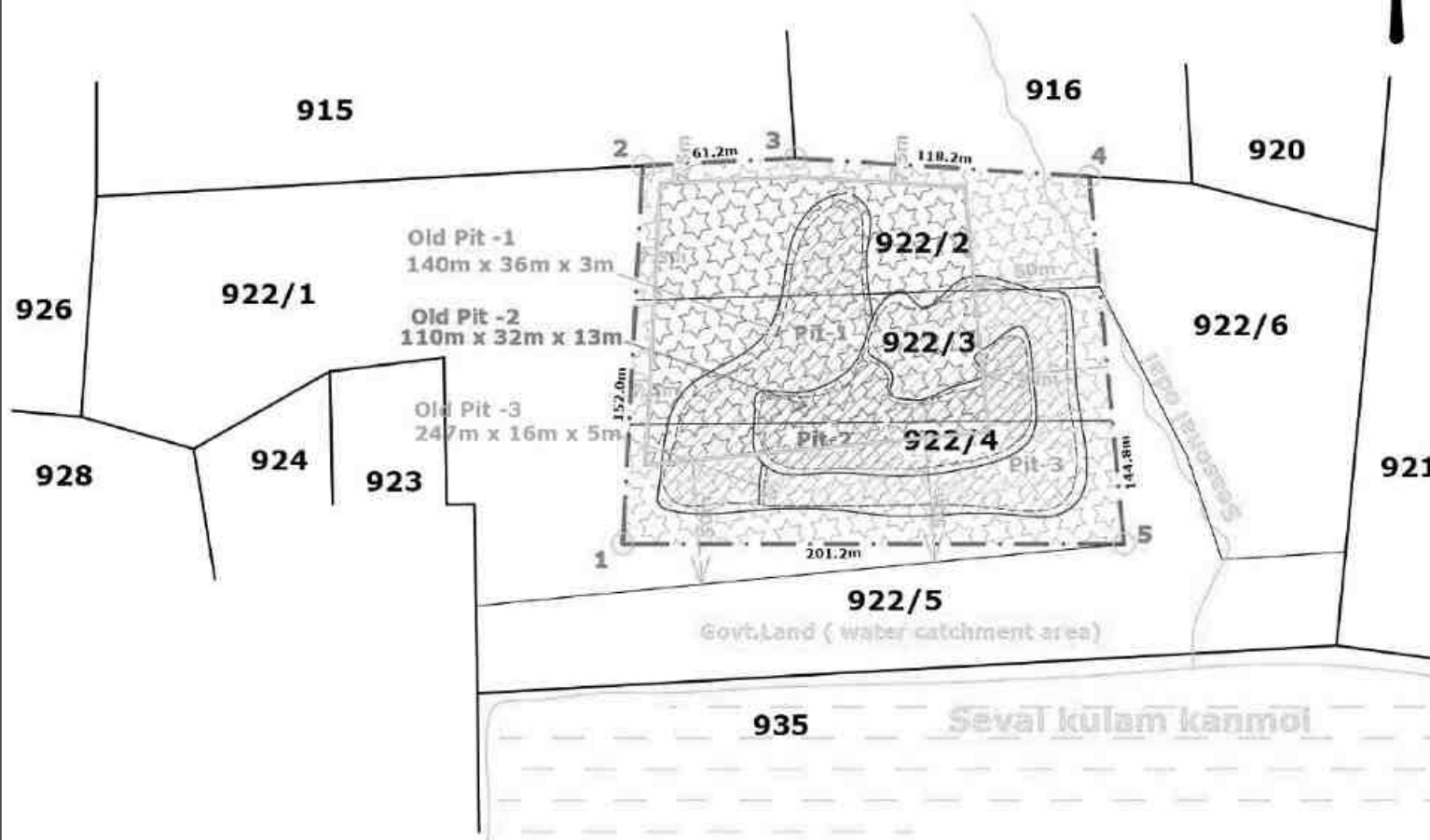
PREPARED BY:-

M. Dharmalingam

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

	Roughstone in cu.m.	Gravel in cu.m.
Quantity as per previous Environment clearance (E.C.)	1,97,050	72,450
excavated quantity	42,687	37,871.75

Old Pit Size			
	LENGTH [M]	WIDTH [M]	DEPTH [M]
Pit -1	140	36	3
Pit -2	110	32	13
Pit -3	247	16	5
Total Quantity in CUM			80,640



NAME OF THE APPLICANT:

SRI. S. SOUNDARARAJAN, S/o. SUBBIAH,
D.No. 2/115A2, MAIN ROAD, MAMAPURAM,
SIVAKASI WEST (Post), SIVAKASI TALUK,
VIRUDHUNAGAR DISTRICT - 626124.

INDEX:-

LEASE RENEWAL BOUNDARY — . —
SAFETY DISTANCE 7.5M
(10m from seasonal odal, 50m from sfra 922/5 & seval kulam kanmoi)
BOUNDARY PILLARS ○ 1 2 3 ..

LOCATION OF THE AREA:

DISTRICT : VIRUDHUNAGAR
TALUK : VEMBAKOTTAI
VILLAGE : NATHIKUDI
S.F.Nos. : 922/2, 922/3 & 922/4
EXTENT : 2-92.0 HECTARE.

S.F.Nos	EXTENT (Ha)	Safety area	Mining area
922/2	0-97.0		
922/3	0-97.0		
922/4	0-98.0		
TOTAL	2-92.0 Ha.	3-31.0 Ha.	1-41.0 Ha.

GPS CO-ORDINATES OF BOUNDARY PILLARS

PILLAR	LATITUDE	LONGITUDE
1	9° 26' 00.31"	77° 41' 27.96"
2	9° 26' 05.24"	77° 41' 28.36"
3	9° 26' 05.33"	77° 41' 30.36"
4	9° 26' 04.86"	77° 41' 34.22"
5	9° 26' 00.09"	77° 41' 34.60"

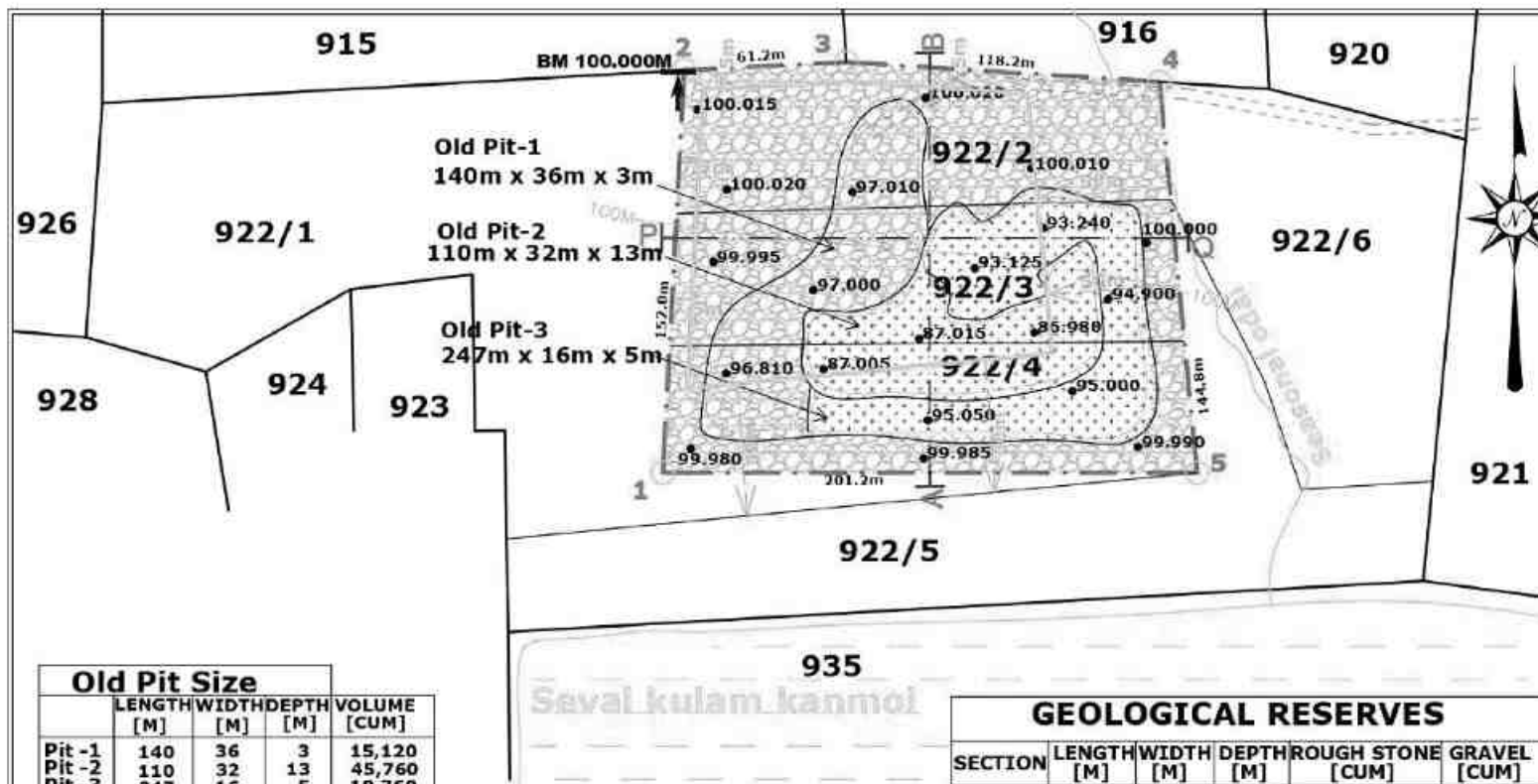
ROUGH STONE AND GRAVEL QUARRY

LEASE PLAN

SCALE:- 1: 2000

ALL PLANS AND SECTIONS ARE PREPARED
BASED ON THE LEASE MAP AUTHENTICATED
BY STATE GOVERNMENT.

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



NAME OF THE APPLICANT:

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D.No. 2/115A2, MAIN ROAD, MAMAPURAM,
SIVAKASI WEST (Post), SIVAKASI TALUK,
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INDEX:-

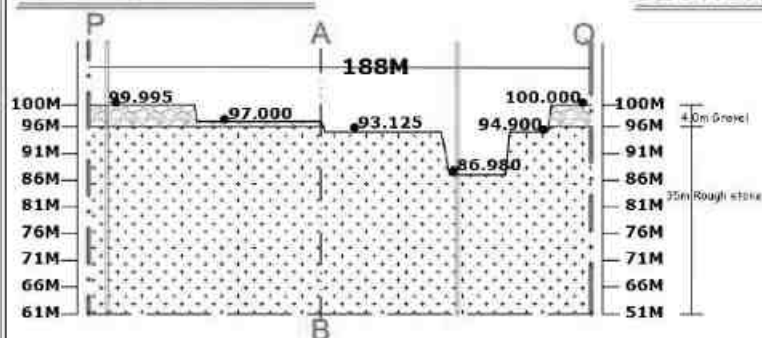
LEASE RENEWAL BOUNDARY	---
SAFETY DISTANCE 7.5M (10m from seasonal edai, 50m from sfno 922/5 & seval kulam kanmoi)	---
BOUNDARY PILLARS	1 2 3 ..
CONTOURS	---
BENCH MARK	BM 100.000M
APPROACH ROAD	---
OLD PIT	---
GRAVEL	---
ROUGH STONE	---

Old Pit Size				
	LENGTH [M]	WIDTH [M]	DEPTH [M]	VOLUME [CUM]
Pit -1	140	36	3	15,120
Pit -2	110	32	13	45,760
Pit -3	247	16	5	19,760
Total Quantity in CUM				80,640

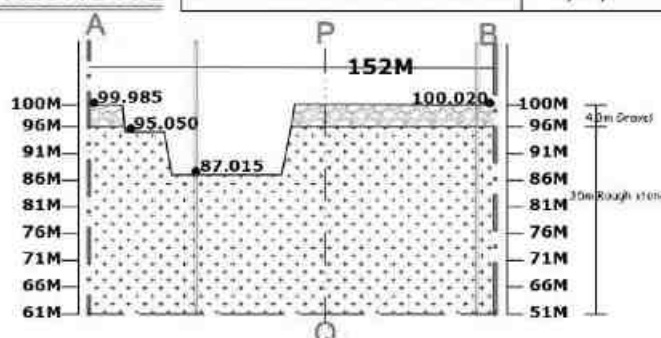
GEOLOGICAL RESERVES

SECTION	LENGTH [M]	WIDTH [M]	DEPTH [M]	ROUGH STONE [CUM]	GRAVEL [CUM]
PQ-AB	188	152	4.0	---	114304
old pit-1 = 140 x 36 x 3 =					- 15120
old pit-2 = 110 x 32 x 4 =					- 14080
old pit-3 = 247 x 16 x 4 =					- 15808
PQ-AB	188	152	35.0	1013320	
old pit-2 = 110 x 32 x 9 =					- 31680
old pit-3 = 247 x 16 x 1 =					- 3952
TOTAL GEOLOGICAL RESERVES				9,77,688	69,296

SECTION ALONG P-Q



SECTION ALONG A-B



**ROUGH STONE AND GRAVEL QUARRY
SURFACE CUM GEOLOGICAL
PLAN & SECTIONS**

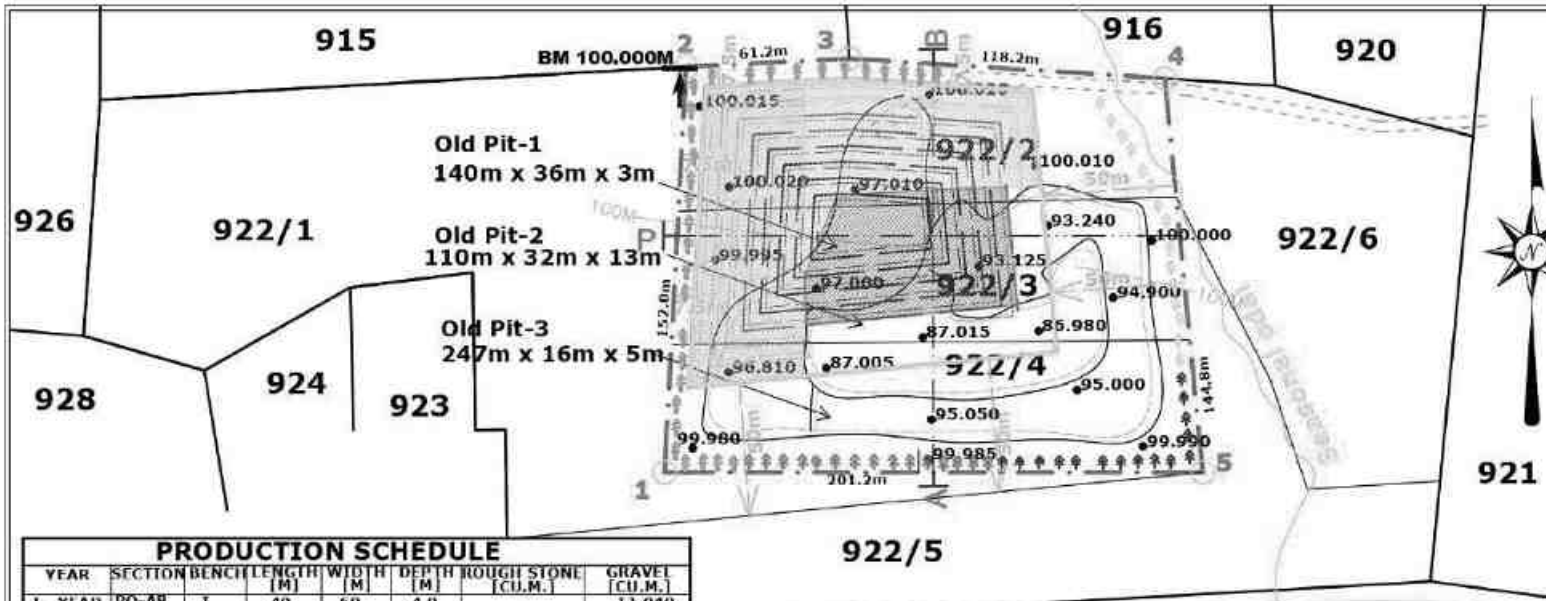
PLAN SCALE:- 1: 2000

SECTION SCALE:- HOR- 1: 2000, VER- 1:1000

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BY STATE GOVERNMENT.

M. Dharmalingam

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



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D.No. 2/115A2, MAIN ROAD, MAMSAPURAM,
SIVAKASI WEST (Post), SIVAKASI TALUK,
VIRUDHUNAGAR DISTRICT - 626124.

INDEX:-

LEASE RENEWAL BOUNDARY	---
SAFETY DISTANCE 7.5M (10m from seasonal edal, 50m from sfnc.922/5 & seval kulam kanmoi)	
BOUNDARY PILLARS	123..
CONTOURS	
BENCH MARK	BM 100.000M
APPROACH ROAD	==
I YEAR EXCAVATION	
II YEAR EXCAVATION	
III YEAR EXCAVATION	
IV YEAR EXCAVATION	
V YEAR EXCAVATION	

PRODUCTION SCHEDULE							
YEAR	SECTION	BENCH	LENGTH [M]	WIDTH [M]	DEPTH [M]	ROUGH STONE [CU.M.]	GRAVEL [CU.M.]
I - YEAR	PQ-AB	I	40	69	4.0		11,040
	PQ-AB	II	34	62	5.0	10,540	
	PQ-AB	III	28	56	5.0	7,840	
I YEAR EXCAVATION						18,380	11,040
II - YEAR	PQ-AB	I	40	69	4.0		11,040
	PQ-AB	II	84	62	5.0	26,040	
II YEAR EXCAVATION						26,040	11,040
III - YEAR	PQ-AB	III	84	56	5.0	23,520	
	PQ-AB	IV	50	77	5.0	19,250	
III YEAR EXCAVATION						42,770	---
IV - YEAR	PQ-AB	IV	50	77	5.0	19,250	
	PQ-AB	V	88	65	5.0	28,600	
IV YEAR EXCAVATION						47,850	---
V - YEAR	PQ-AB	VI	76	53	5.0	20,140	
	PQ-AB	VII	64	41	5.0	13,120	
	PQ-AB	VIII	52	29	5.0	7,540	
V YEAR EXCAVATION						40,800	---
FIVE YEARS TOTAL PRODUCTION						1,75,840	22,080

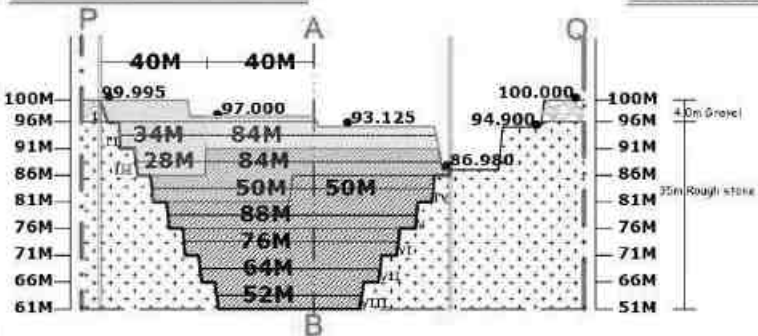
935

Seval kulam kanmoi

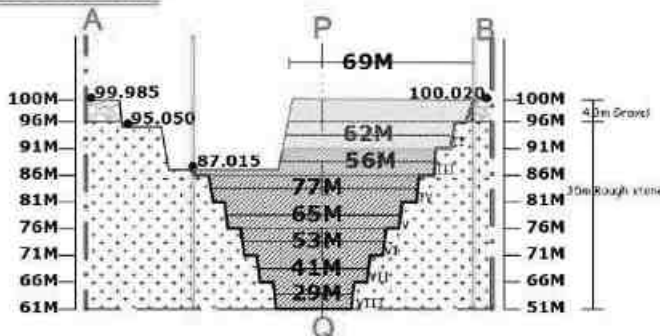
AFFORESTATION PROGRAMME

PLANTATION	TYPE	No of TREES	SPACING	AREA (Ha)	SURVIVAL
I - YEAR	NEEM	20	6m x 6m	0-07.2	80%
II - YEAR	NEEM	20	6m x 6m	0-07.2	80%
III - YEAR	NEEM	20	6m x 6m	0-07.2	80%
IV - YEAR	NEEM	20	6m x 6m	0-07.2	80%
V - YEAR	NEEM	20	6m x 6m	0-07.2	80%
TOTAL PLANTATION		100		0-36.0Ha	

SECTION ALONG P-Q



SECTION ALONG A-B



ROUGH STONE AND GRAVEL QUARRY

LAND USE CUM YEARWISE

PRODUCTION PLAN & SECTION

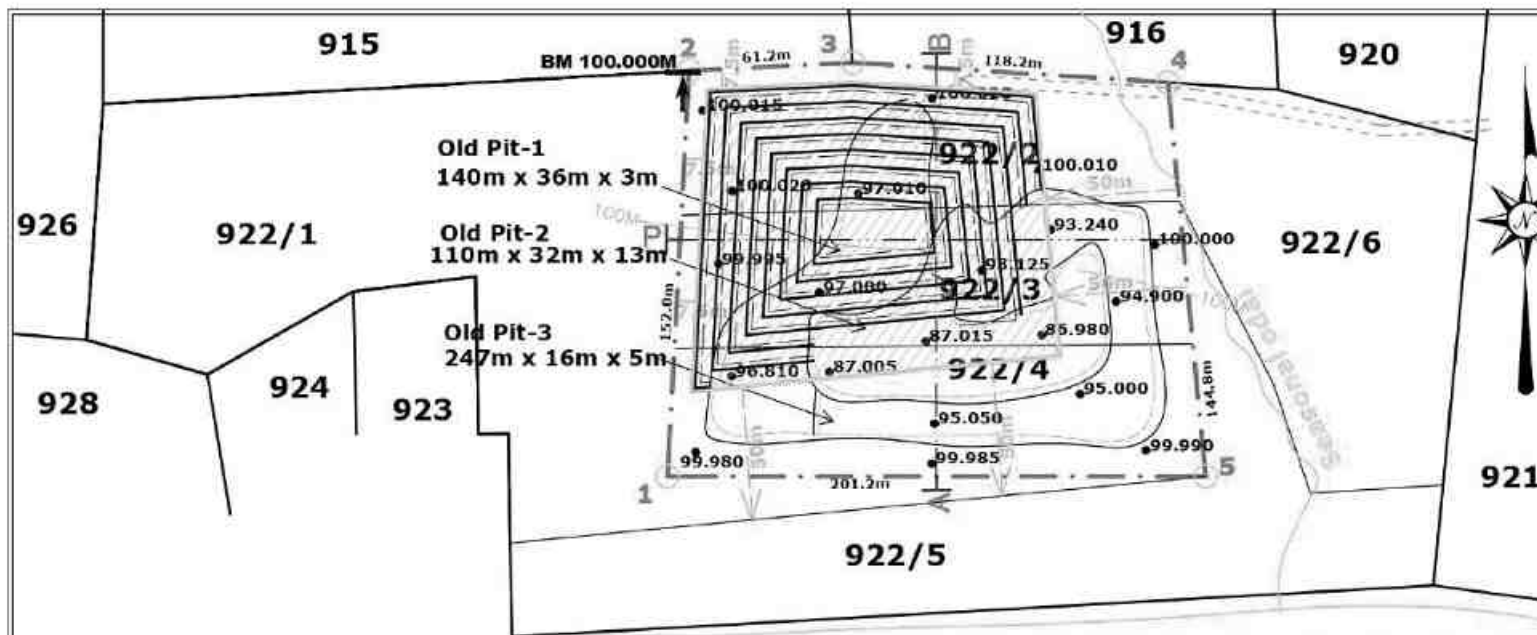
PLAN SCALE:- 1: 2000

SECTION SCALE:- HOR- 1: 2000, VER- 1:1000

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BASED ON THE LEASE MAP AUTHENTICATED
BY STATE GOVERNMENT.

M. Dharmalingam

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



ULTIMATE PIT SIZE		
LENGTH[M]	WIDTH[M]	DEPTH[M]
131	105	39.0

NAME OF THE APPLICANT:

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D.No. 2/115A2, MAIN ROAD, MAMSAPURAM,
SIVAKASI WEST (Post), SIVAKASI TALUK,
VIRUDHUNAGAR DISTRICT - 626124.

INDEX:-

LEASE RENEWAL BOUNDARY



SAFETY DISTANCE 7.5M
(10m from seasonal odai, 50m from sfno.922/5-4 seval kulam kanmoi)



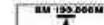
BOUNDARY PILLARS



CONTOURS



BENCH MARK



APPROACH ROAD



LAYOUT OF MINE WORKING

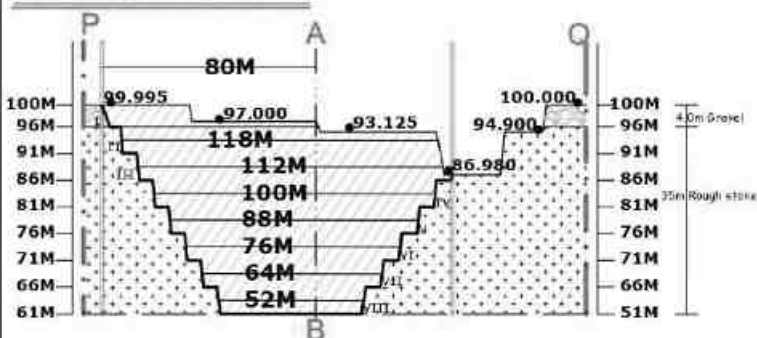


ULTIMATE PIT SLOPE

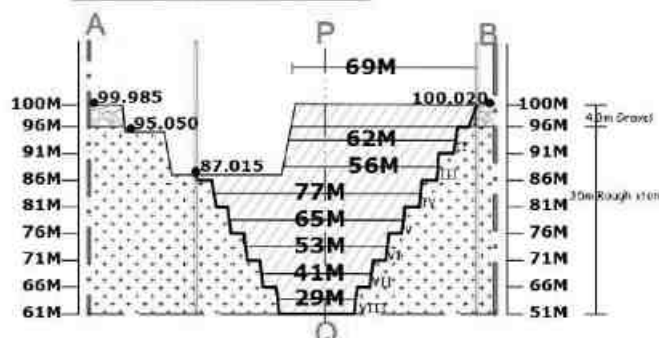


MINEABLE RESERVES					
SECTION	BENCH	LENGTH [M]	WIDTH [M]	DEPTH [M]	ROUGHSTONE [CUM]
PQ - AB	I	80	69	4.0	---
	II	118	62	5.0	36580
	III	112	56	5.0	31360
	IV	100	77	5.0	38500
	V	88	65	5.0	28600
	VI	76	53	5.0	20140
	VII	53	41	5.0	13120
	VIII	41	29	5.0	7540
TOTAL					1,75,840
					22,080

SECTION ALONG P-Q



SECTION ALONG A-B



ROUGH STONE AND GRAVEL QUARRY
CONCEPTUAL MINING PLAN

SECTIONS

PLAN SCALE:- 1: 2000

SECTION SCALE:- HOR- 1: 2000, VER- 1:1000

ALL PLANS AND SECTIONS ARE PREPARED
BASED ON THE LEASE MAP AUTHENTICATED
BY STATE GOVERNMENT.

M. Dharmalingam

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

PLATE NO. VII

500m Radius from the proposed quarry (S.Soundararajan proposal area)

Quarry	SL.No.	Name of owner	Village name	Survey nos	Extent (Ha)	Distance (m)
1. Existing	1	J. Saipreetham	Nathikudi	919/1,2,4(P)	3-33.50	230
2. Abandoned	2	Guruvammal	Nathikudi	933/2	prior-2022	450
	3	P. Jeyaraman	Nathikudi	920/181	prior-2018	48
	4	P. Dhavamani	Nathikudi	925/28	prior-2018	345
	5	Sathomasidana	Nathikudi	807/AC	prior-2016	400
	6	Soundararajan	Nathikudi	915, 916, etc.	prior-2020	15
	7	M. Pandi	Nathikudi	922/1	prior-2021	15
3. present proposed	8	J. Dhavamani	Nathikudi	916/4A, B, 918/1, 2, 3, 4	6-65.00	165
	9	P. Jeyaraman	Nathikudi	913, 914, 915/2 etc.	4-97.50	117
	10	S. Soundararajan	Nathikudi	922/2, 3, 4	2-92.00	applied
TOTAL EXTENT (Ha)					17-88.00	Ha

NAME OF THE APPLICANT:

**SRI. S. SOUNDARARAJAN, S/o. SUBBIAH,
D.No: 2/115A2, MAIN ROAD, MAMSAPURAM,
SIVAKASI WEST (Post), SIVAKASI TALUK,
VIRUDHUNAGAR DISTRICT - 626124.**

INDEX:-

LEASE RENEWAL BOUNDARY	
SAFETY DISTANCE 7.5M (10m from seasonal odal, 50m from sfno.922/5 & seval kulam kanmoi)	
300M RADIUS	
500M RADIUS	
WIND DIRECTION	
APPROACH ROAD	
EXISTING WORKING QUARRY	
ABANDONED PITS	
PROPOSAL QUARRIES	

ROUGH STONE AND GRAVEL QUARRY ENVIRONMENT CUM SATILITE IMAGERY PLAN

SCALE:- 1: 5000

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Signature

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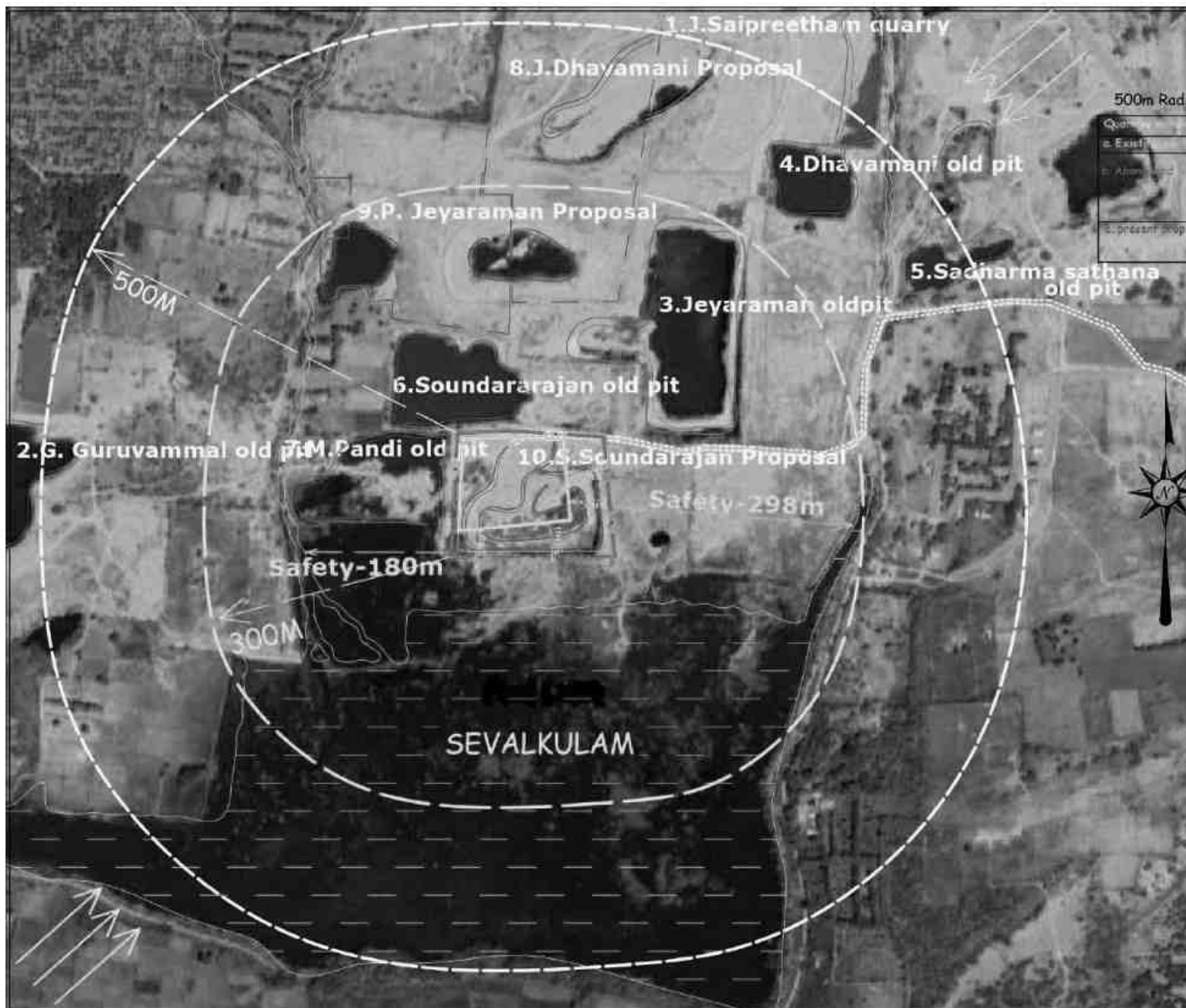


PLATE NO. VIIA**NAME OF THE APPLICANT:**

SRI. S. SOUNDARARAJAN, S/o. SUBBIAH,
D.No. 2/115A2, MAIN ROAD, MAMAPURAM,
SIVAKASI WEST (Post), SIVAKASI TALUK,
VIRUDHUNAGAR DISTRICT - 626124.

LOCATION OF THE AREA:

DISTRICT : VIRUDHUNAGAR

TALUK : VEMBAKOTTAI

VILLAGE : NATHIKUDI

S.F.Nos. : 922/2, 922/3 & 922/4

EXTENT : 2-92.0 HECTARE.

INDEX:- Static water table in winter - 55M
in summer - 60M

- AREA RENEWAL FOR QUARRY LEASE
- SAFETY DISTANCE 7.5M
(10m from seasonal adai, 50m from sfno 922/5 & seval kulam)
- APPROACH ROAD
- 300M RADIUS LINE
(No well, No historical monuments, sevalkulam is situated
in North -50M safety distance)
- 500M RADIUS LINE
(No habitations, No temples, 3 working quarries with in 500m &
No other structures like culverts, head works, bridges etc.,)

BASE LINE DATA FOR WATER BODIES

SL.No.	DETAILS	Direction	DIST.	DEPTH	WATER
			(M)	(M)	LEVEL
1.	Seasonodai	West	180	0.5	dry
2.	Seasonodai	East	298	0.5	dry
3.	Sevalkulam	South	50	1.5	dry
4.	Well	SW	355	15.0	dry
5.	Well	West	350	16.0	dry
6.	Well	West	270	16.0	dry
7.	Well	NW	300	15.0	dry
8.	Well	West	410	14.0	dry
9.	Seasonodai	East	10	0.1	dry

ROUGH STONE AND GRAVEL QUARRY**VILLAGE MAP**

showing environmental features

SCALE:- 1: 5000

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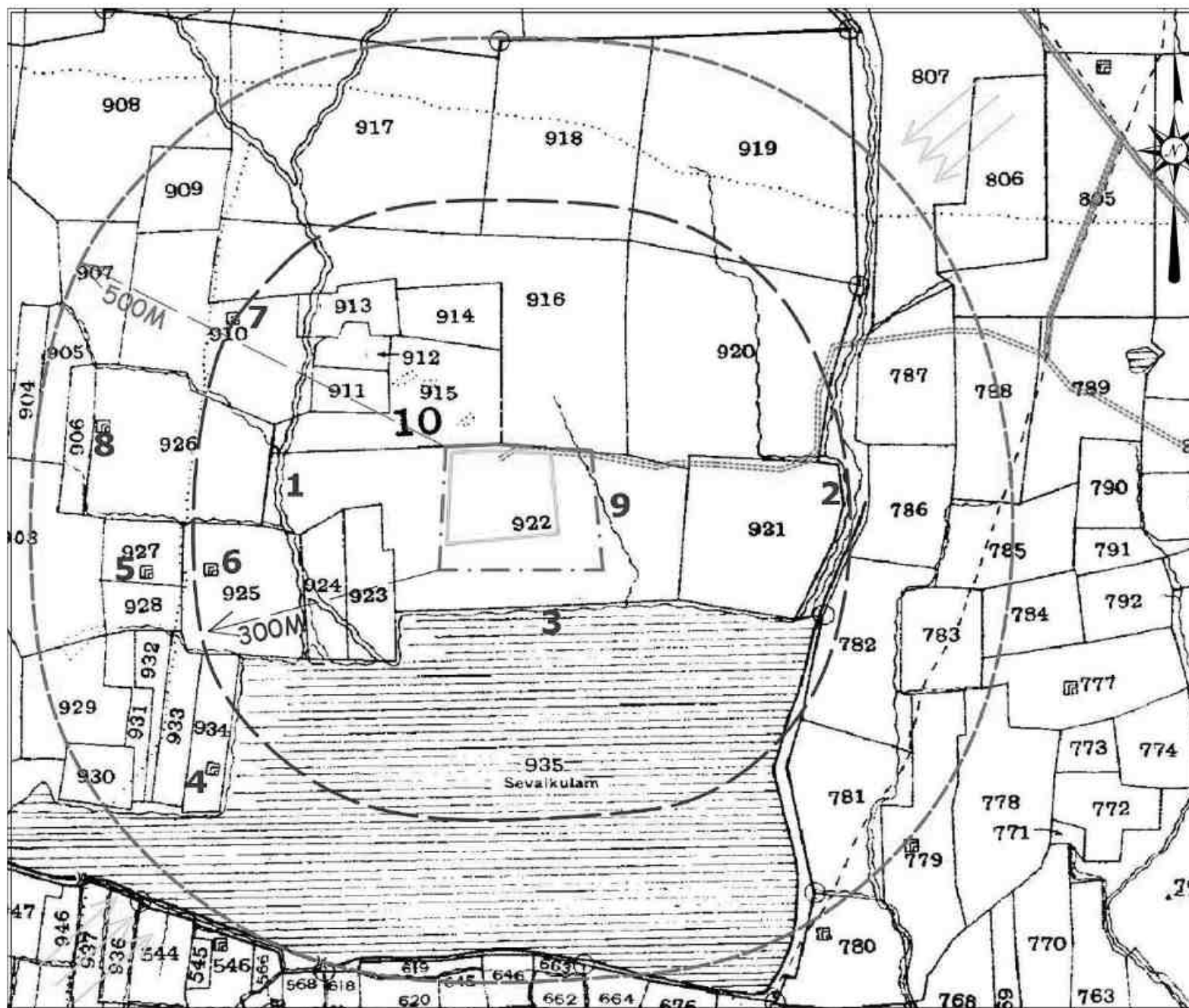


PLATE NO.VIII

ULTIMATE PIT SIZE

LENGTH[M]	WIDTH[M]	DEPTH[M]
131	105	39.0

NAME OF THE APPLICANT:

SRI. S. SOUNDARARAJAN, S/o. SUBBIAH,
D.No. 2/115A2, MAIN ROAD, MAMAPURAM,
SIVAKASI WEST (Post), SIVAKASI TALUK,
VIRUDHUNAGAR DISTRICT - 626124.

INDEX:-

LEASE RENEWAL BOUNDARY	---
SAFETY DISTANCE 7.5M (10m from seasonal odai, 50m from sf no 922/5 & seval kulam kanmoi)	---
BOUNDARY PILLARS	1 2 3 ..
APPROACH ROAD	---
BENCH MARK	BM 100.000M
CONTOURS	---
LAYOUT OF MINE WORKING (FUTURE WATER RESERVOIR)	---

ROUGH STONE AND GRAVEL QUARRY

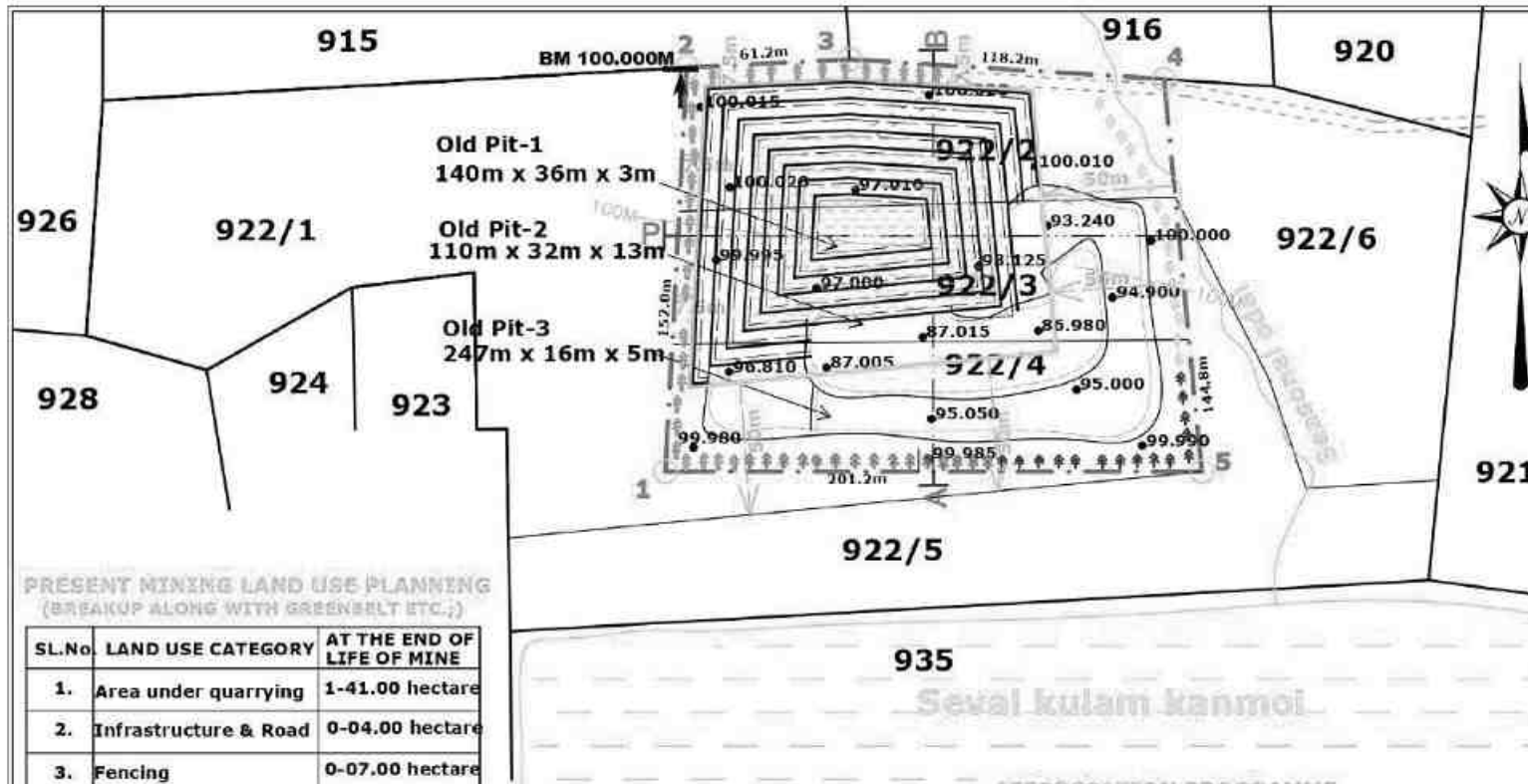
PROGRESSIVE MINE CLOSURE PLAN

SCALE:- 1: 2000

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Signature

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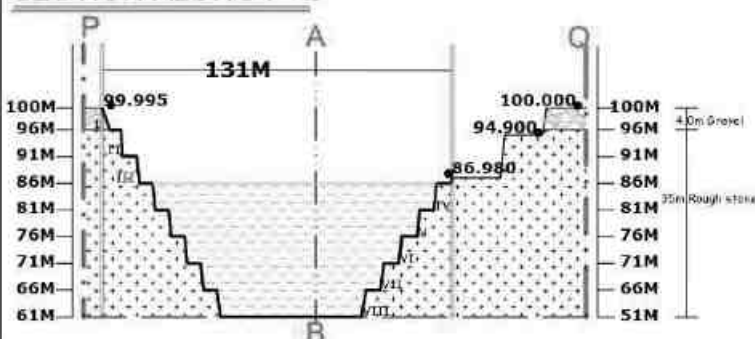
PRESENT MINING LAND USE PLANNING (BREAKUP ALONG WITH GREENBELT ETC.)

SL.No.	LAND USE CATEGORY	AT THE END OF LIFE OF MINE
1.	Area under quarrying	1-41.00 hectare
2.	Infrastructure & Road	0-04.00 hectare
3.	Fencing	0-07.00 hectare
4.	Afforestation (greenbelt & plantation)	0-36.0 hectare
5.	Unutilized area	1-04.0 hectare
TOTAL		2-92.00 Hectare.

AFFORESTATION PROGRAMME

PLANTATION	TYPE	No of TREES	SPACING	AREA (Ha)	SURVIVAL
I - YEAR	NEEM	20	6m x 6m	0-07.2	80%
II - YEAR	NEEM	20	6m x 6m	0-07.2	80%
III - YEAR	NEEM	20	6m x 6m	0-07.2	80%
IV - YEAR	NEEM	20	6m x 6m	0-07.2	80%
V - YEAR	NEEM	20	6m x 6m	0-07.2	80%
TOTAL PLANTATION		100		0-36.0Ha	

SECTION ALONG P-Q



SECTION ALONG A-B

