

**From,**

Thiru. S. Rathinam  
S/O. Sri. S. Sinna Veeran,  
10, North Street,  
Chinna Udaippu Village,  
Perungudi Post,  
Madurai South,  
Madurai District – 625 022.

**To**

**District Environmental Engineer (Madurai District)**

Madurai Tamilnadu Pollution Control Board,  
Thirumangalam Taluk, SIDCO Industrial Estate,  
Madurai -Thirumangalam Rd,  
Kappalur, Tamil Nadu 625008.

**Sub: Submission of Draft EIA/EMP report and Summary for Rough Stone and Gravel Quarry of Thiru. S. Rathinam at Survey Nos. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (Patta Land) over an area of 1.62.17 Ha in Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu – Public Hearing\_Reg**

**Ref: ToR granted by SEIAA, Tamil Nadu vide letter SEIAA-TN/F.No.10072/SEAC/ToR-1506/2023 dated 31.07.2023**

Sir,

With reference to the above mentioned subject, I am herewith submitting the Draft EIA/EMP report and Summary of EIA/EMP report in English and Tamil along with CD for Rough stone and Gravel Quarry over an area of 1.62.17 Ha in Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu. As per the terms of reference issued by SEIAA, Tamil Nadu referred to as (1) above, point no. 39 stipulates conduction of public hearing. Hence, I request you to consider conducting a public hearing for my project at the earliest.

Here with enclosed D.D No –                      dated                      for public hearing.

Thank you.

Yours Faithfully,

**Thiru. S. Rathinam**

Encl: as above

# DRAFT EIA / EMP REPORT

FOR

## ROUGH STONE AND GRAVEL QUARRY

<b>Extent</b>	1.62.17 Ha																
<b>SF.Nos.</b>	84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L																
<b>Location</b>	Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu																
<b>Land Type</b>	Patta Land in the name of applicant																
<b>Production</b>	<table border="1"><thead><tr><th>Year</th><th>Rough Stone M<sup>3</sup></th><th>Gravel in M<sup>3</sup></th><th>Depth</th></tr></thead><tbody><tr><td>1 to 5</td><td>1,14,760.0</td><td>26,325</td><td>17</td></tr><tr><td>6 to 10</td><td>1,27,707.5</td><td>-</td><td>30</td></tr><tr><td>Total</td><td>2,42,467.5</td><td>26,325</td><td>47</td></tr></tbody></table>	Year	Rough Stone M <sup>3</sup>	Gravel in M <sup>3</sup>	Depth	1 to 5	1,14,760.0	26,325	17	6 to 10	1,27,707.5	-	30	Total	2,42,467.5	26,325	47
	Year	Rough Stone M <sup>3</sup>	Gravel in M <sup>3</sup>	Depth													
	1 to 5	1,14,760.0	26,325	17													
	6 to 10	1,27,707.5	-	30													
Total	2,42,467.5	26,325	47														

- Terms of Reference issued by SEIAA-TN/F.No.10072/SEAC/ToR-1506/2023 dated 31.07.2023.
- Baseline Monitoring Period – Summer Season (March – May 2023)

### **PROJECT PROPONENT**

# **THIRU. S. RATHINAM**

CHINNA UDAIPPU VILLAGE, PERUNGUDI POST, MADURAI  
SOUTH MADURAI DISTRICT- 625022

### **CONSULTANT**

## **CREATIVE ENGINEERS & CONSULTANTS**

NABET ACCREDITED CONSULTANCY, NABL ACCREDITED TESTING LAB

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

Mobile: 09444133619 Email : cecgiri@yahoo.com,



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTALAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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**REVISIONS OF EIA/EMP REPORT**

Revision number	Report Status	Date of submission
00/OCT/23	Draft EIA /EMP Report	24.10.2023

Environmental Impact Assessment & Environmental Management Plan Report for Rough stone and Gravel Quarry of Thiru. S. Rathinam at Survey Nos. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (Patta Land) over an area of 1.62.17 Ha in Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu was prepared by Creative Engineers & Consultants and authorized for submission by Dr.B.Swamynathan, EIA Coordinator, of Creative Engineers & Consultants on 24.10.2023 after due review by the personnel and consultation with Thiru. S. Rathinam. Current Revision number of the EIA/EMP report is 00/OCT/23, signifying as per the revision mentioned in the above table that this is a draft EIA/EMP report.



## **PROJECT PROPONENT DECLARATION**

I, Thiru. S. Rathinam received ToR under EIA Notification 2006 from SEIAA-TN/F.No.10072/SEAC/ToR-1506/2023 dated 31.07.2023 for Rough stone and Gravel Quarry over an area of 1.62.17 Ha in Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu.

I 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 23.12.2023.

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.

**Thiru. S. Rathinam**





# 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 23.12.2023.

**Thiru. S. Rathinam** received ToR under EIA Notification 2006 from SEIAA, Tamil Nadu vide their SEIAA-TN/F.No.10072/SEAC/ToR-1506/2023 dated 31.07.2023 for Rough stone and Gravel Quarry over an area of 1.62.17 Ha in Kallanai Village, Kalligudi Taluk, Madurai 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

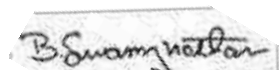
**Creative Engineers & Consultants**

Annexure – VII

**Declaration by Experts contributing to the EIA Report for**

**Rough stone and Gravel Quarry of Thiru. S. Rathinam at Survey Nos. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (Patta Land) over an area of 1.62.17 Ha in Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu**

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



EIA coordinator:



Name: **B.Swamynathan**

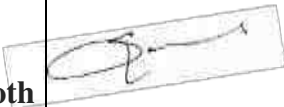



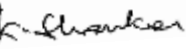
Signature and Date:


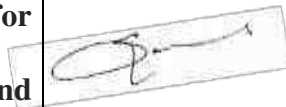

Period of involvement: **January 2023 onwards**



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	<ul style="list-style-type: none"> <li>• Identification of baseline monitoring stations and study of the monitored data with respect to the applicable standards.</li> <li>• Identification of sources of air pollution comprising dust, gaseous emission due to mining &amp; other activities</li> <li>• Identification of Impacts &amp; suggestion of mitigation measures</li> </ul> <b>Period: March 2023 onwards</b>	
		B.Swamynathan	<ul style="list-style-type: none"> <li>• Data interpretation of Micro meteorological data for wind rose.</li> <li>• Identification of polluting source and suggestion of suitable mitigation measures.</li> </ul> <b>Period: March 2023 onwards</b>	

2	WP*	G.Sandhya	<ul style="list-style-type: none"> <li>• Study of the monitored data with respect to the applicable standards.</li> <li>• Identification of Water requirement &amp; Source</li> <li>• Preparation of water balance diagram</li> <li>• Identification of Water polluting sources</li> <li>• Impact of the project on the water quality, both surface and groundwater</li> <li>• Suggestion of Mitigation measures to control water pollution</li> </ul> <p>Period: March 2023 onwards</p>	
3	SHW*	P.Giri	<ul style="list-style-type: none"> <li>• Quantification of mineral &amp; waste from mining operation</li> <li>• Waste disposal method evaluation</li> <li>• Providing dump management plan</li> <li>• Providing Surface Runoff Management Structure Requirements.</li> <li>• Identification of Hazardous waste and its details of disposal</li> </ul> <p>Period: March 2023 onwards</p>	
4	SE*	R.Baburaj	<ul style="list-style-type: none"> <li>• Identification of villages in the study area and finalization of demographic profile of the villages within the study area.</li> <li>• Preparation of sections relevant to SE functional area in the EIA/EMP report</li> </ul> <p>Period: March 2023 onwards</p>	
5	EB*	B.Swamynathan	<ul style="list-style-type: none"> <li>• Perusal of existing data relevant to this project.</li> <li>• Studying the details of flora and fauna, separately for core, buffer zone and forest area based on primary field survey.</li> <li>• Identification of species , Indicating the Schedule of the fauna present in the study area</li> <li>• Assessment of impact on Biological environment and suggestion of mitigative measures</li> <li>• Collecting &amp; providing details of existing and proposed Green belt development /plantation in the core zone</li> </ul> <p>Period: March 2023 onwards</p>	
6	HG*	K.Shankar	<ul style="list-style-type: none"> <li>• Study of existing surface drainage arrangements in the core and buffer zone, impact due to mining on these drainage courses and suggestion of mitigative</li> </ul>	

			<p>measures</p> <ul style="list-style-type: none"> <li>• Perusal of site specific ground water table details for the core zone and the study area.</li> <li>• Studied the hydrological aspects of surface and groundwater in study area</li> <li>• Study about impact on the hydrology due to mining operation</li> <li>• Suggesting mitigative measures like RWH for enhancement of ground water level</li> </ul> <p><b>Period: March 2023 onwards</b></p>	
7	GEO*	K.Shankar	<ul style="list-style-type: none"> <li>• Study of geology of the ML area and the surrounding areas.</li> <li>• Provide details about Mineral composition</li> </ul> <p><b>Period: March 2023 onwards</b></p>	
8	SC*	B.Swamynathan	<ul style="list-style-type: none"> <li>• Study of soil profile</li> <li>• Assessment of Impact on soil and suggesting plantation scheme.</li> </ul> <p><b>Period: March 2023 onwards</b></p>	
9	AQ*	G.Sandhya	<ul style="list-style-type: none"> <li>• Quantification of emission particulars</li> <li>• Air quality modelling for post project impact on the air quality prediction of the study area.</li> <li>• Analysis of the Isopleth generated</li> <li>• Arriving at the post project concentration at the AAQ monitoring locations</li> <li>• Preparation of meteorological data in suitable form for input into the model</li> <li>• Simulation of model for generation of Isopleth and data interpretation.</li> <li>• Studying the impact on AAQ monitoring locations due to the generated emissions.</li> <li>• Preparation of sections relevant to AQ functional area in the EIA/EMP report.</li> </ul> <p><b>Period: March 2023 onwards</b></p>	
10	NV*	P.Giri	<ul style="list-style-type: none"> <li>• Identification of baseline monitoring stations and study of the monitored data with respect to the applicable standards.</li> <li>• Predict the noise level and vibration level due to proposed mining operation based on scientific evaluation.</li> <li>• Suggesting the Mitigation measures to control noise</li> </ul>	

			<p>pollution, Suggesting the Mitigation measures to control ground vibration</p> <p><b>Period: March 2023 onwards</b></p>	
11	LU	B.Swamynathan	<ul style="list-style-type: none"> <li>• Collection of Remote sensing satellite data to study the land use pattern.</li> <li>• Primary field survey and limited field verification</li> <li>• 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.</li> </ul> <p><b>Period: March 2023 onwards</b></p>	
12	RH*	K.Shankar	<ul style="list-style-type: none"> <li>• Identified Major risks involved in the project Mitigation measures suggested to avoid risk.</li> <li>• Preparation of onsite and offsite emergency management plan</li> </ul> <p><b>Period: March 2023 onwards</b></p>	

\*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 **Rough stone and Gravel Quarry of Thiru. S. Rathinam at Survey Nos. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (Patta Land) over an area of 1.62.17Ha in Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu**

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

Signature:



Name: **P.Giri**

Designation: **Chief Executive**

Name of the EIA consultant organization: **Creative Engineers & Consultants, Chennai – 59**

NABET Certificate No. & Issue Date: **No- NABET/EIA/2023/SA 0187 & date 30.01.2023**



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



### Certificate of Accreditation

**Creative Engineers and Consultants,**  
9B/4, Bharathwajar street, East Tambaram, Chennai, Tamil Nadu

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

S. No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1	Mining of minerals including opencast/ underground mining	1	1 (a) (i)	A
2	Thermal power plants	4	1 (d)	A
3	Mineral beneficiation	7	2 (b)	A
4	Cement Plants	9	3 (b)	A

**Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in SAAC minutes dated Oct 4, 2022 posted on QCI-NABET website.**

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/23/2653 dated January 30, 2023. The accreditation needs to be renewed before the expiry date by Creative Engineers and Consultants, following due process of assessment.

Sr. Director, NABET  
Dated: January 30, 2023

Certificate No.  
NABET/EIA/2023/SA 0187

Valid up to  
December 23, 2023

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



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# **TERMS OF REFERENCE & ITS COMPLIANCE**



THIRU.DEEPAK S. BILGI, I.F.S.  
MEMBER SECRETARY

STATE LEVEL ENVIRONMENT IMPACT  
ASSESSMENT AUTHORITY-TAMILNADU

3<sup>rd</sup> Floor, Panagal Maaligai,  
No.1, Jeenis Road, Saidapet,  
Chennai - 600 015.  
Phone No. 044-24359973  
Fax No. 044-24359975

**TERMS OF REFERENCE (ToR)**

**Lr No.SEIAA-TN/F.No.10072/SEAC/ToR-1506/2023 Dated:31.07.2023**

To

Thiru. S. Rathinam,  
S/o. Sri. S. Sinna Veeran,  
10, North Street,  
Chinna Udaippu Village,  
Perungudi Post,  
Madurai South,  
Madurai District – 625 022.

Sir / Madam,

**Sub:** SEIAA, Tamil Nadu – Terms of Reference with Public Hearing (ToR) for the Proposed Rough Stone and Gravel Quarry over an extent of 1.62.17 Ha at S.F. No: 84/2C1, 2D1, 2E1, 2C2, 2D2A, 2E2, 2J, 2K & 2L of Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu by Thiru. S. Rathinam-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/430841/2023, Dated:25.05.2023.
2. Your application submitted for Terms of Reference dated: 31.05.2023.
3. Minutes of the 392<sup>nd</sup> Meeting of SEAC held on 14.07.2023.
4. Minutes of the 642<sup>nd</sup> meeting of Authority held on 31.07.2023.

  
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Kindly refer to your proposal submitted to the State Level Impact Assessment Authority for Terms of Reference.

The proponent, Thiru. S. Rathinam has submitted application for ToR, in Form-I, Pre-Feasibility report for the Proposed Rough Stone and Gravel Quarry over an extent of 1.62.17 Ha at S.F. No: 84/2C1, 2D1, 2E1, 2C2, 2D2A, 2E2, 2J, 2K & 2L of Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu.

**Discussion by SEAC and the Remarks:-**

**Proposed Rough Stone and Gravel Quarry over an extent of 1.62.17 Ha at S.F. No: 84/2C1, 2D1, 2E1, 2C2, 2D2A, 2E2, 2J, 2K & 2L of Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu by Thiru. S. Rathinam -For Terms of Reference. (SIA/TN/MIN/430841/2023, Dated:25.05.2023).**

The proposal was placed in this 392<sup>nd</sup> Meeting of SEAC held on 14.07.2023. The details of the project furnished by the proponent are available in the website (parivesh.nic.in).

**The SEAC noted the following:**

1. The Project Proponent, Thiru. S. Rathinam has applied for Terms of Reference for the Proposed Rough Stone and Gravel Quarry over an extent of 1.62.17 Ha at S.F. No: 84/2C1, 2D1, 2E1, 2C2, 2D2A, 2E2, 2J, 2K & 2L of Kallanai Village, Kalligudi Taluk, Madurai 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.
3. As per the mining plan the lease period is 10 years. The mining plan is for the period of 10 years & production should not exceed 2,42,467.5 m<sup>3</sup> of Rough Stone and 26,325 m<sup>3</sup> of Gravel with an ultimate depth of mining 47m BGL.

Based on the- presentation made by the proponent, **SEAC decided to recommend for grant of Terms of Reference (TOR) with Public Hearing**, subject to the following TORs, 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. During the presentation, SEAC noted that from the KML file uploaded by the proponent in PARIVESH portal, it is construed that the proposed site has been quarried. Further, the precise area communication letter and mine plan approval letter have not mentioned about the quarrying activity carried out. Hence, the PP shall furnish a letter obtained from AD/DD Mine & Geology at the time of EIA appraisal indicating whether any quarrying activities are

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- carried out previously in the proposed quarry site, the depth of such quarrying operation, period of the operation, quantity of minerals mined out and permit details for quarrying & transportation of material.
2. The PP shall submit a comprehensive hydrological report indicating the impact of proposed quarrying operations on Kallanaī Kanmoi exists at 120 m (E), and 'Kundaru' situated at 30m from the proposed quarry site and also on the other waterbodies like lake, water tanks, etc are located within 1 km of the proposed quarry. The studies shall also spell out the monitoring & mitigating measures for such hydrological
  3. The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m 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.
  4. The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report.

#### ANNEXURE-I

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 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.
4. 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

  
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- 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.
5. 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.
  6. 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.
  7. 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.
  8. 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.
  9. 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,
    10. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?
    11. 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.

  
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- Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.
12. 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).
  13. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,
  14. 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.
  15. 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.
  16. 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.
  17. 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.
  18. 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.
  19. 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 &

  
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- health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.
20. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.
  21. 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.
  22. 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.
  23. 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.
  24. 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.
  25. Impact on local transport infrastructure due to the Project should be indicated.
  26. 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.
  27. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.
  28. 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.
  29. 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

  
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- 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.
30. 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
  31. 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.
  32. 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.
  33. 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.
  34. 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.
  35. 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.
  36. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
  37. 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.
  38. 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.

  
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39. 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.
40. 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.

Appendix I  
List of Native Trees Suggested for Planting

No	Scientific Name	Tamil Name	Tamil Name
1	<i>Acacia mangium</i>	Vilavil	விலவில்
2	<i>Adansonia digitata peruviana</i>	Sitambari	சிதம்பரி
3	<i>Albizia lebbek</i>	Vengai	வெங்கை
4	<i>Albizia amara</i>	Uai	உயி
5	<i>Bambusa nana</i>	Machhara	மாச்சரா
6	<i>Bambusa nana</i>	Aaru	அரூ
7	<i>Bambusa nana</i>	Iravathi	இரவதி
8	<i>Bambusa nana</i>	Karuvai	கரவாயி
9	<i>Bambusa nana</i>	Pala	பலா
10	<i>Bambusa nana</i>	Muvukkaruvai	முவுக்கரவாயி
11	<i>Bambusa nana</i>	Dava, Serudava	டாவு, செருடாவு
12	<i>Calophyllum inophyllum</i>	Purrai	புரை
13	<i>Cassia fistula</i>	Saravali	சரவலி
14	<i>Cassia fistula</i>	Serudavai	செருடவாயி
15	<i>Chromolaena odorata</i>	Ponnam	பொன்னம்
16	<i>Chromolaena odorata</i>	Pongu, Marudavai	பொங்கு, மரூடவாயி
17	<i>Cordia alliodora</i>	Naradi	நரதி
18	<i>Cordia alliodora</i>	Nalamangalam	நலாமங்கலம்
19	<i>Dillenia indica</i>	Uga, Uga	உகா, உகா
20	<i>Dillenia indica</i>	Saravali, Serudava	சரவலி, செருடாவு
21	<i>Dillenia indica</i>	Karuvai	கரவாயி
22	<i>Dillenia indica</i>	Vaiyandu	வையாண்டூர்
23	<i>Ficus religiosa</i>	Kalachi	காலாசி
24	<i>Ficus religiosa</i>	Athayavayal	அதையவாயல்
25	<i>Ficus religiosa</i>	Aaru	அரூ
26	<i>Ficus religiosa</i>	Aaru	அரூ
27	<i>Lantana camara</i>	Chidambaram	சிதம்பரம்
28	<i>Lantana camara</i>	Poo Marudavai	பூ மரூடவாயி
29	<i>Lantana camara</i>	Saravali, Serudava	சரவலி, செருடாவு
30	<i>Lantana camara</i>	Vaiyandu	வையாண்டூர்
31	<i>Lantana camara</i>	Piravayal	பிரவையல்
32	<i>Lantana camara</i>	Thiruvai	திருவாயி
33	<i>Lantana camara</i>	ChakkalPala	சாக்கல்பலா
34	<i>Lantana camara</i>	Mangalamangalam	மங்கலாமங்கலம்
35	<i>Lantana camara</i>	Kudam	கடம்
36	<i>Lantana camara</i>	Navai	நவாயி
37	<i>Lantana camara</i>	Vaiyandu	வையாண்டூர்
38	<i>Lantana camara</i>	Kalachi	காலாசி
39	<i>Lantana camara</i>	Pongu	பொங்கு

40	<i>Pennisetum polystachion</i>	Murrai	முரை
41	<i>Pennisetum polystachion</i>	Naramurrai	நராமுரை
42	<i>Pennisetum polystachion</i>	Malapooram	மலபூர்
43	<i>Prosopis juliflora</i>	Vaiyandu	வையாண்டூர்
44	<i>Pterocarpus marsiprum</i>	Vengai	வெங்கை
45	<i>Pterocarpus marsiprum</i>	Vengai, Tada	வெங்கை, தாடா
46	<i>Pterocarpus marsiprum</i>	Polavu	பொலாவு
47	<i>Pterocarpus marsiprum</i>	Karipala	கரபலா
48	<i>Salicornia peruviana</i>	Uga Maram	உகா மரம்
49	<i>Sapindus emarginatus</i>	Marupangan, Soapukai	மரபுங்கா, சோபுகாயி
50	<i>Saraca asoca</i>	Asoca	அசோகா
51	<i>Strobilus asper</i>	Piray maram	பிராய மரம்
52	<i>Strachnos nuxvomica</i>	Yetti	யெதி
53	<i>Strachnos nuxvomica</i>	Theerthang Kottai	தீர்த்தங்க கோட்டை
54	<i>Syconium cumini</i>	Navai	நவாயி
55	<i>Terminalia bellerica</i>	Thandi	தாண்டி
56	<i>Terminalia arjuna</i>	Ven marudhu	வென் மரூடூர்
57	<i>Terna chala</i>	Sandhara vembu	சாந்தரா வெம்பு
58	<i>Tecoparia populnea</i>	Puyarasu	புயராசு
59	<i>Walastrifolia</i>	vairava	வையாண்டூர்
60	<i>Wrightia tinctoria</i>	Veppalai	வெப்பலாயி
61	<i>Pithecolobium dulce</i>	Kodukkapuli	கோடக்கபுலி

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**Discussion by SEIAA and the Remarks:-**

The subject was placed in the 642<sup>nd</sup> Authority meeting held on 31.07.2023. The Authority noted that the subject was appraised in the 392<sup>nd</sup> Meeting of SEAC held on 14.07.2023. After detailed discussions, the Authority accepts the recommendation of SEAC and decided to **grant Terms of Reference (ToR) along with Public Hearing** under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC & normal conditions and conditions in **Annexure 'B'** of this minutes in addition to the following conditions.

**Annexure 'B'****Cluster Management Committee**

1. Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.
2. The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,
3. The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.
4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.
5. The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.
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.
7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.
8. The committee shall furnish the Emergency Management plan within the cluster.
9. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.

  
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10. The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & safety.
11. The committee shall furnish the fire safety and evacuation plan in the case of fire accidents.

**Impact study of mining**

12. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following
  - a) Soil health & soil biological, physical land chemical features.
  - b) Climate change leading to Droughts, Floods etc.
  - c) Pollution leading to release of Greenhouse gases (GHG), rise in Temperature, & Livelihood of the local people.
  - d) Possibilities of water contamination and impact on aquatic ecosystem health.
  - e) Agriculture, Forestry & Traditional practices.
  - f) Hydrothermal/Geothermal effect due to destruction in the Environment.
  - g) Bio-geochemical processes and its foot prints including environmental stress.
  - h) Sediment geochemistry in the surface streams.

**Agriculture & Agro-Biodiversity**

13. Impact on surrounding agricultural fields around the proposed mining Area.
14. Impact on soil flora & vegetation around the project site.
15. Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.
16. The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.
17. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.
18. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.

  
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**Forests**

19. The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.
20. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.
21. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.
22. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.

**Water Environment**

23. 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.
24. Erosion Control measures.
25. 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.
26. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.
27. The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities.
28. 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.
29. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.
30. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.

  
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**Energy**

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

**Climate Change**

32. 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.
33. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.

**Mine Closure Plan**

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

**EMP**

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

**Risk Assessment**


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

**Disaster Management Plan**

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

**Others**

39. 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.

  
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40. 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.
41. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

#### A. STANDARD TERMS OF REFERENCE

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

  
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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

  
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- 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

  
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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

  
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- 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

  
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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.

  
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- 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.

  
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10. EIA report should strictly follow the Environmental Impact Assessment Guidance Manual for Mining of Minerals published February 2010.
11. Detail plan on rehabilitation and reclamation carried out for the stabilization and restoration of the mined areas.
12. The EIA study report shall include the surrounding mining activity, if any.
13. Modeling study for Air, Water and noise shall be carried out in this field and incremental increase in the above study shall be substantiated with mitigation measures.
14. A study on the geological resources available shall be carried out and reported.
15. A specific study on agriculture & livelihood shall be carried out and reported.
16. Impact of soil erosion, soil physical chemical and biological property changes may be assumed.
17. Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./ private land, status of its acquisition, nearby (in 2-3 km.) water body, population, within 10km other industries, forest, eco-sensitive zones, accessibility, (note - in case of industrial estate this information may not be necessary)
18. Baseline environmental data - air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
19. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
20. Likely impact of the project on air, water, land, flora-fauna and nearby population
21. Emergency preparedness plan in case of natural or in plant emergencies
22. Issues raised during public hearing (if applicable) and response given
23. CER plan with proposed expenditure.
24. Occupational Health Measures
25. Post project monitoring plan
26. The project proponent shall carry out detailed hydro geological study through intuitions/NABET Accredited agencies.
27. A detailed report on the green belt development already undertaken is to be furnished and also submit the proposal for green belt activities.
28. The proponent shall propose the suitable control measure to control the fugitive emissions during the operations of the mines.
29. A specific study should include impact on flora & fauna, disturbance to migratory pattern of animals.

  
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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 2<sup>nd</sup> December, 2009, 18<sup>th</sup> March 2010, 28<sup>th</sup> May 2010, 28<sup>th</sup> June 2010, 31<sup>st</sup> December 2010 & 30<sup>th</sup> 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 abovementioned 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 29<sup>th</sup> August, 2017.

  
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**Copy to:**

1. The Additional Chief Secretary to Government, Environment & Forests Department, Govt. of Tamil Nadu, Fort St. George, Chennai - 9
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD Cum-Office Complex, East Arjun Nagar, New Delhi 110032.
3. The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032.
4. The APCCF (C), Regional Office, MoEF & CC (SZ), 34, HEPC Building, 1<sup>st</sup> & 2<sup>nd</sup> Floor, Cathedral Garden Road, Nungambakkam, Chennai -34.
5. Monitoring Cell, IA Division, Ministry of Environment, Forests & CC, Paryavaran Bhavan, CGO Complex, New Delhi 110003
6. The District Collector, Madurai District.
7. Stock File.



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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**TOR COMPLIANCE**

<b>S. No</b>	<b>ToR Points</b>	<b>Reply</b>	<b>Pg.No</b>
<b>A. ToR in Addition to Standard ToR</b>			
<b>A. Annexure</b>			
1.	During the presentation, SEAC noted that from the KML fire uploaded by the proponent in PARIVESH portal, it is construed that the proposed site has been quarried. Further, the precise area communication letter and mine plan approval letter have not mentioned about the quarrying activity carried out. Hence, the PP shall furnish a letter obtained from AD/DD Mine & Geology at the time of EIA appraisal indicating whether any quarrying activities are carried out previously in the proposed quarry site, the depth of such quarrying operation, period of the operation. Quantity of minerals mined out and permit details for quarrying transportation of material.	Under Progress	--
2.	The PP shall submit a comprehensive hydrological report indicating the impact of proposed quarrying operations on Kallanai Kanmoi exists at 120 m (E), and 'Kundaru' situated at 30 m from the proposed quarry site and also on the other water bodies like lake, water tanks' etc. are located within 1 km of the proposed quarry. The studies shall also spell out the monitoring & mitigating measures for such hydrological	A details given in <b>Chapter-IV.</b>	<b>4-9</b>
3.	The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m 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.	A details given in <b>Chapter-II</b>	<b>2-10</b>
4.	The proponent shall carry out Bio diversity study through reputed institution and the same shall be included in EIA Report.	A detailed study is given in <b>Chapter-III.</b>	<b>3-36</b>



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<b>B. Annexure</b>			
1.	<p>In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following:</p> <ul style="list-style-type: none"> <li>a) Original pit dimension</li> <li>b) Quantity achieved Vs EC Approved Quantity</li> <li>c) Balance Quantity as per Mineable Reserve calculated.</li> <li>d) Mined out Depth as on date Vs EC Permitted depth</li> <li>e) Details of illegal/illicit mining</li> <li>f) Violation in the quarry during the past working.</li> <li>g) Quantity of material mined out outside the mine lease area</li> <li>h) Condition of Safety zone/benches</li> <li>i) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.</li> </ul>	Not applicable	--
2.	<p>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.</p>	<p>VAO certificate regarding the location of habitations within 300m radius from the periphery of the site was obtained and given in Annexure No. 9 of AMP.</p>	A-76
3.	<p>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.</p>	Under Progress	--
4.	<p>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 &amp; 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</p>	Not applicable	--



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	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.		
5.	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.	Agreed	--
6.	The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/ I Class mines manager appointed by the proponent.	Agreed	--
7.	The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.	Agreed	--
8	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	--
9	If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,	Not applicable	--
10	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?		



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11	<p>Quantity of minerals mined out.</p> <ul style="list-style-type: none"> <li>• Highest production achieved in any one year</li> <li>• Detail of approved depth of mining.</li> <li>• Actual depth of the mining achieved earlier.</li> <li>• Name of the person already mined in that leases area.</li> <li>• If EC and CTO already obtained, the copy of the same shall be submitted.</li> <li>• Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.</li> </ul>	Not applicable	--
12	<p>All comer 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).</p>	<ul style="list-style-type: none"> <li>• Satellite imagery with corner coordinates of the project area is provided in <b>Figure 2.4, Chapter-II.</b></li> <li>• Toposheet of the lease area and buffer zone is provided in <b>Figure 3.1, Chapter-III.</b></li> <li>• Geology, Geomorphology, Lithology map of the lease area and buffer zone is provided in <b>Figure 3.19, 3.20 and 3.21, Chapter-III.</b></li> </ul>	<p>2-6</p> <p>3-2</p> <p>3-45</p>
13	<p>The PP shall carry out Drone video survey covering the cluster, Green belt, fencing etc.,</p>	Agreed	--
14	<p>The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees &amp; safety distance between the adjacent quarries &amp; water bodies nearby provided as per the approved mining plan.</p>	Agreed	--
15	<p>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.</p>	<ul style="list-style-type: none"> <li>• The details of geological and mineable reserves are provided in <b>Table 2.4, Chapter-II.</b></li> <li>• The production schedule during the plan period is provided in <b>Table 2.7, Chapter-II.</b></li> <li>• The working methodology is detailed under <b>Section 2.8, Chapter-II.</b></li> <li>• Anticipated impacts of mining operations on surrounding environment is provided under</li> </ul>	<p>2-13</p> <p>2-15</p> <p>2-14</p> <p>4-1</p>



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		Chapter-IV.	
16	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 is provided as <b>Figure No.10.1, Chapter-X.</b>	10-3
17	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.	Agreed	--
18	The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.	The baseline data on micro-meteorology, ambient air quality, Water quality, noise level, soil and flora & fauna are collected during Summer Season (March 2023 – May 2023) and detailed in <b>Section 3.3 to 3.5 of Chapter-III.</b> The details of Traffic Study is provided under <b>Section 4.9, Chapter-IV.</b>	3-11 & 3-33  4-24
19	The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of air pollution, water pollution, & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.	<ul style="list-style-type: none"> <li>The details of the quarries located within the 500m radius of the project is given vide <b>Annexure-3.</b></li> <li>A cumulative impact study has been carried out and furnished in <b>Para 7.6, Chapter-VII.</b></li> <li>Environmental Management Plan is provided under Chapter-X.</li> </ul>	A-8  7-5  10-1
20	Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	Water requirement for this project is 10 KLD. The required water will be procured initially from outside agencies. Later Rain water harvested in the mine	2-18



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		sump can also be used.	
21	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.	<ul style="list-style-type: none"> <li>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.</li> <li>The land use pattern at present and at the end of the quarrying period has been provided under section 4.5.1, Chapter-IV.</li> <li>The post mining land use has been provided in Table No. 4.13. The post mining land use plan showing afforestation and water body is shown in Figure No- 4.5.</li> </ul>	3-28 4-16 4-21
22	Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.	There is no waste generation anticipated in this quarry. As such there are no OB dumps involved.	--
23	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	--
24.	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.	<ul style="list-style-type: none"> <li>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 550 m will be constructed around the quarry and will be connected to a settling pond with silt traps. The supernatant clear water from the settling pond will be flow to the downstream users. The surface runoff management structures diagram is given in Figure No 4.4, Chapter-IV.</li> <li>Details of rainwater harvesting are provided under Section 4.3.4.2,</li> </ul>	4-9 4-11



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		Chapter-IV.	
25.	Impact on local transport infrastructure due to the Project should be indicated.	<ul style="list-style-type: none"> <li>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.</li> <li>About 2 trips per hour of transport is envisaged. The existing road can easily absorb this traffic due to this project. The details of various mitigative measures towards logistical system is elaborated under <b>Section 4.9, Chapter-IV.</b></li> </ul>	4-24
26.	A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity.	An ecological survey of the study area was conducted with reference to listing of species and assessment of the existing baseline ecological conditions. Details are provided under section 3.5.1, Chapter-III.	3-33
27.	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
28.	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.	Agreed	--
29.	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	--
30.	Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark	Agreed	--



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	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		
31.	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.	7-3
32.	A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.	Various risks likely to arise due to mining activities are detailed under section 7.3, Chapter-VII.	7-1
33.	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.	4-22
34.	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.	<p>Details of the socio-economic survey conducted in the buffer zone has been provided in Para 3.2.4, Chapter-III.</p> <p>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.</p>	3-10
35.	The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	Nearby villages were visited for conducting study to know about socio-economic conditions, including aspirations and requirements of the people for a better living and collected relevant data. The details are provided under section 3.2.4, Chapter-III.	3-10
36.	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.	There is no litigation pending against the project.	--
37.	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 and Gravel 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,	8-1





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		<p>infrastructural etc.</p> <p>Direct employment to about 9 people and indirect employment to scores of people.</p> <p>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.</p>	
38.	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/TNPCCB.	This is a proposed quarry. As such no mining activities have been carried out in this lease area.	--
39.	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.	Will be submitted.	--
40.	Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.	Agreed	--
<b>A. Annexure-B</b>			
<b>Cluster Management Committee</b>			
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 <b>Section 10.2.2, Chapter-X.</b>	<b>10-2</b>
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 <b>Section 10.2.2, Chapter-X.</b>	<b>10-2</b>
3.	The List of members of the committee formed shall be submitted to AD/It4ines 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 <b>Section 10.2.2, Chapter-X.</b>	<b>10-2</b>
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	Details of the cluster management committee is provided under <b>Section</b>	<b>10-2</b>



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	of haul roads by the individual quarry in the form of route map and network.	10.2.2, Chapter-X.	
5.	The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.	Details of the cluster management committee is provided under <b>Section 10.2.2, Chapter-X.</b>	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.	Details of the cluster management committee is provided under <b>Section 10.2.2, Chapter-X.</b>	10-2
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 <b>Section 10.2.2, Chapter-X.</b>	10-2
8.	The committee shall furnish the Emergency Management plan within the cluster.	Details of the cluster management committee is provided under <b>Section 10.2.2, Chapter-X.</b>	10-2
9.	The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.	Details of the cluster management committee is provided under <b>Section 10.2.2, Chapter-X.</b>	10-2
10.	The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & safety.	Details of the cluster management committee is provided under <b>Section 10.2.2, Chapter-X.</b>	10-2
11.	The committee shall furnish the fire safety and evacuation plan in the case of fire accidents.	Details of the cluster management committee is provided under <b>Section 10.2.2, Chapter-X.</b>	10-2
<b>Impact Study of Mining</b>			
12.	<p>Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following:</p> <p>a) Soil health &amp; soil biological, physical land chemical features</p> <p>b) Climate change leading to Droughts, Floods etc.</p> <p>c) Pollution leading to release of Greenhouse gases (GHG), rise in Temperature, &amp; Livelihood of the local people.</p> <p>d) Possibilities of water contamination and impact</p>	<ul style="list-style-type: none"> <li>• As such the production from this lease is very low to cause any appreciable impact.</li> <li>• No adverse impact on the surrounding environment is envisaged since the number of equipment's to be used to achieve this small production is very less and the magnitude of operation is of very small level.</li> <li>• Besides, as is it a mining project, no adverse generation of heat is</li> </ul>	4-18



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	<p>on aquatic ecosystem health</p> <p>e) Agriculture, Forestry &amp; Traditional practices.</p> <p>f) Hydrothermal/Geothermal effect due to destruction in the Environment.</p> <p>g) Bio-geochemical processes and its loot prints including environmental stress</p> <p>h) Sediment geochemistry in the surface streams</p>	<p>envisaged.</p> <ul style="list-style-type: none"> <li>• 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 800 number of plants will be planted in and around the lease area.</li> <li>• 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.</li> <li>• There are no Protected or Eco-Sensitive Zone or forest land nearby wherein it can have an impact.</li> <li>• 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.</li> <li>• These mitigative measures will be continued for the entire lease period ensuring no impact on the environment.</li> <li>• 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.</li> </ul>	
<b>Agriculture &amp; Agro-Biodiversity</b>			
13.	Impact on surrounding agricultural fields around the proposed mining Area.	Due to poor soil condition and non-availability of perineal water source, no major agricultural activity is carried out	4-18



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		in and around the lease area. Only patches of plantation are observed in few places in the monsoon season based on water availability.	
14.	Impact on soil flora & vegetation around the project site.	The impact of mining on biological environment is provided under <b>Table 4.15, Chapter-IV.</b>	4-17
15.	Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.	The details of flora in the core zone is provided in <b>Table 3.24, Chapter-III.</b> There is no major clearance of vegetation or transplantation involved.	3-36
16.	The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.	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 <b>Section 3.5.1, Chapter-III.</b>	3-33
17.	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 <b>Table No. 4.13.</b> The post mining land use plan showing afforestation and water body is shown in <b>Figure No- 4.5.</b>	4-16 4-21
18.	The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.	Due to poor soil condition and non-availability of perineal water source, no major agricultural activity is carried out in and around the lease area. Only patches of plantation are observed in few places in the monsoon season based on water availability.	4-18
<b>Forests</b>			
19.	The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.	There are no reserve forest in the proximity of the lease area.	3-2
20.	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-III.	3-33
21.	The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.	Replied in point 20. Above	--



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22.	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.	3-3
<b>Water Environment</b>			
23.	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.	Details of hydrogeological scenario of this project is provided under section 3.6, Chapter-III.	3-43
24.	Erosion Control Measures	<ul style="list-style-type: none"> <li>• Since the entire material from the quarry face will be directly dispatched to the consumers, there will not be any stockpiles. There are no waste dumps in this quarry. As such there will not be any wash out due to stock pile or waste dumps.</li> <li>• Towards surface runoff management, a garland drain of length 550m 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</li> </ul>	4-9
25.	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 a odai channel on the western side of the lease area for which safety distance of 50m has been left. There is no proposal to discharge any effluent into this water body. No major impact is envisaged on the nearby water bodies due to project operations	4-10
26.	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.	3-3
27.	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. 4.13. The post mining land use plan showing afforestation and water body is shown in Figure No- 4.5.	4-16 4-21



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28.	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.	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The land use pattern details are provided under section 4.5.1, Chapter-IV.</li> </ul>	3-33 4-16
29.	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	<ul style="list-style-type: none"> <li>• Soil samples were collected in 3 locations in the core and buffer zone to analyse the physiochemical characteristics of the soil in the area. The soil quality data is provided in Table No.3.18, Chapter-III.</li> </ul>	3-27
30.	The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.	<ul style="list-style-type: none"> <li>• The nearest major water bodies is provided in Table No.3.1, Chapter-III.</li> <li>• There is a odai channel on the western side of the lease area for which safety distance of 50m has been left. 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.</li> <li>• 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 47m. 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.</li> </ul>	3-2 4-10
<b>Energy</b>			
31.	The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilize 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	4-2 4-8



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		be optimum and as per requirement.	
<b>Climate Change</b>			
32.	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 800 number of plants will be planted in and around the lease area.	4-3
33.	The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.	Replied in point no.32	--
<b>Mine Closure Plan</b>			
34.	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
<b>EMP</b>			
35.	Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.	Detailed environmental management plan is provided under Chapter-X.	10-1
36.	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
<b>Risk Assessment</b>			
37.	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 <b>Section 7.3, Chapter-VII.</b>	7-1
<b>Disaster Management Plan</b>			
38.	To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.	The disaster management plan has been provided under <b>Section 7.3.1, Chapter-VII.</b>	7-3
<b>Others</b>			



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39.	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.	Given vide - Annexure No – 9 of AMP.	A-76
40.	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.	Agreed	--
41.	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.	4-25
<b>B. Standard ToR</b>			
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.	This is a proposed quarry. As such no mining activities have been carried out in this lease area.	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 received from the Assistant Director, Dep. of Geology & Mining, Madurai Vide Rc.No.08/Mines/2023 dated 14.03.2023. <b>(Annexure-1)</b>	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).	<ul style="list-style-type: none"> <li>Project coordinates superimposed in satellite imagery and given as <b>Figure No - 2.4 in Chapter – II.</b></li> <li>The geology and geomorphology map is provided in <b>Figure No.3.19, 3.20, Chapter-III.</b> The Lithology map and Soil map are provided under <b>Figure</b></li> </ul>	2-6  3-45 & 3- 48







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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.	<ul style="list-style-type: none"> <li>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.</li> <li>The land use pattern at present and at the end of the quarrying period has been provided under section 4.5.1, Chapter-IV.</li> <li>The post mining land use has been provided in Table No. 4.14. The post mining land use plan showing afforestation and water body is shown in Figure No- 4.5.</li> </ul>	<p align="center">3-28</p> <p align="center">4-16</p> <p align="center">4-21</p>
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.	Not Applicable	--
13.	Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.	There is no forest land in the lease area.	--
14.	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.	Not applicable	--
15.	The vegetation in the RF / PF areas in the study area, with necessary details, should be given.	There is no forest land in the lease area.	--



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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.	4-17
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 part of the project cost.	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.	3-33
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	Not Applicable	--



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	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.	The mining activities will be carried out within the mine lease areas only. The entire mine lease areas are patta land in proponent's possession. 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 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 predominant 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.	<ul style="list-style-type: none"> <li>• The baseline data on micro-meteorology, ambient air quality, Water quality, noise level, soil and flora &amp; fauna are collected during Summer Season (Mar 2023 to May 2023) and detailed in para 3.3 to 3.5 of Chapter-III.</li> <li>• Monitoring stations were selected taking into account, wind direction and location of sensitive receptors.</li> <li>• Free silica composition in PM10 sample has been done and the values are found to be Below Detectable Limit (DL 0.05mg/m3) which is well within the prescribed limit of 5mg/m3.</li> </ul>	3-11 & 3-33
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.	<ul style="list-style-type: none"> <li>• Air quality modeling details are furnished in para 4.2.2 and its continuous sub paras in Chapter-IV of EIA report.</li> <li>• The impact on air quality due to the proposed project is estimated using AERMOD View Gaussian Plume Air Dispersion Model developed by Lakes Environmental Software which is based on steady state Gaussian plume dispersion.</li> <li>• The model simulations are done for the air pollutant arising from the</li> </ul>	4-3



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		<p>mining operations, namely, PM10, PM2.5. Ground Level Concentration (GLC) have been computed using hourly meteorological data.</p> <ul style="list-style-type: none"> <li>• The Isopleths of PM10, PM2.5 concentrations for with control measures scenario have also been drawn and these are given in Figure No.4.1 and 4.2.</li> <li>• It can be seen that the resultant added concentrations with baseline figures even at worst scenario, show that the values of ambient air quality with respect to PM10 are within the statutory limits in each case.</li> </ul>	<b>4-5</b>
<b>24.</b>	<p><b>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.</b></p>	<p>The total water requirement for this project will be 10.0 KLD comprising 1.0 KLD for drinking water and domestic use, 8.0 KLD for dust suppression and 1.0 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 <b>Figure No 4.3, Chapter-IV.</b></p>	<b>4-8</b>
<b>25.</b>	<p><b>Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.</b></p>	Not Applicable	--
<b>26.</b>	<p><b>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.</b></p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>	<b>4-9</b>



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		<ul style="list-style-type: none"> <li>The methods for reducing water consumption and rainwater harvesting is provided in section 4.3.4, Chapter-IV.</li> </ul>	
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.	<ul style="list-style-type: none"> <li>There is a odai channel on the western side of the lease area for which safety distance of 50m has been left. There is no proposal to discharge any effluent into this water body.</li> <li>The ultimate pit depth of mining is 47m. 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.</li> </ul>	4-10
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.	<ul style="list-style-type: none"> <li>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.</li> <li>The ultimate pit depth of mining is 47m. 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.</li> <li>Details of hydro geological study are given in Para 3.6, Chapter – III.</li> </ul>	4-10  3-43
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.	Replied above in Standard ToR point No.27.	--
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 ultimate pit depth of mining is 47m. The ground water table in this area is below this level.	4-10



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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.	In the lease area, safety barrier 7.5m around the periphery is left. About 800 trees will be planted in and around the lease area. The details of proposed plantation is provided under <b>Table 4.16, Chapter-IV.</b>	4-20
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 study is provided under section 4.9, Chapter-IV.	4-24
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.	2-18
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.	The post mining land use has been provided in Table No. 4.13. The post mining land use plan showing afforestation and water body is shown in Figure No- 4.4.	4-16 4-21
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.	4-22
36.	Public health implications of the Project and related activities for the population in the impact	• Details of the socio economic survey conducted in the buffer zone has	3-9



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	zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations	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.	
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.	Nearby villages were visited for conducting study to know about socio-economic conditions, including aspirations and requirements of the people for a better living and collected relevant data. The details are provided under section 3.2.4, Chapter-III.	3-10
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 is provided in Chapter-X.	10-1
39.	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.	• This draft EIA/EMP report will be exposed to public consultation as per mandatory procedures through the District Collector and State Pollution Control Board officials after giving 30 days advance notice in two local newspapers about the scheduled date and time for conduct of the public hearing procedures.  • The opinions, concerns and objections of stakeholders will be recorded during the public hearing. All the public queries and the replies to the query by the project proponent and officials concerned will be recorded and incorporated in the EIA/EMP report for approval by SEIAA, Tamil Nadu.	7-1
40.	Details of litigation pending against the project, if any, with direction /order paced by any Court of Law against the Project should be given.	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. 95,93,468/  • The capital and recurring cost of the	2-18 10-9





**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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		project is provided under Table No.10.1, Chapter-X.	
42.	<b>A Disaster management Plan shall be prepared and included in the EIA/EMP Report.</b>	The disaster management plan has been provided under section 7.3.1, Chapter-VII.	<b>7-3</b>
43.	<b>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.</b>	<ul style="list-style-type: none"> <li>• The Rough Stone and Gravel 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.</li> <li>• Direct employment to 9 person and 50 person indirect employment to scores of people.</li> <li>• 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.</li> </ul>	<b>8-1</b>

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# CHAPTER - I

## INTRODUCTION

**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**CHAPTER 1  
INTRODUCTION**

**1.1 PURPOSE OF THE REPORT:**

Thiru. S. Rathinam proposes to operate a **Rough Stone and Gravel Quarry** over an area of 1.62.17 Ha in Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu and has initiated action towards obtaining environmental clearance. Proposed Production for the first five years is 1,14,760.0 m<sup>3</sup> of Rough stone and 26,325 m<sup>3</sup> of gravel for the depth of 17 meter. The Total production for 10 years lease period is 2, 42,467.5m<sup>3</sup> of Rough Stone and 26,325m<sup>3</sup> of gravel for the depth of 47 meter.

Although the individual lease area of this project is less than 5 Ha, the other existing and proposed quarries within the 500m radius cluster along with this subject project works out to >5 Ha. Hence, this proposal is considered under Category – B1 and as per MoEF & CC notification necessitates preparation of EIA/EMP report and public hearing. This EIA/EMP report is prepared based on standard and additional Terms of Reference issued by SEIAA, Tamil Nadu vide letter no. SEIAA-TN/F.No.10072/SEAC/ToR-1506/2023 dated 31.07.2023 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:**

**Table 1.1 Identification of project**

1	<b>Project Name</b>	Rough Stone and Gravel Quarry of Thiru. S. Rathinam
2	<b>Extent</b>	1.62.17 Ha
3	<b>Production</b>	The Proposed Production for the first five years is 1,14,760.0 m <sup>3</sup> of Rough stone and 26,325 m <sup>3</sup> of gravel. The Total production for 10 years lease period is 2,42,467.5m <sup>3</sup> of Rough Stone and 26,325m <sup>3</sup> of gravel.
4	<b>Ultimate Depth</b>	47m bgl for 10 years and 17 m bgl for 5 years
5	<b>Land Classification</b>	Patta land owned by the applicant
6	<b>Location</b>	<b>Survey Number:</b> 84/2C1,2D1,2E1, 2C2,2D2A,2E2, 2J,2K,2L
		<b>Village:</b> Kallanai
		<b>Taluk:</b> Kalligudi
		<b>District:</b> Madurai
		<b>State:</b> Tamil Nadu



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Table 1.2: Identification of Project Proponent**

1	<b>Proponent Name</b>	Thiru. S. Rathinam
2	<b>Address</b>	S/O. Sri. S. Sinna Veeran, 10, North Street, Chinna Udaippu Village, Perungudi Post, Madurai South, Madurai District – 625 022.
3	<b>Contact Number</b>	88708 58456
4	<b>Email-ID</b>	ranjithkumarbe1994@gmail.com

The Proponent can meet the requirement the financial requirement of this project and will ensure that the mining activities are carried out as per statutory requirements.

**Table 1.3: Statutory Approvals**

S.No	Statutory Approval	Authority	Letter Number and Date	Reference
1.	<b>Precise Area Communication Letter</b>	Assistant Director, Dep. of Geology & Mining	Rc.No.08/Mines/2023 dated 14.03.2023.	<b>Annexure-1</b>
2.	<b>Mining Plan Approval</b>	Assistant Director, Dep. of Geology & Mining	Rc.No.08/Mines/2023 dated 10.04.2023	<b>Annexure-2</b>
3.	<b>Details of other quarries within 500m radius</b>	Assistant Director, Dep. of Geology & Mining	Rc.No.08/Mines/2023 dated 10.04.2023	<b>Annexure-3</b>

The following conditions have been stated in the Precise Area Letter:

- 10m safety distance for S.F.No.82/1 and 84/4 Government poromboke lands
- 50m safety distance for Drainage channel on the west.
- 7.5m safety distance for nearby patta lands

The above conditions have been adhered to.



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTI LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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

**Table 1.4: Brief Description of Nature of project**

1.	<b>Sector</b>	1(a), Non-Coal Mining
2.	<b>Type</b>	Fresh Project
3.	<b>Category</b>	B1 (Cluster Situation)
4.	<b>Mineral Mined</b>	Rough stone, Gravel
5.	<b>Major/Minor Mineral</b>	Minor
6.	<b>Mining method</b>	Opencast mechanized Mining
7.	<b>End use</b>	The gravel will be loaded into tipper and marketed to needy customers on payment of necessary Seignior age Fees to Government. The rough stone will be excavated and loaded into tipper to the needy buyers for producing crusher aggregates, M Sand.

**Table 1.5: Location of the project**

S.No	Particulars	Details
1.	<b>Location</b>	Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu
2.	<b>Corner Coordinates</b>	<b>Latitude:</b> 9° 45' 54.5" to 9° 45' 57.3" N <b>Longitude:</b> 78° 02' 40.4" to 78° 02' 46.3" E
3.	<b>Toposheet Number</b>	58-K/01

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

**1.3.1 IMPORTANCE TO THE COUNTRY AND REGION:**

Rough stone and Gravel from this quarry will meet the domestic demand. There is good demand for the Gravel & stone aggregate, which is the main requisite for the construction/ infrastructure sector. Gravel quarried from this lease will be directly transported to the nearby end users. The boulders will be marketed to the nearby crushers for producing crusher aggregates.

This project in the area will provide both direct and indirect employment opportunities through allied opportunities in logistics, trading, repairing works etc., improved per capita income for local people, improved social welfare facilities like infrastructural build-up, improvement in facilities due to the proposed CER activities of the proponent etc.



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**1.4 SCOPE OF THE STUDY:**

Particulars	Details
Proposal no	SIA/TN/MIN/430841/2023
File no	10072
SEAC meeting for issue of TOR	392 <sup>th</sup> SEAC Meeting held on 14.07.2023
SEIAA meeting for issue of TOR	642 <sup>th</sup> SEIAA Meeting held on 31.07.2023
Terms of Reference	Received from SEIAA, Tamil Nadu vide their Lr No. SEIAA-TN/F.No.10072/SEAC/ToR-1506/2023 dated 31.07.2023
Baseline Data Collection	Carried out by Creative Engineers & Consultants , Chennai for Summer Season (March – May 2023)

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.
- Formulation of an Environmental Management plan including administrative aspects for proposed implementation of mitigative measures in time.



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTI LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**CHAPTER 2**

**PROJECT DESCRIPTION**

**2.1 TYPE OF PROJECT:**

This proposal involves quarrying of Rough stone and Gravel by Thiru. S. Rathinam using mechanized opencast method for the lease period of 10 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**

<b>Location</b>	Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu
<b>Survey No.</b>	84/2C1,2D1,2E1, 2C2,2D2A,2E2, 2J,2K,2L
<b>Coordinates</b>	Latitude: 90 45' 54.5" to 90 45' 57.3" N Longitude: 780 02' 40.4" to 780 02' 46.3" E
<b>Nearest Village</b>	Kallanai -1.2Km- (S)
<b>Nearest Town</b>	Thirumangalam – 13 km - NW
<b>Nearest Highway</b>	(NH-45B) - 5.0 Km– (E) (NH-7) - 7.1Km– (W)
<b>Nearest Railway Station</b>	Thirumangalam – 8.8 km - NW

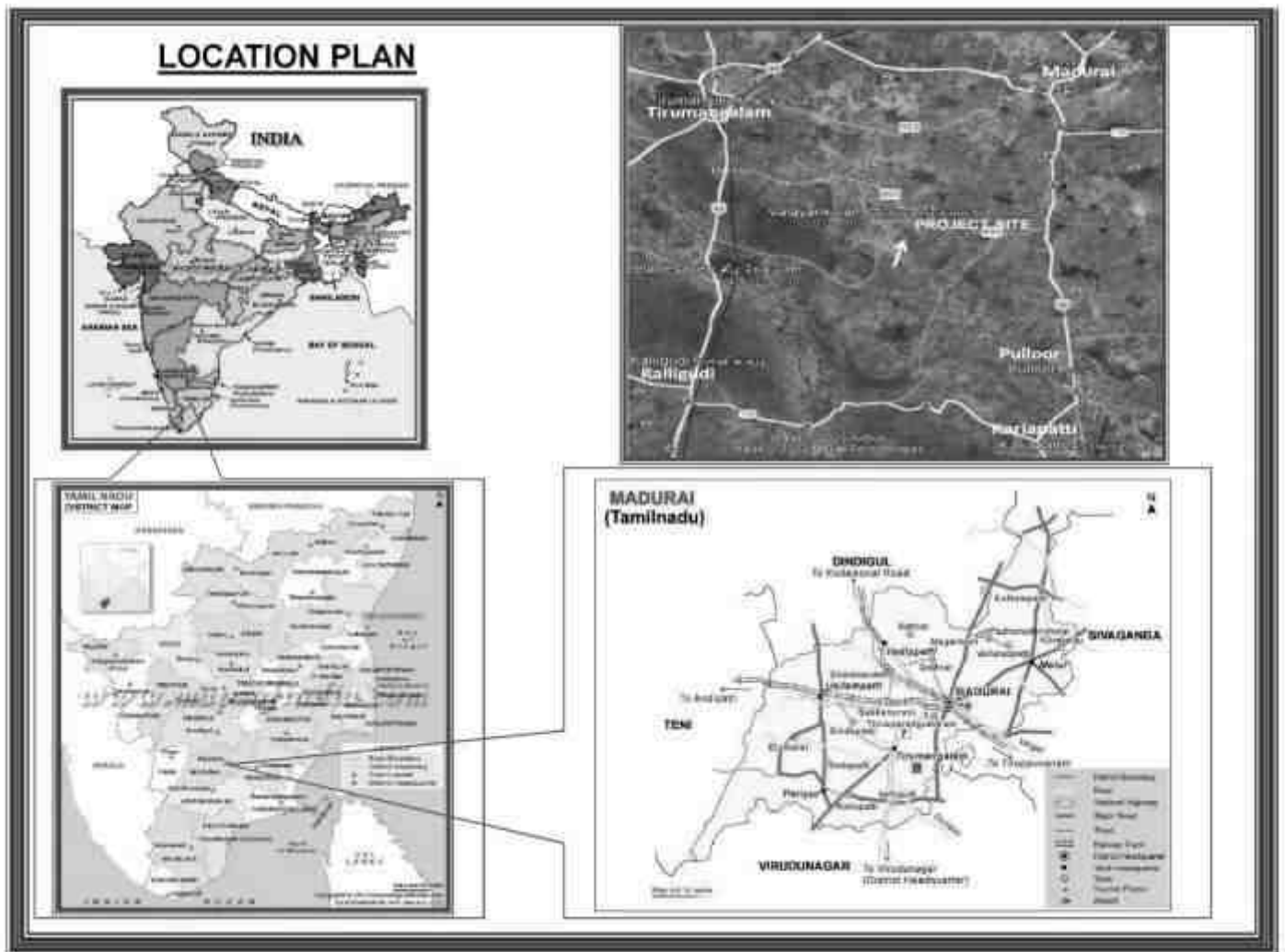


**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

<b>Nearest Airport</b>	Madurai- 9.3 km – NE
<b>Accessibility</b>	The lease area can be approached from Viraliipatti at a distance of 18Kms from Madurai and then to the applied area at a distance of 5Km towards west of Paraipatti.
<b>Topography</b>	Plain terrain, dry lands with scarce vegetation.
<b>Drainage</b>	There is a Drainage channel on the western side of the lease area for which safety distance of 50m has been left.

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**

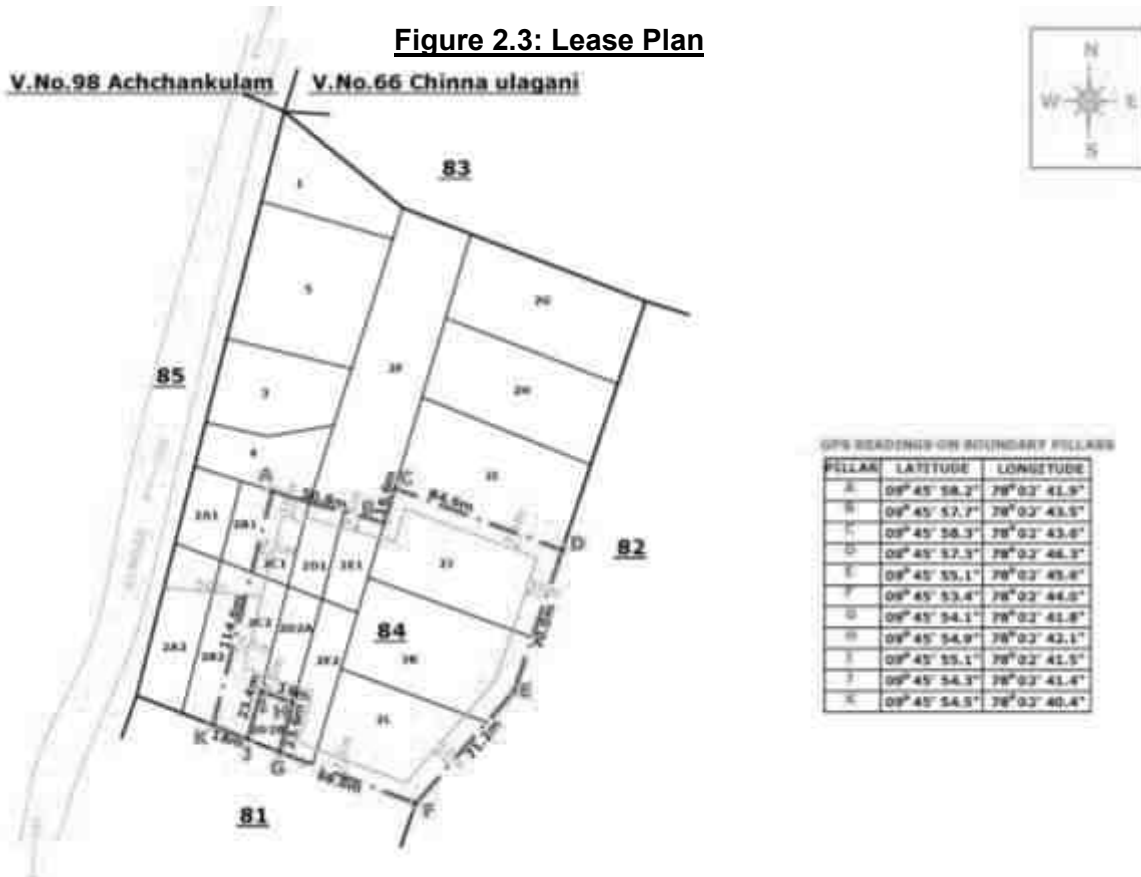


**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 2.2: Approachability Map**



**Figure 2.3: Lease Plan**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 2.4: Satellite Imagery Showing Corner Co-ordinates of the Project Area**



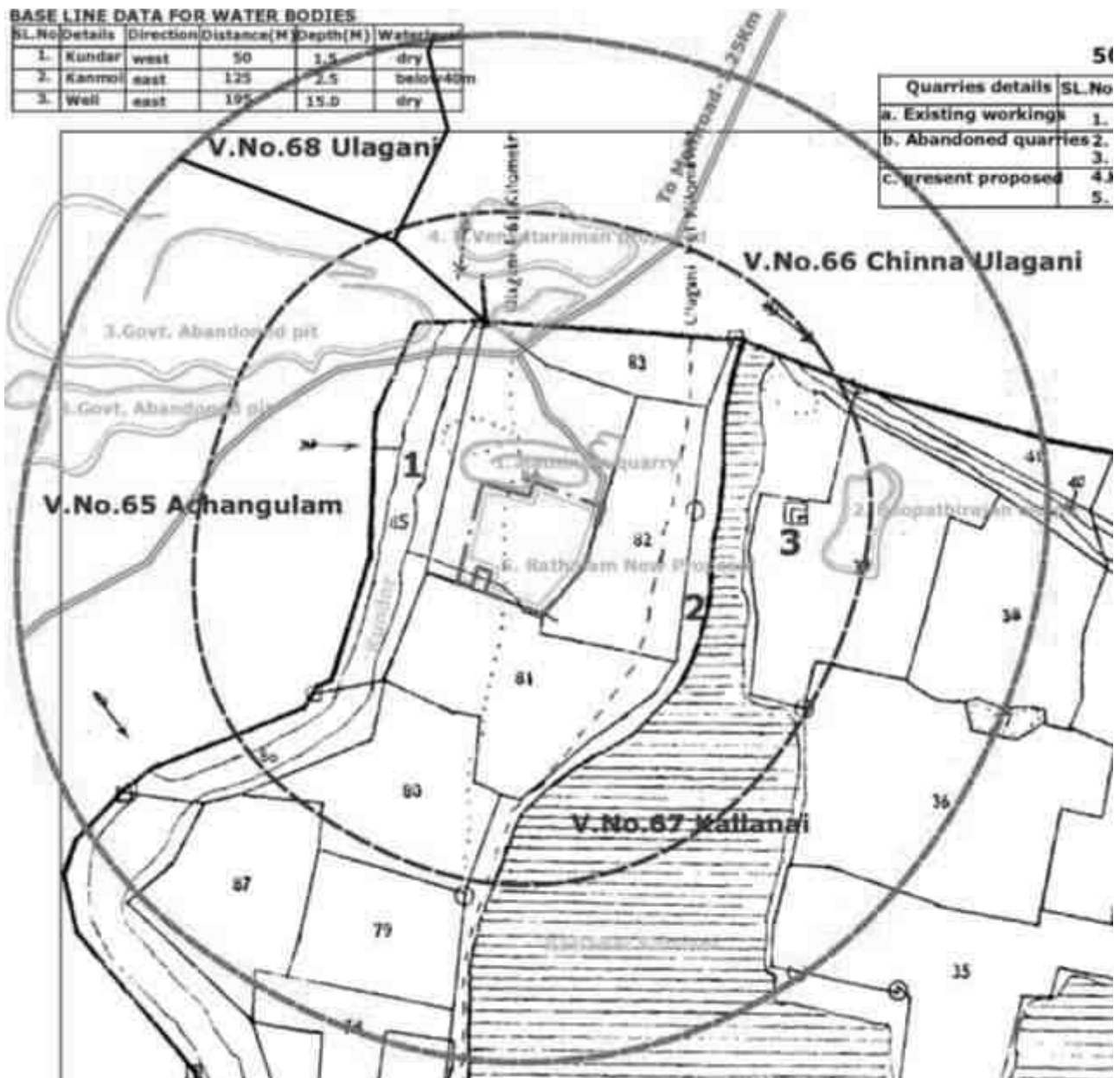
**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**SITE PHOTOGRAPH**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 2.5: Village Map**



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**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 2.6: Details of features within 500m radius**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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

**Table 2.2: Features within 500m radius**

S.No	Features	Distance
1	Motor Room	255m-W
2	Village Road	200m-N
3	Own Quarry Shed	125m-NE
4	Shed	185m-N
5	Kanmai	160m-SE
6	Odai	50m-W
7	Small Shed	330m-W
8	Small Temple	350m-SW
9	Quarry Shed	355m-W
10	Quarry Shed	435-NW
11	Shed	375m-NE
12	Working Quarry	315m-NE





**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2, 2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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**2.4 LAND CLASSIFICATION:**

The lease area of 1.62.17 Ha in S.F.No. 84/2C1,2D1,2E1, 2C2,2D2A,2E2, 2J,2K,2L is a patta land in the name of the applicant. The survey no. wise area breakup has been provided below:

**Table 2.3: Survey Number wise Area Breakup**

<b>Survey Nos</b>	<b>Area in Ha</b>
84/2C1	0.08.00
84/2D1	0.06.50
84/2E1	0.08.00
84/2C2	0.13.00
84/2D2A	0.08.67
84/2E2	0.14.50
84/2J	0.37.50
84/2K	0.36.00
84/2L	0.30.00
<b>Total</b>	<b>1.62.17</b>

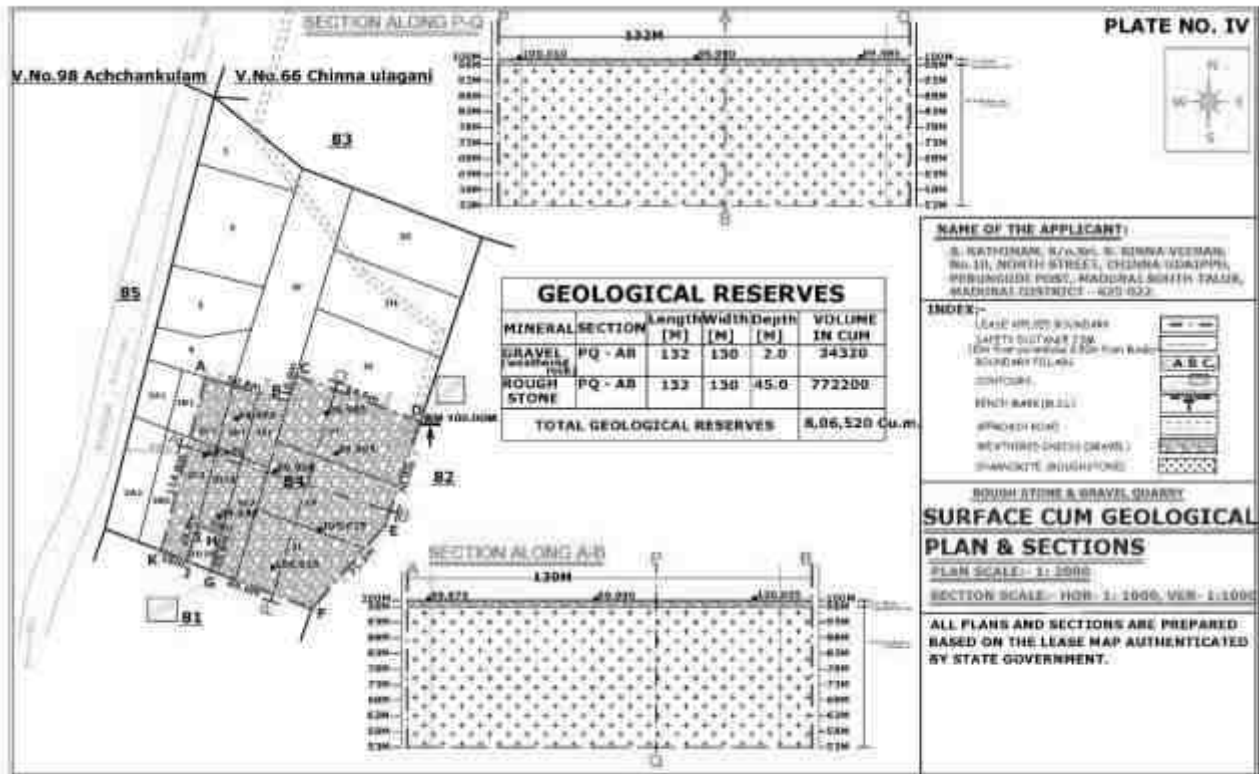
**2.5 GEOLOGY:**

The area applied for mining lease is a gentle plain terrain and dry lands without any vegetation. The gravel formation is having thickness of 2m. The rocks in this area belonging to ARCHEAN group of rocks. Below the gravel formation a hard Rough stone Charnockite is noticed. The rocks are Phaneric to medium grained nature. And in these rocks there are mineral constituents of BLUE QUARTS, MICRO CLINE FELDSPAR, HYPERSTHENE and flakes of BIOTITE MICA. The rocks are striking towards North west – South east direction dipping 80° Vertical towards South east direction. The strike length of the deposit on 132m length and 130m width



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 2.7: Geological Plan & Cross Section**



**2.6 SIZE AND MAGNITUDE OF THE OPERATION:**

- The proposed mining will be done by open cast semi mechanized mining method.
- Life of mine will be 10 years.
- It is proposed to mine out 1,14,760.0 m<sup>3</sup> of Rough stone and 26,325 m<sup>3</sup> of gravel for the depth of 17 meter for 5 years and 2,42,467.5m<sup>3</sup> of Rough Stone and 26,325m<sup>3</sup> of gravel for the depth of 47 meter for 10 years .
- There is no waste generation anticipated in this quarry operation since the entire excavated material will be transported to buyers.



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**2.6.1 RESERVES:**

**Table 2.4: Geological and Mineable Reserves**

Type of reserves	Gravel + Rough stone in Cub.m
Geological Resources	8,06,520 Cu.m.
Mineable reserves	2,68,792.5 Cu.m.
Bench locked & 7.5m boundary barrier reserves	5,37,727.5 Cu.m.

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, and excavation through excavator & mineral transport through tippers will be carried out. The top gravel is soft and can be directly excavated. The weathered rock and rough stone below will be blasted and then excavated. Bench height of 5.0m & 5m width is considered.

**Table 2.5: Details of Equipments**

SI. NO	NAME OF THE EQUIPMENT	CAPACITY	REQUIRED
1	Excavator	TATA HITACHI (EX200)	1
2	Tipper	10 Tonnes	2
3	Tractor compressor for drilling	175 CFM	1
	Dewatering pump	5 Hp Diesel pump	1

**2.7 PROPOSED SCHEDULE FOR APPROVAL AND IMPLEMENTATION:**

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

**Table 2.6: Proposed Schedule of Implementation**

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

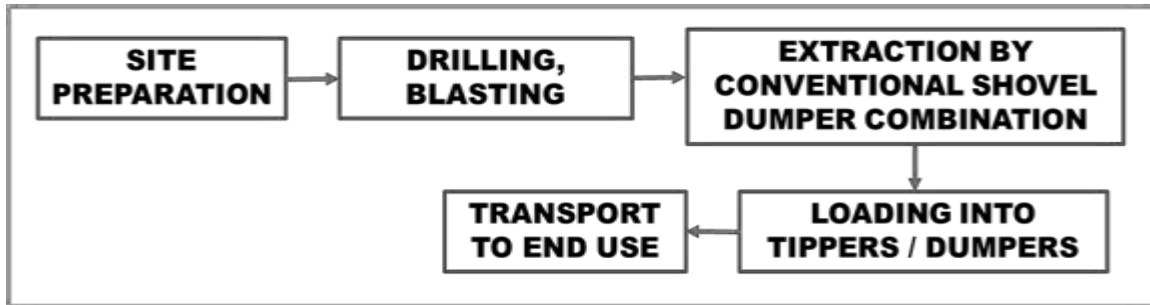


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**2.8 TECHNOLOGY AND PROCESS DESCRIPTION:**

The quarry operations involve drilling, blasting, excavation, loading and transportation of Rough stone to buyers. The production of Rough stone 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 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:**

This is a proposed quarry. As such no mining activities have been carried out in this lease area.



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**2.9.2 PRODUCTION & WASTE DISPOSAL:**

The year wise production has been provided below:

**Table 2.7: Production Schedule During Plan Period**

YEAR	GRAVEL(m3)	ROUGHSTONE (m3)
I	9000	19,702.5
II	9000	19,702.5
III	8325	19,702.5
IV	----	28,950.0
V	----	26,702.5
<b>First 5 Year Total</b>	<b>26,325</b>	<b>1,14,760.0</b>
VI	----	27,247.5
VII	----	26,610.0
VIII	----	26,520.0
IX	----	23,882.5
X	----	23,447.5
<b>2nd 5 year Total</b>	<b>----</b>	<b>1,27,707.5</b>
<b>10 Year Total</b>	<b>26,325</b>	<b>2,42,467.5</b>

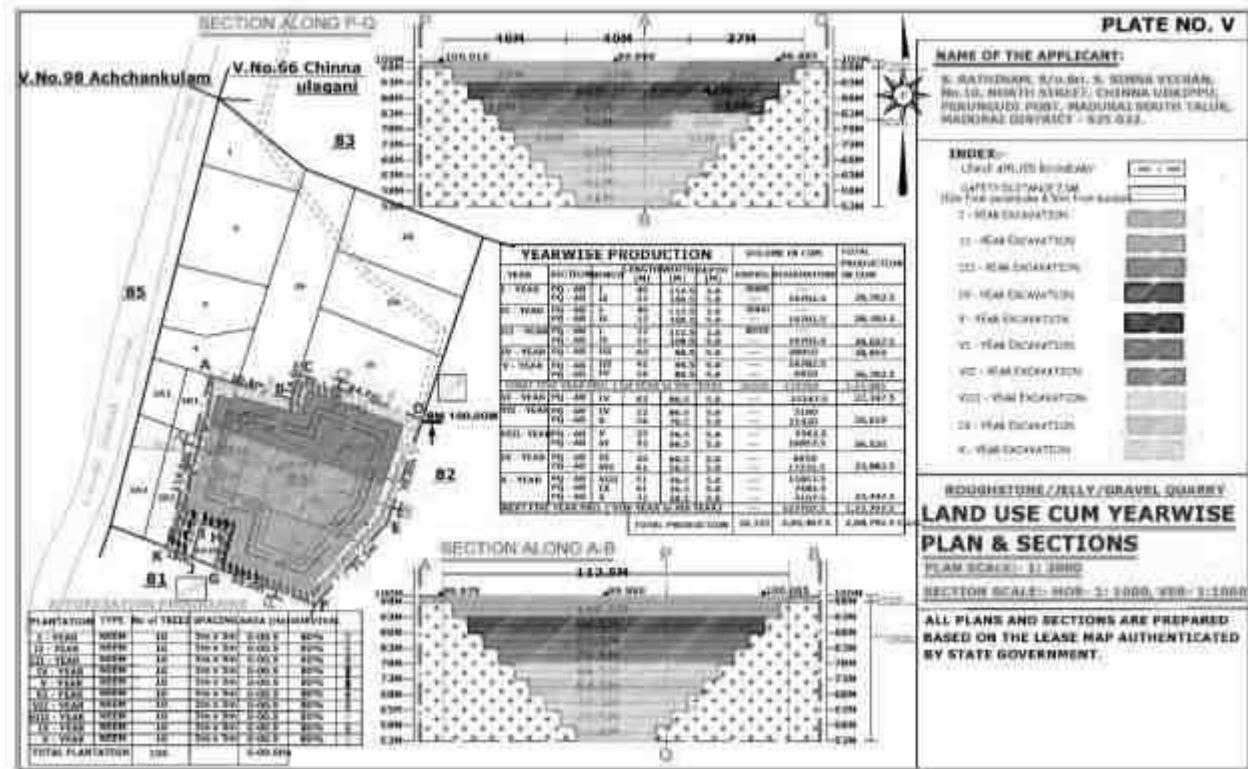
**Waste Disposal during Plan Period:**

There is no waste generation anticipated in this quarry operation 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.



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 2.9: Year wise Plan & Cross Section**



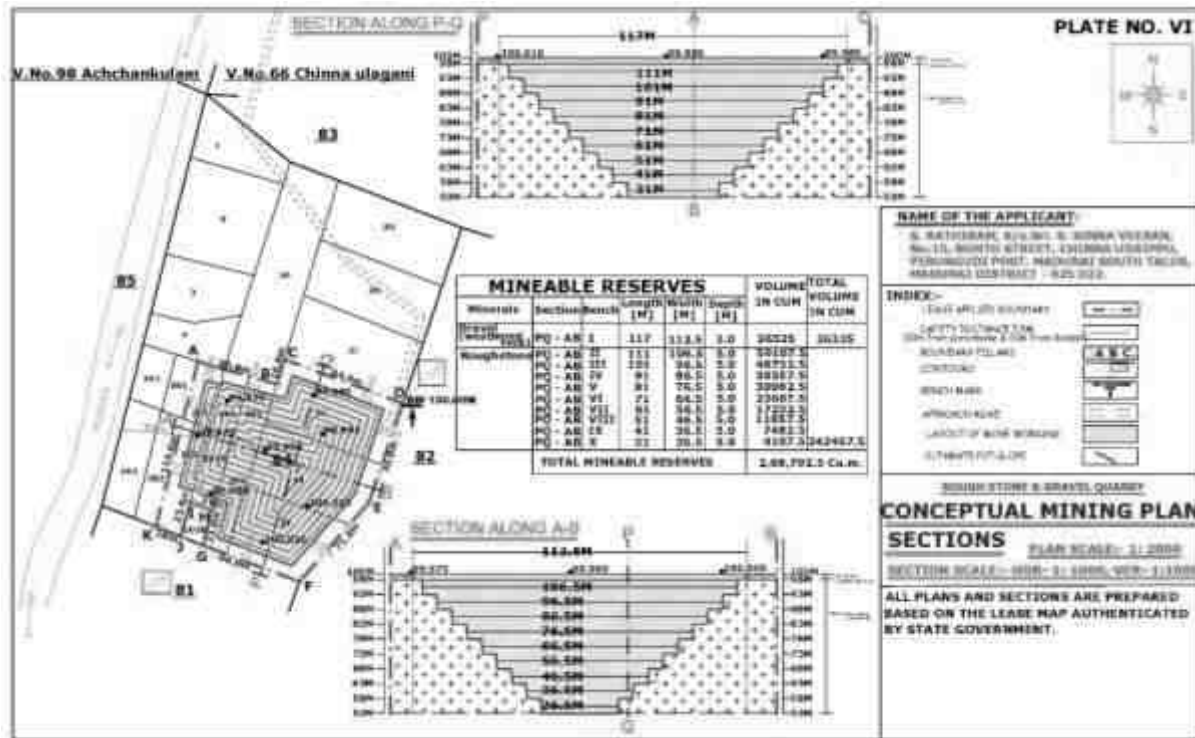
**Table 2.8: Ultimate Pit Dimensions**

LENGTH(m)	WIDTH(m)	DEPTH(m)
117	112.5	47

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 in **Figure No. 2.10**.

**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 2.10: Conceptual Plan & Cross Section**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTI LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

At the end of the 5 year period, 1.32.0 Ha will be used as mined out area at 17m depth. Subsequently, in the remaining 6th to 10th year there will be only depth ward mining in the same mined out area up to 47 m depth. Ultimately the entire mined out area of 1.32.0 Ha will be left as water body. 0.05.0Ha will be the mine roads & Infrastructure and 0.09.0 Ha will be covered with vegetation, 0.11.17Ha will be undisturbed and 0.05.0 Ha will be fencing.

**2.9.3 PROJECT REQUIREMENTS:**

**Table 2.10: Project Requirements**

<b>Manpower</b>	9 People directly and more than 50 people indirectly										
<b>Water Requirement and Source</b>	<b>Water Requirement: 10 KLD</b>										
	<table border="1"> <thead> <tr> <th>Details</th> <th>Quantity (KLD)</th> </tr> </thead> <tbody> <tr> <td>Drinking water and Domestic Use</td> <td>1.0</td> </tr> <tr> <td>Dust Suppression</td> <td>8.0</td> </tr> <tr> <td>Green belt</td> <td>1.0</td> </tr> <tr> <td><b>Total</b></td> <td><b>5.0</b></td> </tr> </tbody> </table>	Details	Quantity (KLD)	Drinking water and Domestic Use	1.0	Dust Suppression	8.0	Green belt	1.0	<b>Total</b>	<b>5.0</b>
	Details	Quantity (KLD)									
	Drinking water and Domestic Use	1.0									
	Dust Suppression	8.0									
Green belt	1.0										
<b>Total</b>	<b>5.0</b>										
<b>Source:</b> The required water will be procured initially from outside agencies. Later Rain water harvested in the mine sump can also be used.											
<b>Power Requirement</b>	No electricity needed for mining operation. The minimum power requirement for office, etc will be met from state grid.										
<b>Site Services</b>	This is a proposed project. Site services like mine office, first aid room, rest shelters, toilets etc. will be provided as semi-permanent structures.										
<b>Project Cost</b>	Rs. 95,93,468 /- (Including operational + Fixed Asset + EMP cost).										
<b>Funds allocated for socio-economic development</b>	Rs.5.0 Lakhs is allocated under CER budget.										





**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**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.

**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 **Summer Season (March 2023 to May 2023)** 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**

<b>S.No</b>	<b>Studies</b>	<b>Parameters / Study</b>	<b>Location</b>
1	Socio Economy	Demographic Data from Census 2011	Core and Buffer Zone
		Sample Survey	Buffer Zone
2	Micro Meteorology	Rainfall Data from IMD, Madurai	Madurai District
		Temperature, Humidity, Wind Speed, Wind Direction	1 Representative Location
3	Ambient Air Quality	PM10, PM2.5, SO2, NOx, CO	1 Core Zone, 4 Buffer Zone
4	Water Quality	Physical and Chemical Parameters	1 Core Zone, 4 Buffer Zone
5	Noise Levels	Ambient Noise	1 Core Zone, 4 Buffer Zone
6	Soil Quality	Physical and Chemical Parameters	1 Core Zone, 2 Buffer Zone
7	Land Use and Land Cover	Land use pattern within 10km study area using RS Satellite	Core and 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

**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 3.1: Study Area Map**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Table 3.2: Environmental Setting of the Study Area**

S.No	PARTICULARS	DETAILS
1	Nearest highway	(NH-45 B) – 5.0km (E) (NH-7) – 7.1km (W)
2	Nearest Railway station	Thirumangalam RS – 8.8km – (NW)
3	Nearest Airport	Madurai – 9.3Km – (NE)
4	Nearest major water bodies	<ul style="list-style-type: none"> <li>➤ Terku Ar – Less then 1km- (SW),</li> <li>➤ Gundar River – 5.1km–SW,</li> <li>➤ Gundaru Nadi – 7.4km – (SW)</li> </ul>
5	Nearest town/City	Thirumangalam – 8.8km – (NW)
6	Nearest villages	<ul style="list-style-type: none"> <li>➤ Chinna Ulagani – 1.2 km (NE)</li> <li>➤ Kallanai – 1.2 km (SE)</li> <li>➤ Nedunkulam - 1.5 km (NW)</li> </ul>
7	Notified Archaeologically important places, Monuments	Nil within 10m radius
8	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
9	Reserved / Protected Forests	Nil within 10m radius
10	Defence Installations	Nil within 10m radius
11	Seismic Zone	Zone – II (Least Active)
12	Other Industries in the study area	Other than rough stone quarry & crushers there are no other major industries in the 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 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 Roughstone and gravel quarry is located in Kallanai Village, Kalligudi Taluk, Madurai District. Based on 2011 census data, in the 10km radius there are 72 Rural villages from three Taluks namely Madurai South, Thirumangalam, Kariapatti and 2 urban areas. The demographic profile of the study area is given below:

The total population of these 72 rural villages and 2 urban areas is 208168 in which the male population is 104850 (50.37%) and the female population is 103318 (49.63%). This shows that the male and female population ratio is almost equal. Among the total population 0.04% belong to Scheduled Tribes, 14.88% are Scheduled Caste and the balance 85.08% people belong to other castes. Among the total population, 69.68% of the people are literate.

Among the total population, 38.69% are literate males and 30.99% are literate females. This shows that the male literates are slightly more than the female literates.

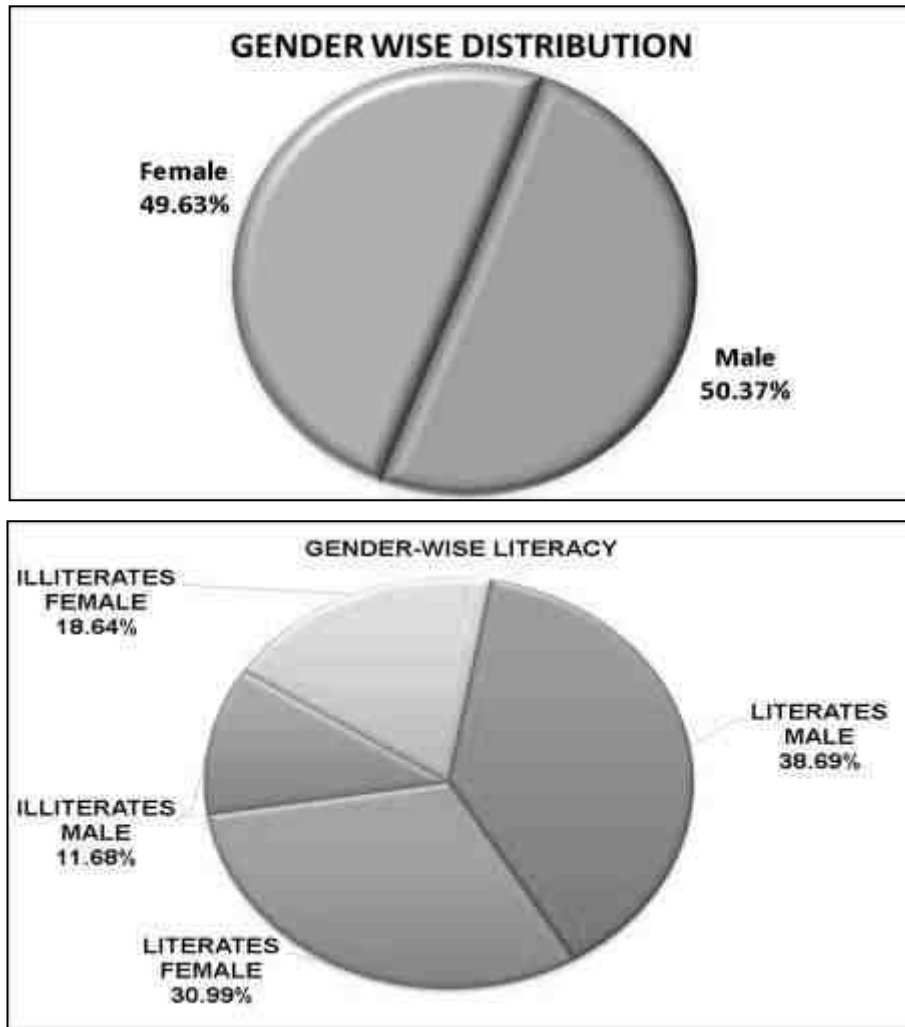
The village wise population, literacy levels and occupational structure details area given in **Annexures 4 and 5**. The demographic structure within the buffer zone is shown diagrammatically in **Figure No – 3.2**.

**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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

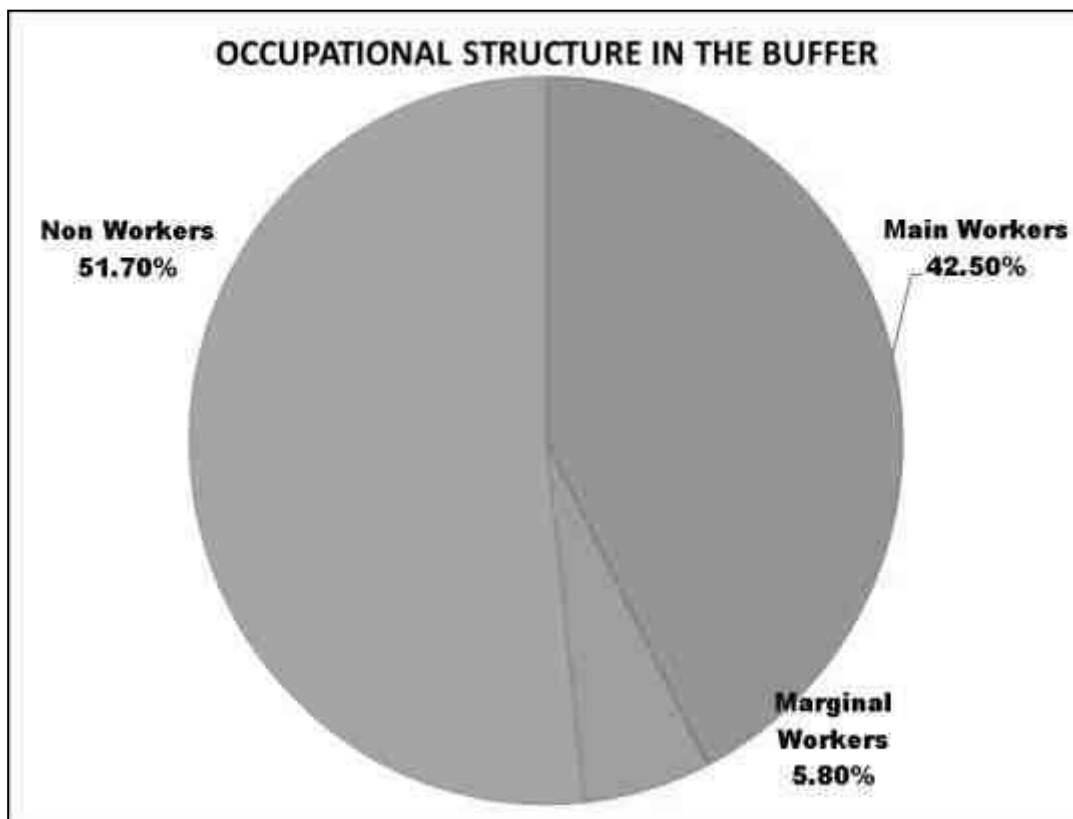
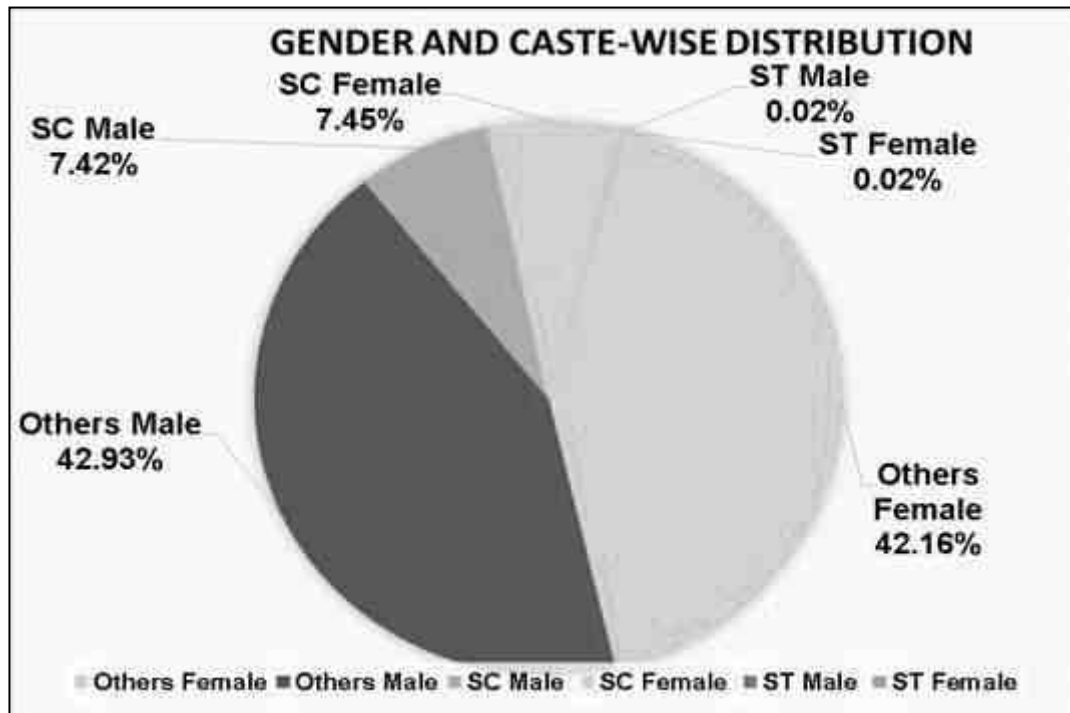
Details	Population	Percentage
<b>A. Gender-wise distribution</b>		
Male Population	104850	50.37
Female Population	103318	49.63
<b>Total</b>	<b>208168</b>	<b>100</b>
<b>B. Caste-wise population distribution</b>		
Scheduled Caste	30966	14.88
Scheduled Tribes	83	0.04
Other	177119	85.08
<b>Total</b>	<b>208168</b>	<b>100</b>
<b>C. Literacy Levels</b>		
Total Literate Population	145052	69.68
Others	63116	30.32
<b>Total</b>	<b>208168</b>	<b>100</b>
<b>D. Occupational structure</b>		
Main workers	88406	42.50
Marginal workers	12127	5.80
<b>Total Workers</b>	<b>100533</b>	<b>48.30</b>
<b>Total Non-workers</b>	<b>107635</b>	<b>51.70</b>
<b>Total</b>	<b>208168</b>	<b>100</b>

**Figure 3.2: Demographic Structure in Buffer Zone**





**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**3.2.3 DETAILS OF AMENITIES:**

Based on 2011 census data, regarding the educational facilities, there are totally 93 Primary Schools functioning in these 72 rural villages. Among them 17 villages have no primary school, 34 villages have 1 primary schools, 13 villages have 2 primary schools, 5 villages have 3 primary schools, 2 villages has 4 primary schools, 2 villages have 5 primary schools.

**Table 3.4: Primary Schools in the Buffer Zone Rural Villages**

S.No	No of Rural Villages	Number of primary schools	Totals
1	17	0	0
2	34	1	34
3	13	2	26
4	5	3	15
5	2	4	8
6	2	5	10
<b>Total</b>	<b>72</b>		<b>93</b>

**Table 3.5: Education Facility Availability**

PARTICULARS	Available in village
Govt Primary School	93
Govt Middle School	37
Govt Secondary School	16
Govt Senior Secondary School	7
Govt Arts and Science Degree College	0
Govt Engineering College	0
Govt Medicine College	0
Govt Management Institute	0
Govt Polytechnic	0
Govt Vocational Training School/ITI	1

Better and higher education facilities are available in nearby Thirumangalam, Madurai & Virudhunagar city corporation.

**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Table 3.6: Healthcare Amenities Availability**

<b>PARTICULARS</b>	<b>Available in village</b>
Community Health Centre	1
Primary Health Centre	3
Primary Health Sub Centre	21
Maternity And Child Welfare Centre	3
TB Clinic	3
Hospital Allopathic	0
Hospital Alternative Medicine	0
Dispensary	3
Veterinary Hospital	5
Mobile Health Clinic	0
Family Welfare Centre	3

Better Healthcare facilities are available in nearby town like Thirumangalam, Madurai & Virudhunagar City Corporation.

**Table 3.7: Infrastructure Facilities**

<b>Particulars</b>	<b>Available in village</b>
Tap Water-Treated	66
Covered Well	17
Hand Pump	31
Tube Wells/Borehole	49
Post office	1
bus services	29
Commercial Bank	5
Cooperative bank	10

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



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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**3.2.4 SAMPLE SURVEY:**

Study of the nearby villages to know about socio-economic conditions, including aspirations and requirements of the people show the following:

- Agriculture is the main occupation in some villages. But it is more along the river side and in lands where bore well facilities are available. Farmers in the locality mainly depend on rain for water source.
- Majority of the people are small farmers. They also work as agriculture laborers. As it is river fed agriculture and the water is available only in rainy season, during the rest of the time they have less employment opportunities. Other occupations include construction workers, vendors, etc. Nearby town and industries also provide good employment opportunity for the locals.
- Due to inconsistent rainfall, poor soil condition/ yield, non availability of workers for farming due to better employment opportunities available in nearby town and other places due to less economics, locals have migrated to better avenue and only handful of people are in this activity.
- Other allied activities like livestock rearing and poultry farming are also found.
- Reasonably better amenities like approach road bus facility, electricity, mobile phone connectivity, Public Distribution System, Co operative bank. Scheduled banks etc are available.
- Bore well is the main source for drinking water. There are OHT's, Ground level tanks, public taps are available.
- Private and more improved facilities are available in Thirumangalam, Madurai



### **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.

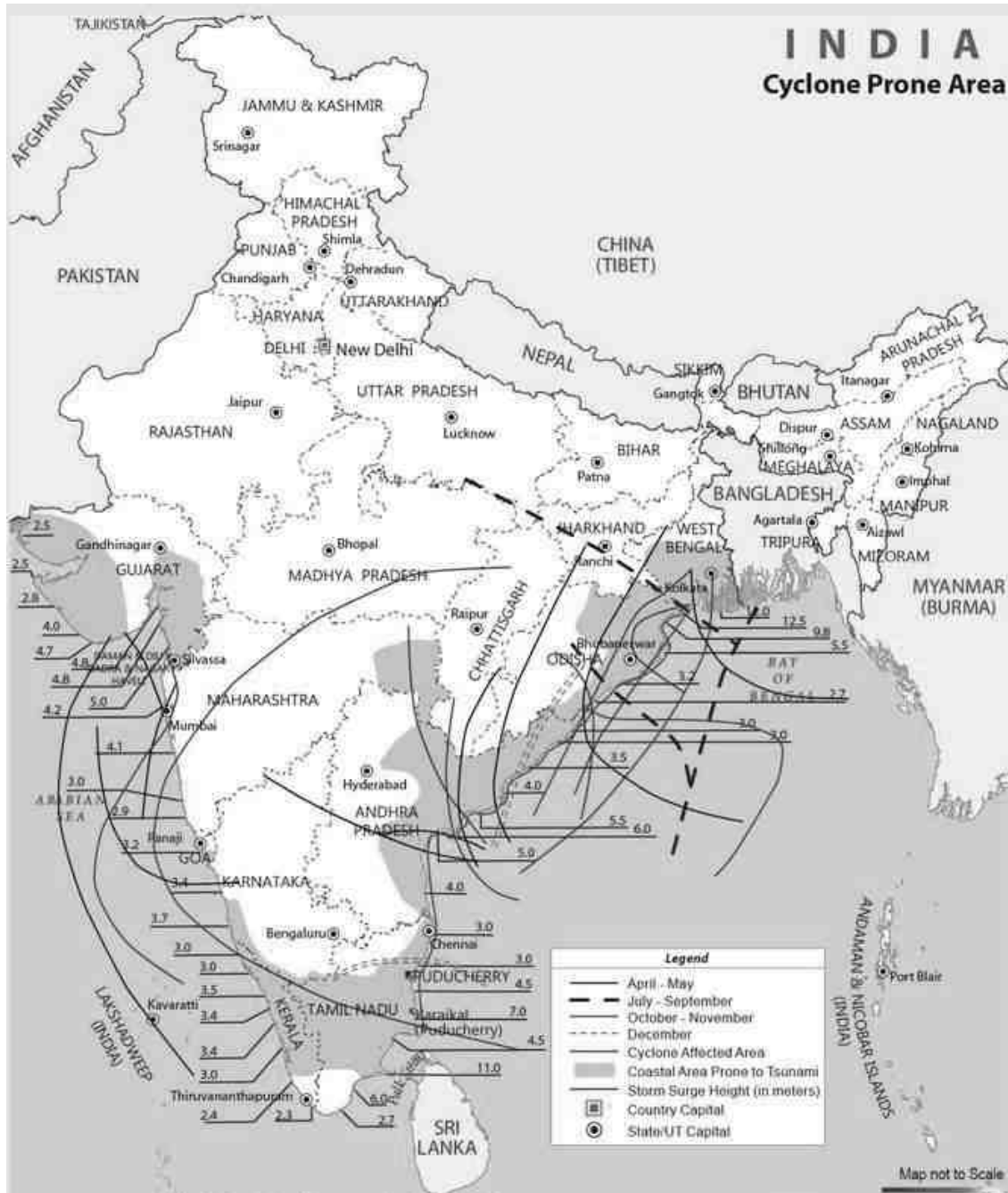
##### **3.3.1.2 Historical Meteorological Data:**

###### **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](http://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.

**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 3.3: History of Cyclonic Storms**

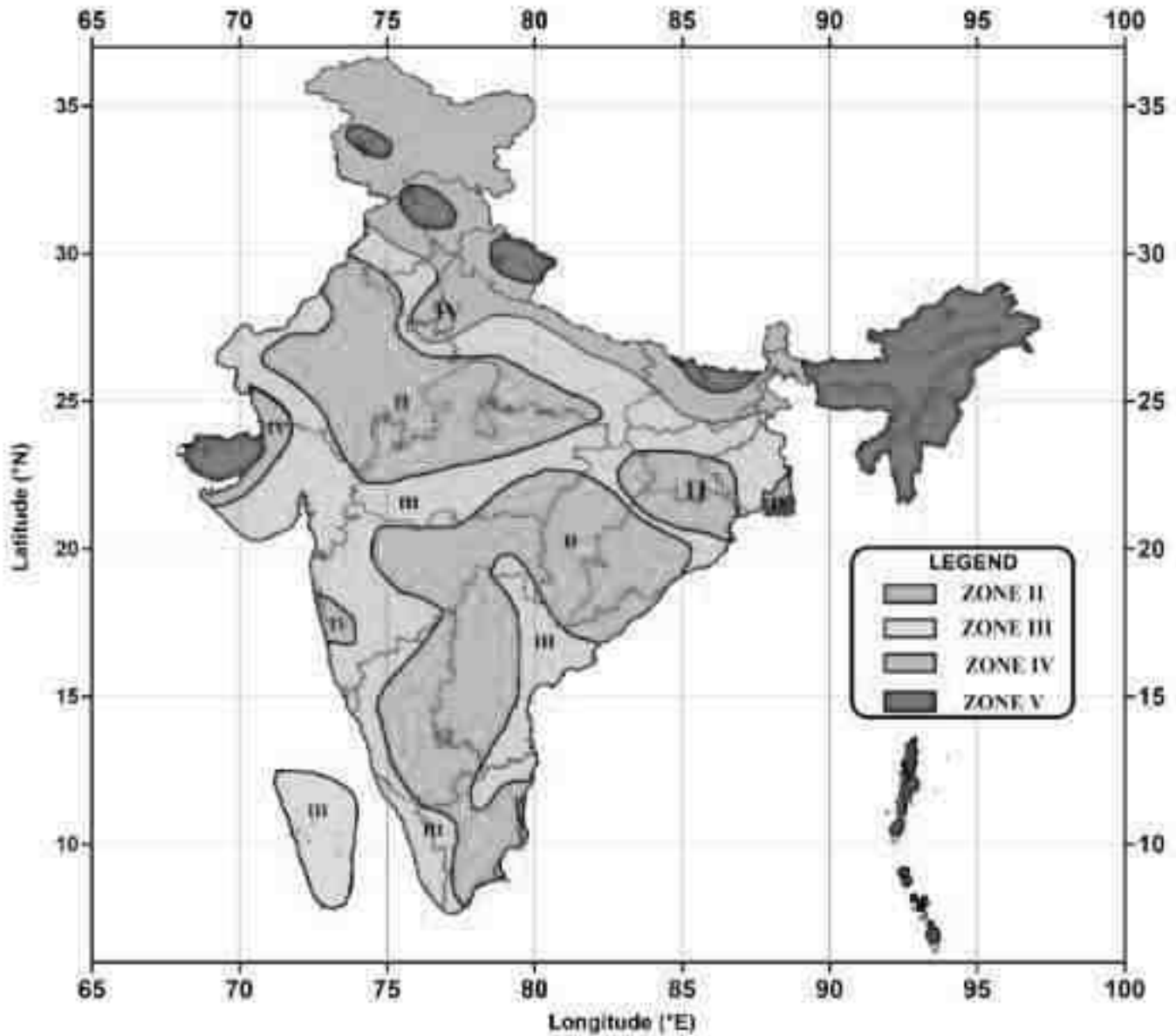


**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**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**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**C. Climate and Rainfall Data:**

Analysis of long term rainfall data (1901-2004) shows that the district receives rainfall during NE monsoon (47%) , SW monsoon (32%), summer (17%) and winter (4%). The normal annual rainfall varies from 806 mm (Sholavandan Rain Gauge Station) in the northern part to 964.1 mm (Melur Ranguage Station) in the eastern part of the district. The entire district experiences a declining trend in annual rainfall except at Melur, where a rising trend is noticed.

The climate is subtropical and the temperature varies from 15 to 41°C in the district. The relative humidity varies from 45 to 85% and is high during NE monsoon.

**Table 3.8: Average Annual Rainfall Data**

The average annual rainfall and the 5 years rainfall collected from IMD, Madurai as follows:

Actual Rainfall In Mm					Normal Rainfall In Mm
2017	2018	2019	2020	2021	
904.6	734.1	671.9	915.5	1095.2	985

Source – IMD, Madurai report

**3.3.1.3 SITE SPECIFIC METEOROLOGICAL DATA:**

Micrometeorology and microclimatic parameters of 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 21.0°C to 39.0°C while the relative humidity varied between 18.2 - 94%. The wind speed during the study period ranged from <1.8 to 33.5 km/h. The predominant wind direction is from E,ENE. The meteorological data are presented in **Table no – 3.9**. The average wind rose is depicted in **Figure No - 3.5**.

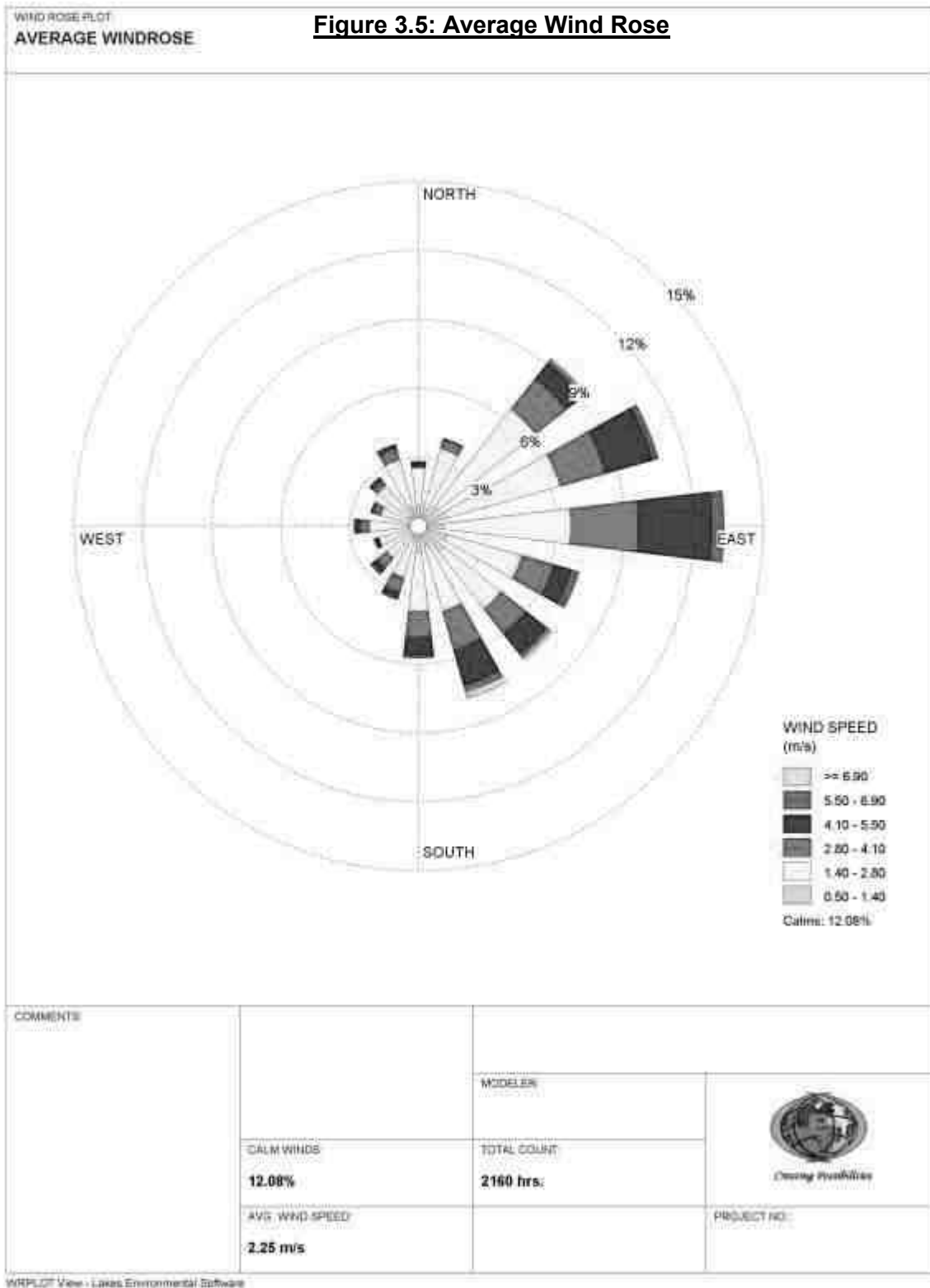
**Table 3.9: Meteorological Data**

Season: Winter Season (March 2023 to May 2023)			
S.NO	PARAMETERS	MIN	MAX
1	Temperature In °c	21.0	39.0
2	Humidity in %	18.2	94.0
3	Wind speed in km/hr	<1.8	33.5
4	Predominant wind direction from	E,ENE	





**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTALAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**3.3.2 AMBIENT AIR QUALITY (AAQ):**

Ambient Air quality has been assessed through a network of 5 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, 5 numbers of air sampling stations were selected in the area as shown below in Table No.3.10.

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

**Table 3.10: Air Quality Monitoring**

1.	<b>Monitoring Period</b>	Summer Season ( March 2023 – May 2023)
2.	<b>Monitoring Location</b>	The location map showing Ambient Air Quality study stations are shown in <b>Figure No- 3.6.</b>
3.	<b>Methodology</b>	
	<b>Parameter</b>	<b>Protocol</b>
	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.	<b>Monitoring Frequency</b>	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	Ulagani Village	1.3km	NW
3	A3	Nedungulam Village	1.5km	NW
4	A4	Kallanai Village	1.2km	SE
5	A5	Kokkulam Village	3.0km	SE



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 3.6: Ambient Air Quality Study Stations**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

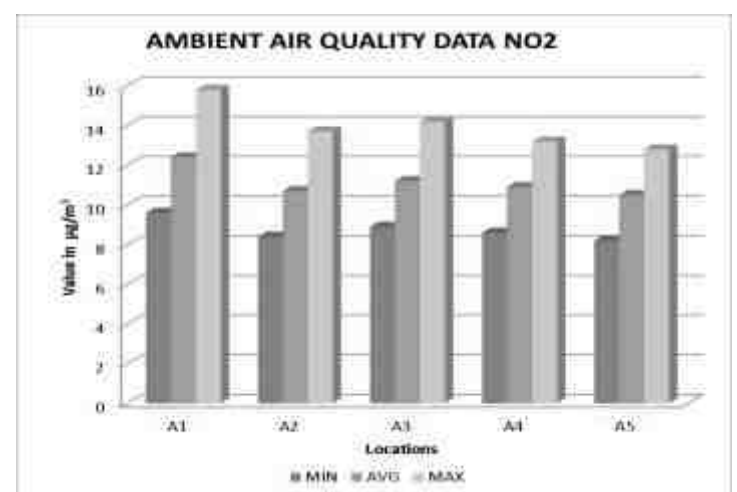
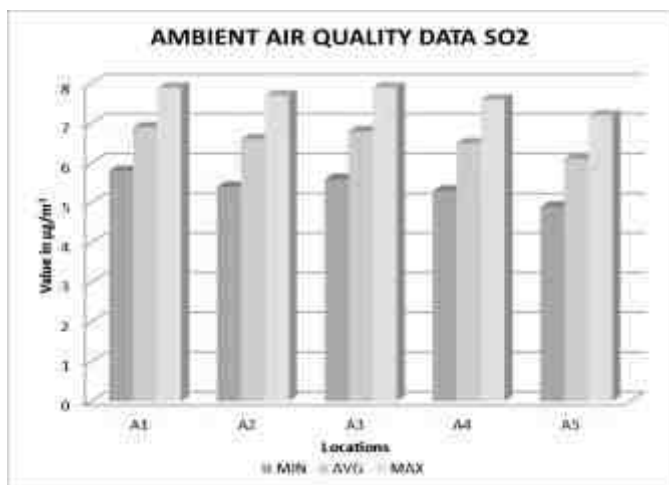
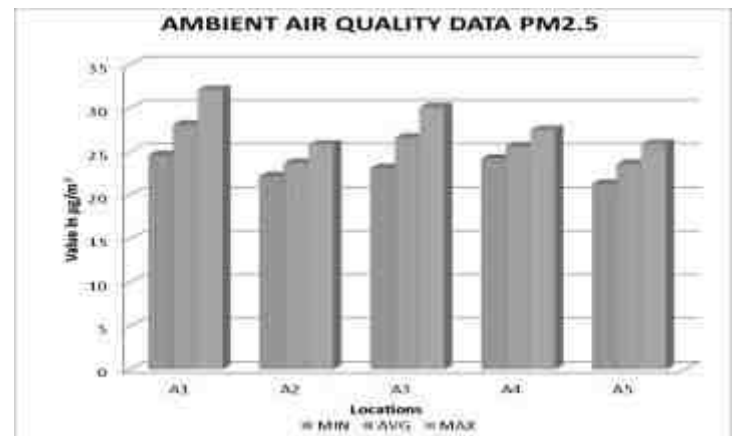
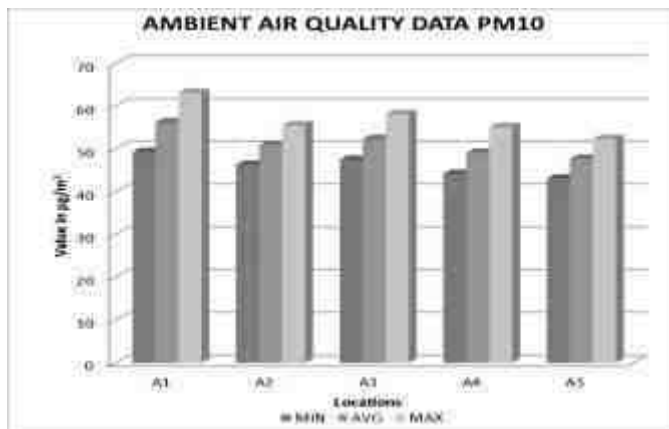
**Table 3.12: Ambient Air Quality Data**

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

PARAMETERS	Cat.*	PM <sub>10</sub>			PM <sub>2.5</sub>			SO <sub>2</sub>			NO <sub>2</sub>		
LOCATIONS		MIN	AVG	MAX	MIN	AVG	MAX	MIN	AVG	MAX	MIN	AVG	MAX
A1-Near Mine Lease Area	I	49.3	56.2	63.1	24.6	28.1	32.1	5.8	6.9	7.9	9.6	12.4	15.8
A2- Ulagani Village	R	46.3	50.9	55.5	22.2	23.7	25.8	5.4	6.6	7.7	8.4	10.7	13.7
A3- Nedungulam Village	R	47.5	52.3	58.1	23.1	26.6	30.1	5.6	6.8	7.9	8.9	11.2	14.2
A4- Kallanai Village	R	44.2	49.1	55.1	24.2	25.6	27.5	5.3	6.5	7.6	8.6	10.9	13.2
A5- Kookulam Village	R	43.1	47.7	52.3	21.3	23.6	25.9	4.9	6.1	7.2	8.2	10.5	12.8
<b>NAAQ Limits</b>		<b>PM<sub>10</sub></b>			<b>PM<sub>2.5</sub></b>			<b>SO<sub>2</sub></b>			<b>NO<sub>2</sub></b>		
	*	<b>100</b>			<b>60</b>			<b>80</b>			<b>80</b>		
	**	<b>100</b>			<b>60</b>			<b>80</b>			<b>80</b>		

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

**Figure 3.7: Ambient Air Quality Data**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**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 - 3.7**. Ambient Air Quality data during the study period is given in **Annexure-9**. From the table it is seen that, in the ambient air, the PM<sub>10</sub> values were in the range of 43.1-63.1 µg/m<sup>3</sup>. PM<sub>2.5</sub> values were in the range of 21.3 - 32.1 µg/m<sup>3</sup>. SO<sub>2</sub> levels were ranging from 4.9– 7.9 µg/m<sup>3</sup>. NO<sub>2</sub> levels were ranging from 8.2-15.8 µg/m<sup>3</sup>.

The existing Ambient Air Quality levels for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>2</sub>, are within the NAAQ standards prescribed CPCB limits of 100 µg/m<sup>3</sup>, 60 µg/m<sup>3</sup>, 80 µg/m<sup>3</sup> & 80 µg/m<sup>3</sup>. The CO values in all the locations were found to be below detectable limit. Silica values in the study area are found to be below detectable limit. (Detection limit – 0.05 mg/m<sup>3</sup>)

**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 5 locations. Details of the same has been provided below:

**Table 3.13: Water Quality Monitoring**

1.	<b>Monitoring Period</b>		<b>Summer Season ( March 2023 – May 2023)</b>		
2.	<b>Monitoring Location</b>		<b>The location map showing water sampling locations are given in Figure No.3.8.</b>		
	<b>Code</b>	<b>Location</b>	<b>Sample Type</b>	<b>Distance</b>	<b>Direction</b>
	W1	Near Mine Lease Area	Bore Well	-	-
	W2	Ulagani Village	Borewell	1.3km	NW
	W3	Nedungulam Village	Borewell	1.5km	NW
	W4	Kallanai Village	Borewell	1.2km	SE
	W5	Kokkulam Village	Borewell	3.0km	SE
3.	<b>Methodology</b>		Sampling - IS 3025 Part - I		
			Analysis – IS 3025 relevant parts / APHA 23rd Edition		



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 3.7: Location of Water Sampling Stations**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Table 3.14: Summary of Water Quality Data**

Season	March 2023 to May 2023	
Monitoring Locations	5 locations	
Parameters	Range of values	Limits*
pH at 25 °C	6.97 – 7.54	<b>6.5-8.5</b>
Total Dissolved Solids, mg/L	560 – 1110	<b>2000</b>
Chloride as Cl-, mg/L	56.7 – 440	<b>1000</b>
Total Hardness (as CaCO <sub>3</sub> ), mg/L	321 – 559	<b>600</b>
Total Alkalinity (as CaCO <sub>3</sub> ), mg/L	186– 314	<b>600</b>
Sulphates as SO <sub>4</sub> <sup>2-</sup> , mg/L	167 – 344	<b>400</b>
Iron as Fe, mg/L	0.04 – 0.11	<b>0.3</b>
Nitrate as NO <sub>3</sub> , mg/L	3.25 – 6.54	<b>45</b>
Fluoride as F, mg/L	0.42 – 0.56	<b>1.5</b>

**3.3.3.1 Results and Discussion:**

The results of the water sample analysis are shown in Table No - 3.14. The pH values were ranging in between 6.97 – 7.54. TDS values were in the range of 560 – 1110mg/L. Chloride values were ranging from 56.7 – 440mg/L. Iron content was found to be in the range 0.04– 0.11mg/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 5 locations during the monitoring period. Details of the same are provided below:



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Table 3.15: Noise Level Monitoring**

1.	<b>Monitoring Period</b>	Summer Season ( March 2023 – May 2023)		
2.	<b>Monitoring Location</b>	The location map showing noise monitoring locations are given in <b>Figure No.3.9.</b>		
	<b>Code</b>	<b>Location</b>	<b>Distance</b>	<b>Direction</b>
	N1	Near Mine Lease Area	-	-
	N2	Ulagani Village	1.3km	NW
	N3	Nedungulam Village	1.5km	NW
	N4	Kallanai Village	1.2km	SE
3.	<b>Methodology</b>	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.		
		Once during monitoring period		
4.	<b>Monitoring Frequency</b>	Once during monitoring period		





**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 3.8: Location of Noise Sampling Stations**

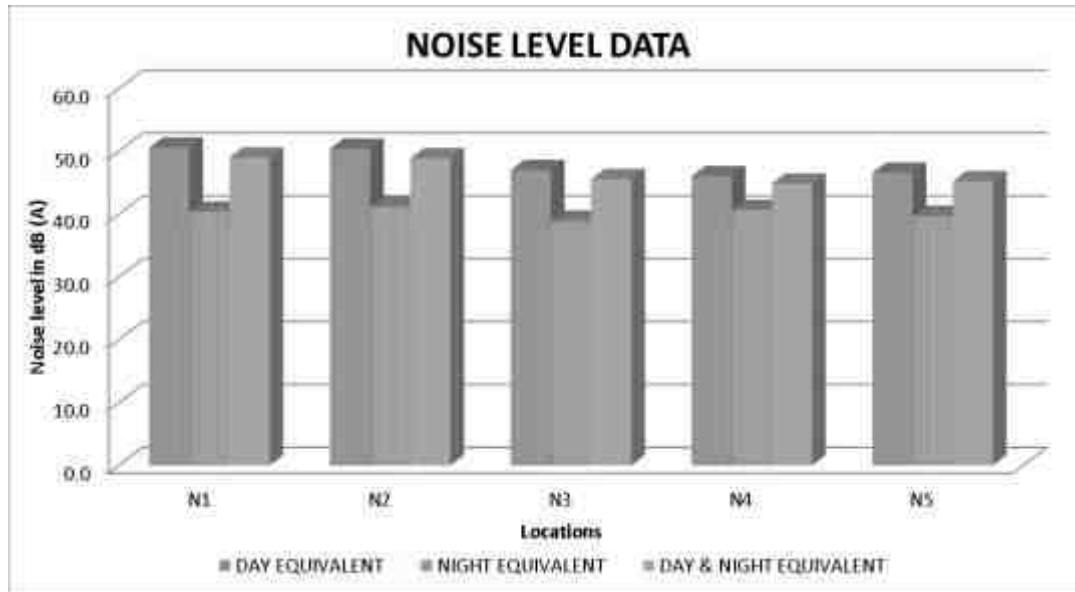


**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Table 3.16: Ambient Noise Level in dB (A)**

Date and time of monitoring	N1	N2	N3	N4	N5
Day Equivalent	50.6	50.4	47.0	46.0	46.6
Night Equivalent	40.4	41.2	38.9	40.6	39.7
Day & Night Equivalent	49.0	48.9	45.6	44.8	45.2

**Figure 3.9: Noise Level Data**



**3.3.4.1 Results and Discussion:**

The results of noise levels for all locations are given in **Table No-3.15**. The noise values for all above locations are shown in a comparative chart given in **Figure No - 3.10**. In the buffer zone, day Equivalent Noise (Leq-d) noise levels were ranging from 46.0 dB(A) to 50.6 dB(A) and night Equivalent Noise (Leq-d) levels ranged between 38.9 dB(A) to 41.2dB(A). While comparing with the MOEF&CC Norm of 55 dB(A) for day time and 45 dB(A) for night time, the monitored ambient noise levels were within the limit values for Residential areas.

**3.3.5 SOIL CHARACTERISTICS:**

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



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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**Table 3.17: Soil Quality Monitoring**

1.	<b>Monitoring Period</b>	Summer Season ( March 2023 – May 2023)		
2.	<b>Monitoring Location</b>	The location map showing soil sampling locations are given in <b>Figure No.3.11.</b>		
	<b>Code</b>	<b>Location</b>	<b>Distance</b>	<b>Direction</b>
	S1	Near Mine lease area	-	-
	S2	Ulagani Village	1.3km	NW
	S3	Nedungulam Village	1.5km	NW
3.	<b>Methodology</b>	Composite soil samples using sampling augers and field capacity apparatus.		
4.	<b>Monitoring Frequency</b>	Once during monitoring period		



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 3.10: Location of Soil Sampling Stations**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Table 3.18: Soil Quality Data**

S.No	Parameters	Unit	S1	S2	S3
1	pH at 25°C	-	7.24	6.99	7.03
2	Electrical Conductivity	(µmhos/cm)	45.67	65.43	70.74
3	Dry matter content	%	94.55	93.42	97.23
4	Water Content	%	5.45	6.58	2.77
5	Organic Matter	%	0.76	0.94	1.02
6	Soil texture	-	Sandy Clay Loam	Clay Loam	Loam
7	Grain Size Distribution i. Sand	%	48.04	24.32	42.98
8	ii. Silt	%	17.98	35.87	29.05
9	iii. Clay	%	33.98	39.81	27.97
10	Phosphorous	µg/g	1.59	1.41	1.36
11	Sodium	mg/kg	390	354	422
12	Potassium	mg/kg	586	620	704
13	Total Nitrogen	mg/kg	125	210	245
14	Total Sulphur	%	BDL(D.L - 0.02)	BDL(D.L - 0.02)	BDL(D.L - 0.02)

**3.3.5.1 Results and Discussion:**

Results of the soil samples show that the pH values were ranging between 6.99 to 7.24 and Electrical Conductivity values were ranging between 45.67 – 70.74 µmhos/cm. Soils are generally Sandy Clay Loam type. Organic matter values were ranging between 0.76 – 1.02%. Total Nitrogen values were ranging between 125 - 245mg/kg. Phosphorus values were ranging between 1.36 – 1.59µg/g. Potassium values were ranging between 586 - 704 mg/kg. Sodium values were ranging between 354- 422 mg/kg. Total Sulphur values were observed to be BDL. The soil quality data for the 3 samples collected and analyzed are provided in **Table No – 3.18.**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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### **3.4 LAND ENVIRONMENT - LANDUSE & LAND COVER**

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

#### **3.4.1 DATA USED AND METHODOLOGY**

For the present study on land use pattern of buffer area around the proposed stone and gravel quarry, an archived historical data of Landsat-8 data shas been used as base data acquired on May 2023 (Figure No.3.12) 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**

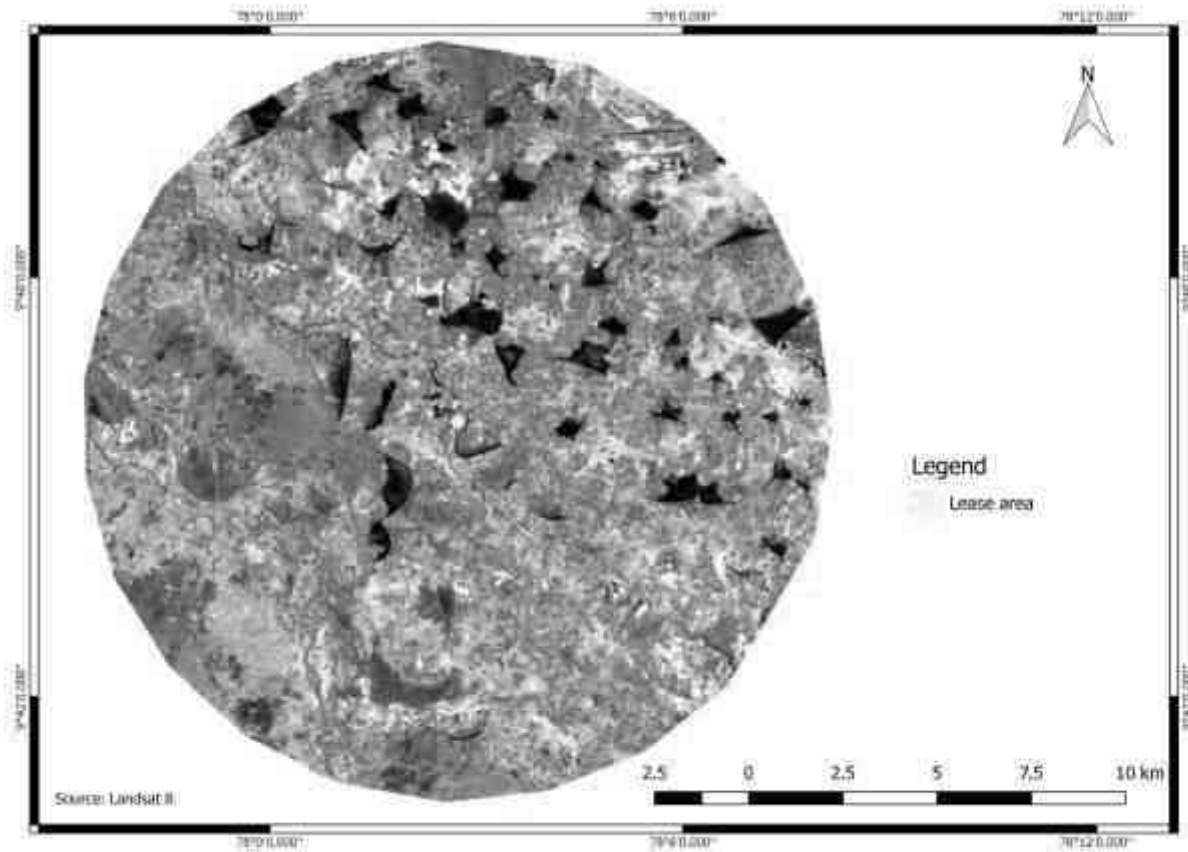
<b>S.No</b>	<b>Type of Data</b>	<b>Date</b>	<b>Generated Map</b>
1.	Landsat-8	May 2023	Landuse (LU) Map showing 10 Km around the ML area

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



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 3.11 : Landsat 8 Satellite Data of the Study Area**



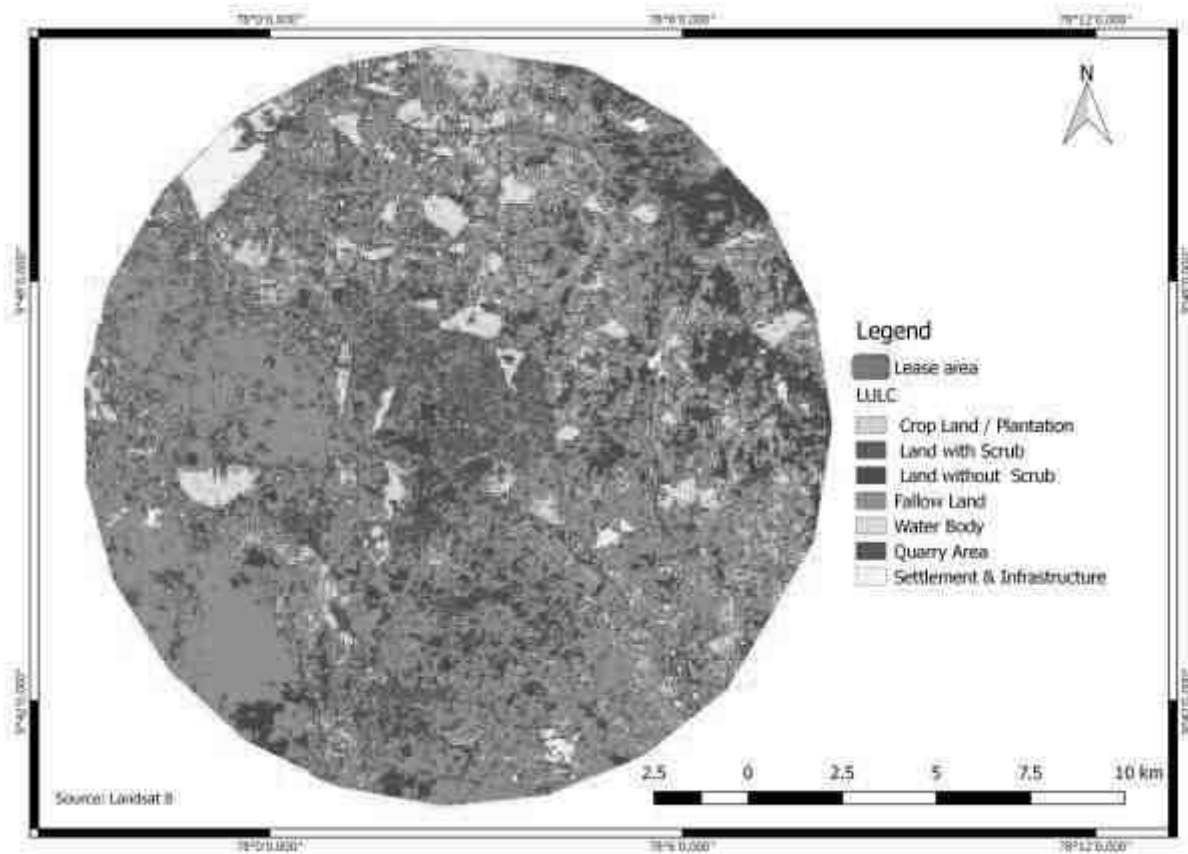
**Table 3.20: Major Landuse Units of the Study Area**

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. 3.13) using above such elaborate procedure and transformed into GIS environment for its spatial distribution and area estimation. Spatial nature and extent of various landuse categories within the buffer area is discussed is given below:

**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Figure 3.12: Map Showing Land Use Categories around 10km Buffer**





**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Table 3.21: Area Estimation of Landuse Categories in Buffer Zone**

S.No	Landuse Feature	Area (Sq.Km)	Percentage
1	Crop Land / Plantation	47.97	15.50
2	Land With Scrub	58.71	18.96
3	Land Without Scrub	52.40	16.93
4	Fallow Land	129.23	41.74
5	Water bodies	13.61	4.40
6	Mining Area/ Industries	1.23	0.40
7	Settlement & Infrastructure	6.42	2.07
	<b>Total</b>	309.56	100

From the above table it is seen that 15.50 % of the study area is agriculture land and 41.74 % are fallow land. Land with scrub constitutes 18.96 %, lands without scrub constitute 16.93 % and waterbodies constitute 4.40 % & others constitute 2.47 %.

**3.4.2 LAND USED BASED ON REVENUE RECORDS:**

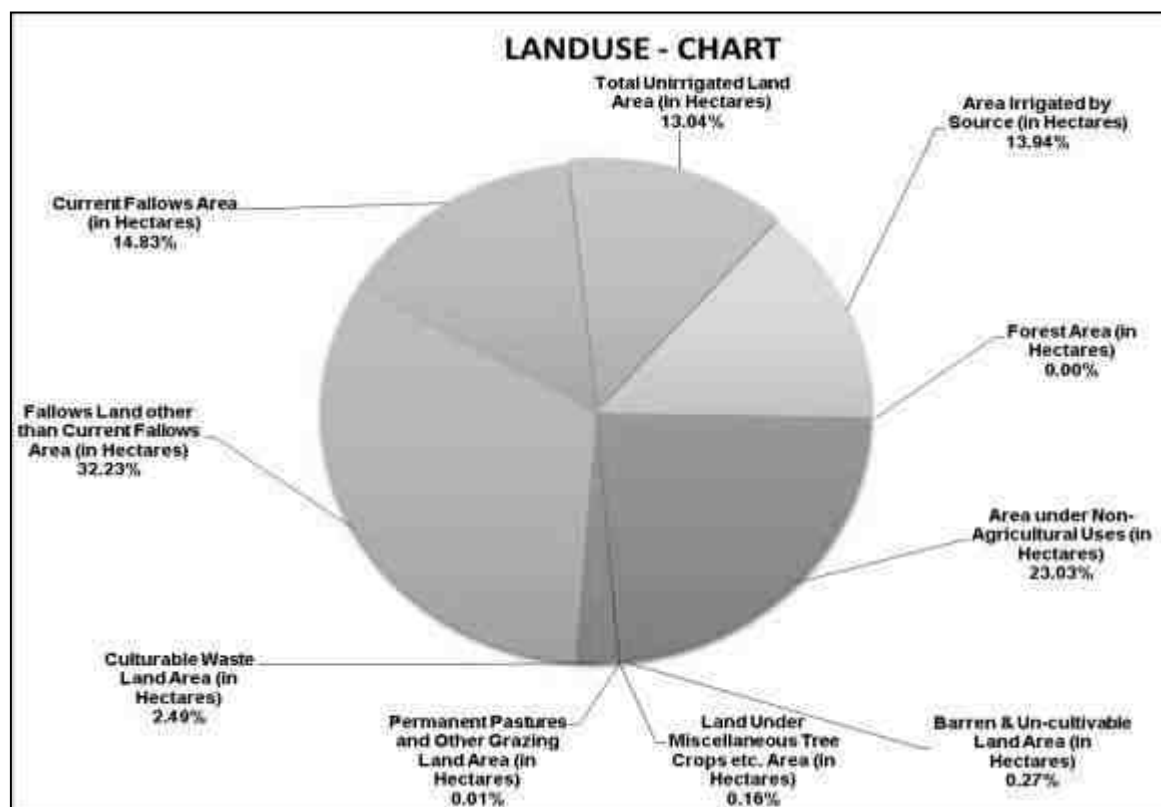
The lease area falls in Kallanai village, Kalligudi Taluk, madurai District, Tamil Nadu state and the study area for the land use pattern (10 km radius) has been divided into four zones viz. Zone-I (0-2 km), Zone-II (2-5 km), Zone-III (5-10 km) and Zone-IV (0-10 km) respectively. The land use pattern of the study area falling within 10 km radius around the proposed project area is presented in Table no - 3.21. Village wise land use pattern is provided in **Annexure-11**.

**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

**Table 3.22: Land Use Pattern of the Study Area Falling Within 10 Km Area in (Ha)**

Study Area	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	1656.44	0	535.74	0	0	1.63	63.14	376.78	287.1	44.23	347.82
2 - 5 KM	7021	0	1565.59	8.12	0	0.74	94.83	2038.43	909.9	1015.79	1387.6
5-10 KM	28984.07	0	6573.77	93.39	2.82	56.21	780.36	9724.03	4388.17	3849.48	3515.84
0-10 KM	37661.51	0	8675.1	101.51	2.82	58.58	938.33	12139.24	5585.17	4909.5	5251.26

**Figure 3.13: Landuse within the Buffer Zone Area**



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTU LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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### **3.5 BIOLOGICAL ENVIRONMENT:**

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

#### **3.5.1 FLORA:**

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

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

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

##### **3.5.1.1 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



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represented is recorded at quadrats level. A total of 10 quadrats were laid down in core area and a total of 20 quadrats were laid out in four quartiles (5 each) of buffer area.

**Quadrats method for flora :** Quadrats of 10 × 10m were laid down randomly within core and 10kms buffer area; each quadrat was laid to assess the trees (>5 cm GBH) and 5 × 5 m sub-quadrat nested within the quadrat for shrubs and two plot 1 × 1 m for herbs . The quadrats were laid at a minimum distance of a kilometer apart to maximize the sampling efforts and minimize the species homogeneity, such as small stream area, trees in agricultural bunds, tank bunds, farm forestry plantations, natural forest area, avenue plantations, house backyards, etc. In each sample 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 lease area is a non-forest, private land. Major part of lease area is barren fallow land with bushes ( *Prosopis juliflora*) and grasses. The detailed list of plants found in the core zone are given in Table no – 3.20.



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**Table 3.23: List of Floristic Species in the Core Zone**

Sl.No	Species Name	Common Name	Family
<b>Trees</b>			
1	<i>Prosopis juliflora</i>	Fabaceae	Cimaikkaruvel
2	<i>Morinda tinctoria</i>	Rubiaceae	Nuna
3	<i>Acacia nilotica</i>	Fabaceae	Karuvelan
<b>Shrubs</b>			
1	<i>Calotropis gigantea</i>	Apocynaceae	Earukku
2	<i>Cassia auriculata</i>	Fabaceae	Aavarampoo
3	<i>Lantana camara</i>	Verbenaceae	Uni
<b>Herbs</b>			
1	<i>Sida acuta</i>	Malvaceae	Palambasi
2	<i>Anisomeles indica</i>	Lamiaceae	marutti
3	<i>Acalypha indica</i>	Amaranthaceae	Kupaimeni keeri
<b>Grasses</b>			
1	<i>Cyperus rotundus</i>	Cyperaceae	Korai pullu

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**B. PROJECT IMPACT ZONE (PIZ-300m BUFFER FROM CORE ZONE):**

The PIZ is a dry area comprising mining area, plantation, barren fallow land with thorny bushes of Prosopis juliflora. A total of 15 tree species from 7 families were recorded in the PIZ. The diversity indexes was less due to dry area. From the above result it is clearly shows the PIZ is disturbed and has less diversity. Hence it is important to improve the plantation of the study area. The list of plants found in the PIZ are given in Table no – 3.23. The detailed list of plants found in the PIZ is given below.

**Table 3.24: Phyto-Sociological Survey Of Trees In PIZ**

Species	Family	Density	Frequency	BA	Rd	Rdo	Rf	IVI
Acacia auriculiformis	Fabaceae	7	4	0.613057	5.34	2.4059	7.692308	15.44
Acacia leucophloea	Fabaceae	3	2	0.13535	2.29	0.5312	3.846154	6.67
Acacia nilotica	Fabaceae	28	10	1.897054	21.37	7.4449	19.23077	48.05
Albizia amara	Fabaceae	2	2	0.288615	1.53	1.1327	3.846154	6.51
Albizia lebbeck	Fabaceae	2	2	0.169188	1.53	0.6640	3.846154	6.04
Azadirachta indica	Meliaceae	9	4	17.44666	6.87	68.4690	7.692308	83.03
Borassus flabelliformis	Arecaceae	8	4	1.172373	6.11	4.6009	7.692308	18.40
Cassia fistula	Fabaceae	2	1	0.22492	1.53	0.8827	1.923077	4.33
Casuarina equisetifolia	Casuarinaceae	3	2	0.322452	2.29	1.2655	3.846154	7.40
Ficus religiosa	Moraceae	3	2	0.826911	2.29	3.2452	3.846154	9.38
Mangifera indica	Anacardiaceae	3	2	0.32707	2.29	1.2836	3.846154	7.42
Morinda pubescens	Rubiaceae	5	5	0.417118	3.82	1.6370	9.615385	15.07
Pongamia pinnata	Fabaceae	4	2	0.556449	3.05	2.1838	3.846154	9.08
Prosopis juliflora	Fabaceae	48	9	0.546467	36.64	2.1446	17.30769	56.09
Samanea saman	Fabaceae	4	1	0.53742	3.05	2.1091	1.923077	7.09

*Rd- Relitive Density, Rdo- Relative dominance, Rf – Relative Frequency, IVI – Importance Value Index*

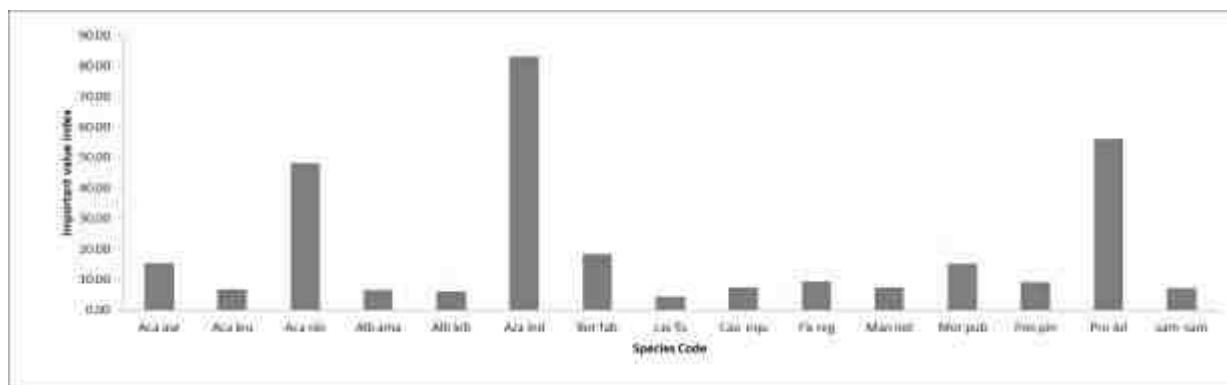
**Table 3.25: Species Diversity index of trees in PIZ**

A	Lower	Upper
Taxa	15	15
Individuals	131	131
Dominance	0.1974	0.2482
Simpson	0.8026	0.8451
Shannon	2.084	2.233
Evenness	0.5358	0.6217
Fisher alpha	4.369	4.369
Berger Parker	0.3664	0.4427



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**Figure 3.14: Species Important Value Index For Trees in PIZ**



**C.BUFFER ZONE:**

The Dominated species are Prosopis juliflora, Azadirachta indica, Borassus flabellifer, Acacia nilotica, Albizia lebbeck, Acacia leucophloea, Acacia auriculiformis, etc. The detailed list of plants found in the Bufferzone is given in Table no – 3.25.

**Table 3.26: List of Floristic Species in the Buffer Zone**

Sl.No	Species Name	Family	Local Name
<b>Trees</b>			
1	Acacia auriculiformis	Fabaceae	Pencil tree
2	Acacia leucophloea	Fabaceae	Valvelam
3	Acacia nilotica	Fabaceae	Karuvelan
4	Aegle marmelos	Rutaceae	Vilvam
5	Albizia amara	Fabaceae	Wunja
6	Albizia lebbeck	Fabaceae	Vagai
7	Anacardium occidentale	Anacardiaceae	Munthiri
8	Annona squamosa	Annonaceae	Sitapalam
9	Artocarpus heterophyllus	Moraceae	Palamaram
10	Azadirachta indica	Meliaceae	Vembu
11	Borassus flabelliformis	Malvaceae	Ilavu
12	Bauhinia purpurea	Caesalpinaceae	Mantharai
13	Borassus flabelliformis	Arecaceae	Panna-maram
14	Carica papaya	Caricaceae	Pappali
15	Cassia fistula	Fabaceae	Konrai
16	Cassia siamea	Fabaceae	ManjalKonrai
17	Casuarina equisetifolia	Casuarinaceae	Savukku maram
18	Citrus limon	Rutaceae	Lemon

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Sl.No	Species Name	Family	Local Name
19	Cocus nucifera	Arecaceae	Tennai
20	Delonix elata	Fabaceae	Perungondrai
21	Delonix regia	Fabaceae	Gulmohar
22	Ficus benghalensis	Moraceae	Aalamaram
23	Ficus religiosa	Moraceae	Poarasamaram
24	Gmelina arborea	Lamiaceae	Kumalaamaram
25	Leucaena leucocephala	Fabaceae	Subabul
26	Madhuca longifolia	Sapotaceae	Iluppai
27	Mangifera indica	Anacardiaceae	Manga
28	Manilkara zapota	Sapotaceae	Sappota
29	Melia azedarach L	Meliaceae	Malai vembu
30	Millettia pinnata	Fabaceae	Pongam
31	Mimusops elengi	Sapotaceae	Magizhamboo
32	Morinda pubescens	Rubiaceae	Manjanathi
33	Morinda tinctoria	Rubiaceae	Nuna
34	Moringa oleifera	Moringaceae	Murungai
35	Musa paradisiaca	Musaceae	Valzhlai
36	Peltophorum pterocarpum	Fabaceae	Kilukiluppai
37	Phyllanthus emblica	Phyllanthaceae	Nelli
38	Pithecellobium dulce	Fabaceae	Kudukapuli
39	Polyalthia longifolia	Annonaceae	Nietilingam
40	Pongamia pinnata	Fabaceae	Pungai
41	Prosopis juliflora	Fabaceae	Seemai karuvel
42	Psidium guava	Myrtaceae	Koyya
43	Samanea saman	Fabaceae	Amaivagai
44	Sygygium cumuni	Myrtaceae	Naval
45	Tamarindus indica	Fabaceae	Puli
46	Tectona grandis	Verbenaceae	Tekku
47	Terminalia arjuna	Combretaceae	Marudha Maram
48	Thespesia populnea	Malvaceae	Puvarasu
49	Vachellia nilotica	Fabaceae	Karuvelam
50	Ziziphus mauritiana	Rhamnaceae	Elanthai maram
<b>Shrubs</b>			
1	Abutilon indicum	Meliaceae	Thuthi
2	Aloe vera	Asphodelaceae	Chotthu kathalai
3	Boerhaavia diffusa	Nyctaginaceae	Kagithapoo
4	Calotropis gigantea	Apocynaceae	Earukku
5	Cassia auriculata	Fabaceae	Aavarampoo





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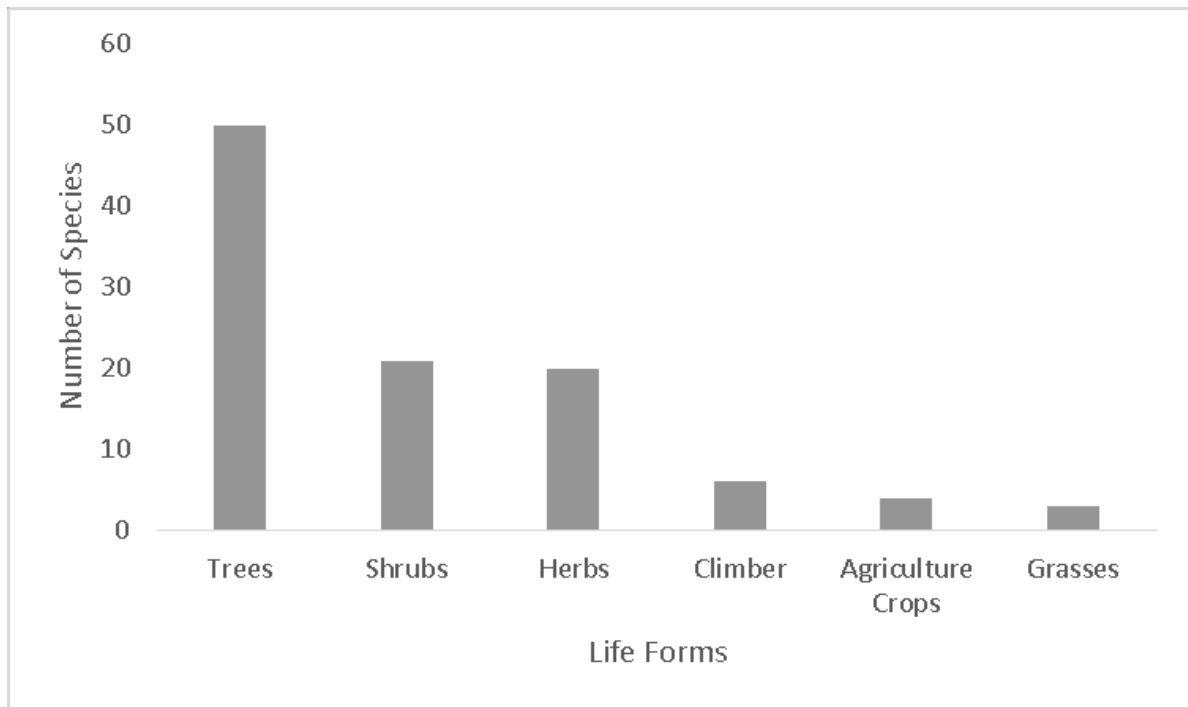
Sl.No	Species Name	Family	Local Name
6	Hibiscus rosa-sinensis	Malvaceae	Semparuthi
7	Ipomoea carnea	Convolvulaceae	Pink morning glory
8	Ixora casei	Rubiaceae	Idlipoo
9	Jatropagossypifolia	Euphorbiaceae	Kaatamanaku
10	Justicia adhatoda	Acanthaceae	Adathoda
11	Lantana camara	Verbenaceae	Unni chedi
12	Lawsonia inermis	Lythraceae	Maruthani
13	Mimosa pudica	Mimosaceae	Thottalchinungi
14	Nerium indicum	Apocynaceae	Arali
15	Ricinus communis	Euphorbiaceae	Amanakku
16	Senna auriculata	Fabaceae	Avarai
17	Sida cordifolia	Malvaceae	Sida plant
18	Solanum torvum	Solanaceae	Sundaika
19	Tecoma stans	Bignoniaceae	Yellow trumpetbush
20	Vitex negundo	Verbinaceae	Vanili
21	Ziziphus jujuba	Rhamnaceae	Elanthai
<b>Herbs</b>			
1	Acalypha indica	Euphorbiaceae	Kuppamani
2	Acanthospermum hispidum	Asteraceae	Gokul kanta
3	Achyranthes aspera	Amaranthaceae	Nayuruvi
4	Aloe vera	Asphodelaceae	Katrashai
5	Anisomeles indica	Lamiaceae	marutti
6	Anisomeles malabarica	Lamiaceae	Peyimarutti
7	Argemone mexicana	Papaveraceae	Mexican poppy
8	Catharanthus roseus	Apocynaceae	Nithiyakalyani
9	Celome viscosa	Capparidaceae	Nai kadugu
10	Euphorbia hirta	Euphorbiaceae	Amman pacharisi
11	Leucas aspera	Lamiaceae	Thumbai
12	Ocimum tenuiflorum	Lamiaceae	Thulasi
13	Parthenium hysterophorus	Asteraceae	Parthenium
14	Phyllanthus niruri	Phyllanthaceae	Keelzhaneeli
15	Sida acuta	Malvaceae	Palambasi
16	Sida rhombifolia	Malvaceae	Kurundotti
17	Solanum xanthocarpum	Solanaceae	Kandangkattari
18	Solanumnigrum	Solanaceae	Manathakkali
19	Tephrosia purpurea	Fabaceae	Kavali
20	Tridax procumbens	Asteraceae	Thatha poo
<b>Climber</b>			



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Sl.No	Species Name	Family	Local Name
1	Abrus precatorius	Fabaceae	Kundumani
2	Asparagus racemosus	Asparagaceae	Tannir-vittan
3	Cissus quadrangularis	Vitaceae	Pirandai
4	Citrullus colocynthis	Cucurbitaceae	Peikkumatti
5	Clitoria ternatea	Fabaceae	Sangu poo
6	Coccinia grandis	Cucurbitaceae	Kovai
<b>Agricultures Crops</b>			
1	Musa paradisiaca	Musaceae	Valzhai
2	Solanum melongena	Solanaceae	Kaththarii
3	Sesbania grandiflora	Fabaceae	Agati
4	Gossypium hirsutum	Malvaceae	Paruththi
<b>Grasses</b>			
1	Cyperus rotundus	Cyperaceae	korai pullu
2	Chloris barbata	Poaceae	Kodai pullu
3	Cynodon dactylon	Poaceae	Arugampillu

**Figure 3.15: Flora species in the Buffer Zone**



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**3.5.2 FAUNA:**

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

**Observation:** There is no Wild Life Sanctuary or National Park within the study area of 10 km. Domesticated animals are commonly found. The lease and 10 Km buffer zone does not fall in the Western Ghats ESA boundary. No wild mammalian species was directly sighted during the field survey. There is no Schedule I animals in the buffer zone area. The list of fauna within the study area is given in Table No – 3.26.

**Table 3.27: List of Fauna in the Buffer Zone**

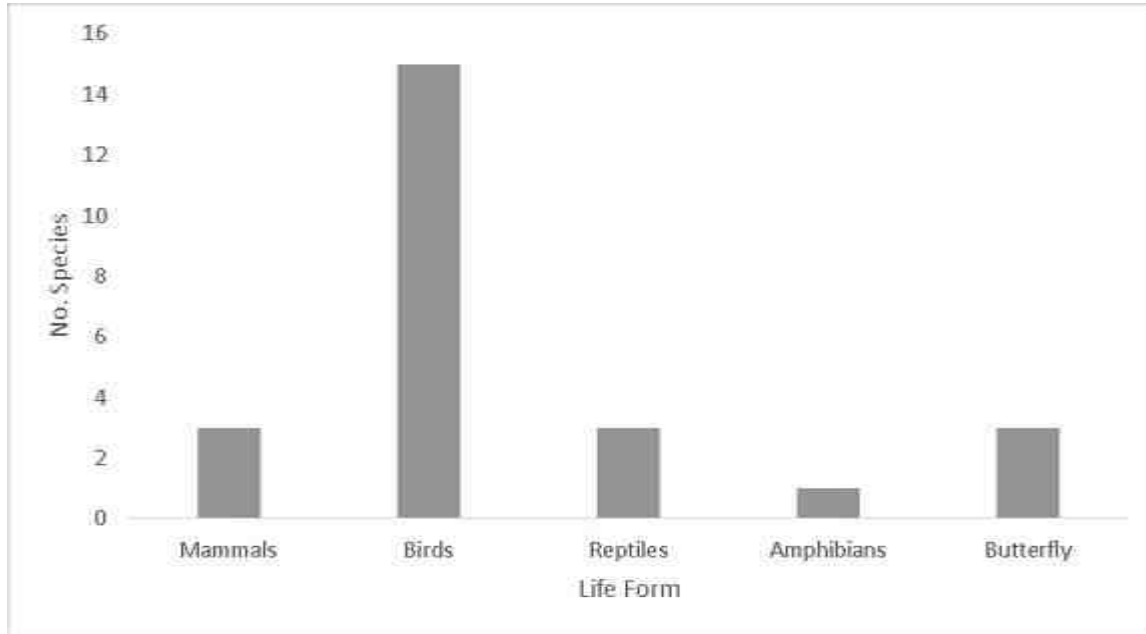
S.No	Common Name	Scientific name	IWPA, Schedule
<b>Mammals</b>			
1	Indian Palm squirrel	Funambus palmarum	IV
2	Indian Grey Mongoose	Herpestes edwardsii	II
3	Common Indian Hare	Lepus ruficaudatus	IV
<b>Birds</b>			
1	Spotted Dove	Streptopelia chinensis	IV
2	Common Kingfisher	Alcedo atthis	IV
3	Common Myna	Acridotheres tristis	IV
4	Rose-ringed Parakeet	Psittacula krameri	IV
5	House Sparrow	Passer domesticus	IV
6	Black Drongo	Dicrurus macrocercus	IV
7	Common Crow	Corvus splendens	V
8	Red-vented Bulbul	Pycnonotus cafer	IV
9	Indian Cuckoo	Cuculus micropterus	IV
10	Little Cormorant	Phalacrocorax niger	IV
11	Purple-rumped Sunbird	Nectarinia zeylonica	IV
12	Little Egret	Egretta garzetta	IV
13	Common Quail	Coturnix coturnix	IV
14	Cattle Egret	Bubulcus ibis	IV
15	Common Babbler	Turdoides caudatus	IV
<b>Reptiles</b>			
1	Garden Lizard	Calotes versicolor	IV
2	Rat Snake	Ptyas mucosa	II
3	Common Indian krait	Bungarus caeruleus	II
<b>Amphibians</b>			
1	Common Indian toad	Bufo melanostictus	IV
<b>Butterfly</b>			



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S.No	Common Name	Scientific name	IWPA, Schedule
1	Small grass yellow	Eurema brigitta	IV
2	Lime butterfly	Papilio demoleus	IV
3	Common crow	Euploea core	IV

**Figure 3.16: Fauna Diversity in the Buffer Zone**



### **3.6 HYDROGEOLOGICAL STUDY:**

This section delves into the study of the hydrogeological scenario of the study area to evaluate the impact of mining activities on the nearby areas. The study area is located in Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu is considered to understand the nature of the general hydrogeological conditions of the area.

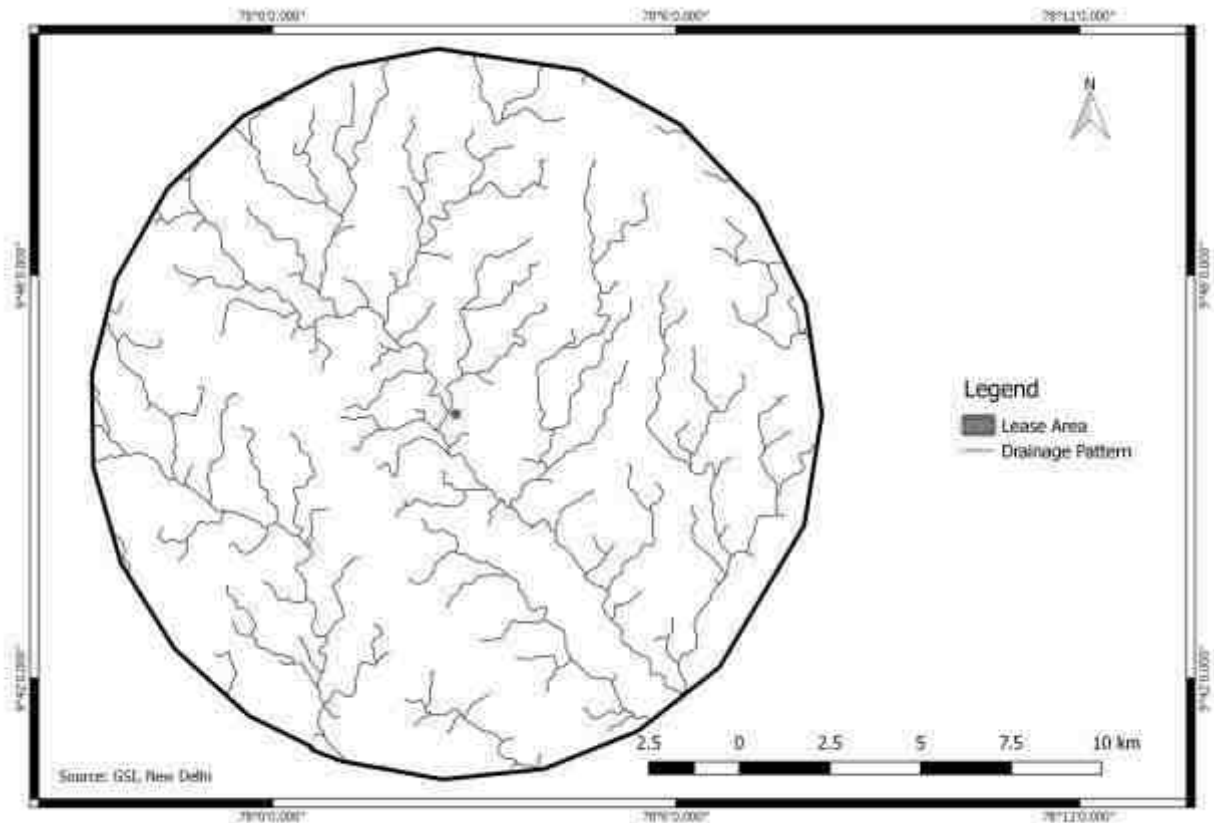
#### **3.6.1 PHYSIOGRAPHY AND DRAINAGE:**

**Physiography:** The area applied for mining lease is a gentle plain terrain and dry lands without any vegetation. The gravel formation is having thickness of 2m. The rocks in this area belonging to ARCHEAN group of rocks. Below the gravel formation a hard Rough stone Charnockite is noticed. The rocks are Phaneric to medium grained nature. And in these rocks there are mineral constituents of BLUE QUARTS, MICRO CLINE FELDSPAR, HYPERSTHENE and flakes of BIOTITE MICA. The rocks are striking towards North west – South east direction dipping 80° Vertical towards South east direction.

**Drainage:** There is a Drainage channel on the western side of the lease area for which safety distance of 50m has been left. The drainage map prepared from the survey of India topographic maps shows the presence of few streams running in a dendritic pattern.

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**Figure 3.17: Drainage Map**

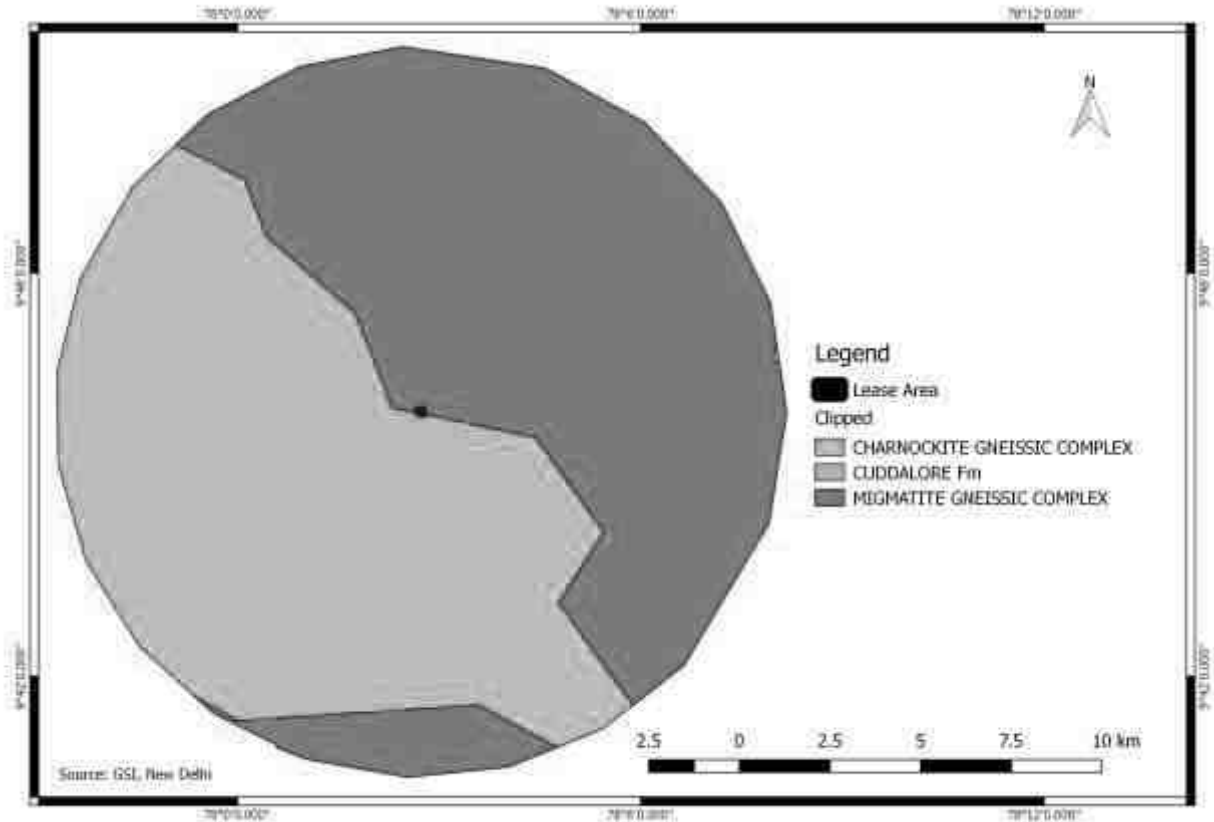


### 3.6.2 GEOLOGY AND GEOMORPHOLOGY

**Geology:** The type of rock formation in the buffered zone is composed majorly of Migmatite Gneissic complex. The lease area falls under Charnockite Gneissic complex category.

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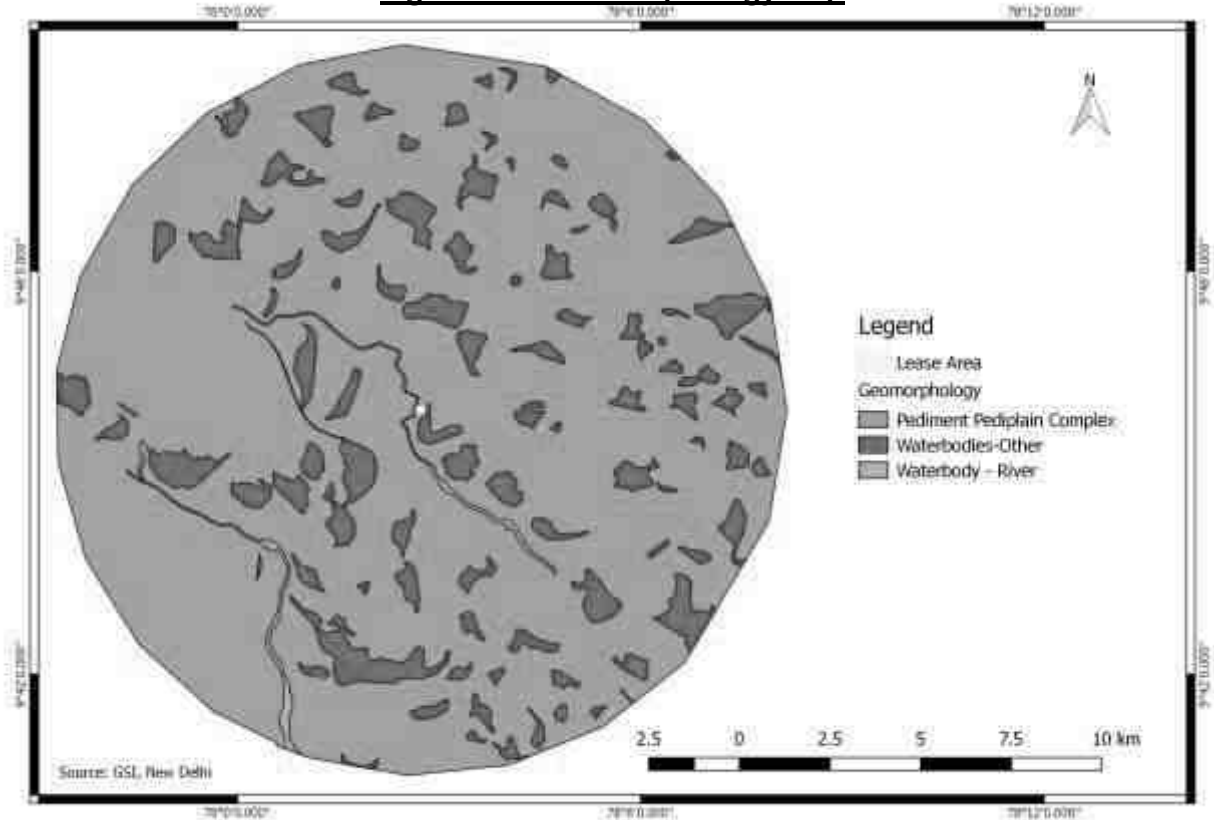
**Figure 3.18: Geology Map**



**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 Pediplain complex, and it is the same category that the lease area also falls under.

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**Figure 3.19: Geomorphology Map**

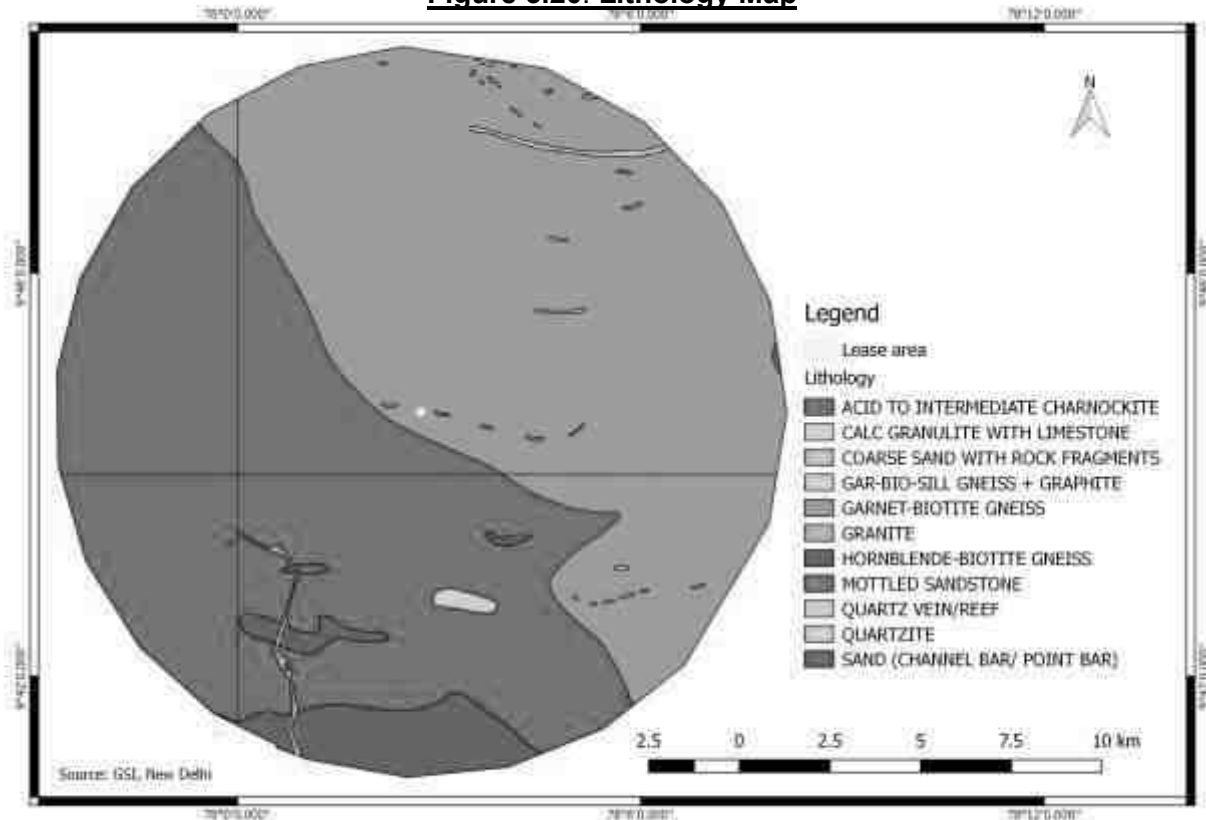


**Lithology:** The study area is mainly dominated by Calc Granulite with limestone. The lithology map has been provided below.



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

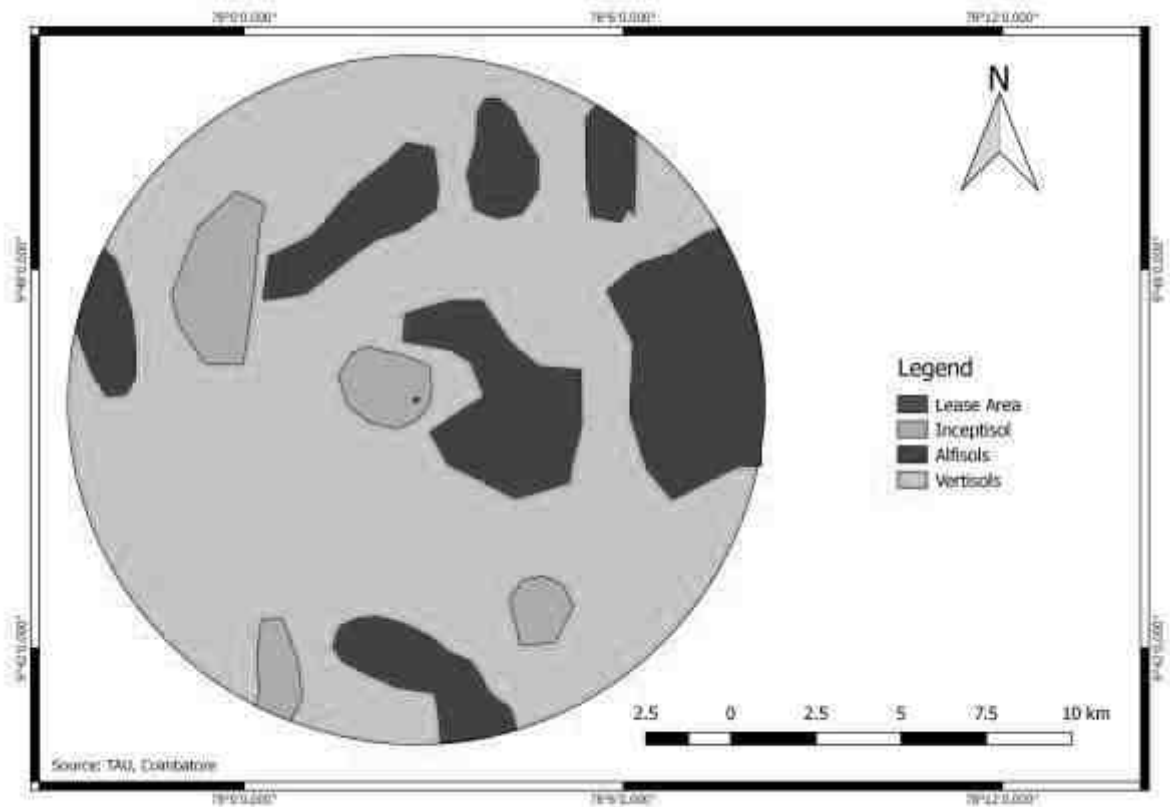
**Figure 3.20: Lithology Map**



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

**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

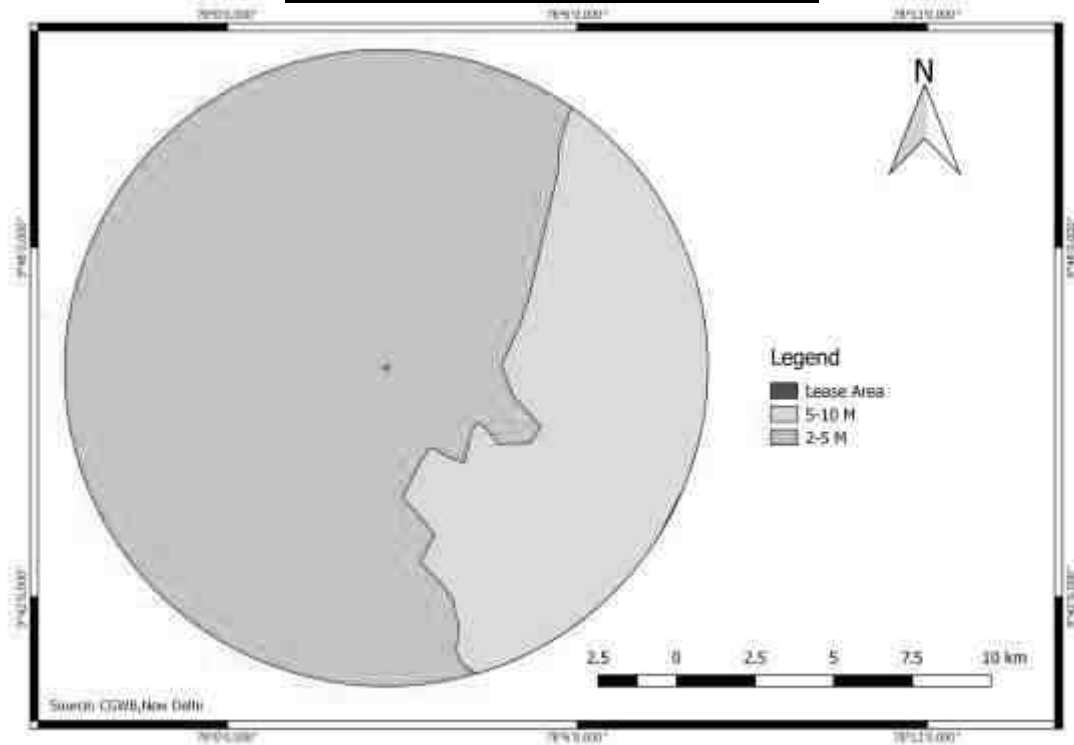
**Figure 3.21: Soil Map**



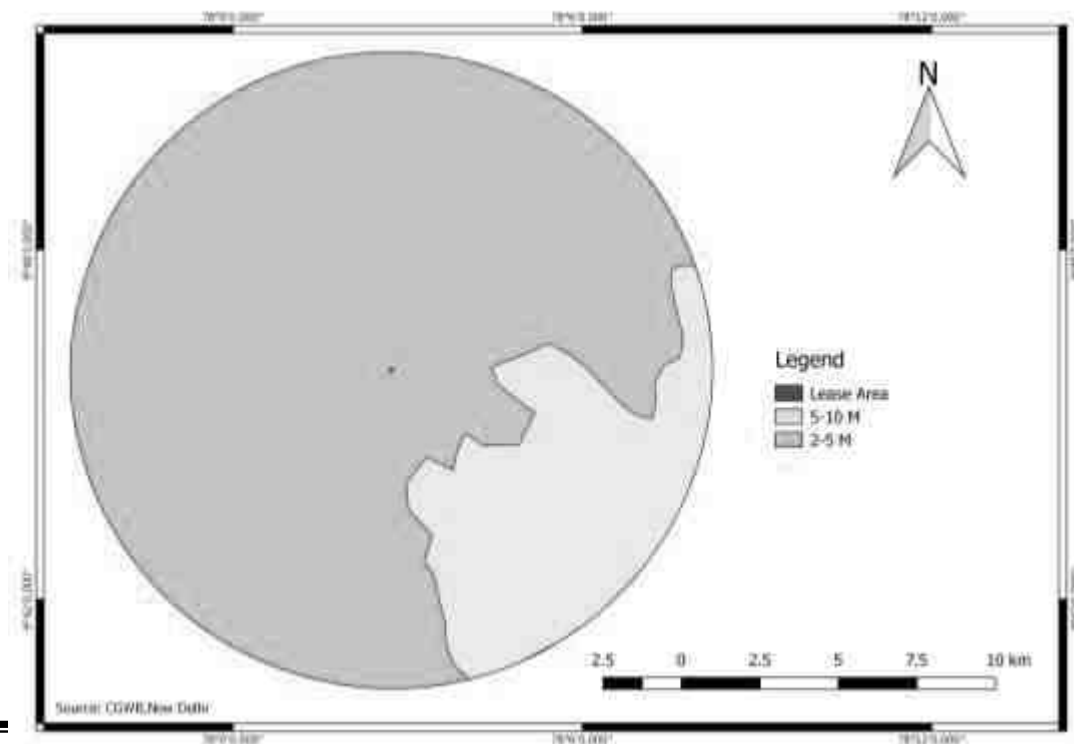
The premonsoon and post monsoon water levels are depicted in Figure No.3.25, and 3.26 and they indicate that the depth to water level in project area ranges between 2.0 to 10.0 m bgl during the pre-monsoon season(April) and 2.0 to 10.0 m bgl during the post monsoon season (November).

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**Figure 3.22: Pre-Monsoon Water Level**



**Figure 3.23: Post Monsoon Water Level**



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**Field investigation:**

Study of the area shows that the sub-surface formations reveal about 1 to 2m of soil with low recharge potentials. Subsequently hard and massive formations of rock are found.

In the study area, the shallow aquifer is developed through dug wells and deeper aquifer through tube wells. The study has revealed that potential fractures are encountered at deeper levels. The water in the wells are available mainly after post monsoon and it reduces during summer necessitating only dry crops cultivation. Bore wells are as deep as 450 ft also and it reflects that the yield is only better at deeper water levels.

Based on the available information and the geophysical investigations it is concluded that the project area is considered to poor groundwater potential up to 60m. Besides, the mining area consists of hard compact rock, no major water seepage within the mine is expected. There is no water seepage noticed in to the already quarried pits situated nearby the proposed quarry area. Hence, the quarrying rough stone up to the proposed depth may not have any adverse impact in the area over ground water conditions.

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



# **CHAPTER - IV**

## **ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES**

## **CHAPTER 4**

### **ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

#### **4.1 GENERAL**

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

#### **4.2 AIR ENVIRONMENT:**

##### **4.2.1 IMPACTS DUE TO PROJECT OPERATION:**

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

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

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

Particulate matter smaller than 10 microns, referred to as PM<sub>10</sub>, 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<sub>2.5</sub>), tend to penetrate into the lungs and very small particles (<100 nanometers) may pass through the lungs to affect other organs.

Besides the above mentioned fugitive dust emissions, atmospheric pollution can occur as a result of emission of SO<sub>2</sub>, NO<sub>x</sub>, 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 SO<sub>2</sub>, NO<sub>x</sub>, 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 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
5	Others	Dust emanation, Gaseous Emission	Covering of loaded tippers with tarpaulins during transportation
			Development of greenbelt / barriers around mine in the safety zone and carrying out plantation within the lease area.
			Green netting 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.



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Considering that the quantum of production is less, only 1 excavator, 2 tippers will be engaged. These equipment's will be properly and regularly maintained. Besides, as mentioned earlier, 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 800 number of plants will be planted in and around the lease area.

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

#### **4.2.2 AIR QUALITY IMPACT PREDICTION:**

The model simulations are done for the air pollutant arising from the mining operations, namely, PM<sub>10</sub>, PM<sub>2.5</sub>. **Ground Level Concentration** (GLC) have been computed using hourly meteorological data.

**Table 4.2: Emission Sources**

<b>ACTIVITY</b>	<b>SOURCE TYPE</b>
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. The details of the emission factors used for the same is provided below:





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**Table 4.3: Emission Factors**

S.No	Activity	PM10	PM2.5	Unit
1	Ore Loading	$1.5 \times 10^{-3}$	$2.1 \times 10^{-4}$	Kg/T
2	OB Loading	$1.4 \times 10^{-4}$	$1.5 \times 10^{-5}$	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, 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/POLLUTANTS	PM <sub>10</sub> (g/sec)	PM <sub>2.5</sub> (g/sec)
Ore Loading	0.02	0.00
Drilling	0.07	0.03
Hauling inside lease area	0.07	0.01
<b>Total</b>	<b>0.16</b>	<b>0.04</b>

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

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

**4.2.2.3 Results and Discussions**

**Table 4.5: Peak Incremental Concentration**

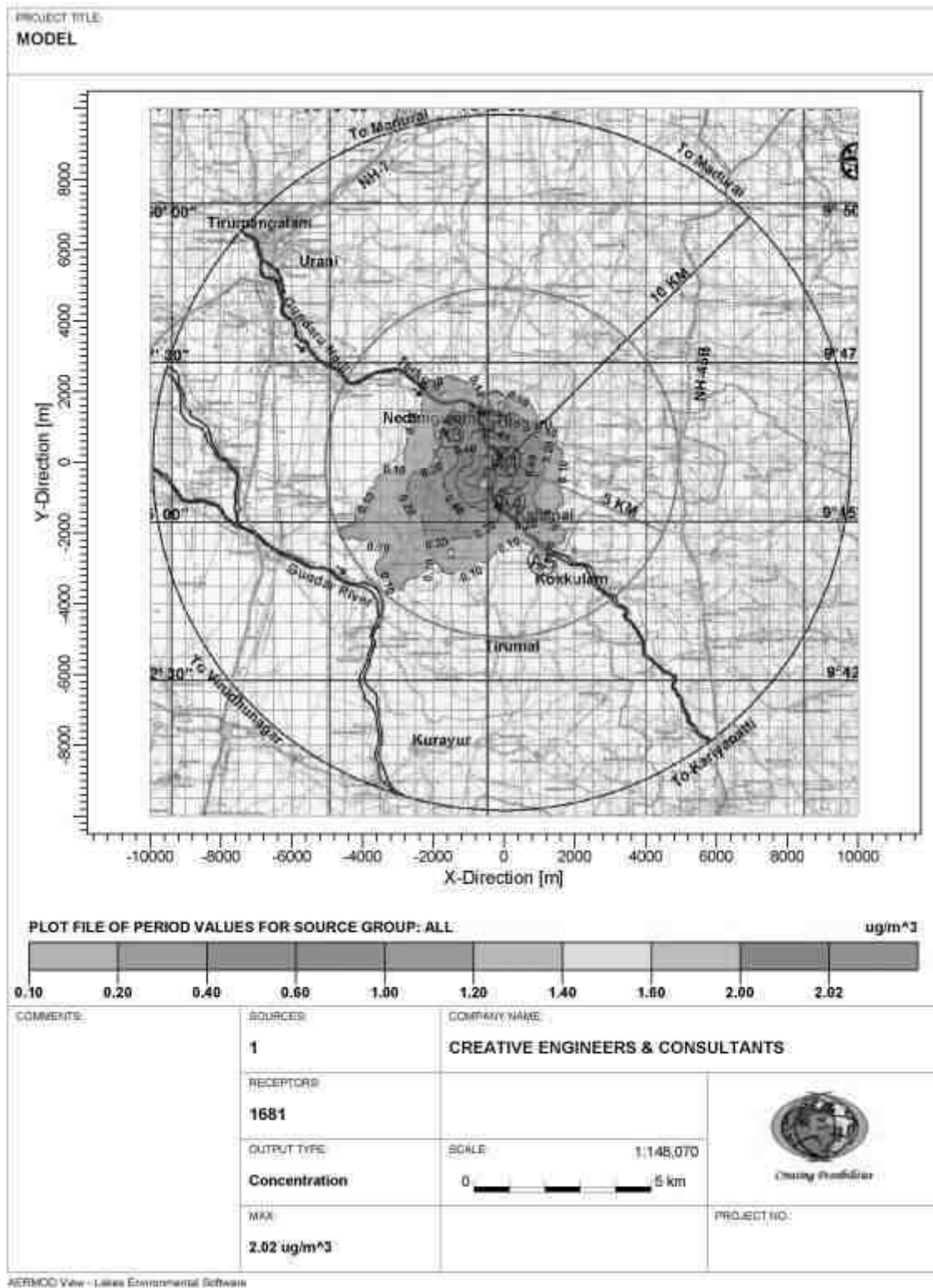
S.No	Parameters	Peak incremental concentration $\mu\text{g}/\text{m}^3$
1	PM <sub>10</sub>	2.00
2	PM <sub>2.5</sub>	0.54

It is observed that the peak incremental concentration for PM<sub>10</sub>, PM<sub>2.5</sub> occurring very near the source. At away from the source the values are getting reduced due to dispersion effects. The Isopleths of PM<sub>10</sub>, PM<sub>2.5</sub> 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.

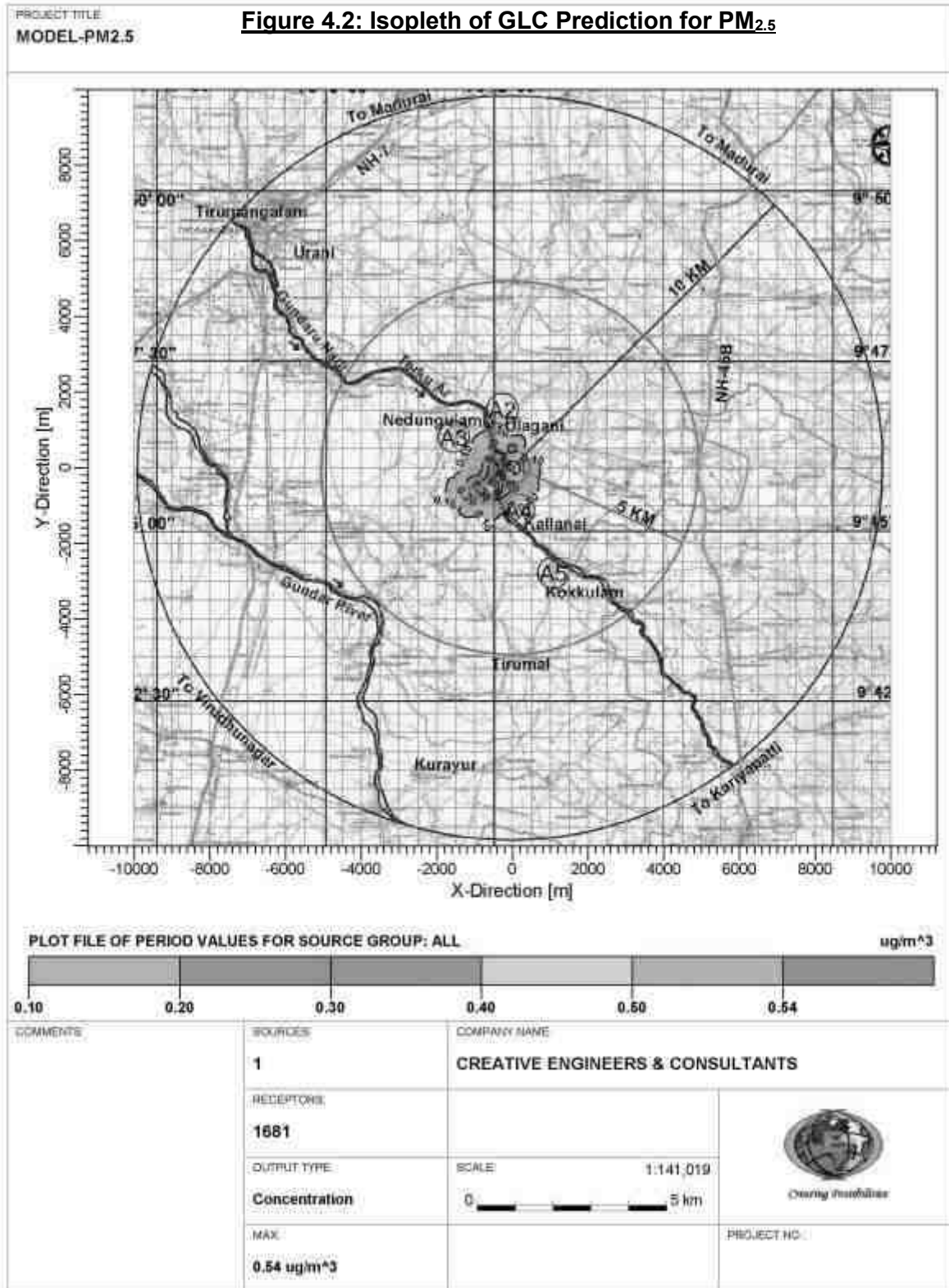


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**Figure 4.1: Isopleth of GLC Prediction for PM<sub>10</sub>**



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**Predicted Ambient Air Quality:**

The post project Concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, (GLC) (base line + incremental) after adopting necessary control measures is given in Table No - 4.6 to 4.7.

**Table 4.6: Concentrations Of PM<sub>10</sub> after Project Implementation**

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

S. No	Location	Background Concentration	Predicted Incremental Concentration	Post Project Concentration	Statutory Limits
1	Near Mine Lease Area	63.1	2.0	65.1	-
2	Ulagani Village	55.5	<1.0	56.5	100
3	Nedungulam Village	58.1	<1.0	59.1	
4	Kallanai Village	55.1	<1.0	56.1	
5	Kokkulam Village	52.3	<1.0	53.3	

**Table 4.7: Concentrations Of PM<sub>2.5</sub> after Project Implementation**

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

S. No	Location	Background Concentration	Predicted Incremental Concentration	Post Project Concentration	Statutory Limits
1	Near Mine Lease Area	32.1	<1.0	33.1	-
2	Ulagani Village	25.8	<1.0	26.8	60
3	Nedungulam Village	30.1	<1.0	31.1	
4	Kallanai Village	27.5	<1.0	28.5	
5	Kokkulam Village	25.9	<1.0	26.9	

It can be seen that the resultant added concentrations with baseline figures even at worst scenario, show that the values of ambient air quality with respect to PM<sub>10</sub> are in the range of 53.3  $\mu\text{g}/\text{m}^3$  to 65.1  $\mu\text{g}/\text{m}^3$  and with respect to PM<sub>2.5</sub> are in the range of 26.8  $\mu\text{g}/\text{m}^3$  to 33.1  $\mu\text{g}/\text{m}^3$  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.



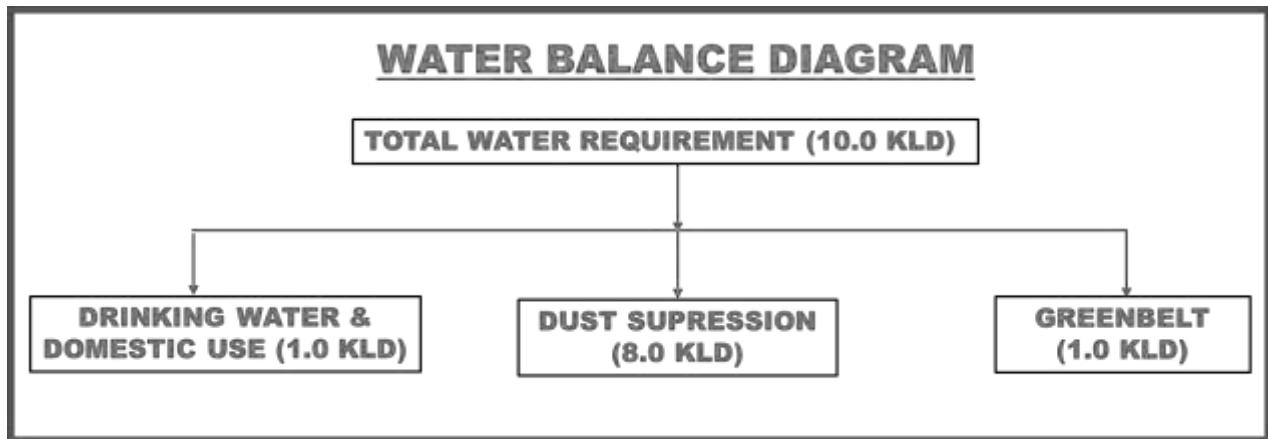
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**4.3 WATER ENVIRONMENT:**

**4.3.1 WATER REQUIREMENT:**

The total water requirement for this project will be 10.0 KLD comprising 1.0 KLD for drinking water and domestic use, 8.0 KLD for dust suppression and 1.0 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.**

**Figure 4.3: 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.



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**4.3.3 TREATMENT SCHEME:**

**A. Generation of domestic effluent:**

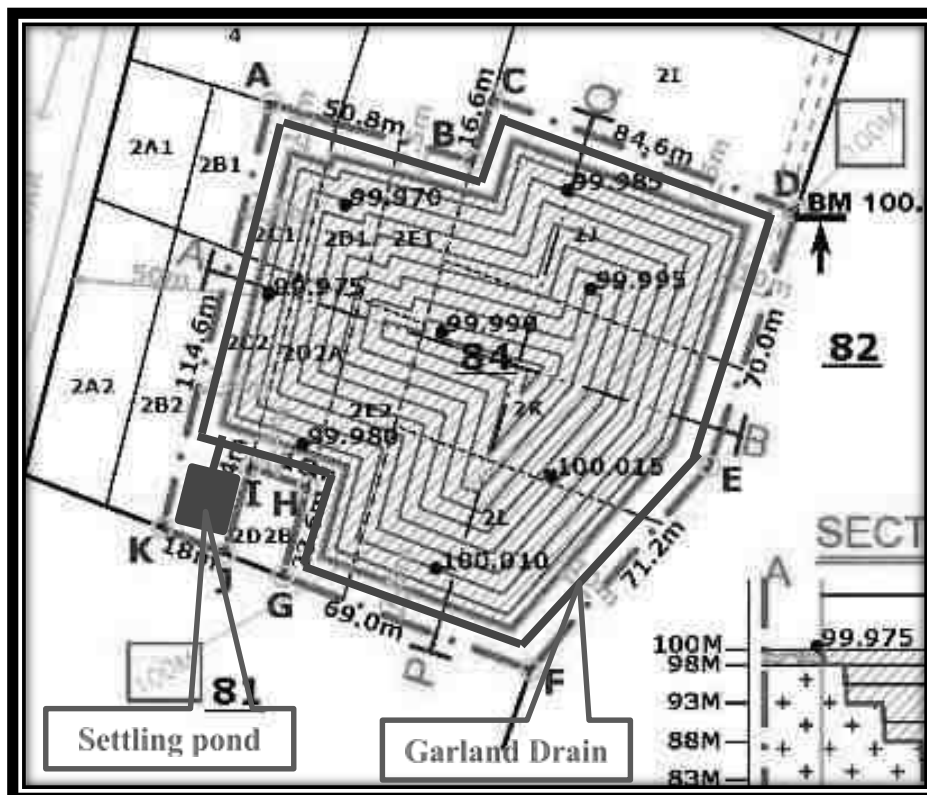
The domestic sewage to be generated from the project will be collected in septic tank with soak pits.

**B. Washouts from overburden, ore stockpile, etc.**

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

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 550m 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.**

**Figure 4.4: Surface Runoff Management Structures**



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**C. Disturbance to drainage courses**

There is a Drainage channel channel located on the Western side of the lease for which 50m safety distance has been left. Earthen bund will be formed within the lease area. Besides, there is a tank about 160m on the south eastern side. These water bodies remains dry for most of the season. There is no proposal to discharge any effluent into this water body. No major impact is envisaged on the nearby water bodies due to project operations

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

The occurrence and movement of groundwater in hard rock formations are restricted to the porous zones of weathered formations and the open systems of fractures, fissures and joints. Generally, in hard rock regions, occurrence of weathered thickness is discontinuous 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. The ultimate pit depth of mining is 47m. 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. 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 Madurai district was obtained from the data provided in the technical report of the National Water Mission – Notes on Madurai District.

**Table 4.8: Ground Water Resources Estimation– Kallikudi Taluk (Ha-m)**

<b>Net Groundwater Availability</b>	<b>Existing Gross Draft for Irrigation</b>	<b>Existing Gross Draft for Domestic and industrial water supply</b>	<b>Existing Gross Draft for all uses</b>	<b>Stage of Ground water Development (%)</b>	<b>Category of Block</b>
3428.95	1452.35	161.17	1613.52	47	Safe



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From the table it is seen that the stage of groundwater development of Kallikudi where the study area falls is 47 %. In view of this, 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 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.





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**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 4.9: Main Sources of Noise**

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

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

**Table 4.10: Impact of Noise Levels**

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



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

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

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

Noise modeling is carried out using the following formula:

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

**Table 4.11: Post Project Noise Levels**

SI.No	Location	Baseline Day Eq.in dB(A)	Post project noise Eq in dB(A)	Limit dB(A) as per MoEF&CC
1.	Near Mine Lease Area	50.6	54.5	90
2.	Ulagani Village	50.4	50.6	90
3	Nedungulam Village	47.0	47.2	90
4	Kallanai Village	46.0	46.3	90
5	Kokkulam Village	46.6	46.9	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



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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.
- Provision of tin net on the southern side and green net along the lease periphery on the other sides.

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

**4.4.2 GROUND VIBRATIONAL 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.



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The following control measures will be planned 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.

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

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

Type of structure	Dominant excitation frequency Hz		
	<8 Hz	8-25 Hz	>25 Hz
In mm/sec			
<b>A. Buildings/structures not belonging to owner</b>			
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>B. Building belonging to owner with limited span of life</b>			
Domestic houses/structures (Kuchha brick and cement)	10	15	25
Industrial buildings (RCC and framed structures)	15	25	50



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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 lease area of 1.62.17 Ha in S.F.No. 84/2C1,2D1,2E1, 2C2,2D2A,2E2, 2J,2K,2L is a patta land in the name of the applicant. The present land use pattern, and the post mining land use pattern is shown below:

**Table 4.13: Land Use Table**

Sl. No.	Land Use	Present Area (Hect)	Area in use during the 5 year period (Ha)	Area in use during the 10 year period (Ha)
1.	Quarrying Pit	Nil	1.32.0	1.32.0
2.	Infrastructure & Road	Nil	0.05.0	0.05.0
3.	Greenbelt and Dump	Nil	0.09.0	0.09.0
4.	Unutilized	1.62.17	0.11.17	0.11.17
5.	Fencing	Nil	0.05.0	0.05.0
	<b>Total</b>	<b>1.62.17</b>	<b>1.62.17</b>	<b>1.62.17</b>

**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. At the end of the 5 year period, 1.32.0 Ha will be used as mined out area at 17m depth. Subsequently, in the remaining 6th to 10th year there will be only depth ward mining in the same mined out area up to 47m depth. Ultimately the entire mined out area of 1.32.0 Ha will be left as water body. 0.05.0Ha will be the mine roads & Infrastructure and 0.09.0 Ha will be covered with vegetation, 0.11.17Ha will be undisturbed and 0.05.0 Ha will be fencing.

**Table 4.14: Land Use During Post Operational Period**

S.No	Description	Land use (Ha.)			
		Plantation	Water body	Others	Total
1	Quarrying Pit	-	1.32.0	-	1.32.0
2	Infrastructure & Road	0.05.0	-	-	0.05.0
3	Green Belt	0.20.17	-	-	0.20.17
4	Unutilized	--	-	-	--
5	Fencing			0.05.0	0.05.0
	<b>TOTAL</b>	<b>0.25.17</b>	<b>1.32.0</b>	<b>0.05.0</b>	<b>1.62.17</b>



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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.

**4.6 BIOLOGICAL ENVIRONMENT:**

**4.6.1 EXISTING FLORA AND FAUNA:**

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

**4.6.2 IMPACT OF MINING ON BIOLOGICAL ENVIRONMENT:**

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

**Table 4.15: Impact on Biological Environment**

S.No	ISSUES	OBSERVATIONS
1	Clearance of vegetation due to mining and allied activities	No clearance of major vegetation is involved.
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 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	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	There are no Schedule 1 animals
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	Not applicable



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	on which local livelihood depends	
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	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.
14	Impact on soil health and biodiversity	The lease area is barren with grasses and bushes only (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.	<ul style="list-style-type: none"> <li>•As such the production from this lease is very low to cause any appreciable impact.</li> </ul>
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.	<ul style="list-style-type: none"> <li>•No adverse impact on the surrounding environment is envisaged since the number of equipment's to be used to achieve this small production is very less and the magnitude of operation is of very small level.</li> <li>•Besides, as is it a mining project, no adverse generation of heat is envisaged.</li> <li>•Certified vehicles with low carbon emissions will only be used. These equipment's will be properly and regularly maintained. Besides, regular vehicular emission tests will be done for the transport vehicles to ensure minimal impact due to carbon emissions. To further mediate the carbon emissions, a good greenbelt and plantation plan has been planned wherein 800 number of plants will be planted in and around the lease area.</li> <li>•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.</li> <li>•There are no Protected or Eco-Sensitive Zone or forest land nearby wherein it can have an impact.</li> <li>•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.</li> <li>•These mitigative measures will be continued for the entire lease period ensuring no impact on the environment.</li> <li>•As such release of Greenhouse gases (GHG), rise in</li> </ul>



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		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.
17	Possibilities of water contamination and impact on aquatic ecosystem health and impact on Sediment geochemistry in the surface streams	<ul style="list-style-type: none"> <li>•This being a mining project no process effluent will be generated.</li> <li>•Water generation is expected to be due to             <ul style="list-style-type: none"> <li>✓ Direct rainfall falling within the pit</li> <li>✓ Rain water draining near the lease area.</li> </ul> </li> <li>•Direct rain fall will be collected in the mine floor sump. Water from sump will be pumped to settling pond for downstream users.</li> <li>•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.</li> <li>•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.</li> </ul>

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

**4.6.3 CONTROL MEASURES FOR BIOLOGICAL ASPECTS:**

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

**4.6.4 GREEN BELT & PLANTATION:**

In the lease area, safety barrier 7.5m around the periphery and 50m safety zone for the Odai on the western side of the lease area. About 800 trees will be planted in and around the lease area.





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**Table 4.16: Proposed Plantation**

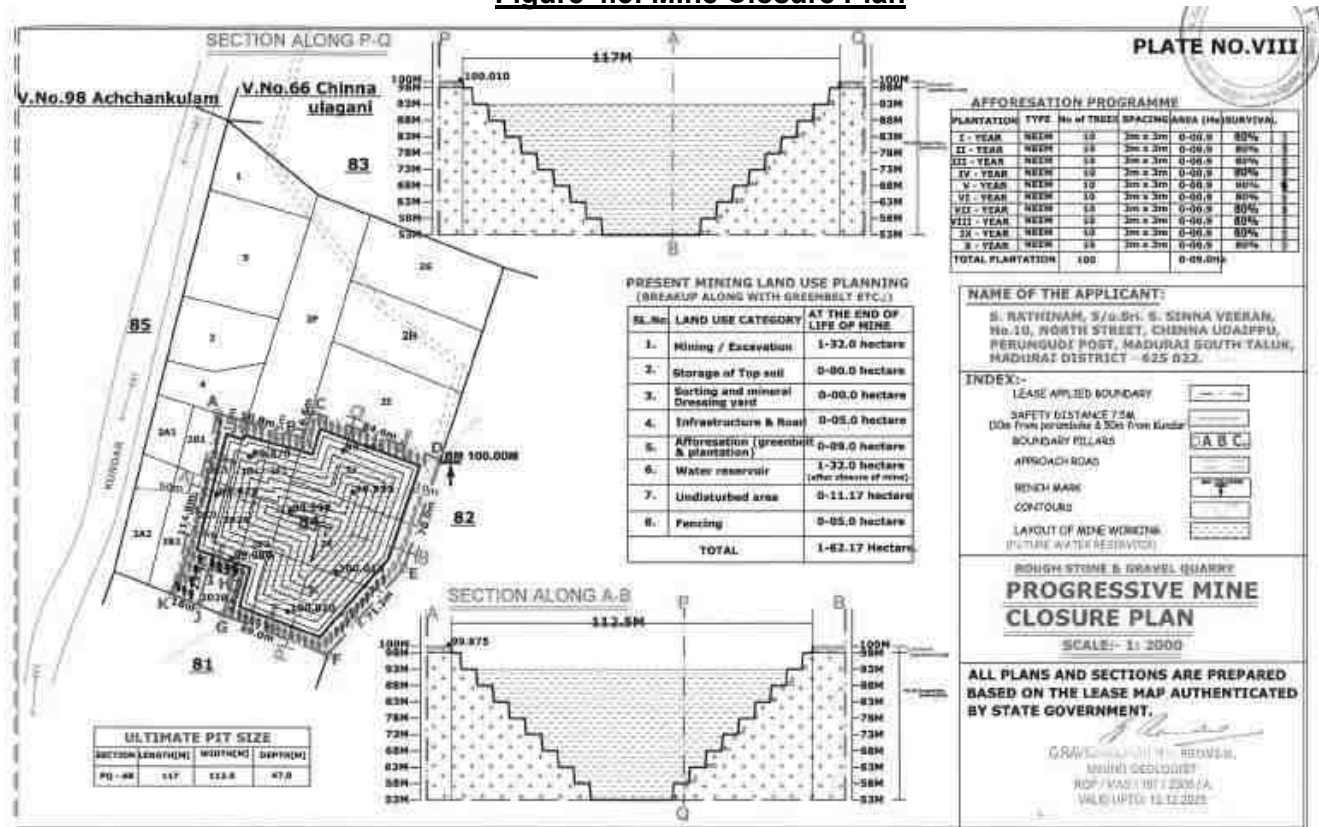
Year	Species	No Of Trees
1	Pongamia pinnata, Syzygium cumini, Albizia lebbeck, Thespesia populnea, Bauhinia racemosa, Cassia siamea, Azadirachta indica	100
2		100
3		100
4		100
5		100
6-10		300
<b>Total</b>		<b>800</b>

At the end of the 5 year period, 1.32.0 Ha will be used as mined out area at 17m depth. Subsequently, in the remaining 6th to 10th year there will be only depth ward mining in the same mined out area up to 47 m depth. Ultimately the entire mined out area of 1.32.0 Ha will be left as water body. 0.05.0Ha will be the mine roads & Infrastructure and 0.09.0 Ha will be covered with vegetation, 0.11.17Ha will be undisturbed and 0.05.0 Ha will be Fencing. The post mining land use plan showing afforestation and water body is shown in **Figure No- 4.5**.



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**Figure 4.5: Mine Closure Plan**



**4.7 SOCIO ECONOMIC ENVIRONMENT:**

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

The mining operations in the proposed mine will employ about 9 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.



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- Casual labor needs for various activities.

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

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

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

**Table 4.17: CER Cost**

<b>Project Cost (Rs.)</b>	Rs. 95,93,468/-
<b>CER Cost Requirement (2% of the Project Cost) (Rs.)</b>	Rs. 1,918,693.6/-
<b>Revised CER cost allocated (Rs.)</b>	Rs. 5,00,000/-

However, 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 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 Metalliferrous Mines Regulations of 1961, so as to minimize hazards and incidences of health problems.



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#### **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:

<b>SI No</b>	<b>Safety Equipments</b>
1.	Helmets
2.	Shoes



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

#### **4.9 LOGISTICAL SYSTEM:**

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. The expected peak transport will be as follows:

**Table 4.18: Details of Transportation**

SI.no	Particulars of activity	Quantity
A	Maximum Roughstone Transported (m <sup>3</sup> /year)	28,950
B	No of days in a year	300
C	Transport hours per day	8
D	Truck capacity in T	20
	Trips per hour	2 Trips/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



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- ❖ 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 this project.

**Liquid waste:** There is no process effluent generation from this mine. Hence no liquid waste is generated.

**Hazardous waste management:** In this project the following management practices will be followed:

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

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

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

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# **CHAPTER - V**

## **ANALYSIS OF ALTERNATIVES (TECHNOLOGY & SITE)**

## **CHAPTER 5**

### **ANALYSIS OF ALTERNATIVES**

#### **5.1 ALTERNATE TECHNOLOGY:**

This is a proposed Rough Stone and Gravel Quarry 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. However, based on the need and priority it may be suitably modified / improved in consultation with local authorities. The monitoring schedules to be adopted in this quarry are given below.



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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 <sub>2</sub> ), Oxides of Nitrogen (NO <sub>2</sub> ), Respirable Particulate Matter (PM <sub>2.5</sub> and PM <sub>10</sub> ).	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 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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4 THE GAZETTE OF INDIA : EXTRAORDINARY [PART III—Sec. 4]

(1)	(2)	(3)	(4)	(5)	(6)
9	Benzene (C <sub>6</sub> H <sub>6</sub> ) µg/m <sup>3</sup>	Annual*	05	05	- Gas chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10	Benz[a]Pyrene (BaP) - particulate phase only, ng/m <sup>3</sup>	Annual*	01	01	- Solvent extraction followed by HPLC/GC analysis
11	Arsenic (As), ng/m <sup>3</sup>	Annual*	06	06	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper
12	Nickel (Ni), ng/m <sup>3</sup>	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 05 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-124/18409/Exy.]

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 11<sup>th</sup> April, 1994 and S.O. 935(E), dated 14<sup>th</sup> 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, Max	0.03	0.2	IS 3025 (Part 55)	—
ii)	Ammonia (as total ammonia-N), mg/l, Max	0.5	No relaxation	IS 3025 (Part 34)	—
iii)	Anionic detergents (as MBAS) mg/l, Max	0.2	1.0	Annex K of IS 13428	—
iv)	Barium (as Ba), mg/l, Max	0.7	No relaxation	Annex F of IS 13428* or IS 15302	—
v)	Boron (as B), mg/l, Max	0.5	1.0	IS 3025 (Part 57)	—
vi)	Calcium (as Ca), mg/l, Max	75	200	IS 3025 (Part 40)	—
vii)	Chloramines (as Cl <sub>2</sub> ), mg/l, Max	4.0	No relaxation	IS 3025 (Part 26)* or ALPHA 4500-Cl G	—
viii)	Chloride (as Cl), mg/l, Max	250	1 000	IS 3025 (Part 32)	—
ix)	Copper (as Cu), mg/l, Max	0.05	1.5	IS 3025 (Part 42)	—
x)	Fluoride (as F) mg/l, Max	1.0	1.5	IS 3025 (Part 60)	—
xi)	Free residual chlorine, mg/l, Min	0.2	1	IS 3025 (Part 26)	To be applicable only when water is chlorinated. Tested at consumer end. When protection against viral infection is required, it should be minimum 0.5 mg/l
xii)	Iron (as Fe), mg/l, Max	0.3	No relaxation	IS 3025 (Part 53)	Total concentration of manganese (as Mn) and iron (as Fe) shall not exceed 0.3 mg/l
xiii)	Magnesium (as Mg), mg/l, Max	30	100	IS 3025 (Part 46)	—
xiv)	Manganese (as Mn), mg/l, Max	0.1	0.3	IS 3025 (Part 59)	Total concentration of manganese (as Mn) and iron (as Fe) shall not exceed 0.3 mg/l
xv)	Mineral oil, mg/l, Max	0.5	No relaxation	Clause 6 of IS 3025 (Part 39) Infrared partition method	—
xvi)	Nitrate (as NO <sub>3</sub> ), mg/l, Max	45	No relaxation	IS 3025 (Part 34)	—
xvii)	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l, Max	0.001	0.002	IS 3025 (Part 43)	—
xviii)	Selenium (as Se), mg/l, Max	0.01	No relaxation	IS 3025 (Part 56) or IS 15303*	—
xix)	Silver (as Ag), mg/l, Max	0.1	No relaxation	Annex J of IS 13428	—
xx)	Sulphate (as SO <sub>4</sub> ) mg/l, Max	200	400	IS 3025 (Part 24)	May be extended to 400 provided that Magnesium does not exceed 30
xxi)	Sulphide (as H <sub>2</sub> S), mg/l, Max	0.05	No relaxation	IS 3025 (Part 29)	—
xxii)	Total alkalinity as calcium carbonate, mg/l, Max	200	600	IS 3025 (Part 23)	—
xxiii)	Total hardness (as CaCO <sub>3</sub> ), mg/l, Max	200	600	IS 3025 (Part 21)	—
xxiv)	Zinc (as Zn), mg/l, Max	5	15	IS 3025 (Part 49)	—

NOTES

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

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



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**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)
<b>8</b>	<b>90</b>
<b>4</b>	<b>93</b>
<b>2</b>	<b>96</b>
<b>1</b>	<b>99</b>
<b>1/2</b>	<b>102</b>
<b>1/4</b>	<b>105</b>
<b>1/8</b>	<b>108</b>
<b>1/16</b>	<b>111</b>
<b>1/32</b>	<b>114</b>





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**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
<b>A. Buildings/structures not belonging to owner</b>			
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>B. Building belonging to owner with limited span of life</b>			
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 for this project. 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 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.

### **7.3 RISK ASSESSMENT:**

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

<b>S.No</b>	<b>Factors</b>	<b>Causes of risks</b>	<b>Control measures</b>
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. b) Down the hole drill rod	• 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
		may break due to improper maintenance of rod.	<ul style="list-style-type: none"> <li>As per manufacturers recommendation rod to be replaced and bits will be changed.</li> </ul>
3.	Blasting	a) Fly rock, ground vibration, noise etc. b) Improper charging of explosives	<ul style="list-style-type: none"> <li>Burden and spacing will be kept optimum on trial basis.</li> <li>Explosive charge per delay will be minimized.</li> <li>Controlled blasting with Nonel will be used.</li> </ul>
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	<ul style="list-style-type: none"> <li>Operator shall not operate the machine when person &amp; vehicles are in such proximity.</li> <li>Shall not swing the bucket over the cab and operator leaves the machine after ensuring the bucket is on ground.</li> <li>Shall not allow any unauthorized person to operate the machine by effective supervision.</li> </ul>
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	<ul style="list-style-type: none"> <li>It will be ensured that all these causes will be nullified by giving training to the operators.</li> <li>No over loading will be done.</li> <li>Audio visual reverse horn will be provided.</li> <li>Proper training will be given.</li> </ul>
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.	<ul style="list-style-type: none"> <li>Electrical parts shall be cleaned frequently with the help of dry air blower</li> <li>All fastening parts and places will be tightening. Suitable fire suppression equipment shall be provided.</li> </ul>
7.	Natural calamities	Unexpected happenings	The mine management is capable to deal with the situation.

This being a small rough stone project 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 this 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 Fire fighting 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.



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- 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 area only. The entire mine lease area is a Patta land. There is no population within the ML area. Hence, the question of R&R does not arise.

#### **7.5 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 Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nad. The details of the other quarries located within the 500m radius of the project considered for cumulative impact study now (**Annexure-3**) has been provided below:

**Table 7.1: Details of quarries within 500m radius**

S.No	Name of the Owner	Village & S.F.Nos.	Proceedings and Lease Period
<b>Existing Quarries</b>			
1.	Ahmed Abdul Razzak.	Chinna Ulagani 70/2(0.24.5), 70/5(0.49.5), 70/8(0.45.0), 70/3A (0.20.5), 70/313 (0.04.0), 70/4 (0.79.5), 70/6A (0.41.5), 70/6B (0.08.0), 70/7 (0.34.0), 70/9A (0.13.0), 70/9B (0.02.5), 72/1 (0.28.5) & 72/5 (0.16.5),	Roc.No.383/2014, Dt 08.05.2018 07.06.2018 to 06.06.2023
2.	Rathinam	Kallanai 84/2F (0.52.5), 84/2G (0.36.0), 84/2H (0:34.0) & 84/21 (0.38.5)	Roc.No.301/2017, Dt 12.03.2018 17.07.2018 to 16.07.2023
<b>Abandoned Quarry</b>			
1.	Boopathirajan.R,	Kallanai 39/2A (0.48.5), 39/213 (0.26.5), 39/2C (0.23.5), 39/2D (0.45.0), 39/2E (0.33.0) & 39/2F1 (0.33.0)	Roc.No. 1619/2015, Dt 10.08.2017 Lease period 28.08.2017 27.08.2022
<b>Present Proposed Quarry</b>			
1.	Tmt.M.Meenatchi	Achankulam 16/2B, 16/3 & 16/4	Proposed
2.	Rathinam	Kallanai 84/2C1, 84/2D1, 84/2E1, 84/2C2, 84/2D2A, 84/2E284/2J, 84/2K, 84/2L	Proposed

From that above it is seen that, although the individual lease area of this project is less than 5 Ha, 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. From the above table it is seen that the lease period of the nearby quarries are almost over and as such this proposal will act more of a replacement only.



## **7.7 PIT SLOPE STABILITY PLAN**

- Factors affecting slope stability of the mine 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:
    - 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.
    - 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.



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The above will ensure safe and stable mine prospects.

**CONCLUSION:**

No adverse impact on the surrounding environment is envisaged from this project 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 wherein 800 number of plants will be planted in and around the lease area.

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 plan is prepared for the lease period and already included in the approved mine plan.

Due to absence of perennial water bodies nearby where in any marine ecosystem is observed, no effect on this front is also expected. Hydrological investigation carried out and as given in Para 3.6 of Chapter III & para 4.3 Chapter – IV shows that the all-time ground water table in this area is much below the mining level. Hence, ground water intersection in not envisaged for the entire life of the mine and ground water will not be affected due to the quarrying operation. As such there will not be any adverse impact on the ground water regime. Besides, this being a mining project, there will be not be any process effluent. As mentioned earlier, the rainfall will be



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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 Quarry of Thiru. S. Rathinam **will** improve physical and social infrastructures in the area like:

- Direct employment to 9 people.
- 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, and 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 has planned to allocate Rs.5.0 Lakhs for various activities under CER. From the CER activities allocated for various social welfare activities, the villages near the lease area will be benefited.

\* \* \* \* \*



# **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 this project has been received from SEIAA, Tamil Nadu vide their letter No. SEIAA-TN/F.No.10072/SEAC/ToR-1506/2023 dated 31.07.2023. Environmental cost benefit analysis is not prescribed in the terms of reference. Hence, it is not applicable for this project.

\* \* \* \* \*



# **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.

#### **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 proponent 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.





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- ❖ 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:**

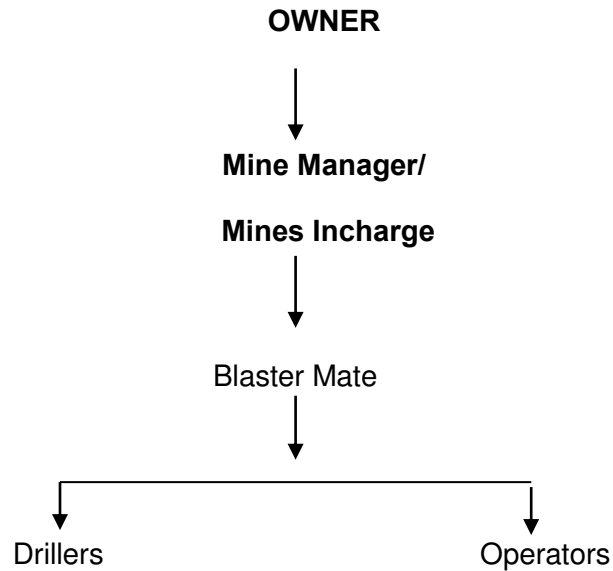
The Mines Manager/Mine Incharge will undertake effective monitoring and implementation of various environmental control measures promptly and effectively and to oversee various environmental management schemes for air quality control, water quality status, noise level



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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 In charge 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 In charge 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.



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- ❖ 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 this project will also act as a Cluster Management Committee. The various activities undertaken to be undertaken by this committee are detailed below:

- Effective implementation of the environmental management measures in a holistic manner
- Devising an operation plan for mining and transportation activities.



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- 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:

- 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.



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**10.2.3.3 Water Environment:**

There will be no process effluent generated from this 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 area as the entire material will be directly despatched to the consumers.

Surface runoff management structures such as garland drain connected to a settling pond will be constructed around the quarry 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 is Drainage channel located on the western side of the lease area for which 50m safety distance has been left. There is no proposal to discharge any effluent into this water body. 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 equipment's
- 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. Besides, no Schedule-I animals are observed in the core and buffer zone. There will be no major clearance of vegetation involved in this project. However, good greenbelt and plantation programmes are planned within the lease area.

In the lease area, safety barrier 7.5m & 10m around the periphery and 50m safety zone for the Odai on the western side of the lease area. About 800 trees will be planted in and around the lease area. Greenbelt / Plantation will be carried out to enhance the vegetative growth and aesthetic in the safety zone area. This will boost the biological, visual and aesthetic outlook of the area. Elaborate details regarding the same is provided under section 4.6.4, Chapter-IV.



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**10.2.2.7 Socio-Economic Environment:**

The proposed project operation will provide positive impacts in the region on the employment area as well as on physical and social infrastructural status. Many other tangible benefits will be gained by the local people in the surrounding areas due to ancillary units, trading operations, contractual needs, casual labor, green belt development, etc. Towards the socio economic development of the surrounding area, the proponent has earmarked an amount of Rs.5.0 Lakhs under Corporate Environmental Responsibility. The activities identified under CER will be implemented in a phased manner.

**10.3 ENVIRONMENTAL POLLUTION CONTROL COST:**

In this proposed quarry Implementation of environmental control measures as stated above involves capital as well as recurring expenses. The probable capital and recurring environmental control cost are calculated and given below **Table No – 6.5**

**Table 10.1: Environmental Control Cost**

Sl. No	Mitigation Measure	Rs. In lakhs	
		Capital cost in Lakhs	Recurring Cost / Annum in lakhs
<b>Air Environment</b>			
1	Compaction, gradation and drainage on both sides for Haulage Road	0.11	0.11
2	Water Sprinkling Arrangements	8.00	1.00
3	Air Quality will be regularly monitored as per norms within ML area & Ambient Area	0.00	0.50
4	Muffle blasting – To control fly rocks during blasting	0.00	0.10
5	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	0.25	0.03
6	No overloading of trucks/tippers/tractors-Manual Monitoring through Security guard	0.00	0.05
7	Stone carrying trucks will be covered by tarpaulin	0.00	0.10
8	Enforcing speed limits of 20 km/hr within ML area-Installation of Speed Governors	0.10	0.00
9	Regular monitoring of exhaust fumes as per RTO norms	0.00	0.05
10	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	0.00	0.22
11	Installing wheel wash system near gate of quarry	0.50	0.20
<b>Sub-Total (A)</b>		<b>8.96</b>	<b>2.36</b>
<b>Noise Environment</b>			





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Sl. No	Mitigation Measure	Capital cost in Lakhs	Recurring Cost / Annum in lakhs
12	Source of noise will be during operation of transportation vehicles, HEMM- For this proper maintenance will be done at regular intervals.	Will be part of Operating Cost	
13	Oiling & greasing of Transport vehicles and HEMM at regular interval will be done		
14	Adequate silencers will be provided in all the diesel engines of vehicles.		
15	It will be ensured that all transportation vehicles carry a fitness certificate.		
16	Safety tools and implements that are required will be kept adequately near blasting site at the time of charging.	Provision made in OHS part	
17	Line Drilling all along the boundary to reduce the PPV from blasting activity and implementing controlled blasting.	Will be part of Operating Cost	
18	Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.-Blowing Whistle by Mining Mate / Blaster / Compentent Person		
19	Provision for Portable blaster shed	0.5	0.02
20	NONEL Blasting will be practiced to control Ground vibration and fly rocks		3.62
<b>Sub-Total (B)</b>		<b>0.50</b>	<b>3.64</b>
<b>Water Environment</b>			
21	Surface Runoff Management Structures	0.16	0.05
<b>Sub-Total (C)</b>		<b>0.16</b>	<b>0.05</b>
<b>Implementation of EC, Mining Plan &amp; DGMS Condition</b>			
22	Waste management (Spent Oil, Grease etc.,)-Provision for waste collection and disposal through authorized agency	0.25	0.20
23	Installation of dust bins	0.05	0.02
24	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	0.10	0.01
25	Workers will be provided with Personal Protective Equipment's	0.36	0.09
26	Health check up for workers will be provisioned-IME & PME Health check up	0.00	0.09
27	First aid facility will be provided	0.00	0.06
28	Mine will have safety precaution signages, boards.	0.10	0.02
29	Barbed wire fencing	3.24	0.10
30	No parking will be provided on the transport routes. Separate parking area will be provided. Flaggers will be deployed for traffic management	0.81	0.10



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1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

Sl. No	Mitigation Measure	Capital cost in Lakhs	Recurring Cost / Annum in lakhs
31	Installation of CCTV cameras in the mines and mine entrance-Camera 4 Nos, DVR, Monitor with internet facility	0.30	0.05
32	Remuneration of statutory persons	0.00	7.80
<b>Sub-Total (D)</b>		<b>5.21</b>	<b>8.54</b>
<b>Green Belt Development</b>			
34	Plantation Inside the lease area(200Nos.)	0.40	0.06
35	Plantation Outside the lease area (600 Nos.)	1.80	0.18
<b>Sub-Total (E)</b>		<b>2.20</b>	<b>0.24</b>
<b>Grand Total</b>		<b>17.04</b>	<b>14.83</b>

Towards EMP measures, Rs.17.04 Lakhs is allocated under capital cost. Besides, Rs.14.83 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. Rathinam proposes to operate a Rough Stone and Gravel Quarry over an area of 1.62.17 Ha in Kallanai Village, Kalligudi Taluk, Madurai District, and Tamil Nadu and has initiated action towards obtaining environmental clearance.

Proposed Production for the first five years is 1,14,760.0 m<sup>3</sup> of Rough stone and 26,325 m<sup>3</sup> of gravel for the depth of 17 meter. The Total production for 10 years lease period is 2, 42,467.5m<sup>3</sup> of Rough Stone and 26,325m<sup>3</sup> of gravel for the depth of 47 meter.

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

This EIA/EMP report is prepared based on standard and additional Terms of Reference issued by SEIAA, Tamil Nadu vide letter no. SEIAA-TN/F.No.10072/SEAC/ToR-1506/2023 dated 31.07.2023 and is in conformance of the generic structure prescribed by MOEF&CC in their notification of September 2006 and the approved mining plan.

#### **11.1.1 STATUTORY APPROVALS:**

<b>S.No</b>	<b>Statutory Approval</b>	<b>Authority</b>	<b>Letter Number and Date</b>	<b>Reference</b>
1.	<b>Precise Area Communication Letter</b>	Assistant Director, Dep. of Geology & Mining	Rc.No.08/Mines/2023 dated 14.03.2023.	<b>Annexure-1</b>
2.	<b>Mining Plan Approval</b>	Assistant Director, Dep. of Geology & Mining	Rc.No.08/Mines/2023 dated 10.04.2023	<b>Annexure-2</b>
3.	<b>Details of other quarries within 500m radius</b>	Assistant Director, Dep. of Geology & Mining	Rc.No.08/Mines/2023 dated 10.04.2023	<b>Annexure-3</b>

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**11.1.2 ENVIRONMENTAL CLEARANCE APPLICATION:**

Particulars	Details
Terms of Reference	Received from SEIAA, Tamil Nadu vide their Lr No. SEIAA-TN/F.No.10072/SEAC/ToR-1506/2023 dated 31.07.2023
Baseline Data Collection	Carried out by Creative Engineers & Consultants , Chennai for Summer Season (March – May 2023)

**11.2 SALIENT FEATURES OF THE PROJECT:**

**Table 11.1: Site Details**

Location	Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu
Survey No.	84/2C1,2D1,2E1, 2C2,2D2A,2E2, 2J,2K,2L
Coordinates	<b>Latitude:</b> 9 <sup>0</sup> 45' 54.5" to 9 <sup>0</sup> 45' 57.3" N <b>Longitude:</b> 78 <sup>0</sup> 02' 40.4" to 78 <sup>0</sup> 02' 46.3" E
Nearest Village	Kallanai -1.2Km- (S)
Nearest Town	Thirumangalam – 13 km - NW
Nearest Highway	(NH-45B) - 5.0 Km– (E) (NH-7) - 7.1Km– (W)
Nearest Railway Station	Thirumangalam – 8.8 km - NW
Nearest Airport	Madurai- 9.3 km – NE
Accessibility	The lease area can be approached from Viralipatti at a distance of 18Kms from Madurai and then to the applied area at a distance of 5Km towards west of Paraipatti.
Topography	Plain terrain, dry lands with scarce vegetation.
Drainage	There is a Drainage channel on the western side of the lease area for which safety distance of 50m has been left.

**Table 11.2: Environment Setting of The Study Area**

S.No	PARTICULARS	DETAILS
1	Nearest highway	(NH-45 B) – 5.0km (E) (NH-7) – 7.1km (W)
2	Nearest Railway station	Thirumangalam RS – 8.8km – (NW)
3	Nearest Airport	Madurai – 9.3Km – (NE)
4	Nearest major water bodies	➤ Terku Ar – Less then 1km- (SW), ➤ Gundar River – 5.1km–SW,



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S.No	PARTICULARS	DETAILS
		➤ Gundaru Nadi – 7.4km – (SW)
5	Nearest town/City	Thirumangalam – 8.8km – (NW)
6	Nearest villages	➤ Chinna Ulagani – 1.2km (NE) ➤ Kallanai – 1.2km (SE) ➤ Nedunkulam - 1.5km (NW)
7	Notified Archaeologically important places, Monuments	Nil within 10m radius
8	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
9	Reserved / Protected Forests	Nil within 10m radius
10	Defence Installations	Nil within 10m radius
11	Seismic Zone	Zone – II (Least Active)
12	Other Industries in the study area	Other than rough stone quarry & crushers there are no other major industries in the area.

**Table 11.3: Technical Description**

PARTICULARS	DETAILS		
Geological reserve	8,06,520 Cu.m.		
Mineable reserve	2,68,792.5 Cu.m.		
Method of Mining	Open cast mechanized mining method with drilling, blasting, excavation, loading and transportation of Roughstone to needy buyers.		
Production	<b>Year</b>	<b>GRAVEL(m3)</b>	<b>ROUGHSTONE (m3)</b>
	<b>I</b>	<b>9000</b>	19,702.5
	<b>II</b>	<b>9000</b>	19,702.5
	<b>III</b>	<b>8325</b>	19,702.5
	<b>IV</b>	----	28,950.0
	<b>V</b>	----	26,702.5
	<b>First 5 Year Total</b>	<b>26,325</b>	<b>1,14,760.0</b>
	<b>2nd 5 year Total</b>	----	<b>1,27,707.5</b>
	<b>10Year Total</b>	<b>26,325</b>	<b>2,42,467.5</b>



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<b>PARTICULARS</b>	<b>DETAILS</b>
Waste Generation and Management	There is no waste generation anticipated in this quarry operation since the entire excavated material will be utilized. The Gravel will be loaded into tipper and marketed to needy customers on payment of necessary Fees to Government. The rough stone will be excavated and loaded into tipper to the needy buyers for producing crusher aggregates, M Sand.
Ultimate Depth	47m
Man power	9 People directly and more than 50 people indirectly
Mode of transport	By Road
Water requirement	5 KLD
Source of water	The required water will be procured from outside agencies initially. Later, water collected in the mine pit will be used to meet the needs.
Power requirement	All the equipment will be diesel operated. No electricity is needed for mining operation. The minimum power requirement for office, etc will be met from state grid.
Life of the mine	10 Years
Project cost	Rs. 95,93,468 /- (Including operational + Fixed Asset + EMP cost).

### 11.3 EXISTING ENVIRONMENTAL SCENARIO:

#### 11.3.1 GENERAL:

The studies and data collection have been carried out systematically and meticulously as per relevant IS codes, CPCB and MoEF&CC guidelines and as per approved ToR during **Summer Season (March 2023 – May 2023)** For the purpose of this study, the area has been divided into two zones, namely, core and buffer zones. Core zone is considered as the total lease area, while buffer zone encompasses an area of 10 km radius distance from the periphery of core zone.



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**11.3.2 SOCIO-ECONOMIC STATUS:**

The proposed Roughstone and gravel quarry is located in in Kallanai Village, Kalligudi Taluk, Madurai District, and Tamil Nadu. The details of the 10Km radius study area has been provided below:

**Table 11.4: Social, Economic and Demographic Profile of the Study Area**

Details	Population	Percentage
<b>A. Gender-wise distribution</b>		
Male Population	104850	50.37
Female Population	103318	49.63
<b>Total</b>	<b>208168</b>	<b>100</b>
<b>B. Caste-wise population distribution</b>		
Scheduled Caste	30966	14.88
Scheduled Tribes	83	0.04
Other	177119	85.08
<b>Total</b>	<b>208168</b>	<b>100</b>
<b>C. Literacy Levels</b>		
Total Literate Population	145052	69.68
Others	63116	30.32
<b>Total</b>	<b>208168</b>	<b>100</b>
<b>D. Occupational structure</b>		
Main workers	88406	42.50
Marginal workers	12127	5.80
<b>Total Workers</b>	<b>100533</b>	<b>48.30</b>
<b>Total Non-workers</b>	<b>107635</b>	<b>51.70</b>
<b>Total</b>	<b>208168</b>	<b>100</b>

**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.**





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**11.3.3 EXISTING ENVIRONMENTAL QUALITY:**

**Table 11.5: Baseline Data**

<b>A) METEOROLOGICAL DATA</b>			
<b>PARAMETERS</b>	<b>MINIMUM</b>		<b>MAXIMUM</b>
Temperature in °C	21.0		39.0
Humidity in %	18.2		94.0
Wind speed Km/Hr	<1.8		33.5
Predominant wind direction (From)	E,ENE		
<b>B) AMBIENT AIR QUALITY</b>		<b>Monitoring Location – 5 locations</b>	
<b>PARAMETER</b>	<b>RESULT (µg/m3)</b>		<b>*LIMIT (µg/m3)</b>
<b>Location</b>	<b>Core Zone</b>	<b>Buffer Zone</b>	
Particulate Matter (Size <10 µm)	49.3 – 63.1	43.1– 58.1	100
Particulate Matter (Size <2.5 µm)	24.6– 32.1	21.3 – 30.1	60
Sulphur Dioxide (as SO <sub>2</sub> )	5.8– 7.9	4.9 – 7.9	80
Nitrogen Dioxide (as NO <sub>2</sub> )	9.6– 15.8	8.2 – 14.2	80
<b>Conclusion:</b> The existing Ambient Air Quality levels for PM10, PM2.5, 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)			
<b>C) WATER QUALITY</b>		<b>Monitoring Location – 5 locations</b>	
<b>PARAMETER</b>	<b>Result</b>		<b>*LIMIT (µg/m3)</b>
pH at 25 °C	6.97 – 7.54		<b>6.5-8.5</b>
Total Dissolved Solids, mg/L	560 – 1110		<b>2000</b>
Chloride as Cl-, mg/L	56.7 – 440		<b>1000</b>
Total Hardness (as CaCO <sub>3</sub> ), mg/L	321 – 559		<b>600</b>
Total Alkalinity (as CaCO <sub>3</sub> ), mg/L	186– 314		<b>600</b>
Sulphates as SO <sub>4</sub> <sup>2-</sup> , mg/L	167 – 344		<b>400</b>
Iron as Fe, mg/L	0.04 – 0.11		<b>0.3</b>
Nitrate as NO <sub>3</sub> , mg/L	3.25 – 6.54		<b>45</b>
Fluoride as F, mg/L	0.42 – 0.56		<b>1.5</b>
<b>Conclusion:</b> 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.			



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D) NOISE LEVELS		Monitoring Location – 5 locations	
PARAMETER	RESULT dB(A)		*LIMIT (µg/m <sup>3</sup> )
	Day Equivalent	Night Equivalent	
Core Zone	50.6	40.4	90
Buffer Zone	46.0 – 50.4	38.9 – 41.2	Day Equivalent - 55dB(A), Night Equivalent - 45dB(A)
*Permissible noise for industrial workers as laid down by CPCB (at 8 hrs Exposure Time). While comparing with the MoEF&CC Norms, the monitored ambient noise levels are generally within the limit values.			
E) SOIL QUALITY		Monitoring Location – 3 locations	
PARAMETER	Range of values		
pH	6.99 to 7.24		
Electrical Conductivity (µmho/cm)	45.67 – 70.74		
Organic matter (%)	0.76 – 1.02		
Total Nitrogen (mg/kg)	125 - 245		
Phosphorus (mg/kg)	1.36 – 1.59		
Sodium (mg/kg)	354- 422		
Potassium (mg/kg)	586 - 704		
Soil is of Clay Loam type.			

**F) LAND ENVIRONMENT:**

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

**Table 11.6: Land Use in 10Km Buffer Zone**

S.No	Landuse Feature	Area (Sq.Km)	Percentage
1	Crop Land / Plantation	47.97	15.50
2	Land With Scrub	58.71	18.96
3	Land Without Scrub	52.40	16.93
4	Fallow Land	129.23	41.74
5	Water bodies	13.61	4.40
6	Mining Area/ Industries	1.23	0.40
7	Settlement & Infrastructure	6.42	2.07
	<b>Total</b>	309.56	100

From the above table it is seen that 15.50 % of the study area is agriculture land and 41.74 % are fallow land. Land with scrub constitutes 18.96 %, lands without scrub constitute 16.93 % and waterbodies constitute 4.40 % & others constitute 2.47 %.



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**G) BIOLOGICAL ENVIRONMENT:**

**Flora:** The lease area is a non-forest, private land. Major part of lease area is barren fallow land with bushes ( Prosopis juliflora) and grasses. The detailed list of plants found in the core zone are given in Table no – 3.24. The Dominated species in the buffer zone are Acacia auriculiformis, Acacia leucophloea Azadirachta indica, Prosopis juliflora, Borassus flabellifer, Acacia nilotica, Albizia lebbeck, etc. The detailed list of plants found in the Bufferzone is given in Table no – 3.25.

**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. No wild mammalian species was directly sighted during the field survey. There is no Schedule I species in the core & buffer zone. The list of fauna within the study area is given in Table No – 3.27.

**H) HYDROLOGICAL STUDY:**

The area applied for mining lease is a gentle plain terrain and dry lands without any vegetation. The gravel formation is having thickness of 2m. The rocks in this area belonging to ARCHEAN group of rocks. Below the gravel formation a hard Rough stone Charnockite is noticed. The rocks are Phaneric to medium grained nature. And in these rocks there are mineral constituents of Blue Quarts, Micro Cline Feldspar, Hypersthene and flakes of Biotite Mica. The rocks are striking towards North west – South east direction dipping 80° Vertical towards South east direction

The general trend of depth to water level for Kalligudu Block, Madurai District, Tamil Nadu the was obtained from the data obtained from India-WRIS, Department of Water Resources, Ministry of Jal Shakti.

In the study area, wells and bore wells were studied which indicate that 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.

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



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seepage within the mine is expected. From the nearby working mines, no such seepage is also observed.

**11.4 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES:**

**11.4.1 GENERAL:**

This is a proposed project and Mechanized Open Cast mining will be carried out to quarry out Rough Stone & Gravel. The identified impacts due to this mine 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 SO<sub>2</sub>, NO<sub>x</sub>, 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 11.7: 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.



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		Imparting sufficient training to operators on safety and environmental parameters.
		Proper maintenance of hauling equipments.
		Avoiding overloading of dumpers.
4	Transportation	Regular wetting of transport road using mobile water tanker.
		Proper maintenance of haul road and other roads
		Setting up of tyre wash facility in the transport road.
		Avoiding overloading of tippers
		Covering of loaded tippers with tarpaulins during transportation
		Vehicular emissions will be controlled through regular and proper preventive maintenance schedules and emissions tests are done with diesel smoke meter equipment to ensure emission values.
5	Others	Development of greenbelt / barriers around mine in the safety zone and carrying out plantation within the lease area.
		Green netting 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 due to the proposed project is estimated using AERMOD View Gaussian Plume Air Dispersion Model developed by Lakes Environmental Software which is based on steady state Gaussian plume dispersion. Ground Level Concentration (GLC) have been computed using hourly meteorological data for particulate matter PM10 and PM2.5.

The resultant added concentrations with baseline figures even at worst scenario, show that the values of ambient air quality with respect to PM<sub>10</sub> are in the range of 53.3 µg/m<sup>3</sup> to 65.1 µg/m<sup>3</sup> and with respect to PM<sub>2.5</sub> are in the range of 26.8 µg/m<sup>3</sup> to 33.1µg/m<sup>3</sup> 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.



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**11.4.3 WATER ENVIRONMENT:**

**Water Requirement:** The total water requirement for this project will be 10.0 KLD comprising 1.0 KLD for drinking water and domestic use, 8.0 KLD for dust suppression and 1.0 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 activity / source of pollution, its impact / consequence, proposed control measures are explained below:

**Table 11.8: 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 450m 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.
		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, before outlet. etc.
C	Drainage Course	Disturbance to drainage course	There is a seasonal odai channel located on the Western side of the lease for which 50m safety distance has been left. Earthen bund will be formed within the lease area. 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

- **Stage of Groundwater Development:** The groundwater resource data of Madurai district was obtained from the data provided in the technical report of the Central Ground Water Board, South Eastern Costal Region – ‘District groundwater brochure, Madurai District.’ Based on the report it is seen that this area can be categorized as ‘Safe’ from ground water development point of view.
- **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



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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. The ultimate pit depth of mining is 47m. 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.

#### **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.



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- 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:**

To reduce ground vibratory conditions, various control measures will be implemented such as keeping PPV below 10mm/s for 8-25hz frequency range, formulating drilling and charging pattern with less explosive charge, initiating sequence and using NONEL, carrying out blasting with minimum charge per delay, avoiding blasting during strong winds etc. 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. 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. Elaborate details regarding the same are provided under section 4.4.2, Chapter-IV.

#### **11.4.6 IMPACT ON LAND ENVIRONMENT:**

The lease area of 1.62.17 Ha in S.F.No. 84/2C1,2D1,2E1, 2C2,2D2A,2E2, 2J,2K,2L is a patta land in the name of the applicant. 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. Plantation will be carried out in this safety zone area. In the post mining stage, at the end of the 5 year period, 1.32.0 Ha will be used as mined out area at 17m depth. Subsequently, in the remaining 6th to 10th year there will be only depth ward mining in the same mined out area up to 47m depth. Ultimately the entire mined out area of 1.32.0 Ha will be left as water body. 0.05.0Ha will be the mine roads & Infrastructure and 0.09.0 Ha will be covered with vegetation, 0.11.17Ha will be undisturbed and 0.05.0 Ha 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.





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**11.4.7 BIOLOGICAL ENVIRONMENT:**

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. In the lease area, safety barrier 7.5m & 10 maround the periphery is left. About 800 trees will be planted in and around the lease area.

**11.4.8 SOCIO ECONOMIC ENVIRONMENT:**

The entire lease area is a private patta land. Hence, there are no habitations or hutments in the core zone area and no rehabilitation or resettlement problems will arise here. The mining operations in the proposed quarry will employ about 9 people. 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, the proponent has earmarked an amount of Rs.5.0 Lakhs under Corporate Environmental Responsibility. The activities identified under CER will be implemented in a phased manner. In consultation with the locals based on the need & priority it will be implemented.

**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,



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buildings and other buyers etc. There will be about 2 trips per hour. The transport route can easily 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 Rough stone in the transport vehicles before transporting, so that no dust nuisance during transport will arise.
- ❖ Proper maintenance of transport roads
- ❖ Proper maintenance of transport vehicles.
- ❖ Avoiding overloading of material
- ❖ Covering of loaded vehicles with tarpaulins sheet if warranted.

**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 this mine. Hence no liquid waste is generated.

The hazardous waste generated in this mine 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



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environmental factors, as dictated from time to time, depending on the prevailing pollution levels, if required.

Towards EMP measures, Rs.17.04 Lakhs is allocated under capital cost. Besides, Rs.14.83 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. Further details of the capital and recurring cost of environmental management has been provided in in Table No. 10.2, Chapter-X.

### **11.6 ADDITIONAL STUDIES:**

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. R&R Plan
4. Mine closure plan

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.

Elaborate description in respect of Risk Assessment and Mine closure plan are given in **Chapter - VII**.

Although the individual lease area of this project is less than 5 Ha, 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. The baseline monitoring carried out for this project reflects the cumulative impact of the existing quarry. However, since the existing quarries lease period is almost expired , this proposal will be more of a replacement only and as such no major additional pollution load is expected.



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF 1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

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**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.

\* \* \* \* \*



# **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 23.12.2023. The team of experienced professionals that are a part of this organization has been detailed below.

**Figure 12.1: Disclosure of consultants engaged**

<b>EXPERT NAME</b>	<b>QUALIFICATION</b>	<b>POSITION</b>	<b>EXPERIENCE</b>
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
Dr. N. Radhakrishnan	M.Sc., M.Tech., Ph.D	Functional area Expert (Land use)	Over 25 years of experience in using the advanced spatial analysis techniques in GIS environment. Specialized in Spatial Information Technology and Applications (remote sensing, GIS)
Mr.S.S.Rajendran	M.Sc. (Pharmaceutical Chemistry)	Lab head	More than 9 years of experience in Environmental laboratory.



**DRAFT EIA/EMP REPORT FOR ROUGH STONE AND GRAVEL QUARRY OF THIRU. S. RATHINAM  
AT SURVEY NOS. 84/2C1,2D1,2E1, 2C2,2D2A,2E2,2J,2K,2L (PATTA LAND) OVER AN AREA OF  
1.62.17 HA IN KALLANAI VILLAGE, KALLIGUDI TALUK, MADURAI DISTRICT, TAMIL NADU.**

EXPERT NAME	QUALIFICATION	POSITION	EXPERIENCE
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 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 15 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 5 years' experience in preparation of EIA/EMP reports

\* \* \* \* \*



# **ANNEXURES**

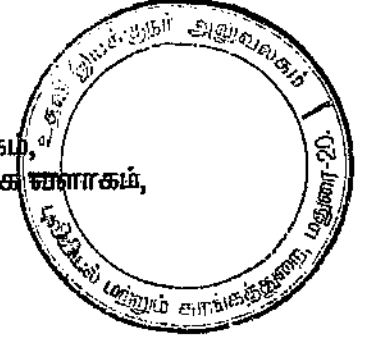


புவியியல் மற்றும் சுரங்கத்துறை

ந.க.எண்.08/கனிமம்/2023,

உதவி இயக்குநர் அலுவலகம்,  
மாவட்ட ஆட்சியர் அலுவலகம், காரைக்கம்,  
மதுரை.

நாள்: 14.03.2023

குறிப்பாணை

**பொருள்:** கனிமங்களும், குவாரிகளும் - சிறுகனிமம் - உடைகல் மற்றும் கிராவல் - மதுரை மாவட்டம் - கள்ளிக்குடி வட்டம் - கல்லணை கிராமம் - புல எண்கள். 84/2C1 (0.08.0), 84/2D1 (0.06.5), 84/2E1 (0.08.0), 84/2C2 (0.13.0), 84/2D2A (0.08.67), 84/2E2 (0.14.50), 84/2J (0.37.5), 84/2K (0.36.0), 84/2L (0.30.0) - பரப்பு 1.62.17 ஹெக்டேர் பரப்பு நிலத்தில் 10 (பத்து) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்கல் - சரியான பரப்பு (Precise Area) தேர்வு செய்யப்பட்டது - சுரங்கத்திட்டம் மற்றும் மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்க கோருவது - தொடர்பாக.

- பார்வை:**
1. திரு.S.ரத்தினம், த/பெ.சின்னவீரன், சின்னஉடைப்பு கிராமம், மதுரை - 625022 என்பவரது விண்ணப்பம் நாள். 19.01.2023.
  2. இவ்வலுவலக கடிதம் எண் ந.க.எண்.08/கனிமம்/2023, நாள்: 19.01.2023.
  3. திருமங்கலம் வருவாய் கோட்டாட்சியர் கடிதம் ந.க. எண். 299/2023/அ1, நாள்.25.02.2023.
  4. உதவி புவியியலாளர், புவியியல் மற்றும் சுரங்கத்துறை, புலத்தணிக்கை அறிக்கை, நாள்.11.03.2023.
  5. 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 41 மற்றும் 42.
  6. அரசாணை எண்.169 தொழில் (எம்.எம்.சி.1) துறை, நாள்: 04.08.2020.
  7. தொடர்புடைய ஆவணங்கள்.

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மதுரை மாவட்டம், பெருங்குடி அஞ்சல், சின்னஉடைப்பு கிராமம், என்ற முகவரியில் குடியிருந்து வரும் திரு.S.ரத்தினம், த/பெ.சின்னவீரன் என்பவர் மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்லணை கிராமம், பட்டா புல எண்கள்.84/2AI (0.09.0),

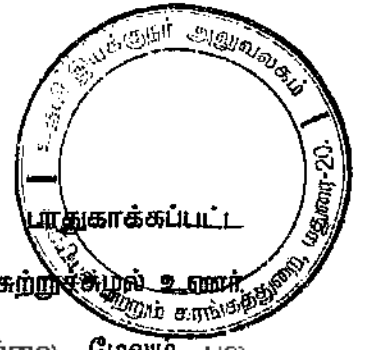
S. S. A. I. K.

84/2B1, (0.06.5), 84/2C1 (0.08.0), 84/2D1 (0.06.5), 84/2E1 (0.08.0), 84/2A2 (0.16.0), 84/2B2 (0.11.5), 84/2C2 (0.13.0), 84/2D2A (0.08.67), 84/2E2 (0.14.50), 84/2J (0.37.5), 84/2K (0.36.0), 84/2L (0.30.0)-இல் 2.05.17 ஹெக்டேரில் 10 வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமை வழங்க கேட்டு பார்வை 1-இல் காணும் விண்ணப்பத்தினை சுமர்பித்துள்ளார்.

திருமங்கலம், வருவாய் கோட்டாட்சியர் மற்றும் புவியியல் மற்றும் சாங்கத்துறை, உதவி புவியியலாளர் ஆகியோரின் அறிக்கையில், கள்ளிக்குடி வட்டம், கல்லணை கிராமம், பட்டா புல எண்கள்.84/2A1, 84/2B1, 84/2C1, 84/2D1, 84/2E1, 84/2A2, 84/2B2, 84/2C2, 84/2D2A, 84/2E2, 84/2J, 84/2K, 84/2L-இல் 2.05.17 ஹெக்டேர் பரப்பு விண்ணப்பதாரர் திரு.S.ரத்தினம் என்பவர் பெயரில் பட்டா தாக்கவாகியுள்ளதால் குவாரிப்பணி மேற்கொள்ள விண்ணப்பதாரரான திரு.S.ரத்தினம் என்பவருக்கு ஸ்தல உரிமை உள்ளது எனவும், இதில் புல எண்கள். 84/2A1, 84/2B1, 84/2A2 மற்றும் 84/2B2 ஆகியவற்றில் பாதுகாப்பு இடைவெளி விட்டு குவாரிப்பணி செய்ய போதிய பரப்பு இல்லாத காரணத்தினால் மேற்கண்ட புல எண்கள் நீங்கலாக மீதமுள்ள புல எண்களான 84/2C1, 84/2D1, 84/2E1, 84/2C2, 84/2D2A, 84/2E2, 84/2J, 84/2K, 84/2L -இல் 1.62.17 ஹெக்டேர் பரப்பு நிலங்களில் மட்டும் 10 (பத்து) ஆண்டுகளுக்கு திரு.S.ரத்தினம் என்பவருக்கு கிராவல் மற்றும் சாதாரண கற்கள் குவாரி குத்தகை உரிமை வழங்கலாம் எனவும் அறிக்கை செய்துள்ளார்.

மேலும், விண்ணப்பிக்கப்பட்ட புலங்களை சுற்றிலும் 300 மீட்டர் சுற்றளவில் குடியிருப்புகள், தெல்லியல் துறையின் மூலம் பாதுகாக்கப்பட்ட பகுதிகளாக அறிவிக்கப்பட்ட இடங்கள் மற்றும் வரலாற்று சின்னங்கள் எதும் இல்லை. 60 மீட்டர் சுற்றளவில் காப்பு காடுகள் மற்றும் 50 மீட்டர் சுற்றளவில் தேசிய / மாநில நெடுஞ் சாலைகள், கட்டிடங்கள் எதும் இல்லை. விண்ணப்பப் புல எண்களுக்கு மேற்கே புல எண்.85-இல் குண்டாறு செல்கிறது. மேலும் விண்ணப்பப் புல எண்களுக்கு வடக்கு மற்றும் கிழக்குப் பகுதியில் புல எண் 84/4 மற்றும் 82/1-இல் அரசுப் புறம்போக்கு நிலம்

S. Raju




அமைந்துள்ளது. மேலும், 10 கி.மீ சுற்றளவில் வனத்துறையால் பாதுகாக்கப்பட்ட பகுதியாக அறிவிக்கப்பட்ட சரணாலயங்கள், தேசிய பூங்காக்கள் சுற்றுச்சூழல் உணர் திறன் மிக்க பகுதிகள் (ECO-SENSITIVE ZONE) ஏதும் இல்லை. மேலும் புல வரைபடத்தில் விண்ணப்பப் புலங்களின் தென்புரத்தில் ஒடை செல்வதாக குறிப்பிடப்பட்டுள்ளது, ஆனால் புலத்தில் அதற்கான தடயங்கள் ஏதும் காணப்படவில்லை. விண்ணப்பப் புலங்களுக்கு சென்று வர பாதை வசதி உள்ளது என அறிக்கை செய்து, பின்வரும் நிபந்தனைகளுக்கு உட்பட்டு 10 (பத்து) ஆண்டுகளுக்கு கிராவல் மற்றும் சாதாரண கற்கள் குவாரி உரிமை வழங்கப் பரிந்துரை செய்துள்ளனர்.

#### நிபந்தனைகள்:

1. மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்ணை கிராமம், புல எண்கள். 84/2C1, 84/2D1, 84/2E1, 84/2C2, 84/2D2A, 84/2E2, 84/2J, 84/2K, 84/2L மொத்தம் 1.62.17 ஹெக்டேர் பரப்பளவில் உடைகல் மற்றும் கிராவல் கனிமம் வெட்டியெடுக்க குவாரி குத்தகை உரிமை வழங்குவது தொடர்பாக, ஏற்பளிக்கப்பட்ட கரங்கத் திட்டம் மற்றும் சுற்றுச்சூழல் ஒப்புதல் ஆகியவற்றை பெற்றறிக்கப்பட வேண்டும்.
2. விண்ணப்பப் புலங்களுக்கு மேற்கில் புல எண்.85-இல் அமைந்துள்ள குண்டாறு-க்கு 50 மீட்டர் பாதுகாப்பு இடைவெளி விட வேண்டும்.
3. விண்ணப்பப் புலங்களுக்கு கிழக்குப் பகுதியில் புல எண்.82/1 மற்றும் வடக்குப் பகுதியில் புல எண்.84/4-இல் அமைந்துள்ள அரகப் புறம்போக்கு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளி விட வேண்டும்.
4. விண்ணப்பப் புலங்களைச் சுற்றியுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி விட வேண்டும்.
5. பொதுமக்கள் / விவசாய நிலங்களுக்கு பாதிப்பு ஏற்படாத வகையில் தகுதி வாய்ந்த அங்கீகரிக்கப்பட்ட நபர்கள் மூலம் வெடிமருந்துகள் சேமிக்கப்பட்டு குவாரியில் வெடித்தல் வேண்டும். குவாரியில் குறைந்த சக்தி கொண்ட வெடி மருந்துகளை பயன்படுத்தல் வேண்டும்.
6. குவாரியில் வேலை செய்யும் தொழிலாளர்கள் தொழிலாளர் நலவாரியம் மற்றும் காப்பீடு திட்டத்தில் பதிவு செய்து தொழிலாளர் நலன் பேண்பட வேண்டும்.
7. கனிமங்களை வாகனங்களில் கொண்டு செல்லும் போது பாதுகாப்பிகள், பொது மக்கள் மற்றும் பிற வாகனங்கள் பாதிக்காதவண்ணம் தூள்பாய்கள் கொண்டு மூடி எடுத்துச் செல்ல வேண்டும்.

எனவே, துறை அலுவலர்களின் பரிந்துரையினை ஏற்றும் நிபந்தனைகளுக்கு உட்பட்டும், மதுரை மாவட்டம், கள்ளிக் குடி வட்டம், கல்லணை கிராமம், பட்டா புல எண்கள். 84/2C1 (0.08.0), 84/2D1 (0.06.5), 84/2E1 (0.08.0), 84/2C2 (0.13.0), 84/2D2A (0.08.67), 84/2E2 (0.14.50), 84/2J (0.37.5), 84/2K (0.36.0), 84/2L (0.30.0)-இல் 1.62.17 ஹெக்டேர் பரப்பு நிலத்திற்கு 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதி எண்: 19 மற்றும் 20-இன்படி 10 (பத்து) ஆண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் சுவாமி உரிமம் வழங்க தகுதி வாய்ந்த நிலப்பரப்பாக (Precise area) கருதப்படுகிறது.

தமிழ்நாடு சிறுகனிம சலுகை விதிகள்-1959 விதி எண்:41-இன்படி சுவாமிப்பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்கத் திட்டத்தினை (Mining Plan) 90 தினங்களுக்குள் சமர்ப்பிக்குமாறும், விதி எண்: 42-இன்படி மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (State Level Environmental Impact Assessment Authority) இசைவினைப் பெற்று சமர்ப்பிக்குமாறும் மனுதாரர் திரு.S.ரத்தினம் என்பவர் கேட்டுக் கொள்ளப்படுகிறார்.

  
உதவி இயக்குநர் (பெர்),  
புவியியல் மற்றும் சுரங்கத்துறை,  
மதுரை.

பெறுநர்

திரு.S.ரத்தினம்,  
த/பெ.சின்னவீரன்,  
சின்னஉடைப்பு கிராமம்,  
பெருங்குடி அஞ்சல்,  
மதுரை மாவட்டம்- 625022

நகல்

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

  
14-3-23

# Annexure No.2

From

Thiru.T.Selvasekar, M.Sc.,  
Assistant Director (i/c),  
Dept. of Geology and Mining,  
Madurai.

To

Thiru.S.Rathinam,  
S/o.Sinnaveeran,  
No.10, North Street,  
Chinna Udaippu, Perungudi Post,  
Madurai - 625 022.

Roc.No.08/Mines/2023-1, dated. 10.04.2023

Sir,

Sub: Mines and Minerals - Minor Mineral - Rough stone and Gravel - Madurai District - Kalligudi Taluk - Kallanai Village - Patta land - S.F. Nos.84/2C1, 84/2D1, etc., - Over an extent of 1.62.17 Hects - Application preferred by Thiru.S.Rathinam - Precise Area Communicated - Draft Mining Plan submitted - Approval Accorded - Reg.

- Ref: 1. Quarry lease application preferred by Thiru.S.Rathinam, dated.19.01.2023
2. Precise area communication letter Roc.No.08/Mines/2023, dated.14.03.2023.
3. Letter dated.Nil. received from Thiru. S.Rathinam along with draft mining plan on 05.04.2023.

\*\*\*\*\*

Thiru.S.Rathinam has preferred an application for the grant of lease to quarry Rough stone and Gravel in SF.Nos.84/2C1, 84/2D1, 84/2E1, 84/2C2, 84/2D2A, 84/2E2, 84/2J, 84/2K, 84/2L over an extent of 1.62.17 Hects of patta land in Kallanai Village, Kallikudi Taluk under Rule 19(1) of Tamil Nadu Minor Mineral Concession Rules, 1959.

Based on reports and recommendations of the Revenue Divisional Officer, Thirumangalam and Assistant Geologist (Mines), precise area was communicated to the applicant vide reference 2<sup>nd</sup> cited with a direction to submit mining plan as stipulated in rule 41 of Tamil Nadu Minor Mineral Concession Rules, 1959.



Accordingly, Thiru.S.Rathinam has submitted the draft Mining Plan and the same has been examined in detail and found correct. The mining plan submitted by Thiru.S.Rathinam in respect of the subject area is approved subject to the following conditions:

- (i). That the mining plan is approved without prejudice to any other Law applicable to the quarry lease from time to time whether such Laws are made by the Central Government, State Government or any other authority.
- (ii). 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 Mines and Minerals (Development and Regulation) Act, 1957, or any other connected laws including Forest (Conservation) Act, 1980, Forest Conservation Rules, 1981, Environment Protection Act, 1980, Indian Explosives Act, 1884(Central Act IV of 1884) and the rules made there under the Tamil Nadu Minor Mineral Concession Rules, 1959.
- (iii). That the mining plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.
- (iv). Quarrying shall be done as per the approved Mining Plan and that the mining plan is approved without prejudice to any other law applicable to the quarry lease from time to time whether such laws are made by the Central Government, State Government or any other authority.
- (v). If anything is found to be concealed as required by the Mines Act in the contents of the Mining Plan and the proposal for rectification has not been made, the approval shall be deemed to have been withdrawn with immediate effect.


- (vi). Waste material should be dumped within the lease granted area as earmarked in the Mining Plan.
- (vii). Quarrying operations and production shall be carried out as per the approved Mining Plan and the applicant shall be liable to pay the cost of mineral if there is any deviation in the quantum indicated in the approved year wise quantum of production and any such cases as on date are to be dealt with as per Court direction.
- (viii). If any violation is found during quarrying operation, the penal provisions of Tamil Nadu Minor Mineral Concession Rules 1959 and other rules and act in force will attract.
- (ix). The applicant shall strictly adhere to the statutory and safety requirements.

Encl: Approved Mining Plan.

  
Assistant Director (M),  
Dept. of Geology and Mining,  
Madurai.

Copy To:

The Commissioner,  
Department of Geology and Mining,  
Guindy, Chennai - 600 032

  
10.4.27



From

Thiru.T.Selvasekar, M.Sc.,  
Assistant Director (i/c),  
Dept. of Geology and Mining,  
Madurai.

To

Thiru.S.Rathinam,  
S/o.Sinnaveeran,  
No.10, North Street,  
Chinna Udaippu, Perungudi Post,  
Madurai - 625 022.

Roc.No.08/Mines/2023-2, dated. 10.04.2023

Sir,

Sub: Mines and Minerals - Minor Mineral - Rough stone and Gravel - Madurai District - Kalligudi Taluk - Kallanai Village - Patta land - S.F. Nos.84/2C1, 84/2D1,etc., - Over an extent of 1.62.17 Hects - Application preferred by Thiru.S.Rathinam - Precise area communicated - Draft Mining Plan submitted - Approval accorded - 500m quarry details requested - furnished - Regarding.

- Ref: 1. Quarry lease application preferred by Thiru.S.Rathinam, dated.19.01.2023
2. Precise area communication letter Roc.No.08/Mines/2023, dated.14.03.2023.
3. Letter dated.Nil. received from Thiru. S.Rathinam along with draft mining plan on 05.04.2023.
4. This office letter even No. dated. 10.04 2023.

\*\*\*\*\*

Thiru.S.Rathinam has preferred an application for the grant of lease to quarry Rough stone and Gravel in SF.Nos.84/2C1, 84/2D1, 84/2E1, 84/2C2, 84/2D2A, 84/2E2, 84/2J, 84/2K, 84/2L over an extent of 1.62.17 Hects of patta land in Kallanai Village, Kallikudi Taluk under Rule 19(1) of Tamil Nadu Minor Mineral Concession Rules, 1959.

Based on reports and recommendations of the Revenue Divisional Officer, Thirumangalam and Assistant Geologist (Mines), precise area was communicated to the applicant vide reference 2<sup>nd</sup> cited with a direction to submit mining plan as stipulated in rule 41 of Tamil Nadu Minor Mineral Concession Rules, 1959.

Accordingly, Thiru.S.Rathinam has submitted the draft mining plan and the same have been approved on .04.2023. In this connection the applicant has requested to furnish the details of quarry lease /





mining lease situated within 500 mts radius from the subject quarry for obtaining Environment Clearance from the State level Environment Impact Assessment Authority.

In this connection it is stated that, the following existing, abandoned / expired and proposed quarries are located within 500m radius distance from the proposed area.

**a. Existing quarries**

Sl No	Name of the Owner	Village	S.F.No.	Extent (in hecets)	Collector's Proceedings No & date	Lease period
1.	Ahamed Abdul Razzak.I,	Chinna Ulagani	70/2(0.24.5), 70/5(0.49.5), 70/8(0.45.0), 70/3A (0.20.5), 70/3B (0.04.0), 70/4 (0.79.5), 70/5A (0.41.5), 70/6B (0.08.0), 70/7 (0.34.0), 70/9A (0.13.0), 70/9B (0.02.5), 72/1 (0.28.5) & 72/5 (0.16.5)	3.67.0	Roc.No. 383/2014 Dt 08.05.2018	07.06.2018 06.06.2023
2.	Rathinam	Kallanai	84/2F (0.52.5), 84/2G (0.36.0), 84/2H (0.34.0) & 84/2I (0.38.5)	1.61.0	Roc.No.301/2017, Dt 12.03.2018	17.07.2018 16.07.2023

**b. Expired / Abandoned quarries**

Sl No	Name of the Owner	Village	S.F.No.	Extent (in hecets)	Collector's Proceedings No & date	Lease period
1.	Boopathirajan.R,	Kallanai	39/2A (0.48.5), 39/2B (0.26.5), 39/2C (0.23.5), 39/2D (0.45.0), 39/2E (0.33.0) & 39/2F1 (0.33.0)	2.09.5	Roc.No.1619/2015, Dt 10.08.2017	28.08.2017 27.08.2022

**c. Present proposed quarries**

Sl No	Name of the Owner	Village	S.F.No.	Extent (in hecets)
1.	Tmt.M.Meenatchi	Achankulam	16/2B, 16/3 & 16/4	1.42.0
2.	Rathinam	Kallanai	84/2C1, 84/2D1, 84/2E1, 84/2C2, 84/2D2A, 84/2E2, 84/2J, 84/2K, 84/2L	1.62.17

Assistant Director (i/c),  
Dept of Geology and Mining,  
Madurai

R 23  
10.2.23

S. S. S. S.

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## Annexure No.4

## POPULATION BREAKUP &amp; LITERACY LEVEL IN THE BUFFER ZONE

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
<b>0-2 km,Thirumangalam Sub-District, Madurai District</b>																						
1	1	Ulagani	Rural	386	1466	743	723	170	84	86	151	72	79	0	0	0	815	522	293	651	221	430
2	2	Nedungulam	Rural	266	897	445	452	83	42	41	88	42	46	0	0	0	558	337	221	339	108	231
3	3	Chinnulagani	Rural	457	1854	936	918	261	135	126	21	7	14	0	0	0	984	629	355	870	307	563
4	4	Kallanai	Rural	564	2112	1080	1032	331	179	152	62	32	30	0	0	0	1033	665	368	1079	415	664
5	5	Melauppiligundu	Rural	314	1183	618	565	140	71	69	11	4	7	0	0	0	687	466	221	496	152	344
		<b>total (A)</b>		<b>1987</b>	<b>7512</b>	<b>3822</b>	<b>3690</b>	<b>985</b>	<b>511</b>	<b>474</b>	<b>333</b>	<b>157</b>	<b>176</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4077</b>	<b>2619</b>	<b>1458</b>	<b>3435</b>	<b>1203</b>	<b>2232</b>
<b>2-5 km,Thirumangalam Sub-District, Madurai District</b>																						
6	1	Vidathakulam	Rural	520	1934	987	947	197	99	98	422	217	205	0	0	0	1295	758	537	639	229	410
7	2	Virusankulam	Rural	227	860	423	437	96	44	52	58	29	29	0	0	0	563	328	235	297	95	202
8	3	Maikkudi	Rural	345	1382	701	681	177	83	94	430	219	211	0	0	0	839	494	345	543	207	336
9	4	Nadukottai	Rural	453	1749	905	844	176	94	82	499	257	242	0	0	0	1304	723	581	445	182	263
10	5	Mallampatti	Rural	166	664	332	332	67	35	32	484	241	243	0	0	0	466	253	213	198	79	119
11	6	Arasapatti	Rural	615	2210	1130	1080	257	139	118	121	68	53	0	0	0	1297	797	500	913	333	580
12	7	Valayankulam	Rural	274	1050	517	533	126	59	67	28	17	11	0	0	0	527	336	191	523	181	342
13	8	Koodakovil	Rural	555	2232	1138	1094	254	139	115	668	330	338	0	0	0	1541	877	664	691	261	430
14	9	Thoombakulam	Rural	325	1149	564	585	156	77	79	102	50	52	0	0	0	610	386	224	539	178	361
15	10	Kokkulam (Thirumal)	Rural	358	1466	751	715	188	99	89	95	48	47	0	0	0	871	549	322	595	202	393
<b>Thirumangalam Sub-District, Madurai District</b>																						
16	1	Nedumadurai	Rural	599	2272	1118	1154	292	135	157	156	73	83	0	0	0	1273	744	529	999	374	625
17	2	Kombadi	Rural	348	1344	663	681	169	79	90	169	84	85	0	0	0	794	466	328	550	197	353
18	3	Othaiyalangulam	Rural	339	1282	656	626	176	95	81	0	0	0	0	0	0	716	458	258	566	198	368
19	4	Periya Koodakoil	Rural	51	173	95	78	33	19	14	53	27	26	0	0	0	72	52	20	101	43	58
20	5	Paraiyapatti	Rural	721	2760	1395	1365	432	210	222	312	158	154	0	0	0	1375	828	547	1385	567	818
		<b>total (B)</b>		<b>5896</b>	<b>22527</b>	<b>11375</b>	<b>11152</b>	<b>2796</b>	<b>1406</b>	<b>1390</b>	<b>3597</b>	<b>1818</b>	<b>1779</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13543</b>	<b>8049</b>	<b>5494</b>	<b>8984</b>	<b>3326</b>	<b>5658</b>
<b>5-10 km, Madurai South Sub-District, Madurai District</b>																						
21	1	Perungudi	Rural	2397	9081	4554	4527	1104	532	572	1824	885	939	4	2	2	6540	3552	2988	2541	1002	1539
22	2	Valanendal	Rural	182	644	325	319	93	52	41	48	23	25	0	0	0	398	234	164	246	91	155
23	3	Nilaiyur (Part)	Rural	491	1789	896	893	223	117	106	1204	611	593	0	0	0	1150	643	507	639	253	386
24	4	Periya Alangulam	Rural	631	2435	1272	1163	333	176	157	173	90	83	0	0	0	1338	834	504	1097	438	659
25	5	Soorakkulam	Rural	175	671	336	335	91	39	52	43	25	18	0	0	0	541	283	258	130	53	77
26	6	Valayapatti	Rural	446	1707	843	864	235	109	126	44	20	24	0	0	0	985	564	421	722	279	443
27	7	Thottiyapatti	Rural	107	500	254	246	64	38	26	11	5	6	0	0	0	248	154	94	252	100	152
28	8	Valayankulam	Rural	1514	5705	2869	2836	792	419	373	480	250	230	0	0	0	3418	1910	1508	2287	959	1328
29	9	Pappanodai	Rural	382	1503	766	737	172	87	85	206	105	101	0	0	0	1125	607	518	378	159	219
30	10	Ramankulam	Rural	40	165	87	78	20	12	8	159	84	75	0	0	0	75	45	30	90	42	48
31	11	Kudiraiakutti	Rural	129	512	258	254	63	33	30	225	114	111	0	0	0	317	178	139	195	80	115
32	12	Solankuruni	Rural	860	3191	1595	1596	383	198	185	298	138	160	4	2	2	1849	1070	779	1342	525	817
33	13	Eliyarapatti	Rural	368	2156	1471	685	186	100	86	157	79	78	0	0	0	1509	1208	301	647	263	384

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
34	14	Nallur	Rural	408	1814	898	916	256	125	131	605	299	306	0	0	0	1025	600	425	789	298	491
<b>Madurai South Sub-District, Madurai District</b>																						
35	1	Nilaiyur (I Bit) (CT)	Urban	3971	14684	7298	7386	1582	789	793	1690	831	859	6	3	3	10930	5807	5123	3754	1491	2263
<b>Thirumangalam Sub-District, Madurai District</b>																						
36	1	Dharmathupatti	Rural	641	2477	1279	1198	275	146	129	71	32	39	0	0	0	1850	1022	828	627	257	370
37	2	Palakkapudupatti	Rural	474	1776	916	860	226	124	102	197	95	102	0	0	0	1232	697	535	544	219	325
38	3	Chockanathanpatti	Rural	95	387	188	199	53	28	25	72	28	44	0	0	0	242	145	97	145	43	102
39	4	S.Puliankulam	Rural	100	418	209	209	47	30	17	37	17	20	0	0	0	298	161	137	120	48	72
40	5	Kappalur	Rural	1026	3848	1913	1935	421	199	222	315	152	163	0	0	0	2681	1502	1179	1167	411	756
41	6	Maravankulam	Rural	802	2877	1436	1441	308	168	140	408	207	201	0	0	0	1950	1042	908	927	394	533
42	7	Kudiraicharikulam	Rural	262	954	488	466	81	44	37	58	28	30	0	0	0	601	350	251	353	138	215
43	8	Andipatti	Rural	256	969	488	481	83	46	37	224	118	106	0	0	0	684	377	307	285	111	174
44	9	Karisalpatti	Rural	445	1835	901	934	162	83	79	650	305	345	1	1	0	1423	772	651	412	129	283
45	10	Melakottai	Rural	1376	5156	2564	2592	515	255	260	1943	972	971	0	0	0	3850	2120	1730	1306	444	862
46	11	Vadagarai	Rural	1262	4900	2513	2387	525	283	242	1691	865	826	0	0	0	3452	1934	1518	1448	579	869
47	12	Giriyagoundanpatti	Rural	203	743	368	375	79	42	37	124	62	62	0	0	0	551	301	250	192	67	125
48	13	Chettipillayarnatham	Rural	220	841	425	416	69	37	32	220	111	109	0	0	0	587	331	256	254	94	160
49	14	Rayapalayam	Rural	239	880	445	435	65	32	33	0	0	0	0	0	0	689	378	311	191	67	124
50	15	Melanesaneri	Rural	79	310	168	142	44	21	23	0	0	0	0	0	0	184	117	67	126	51	75
51	16	Karisalkalampatti	Rural	326	1158	589	569	142	71	71	39	21	18	0	0	0	722	424	298	436	165	271
52	17	Keelanesaneri	Rural	130	498	251	247	54	34	20	96	46	50	0	0	0	307	175	132	191	76	115
53	18	Sivarakottai	Rural	905	3331	1646	1685	347	190	157	449	231	218	27	17	10	2386	1294	1092	945	352	593
54	19	Tirumal	Rural	764	2910	1458	1452	371	201	170	219	112	107	0	0	0	1735	1030	705	1175	428	747
55	20	Paraikulam	Rural	125	452	231	221	52	30	22	0	0	0	0	0	0	273	164	109	179	67	112
56	21	Saluppapillayarnatham	Rural	603	2129	1043	1086	220	112	108	690	333	357	0	0	0	1305	736	569	824	307	517
57	22	Vellakulam (K)	Rural	1431	4867	2380	2487	485	251	234	926	449	477	24	9	15	3594	1857	1737	1273	523	750
58	23	Kalligudi	Rural	1618	5427	2682	2745	515	284	231	1575	782	793	0	0	0	4083	2169	1914	1344	513	831
59	24	Idayanathan	Rural	96	374	187	187	39	20	19	173	87	86	0	0	0	259	152	107	115	35	80
60	25	Chennampatti	Rural	360	1440	733	707	181	99	82	352	178	174	0	0	0	924	515	409	516	218	298
61	26	Kurayur	Rural	1415	5362	2731	2631	573	308	265	1295	647	648	0	0	0	3406	2031	1375	1956	700	1256
62	27	Maruthangudi	Rural	329	1277	641	636	187	98	89	422	211	211	0	0	0	692	404	288	585	237	348
63	28	Vellakulam (S)	Rural	352	1259	627	632	150	85	65	66	38	28	0	0	0	777	446	331	482	181	301
64	29	Karukkuvaipatti	Rural	64	273	144	129	35	20	15	5	2	3	0	0	0	197	118	79	76	26	50
65	30	Sundarangundu	Rural	166	612	306	306	80	42	38	33	15	18	0	0	0	361	215	146	251	91	160
66	31	Veppankulam	Rural	237	878	440	438	150	78	72	369	186	183	0	0	0	291	164	127	587	276	311
<b>Thirumangalam Sub-District, Madurai District</b>																						
67	1	Thirumangalam (M)	Urban	13564	51194	25426	25768	4952	2551	2401	3691	1851	1840	17	6	11	41934	21699	20235	9260	3727	5533
<b>Kariapatti Sub-District, Virudhunagar District</b>																						
68	1	Mangulam	Rural	158	631	306	325	81	36	45	267	133	134	0	0	0	403	242	161	228	64	164
69	2	Kurandi	Rural	504	1974	998	976	245	124	121	254	129	125	0	0	0	1145	680	465	829	318	511

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
70	3	Aviyoor	Rural	1455	5629	2902	2727	838	446	392	503	254	249	0	0	0	3481	2059	1422	2148	843	1305
71	4	D.Kadambankulam	Rural	821	3588	1833	1755	380	196	184	1036	521	515	0	0	0	2327	1350	977	1261	483	778
72	5	Arasakulam	Rural	580	2336	1198	1138	349	176	173	458	233	225	0	0	0	1500	898	602	836	300	536
73	6	Kambikudi	Rural	945	3640	1888	1752	462	232	230	900	447	453	0	0	0	2394	1395	999	1246	493	753
74	7	S.Kallupatti	Rural	586	1962	990	972	212	110	102	41	19	22	0	0	0	1214	720	494	748	270	478
		<b>total (C)</b>		<b>47115</b>	<b>178129</b>	<b>89653</b>	<b>88476</b>	<b>19650</b>	<b>10158</b>	<b>9492</b>	<b>27036</b>	<b>13476</b>	<b>13560</b>	<b>83</b>	<b>40</b>	<b>43</b>	<b>127432</b>	<b>69875</b>	<b>57557</b>	<b>50697</b>	<b>19778</b>	<b>30919</b>
		<b>Grand Total (A+B+C)</b>		<b>54998</b>	<b>208168</b>	<b>104850</b>	<b>103318</b>	<b>23431</b>	<b>12075</b>	<b>11356</b>	<b>30966</b>	<b>15451</b>	<b>15515</b>	<b>83</b>	<b>40</b>	<b>43</b>	<b>145052</b>	<b>80543</b>	<b>64509</b>	<b>63116</b>	<b>24307</b>	<b>38809</b>

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

**OCCUPATIONAL STRUCTURE IN THE BUFFER ZONE**

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
<b>0-2 km,Thirumangalam Sub-District, Madurai District</b>																	
1	1	Ulagani	Rural	370	346	80	69	146	237	1	0	143	40	12	12	361	365
2	2	Nedungulam	Rural	270	224	59	64	172	144	2	2	37	14	7	17	168	211
3	3	Chinnaulagani	Rural	575	493	273	71	141	387	0	0	161	35	5	10	356	415
4	4	Kallanai	Rural	582	645	30	34	439	588	5	4	108	19	4	11	494	376
5	5	Melauppiligundu	Rural	359	311	38	35	169	267	2	1	150	8	2	4	257	250
		<b>total (A)</b>		<b>2156</b>	<b>2019</b>	<b>480</b>	<b>273</b>	<b>1067</b>	<b>1623</b>	<b>10</b>	<b>7</b>	<b>599</b>	<b>116</b>	<b>30</b>	<b>54</b>	<b>1636</b>	<b>1617</b>
<b>2-5 km,Thirumangalam Sub-District, Madurai District</b>																	
6	1	Vidathakulam	Rural	597	554	42	14	369	500	3	1	183	39	6	17	384	376
7	2	Virusankulam	Rural	194	65	12	5	6	13	1	0	175	47	58	182	171	190
8	3	Maikkudi	Rural	389	209	64	72	107	78	8	6	210	53	33	143	279	329
9	4	Nadukottai	Rural	338	111	24	1	93	66	1	0	220	44	194	207	373	526
10	5	Mallampatti	Rural	74	29	0	0	12	23	0	0	62	6	147	171	111	132
11	6	Arasapatti	Rural	667	597	212	211	248	319	6	8	201	59	6	18	457	465
12	7	Valayankulam	Rural	290	310	8	8	263	298	0	0	19	4	1	2	226	221
13	8	Koodakovil	Rural	581	471	21	13	360	387	15	6	185	65	46	45	511	578
14	9	Thoombakulam	Rural	343	293	63	48	124	211	6	2	150	32	6	13	215	279
15	10	Kokkulam (Thirumal)	Rural	409	314	47	22	239	261	2	1	121	30	15	53	327	348
<b>Thirumangalam Sub-District, Madurai District</b>																	
16	1	Nedumadurai	Rural	648	337	136	43	208	187	1	1	303	106	48	288	422	529
17	2	Kombadi	Rural	157	50	32	12	41	12	1	2	83	24	243	313	263	318
18	3	Othaialangulam	Rural	350	315	61	55	68	206	1	3	220	51	8	25	298	286
19	4	Periya Koodakoil	Rural	54	40	25	20	10	8	0	0	19	12	0	8	41	30
20	5	Paraipathi	Rural	788	571	124	103	184	341	2	10	478	117	18	112	589	682
		<b>total (B)</b>		<b>5879</b>	<b>4266</b>	<b>871</b>	<b>627</b>	<b>2332</b>	<b>2910</b>	<b>47</b>	<b>40</b>	<b>2629</b>	<b>689</b>	<b>829</b>	<b>1597</b>	<b>4667</b>	<b>5289</b>
<b>5-10 km, Madurai South Sub-District, Madurai District</b>																	
21	1	Perungudi	Rural	2548	1242	172	61	277	317	133	233	1966	631	161	171	1845	3114
22	2	Valanendal	Rural	124	60	34	10	52	29	1	2	37	19	64	102	137	157

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
23	3	Nilaiyur (Part)	Rural	414	304	55	41	185	221	5	2	169	40	112	109	370	480
24	4	Periya Alangulam	Rural	674	385	97	73	47	245	5	6	525	61	10	119	588	659
25	5	Soorakkulam	Rural	216	165	38	36	27	41	6	6	145	82	1	4	119	166
26	6	Valayapatti	Rural	514	393	81	29	269	306	1	7	163	51	7	44	322	427
27	7	Thottiyapatti	Rural	143	153	39	5	39	102	7	7	58	39	3	13	108	80
28	8	Valayankulam	Rural	1302	687	39	18	321	295	64	54	878	320	374	283	1193	1866
29	9	Pappanodai	Rural	436	206	9	4	100	106	8	5	319	91	14	27	316	504
30	10	Ramankulam	Rural	51	10	0	0	45	9	0	0	6	1	0	0	36	68
31	11	Kudiraikutti	Rural	150	34	13	1	120	29	0	0	17	4	0	1	108	219
32	12	Solankuruni	Rural	971	784	160	163	438	530	5	1	368	90	14	75	610	737
33	13	Eliyarpatti	Rural	301	210	55	31	49	123	5	5	192	51	158	178	1012	297
34	14	Nallur	Rural	530	315	77	34	250	214	0	0	203	67	14	34	354	567

**Madurai South Sub-District, Madurai District**

35	1	Nilaiyur (I Bit) (CT)	Urban	4250	3221	126	81	127	116	1510	1836	2487	1188	421	315	2627	3850
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**Thirumangalam Sub-District, Madurai District**

36	1	Dharmathupatti	Rural	736	267	21	4	11	12	13	6	691	245	22	31	521	900
37	2	Palakkapudupatti	Rural	370	107	15	1	15	4	15	6	325	96	167	51	379	702
38	3	Chockanathanpatti	Rural	95	35	7	2	0	1	3	2	85	30	24	33	69	131
39	4	S.Puliankulam	Rural	123	125	23	35	32	70	2	2	66	18	4	3	82	81
40	5	Kappalur	Rural	1097	581	44	19	123	188	17	12	913	362	17	48	799	1306
41	6	Maravankulam	Rural	759	378	34	24	34	71	21	23	670	260	50	74	627	989
42	7	Kudiraicharikulam	Rural	270	172	32	27	90	106	6	4	142	35	29	28	189	266
43	8	Andipatti	Rural	155	54	2	0	73	13	0	2	80	39	138	199	195	228
44	9	Karisalpatti	Rural	487	347	34	30	219	250	3	4	231	63	3	15	411	572
45	10	Melakottai	Rural	1240	675	60	43	279	278	19	16	882	338	286	344	1038	1573
46	11	Vadagarai	Rural	1296	509	106	61	227	176	30	20	933	252	127	73	1090	1805
47	12	Giriyagoundanpatti	Rural	242	235	16	19	120	182	10	7	96	27	11	14	115	126
48	13	Chettipillayarnatham	Rural	254	225	6	4	193	202	1	1	54	18	4	6	167	185
49	14	Rayapalayam	Rural	216	103	29	17	68	54	0	0	119	32	59	92	170	240
50	15	Melanesaneri	Rural	100	87	0	0	86	87	0	0	14	0	3	3	65	52

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
51	16	Karisalkalpatti	Rural	348	267	49	39	180	199	0	2	119	27	17	51	224	251
52	17	Keelanesaneri	Rural	139	110	9	8	60	82	0	1	70	19	0	3	112	134
53	18	Sivarakottai	Rural	721	449	128	99	213	217	40	28	340	105	255	269	670	967
54	19	Tirumal	Rural	809	742	173	155	442	521	26	10	168	56	40	78	609	632
55	20	Paraikulam	Rural	134	102	25	14	37	78	0	0	72	10	2	8	95	111
56	21	Saluppapillayarnatham	Rural	708	672	244	226	189	368	2	0	273	78	5	5	330	409
57	22	Vellakulam (K)	Rural	1295	1033	130	103	619	689	22	41	524	200	152	171	933	1283
58	23	Kalligudi	Rural	1437	943	76	39	405	574	38	32	918	298	175	217	1070	1585
59	24	Idayanathan	Rural	118	108	0	1	83	82	5	3	30	22	1	1	68	78
60	25	Chennampatti	Rural	106	44	1	1	8	1	1	1	96	41	338	296	289	367
61	26	Kurayur	Rural	1482	1104	174	126	682	807	3	7	623	164	135	165	1114	1362
62	27	Maruthangudi	Rural	352	274	18	13	183	233	0	0	151	28	5	3	284	359
63	28	Vellakulam (S)	Rural	265	256	20	18	211	218	4	3	30	17	142	151	220	225
64	29	Karukkuvaipatti	Rural	84	72	20	16	36	46	0	0	28	10	0	2	60	55
65	30	Sundarangundu	Rural	203	208	30	38	71	153	0	0	102	17	0	1	103	97
66	31	Veppankulam	Rural	269	212	157	162	15	44	1	0	96	6	5	3	166	223
<b>Thirumangalam Sub-District, Madurai District</b>																	
67	1	Thirumangalam (M)	Urban	13788	4506	113	38	275	215	142	172	13258	4081	486	432	11152	20830
<b>Kariapatti Sub-District, Virudhunagar District</b>																	
68	1	Mangulam	Rural	133	21	19	8	10	2	9	2	95	9	36	113	137	191
69	2	Kurandi	Rural	465	267	78	41	168	147	6	11	213	68	141	290	392	419
70	3	Aviyoor	Rural	1503	739	245	161	204	366	18	10	1036	202	38	71	1361	1917
71	4	D.Kadambankulam	Rural	866	706	108	47	448	546	5	4	305	109	27	63	940	986
72	5	Arasakulam	Rural	716	576	377	397	76	146	4	1	259	32	2	6	480	556
73	6	Kambikudi	Rural	1074	704	106	61	485	382	3	3	480	258	23	72	791	976
74	7	S.Kallupatti	Rural	466	357	69	68	172	233	1	2	224	54	169	166	355	449
		<b>total (C)</b>		<b>47545</b>	<b>26541</b>	<b>3793</b>	<b>2752</b>	<b>9188</b>	<b>10726</b>	<b>2220</b>	<b>2602</b>	<b>32344</b>	<b>10461</b>	<b>4491</b>	<b>5126</b>	<b>37617</b>	<b>56809</b>
		<b>Grand Total (A+B+C)</b>		<b>55580</b>	<b>32826</b>	<b>5144</b>	<b>3652</b>	<b>12587</b>	<b>15259</b>	<b>2277</b>	<b>2649</b>	<b>35572</b>	<b>11266</b>	<b>5350</b>	<b>6777</b>	<b>43920</b>	<b>63715</b>

\*Source: District Primary Census Abstract, Madurai & 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)
<b>0-2 km,Thirumangalam Sub-District, Madurai District</b>																
1	1	Ulagani	1	1	1	1	0	0	0	0	0	0	0	0	1	0
2	2	Nedungulam	1	1	1	0	0	0	0	0	0	0	0	0	1	0
3	3	Chinnaulagani	1	1	1	1	0	0	0	0	0	0	0	0	1	0
4	4	Kallanai	1	2	1	0	0	0	0	0	0	0	0	0	1	0
5	5	Achangulam	2	0	0	0	0	0	0	0	0	0	0	0	0	0
6	6	Melauppiligundu	1	2	1	1	0	0	0	0	0	0	0	0	1	0
		<b>total (A)</b>		<b>7</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>2-5 km,Thirumangalam Sub-District, Madurai District</b>																
7	1	Vidathakulam	1	2	3	1	1	0	0	0	0	0	0	0	1	0
8	2	Virusankulam	1	1	1	0	0	0	0	0	0	0	0	0	1	0
9	3	Maikkudi	1	1	1	1	0	0	0	0	0	0	0	0	1	0
10	4	Nadukottai	1	2	1	0	0	0	0	0	0	0	0	0	1	0
11	5	Mallampatti	2	0	0	0	0	0	0	0	0	0	0	0	0	0
12	6	Arasapatti	1	3	2	1	2	0	0	0	0	0	0	0	1	0
13	7	Valayankulam	1	1	1	1	0	0	0	0	0	0	0	0	1	0
14	8	Koodakovil	1	3	2	2	1	1	0	0	0	0	0	0	1	0
15	9	Thoombakulam	1	2	3	2	1	0	0	0	0	0	0	0	1	0
16	10	Kokkulam (Thirumal)	1	2	2	2	1	0	0	0	0	0	0	0	1	0
<b>Thirumangalam Sub-District, Madurai District</b>																
17	1	Nedumadurai	1	2	2	1	0	0	0	0	0	0	0	0	1	0
18	2	Kombadi	1	2	1	0	0	0	0	0	0	0	0	0	1	0
19	3	Othaiangulam	1	1	0	0	0	0	0	0	0	0	0	0	0	0
20	4	Periya Koodakoil	2	0	0	0	0	0	0	0	0	0	0	0	0	0
21	5	Paraipathi	1	1	3	1	1	1	0	0	0	0	0	0	1	0
		<b>total (B)</b>		<b>23</b>	<b>22</b>	<b>12</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>
<b>5-10 km,Madurai South Sub-District, Madurai District</b>																
22	1	Perungudi	1	4	1	2	2	1	0	0	0	0	0	0	1	0
23	2	Valanendal	1	1	0	0	0	0	0	0	0	0	0	0	0	0
24	3	Nilaiyur (Part)	1	1	2	2	0	0	0	0	0	0	0	0	1	0
25	4	Periya Alangulam	1	1	1	1	0	0	0	0	0	0	0	0	1	0
26	5	Soorakkulam	1	0	1	1	0	0	0	0	0	0	0	0	1	0
27	6	Valayapatti	1	1	1	0	0	0	0	0	0	0	0	0	1	0
28	7	Thottiyapatti	1	1	1	0	0	0	0	0	0	0	0	0	1	0
29	8	Valayankulam	1	5	2	1	1	0	0	0	0	0	0	0	1	0
30	9	Pappanodai	1	1	0	0	0	0	0	0	0	0	0	0	0	0
31	10	Ramankulam	1	1	0	0	0	0	0	0	0	0	0	0	0	0
32	11	Kudiraikutti	1	1	0	0	0	0	0	0	0	0	0	0	0	0
33	12	Solankuruni	1	2	2	2	0	0	0	0	0	0	0	0	1	0
34	13	Eliyarpatti	1	1	1	0	0	0	0	0	0	0	0	0	1	0
35	14	Nallur	1	1	1	1	0	0	0	0	0	0	0	0	1	0
<b>Thirumangalam Sub-District, Madurai District</b>																
36	1	Dharmathupatti	1	1	0	0	0	0	0	0	0	0	0	0	0	0
37	2	Palakkapudupatti	1	1	0	0	0	0	0	0	0	0	0	0	0	0
38	3	Chockanathanpatti	1	1	2	0	0	0	0	0	0	0	0	0	1	0
39	4	S.Puliankulam	1	1	1	0	0	0	0	0	0	0	0	0	1	0
40	5	Kappalur	1	2	3	2	2	2	0	0	0	0	0	0	1	0
41	6	Maravankulam	1	2	1	0	0	0	0	0	0	0	0	0	1	0
42	7	Kudiraicharikulam	2	0	0	0	0	0	0	0	0	0	0	0	0	0



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)
43	8	Andipatti	1	1	0	0	0	0	0	0	0	0	0	0	0	0
44	9	Karisalpatti	1	1	1	1	0	0	0	0	0	0	0	0	1	0
45	10	Melakottai	1	3	5	2	0	0	0	0	0	0	0	0	1	1
46	11	Vadagarai	1	6	2	0	0	0	0	0	0	0	0	0	1	0
47	12	Giriyagoundanpatti	1	1	0	0	0	0	0	0	0	0	0	0	0	0
48	13	Chettipillayarnatham	2	0	0	0	0	0	0	0	0	0	0	0	0	0
49	14	Rayapalayam	1	1	1	1	0	0	0	0	0	0	0	0	1	0
50	15	Melanesaneri	1	1	1	0	0	0	0	0	0	0	0	0	1	0
51	16	Karisalkalpatti	1	1	1	1	0	0	0	0	0	0	0	0	1	0
52	17	Keelanesaneri	2	0	0	0	0	0	0	0	0	0	0	0	0	0
53	18	Sivarakottai	1	5	2	1	0	0	0	0	0	0	0	0	1	0
54	19	Tirumal	1	3	2	1	1	0	0	0	0	0	0	0	1	0
55	20	Paraikulam	1	1	1	0	0	0	0	0	0	0	0	0	1	0
56	21	Saluppapillayarnatham	1	3	2	1	0	0	0	0	0	0	0	0	1	0
57	22	Vellakulam (K)	1	4	4	1	1	1	0	0	0	0	0	0	1	0
58	23	Kalligudi	1	6	5	4	1	1	0	0	0	0	0	1	1	0
59	24	Idayanathan	2	0	0	0	0	0	0	0	0	0	0	0	0	0
60	25	Chennampatti	1	1	1	1	0	0	0	0	0	0	0	0	1	0
61	26	Kurayur	1	4	1	1	1	0	0	0	0	0	0	0	1	0
62	27	Maruthangudi	1	2	1	1	1	0	0	0	0	0	0	0	1	0
63	28	Vellakulam (S)	1	1	1	1	0	0	0	0	0	0	0	0	1	0
64	29	Karukkuvaipatti	2	0	0	0	0	0	0	0	0	0	0	0	0	0
65	30	Sundarangundu	1	1	1	0	0	0	0	0	0	0	0	0	1	0
66	31	Veppankulam	1	1	1	0	0	0	0	0	0	0	0	0	1	0
<b>Kariapatti Sub-District, Virudhunagar District</b>																
67	1	Mangulam	1	1	1	0	0	0	0	0	0	0	0	0	0	0
68	2	Kurandi	1	1	1	1	1	0	0	0	0	0	0	0	1	0
69	3	Aviyoor	1	1	1	1	1	1	0	0	0	0	0	0	2	0
70	4	D.Kadambankulam	1	1	3	0	0	0	0	0	0	0	0	0	3	0
71	5	Arasakulam	1	1	1	0	0	0	0	0	0	0	0	0	1	0
72	6	Kambikudi	1	3	4	1	0	0	0	0	0	0	0	0	4	0
73	7	S.Kallupatti	1	0	2	1	0	0	0	0	0	0	0	0	2	0
		<b>total (C)</b>		<b>84</b>	<b>66</b>	<b>33</b>	<b>12</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>45</b>	<b>1</b>
		<b>Grand Total (A+B+C)</b>		<b>114</b>	<b>93</b>	<b>48</b>	<b>19</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>62</b>	<b>1</b>

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

**MEDICAL FACILITIES WITHIN 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)
<b>0-2 km,Thirumangalam Sub-District, Madurai District</b>														
1	1	Ulagani	2	0	0	0	0	0	0	0	0	0	0	0
2	2	Nedungulam	2	0	0	0	0	0	0	0	0	0	0	0
3	3	Chinnaulagani	2	0	0	0	0	0	0	0	0	0	0	0
4	4	Kallanai	2	0	0	0	0	0	0	0	0	0	0	0
5	5	Achangulam	2	0	0	0	0	0	0	0	0	0	0	0
6	6	Melauppiligundu	2	0	0	0	0	0	0	0	0	0	0	0
		<b>total (A)</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2-5 km,Thirumangalam Sub-District, Madurai District</b>														
7	1	Vidathakulam	1	0	0	0	0	0	0	0	0	1	0	0
8	2	Virusankulam	2	0	0	0	0	0	0	0	0	0	0	0
9	3	Maikkudi	2	0	0	0	0	0	0	0	0	0	0	0
10	4	Nadukottai	2	0	0	0	0	0	0	0	0	0	0	0
11	5	Mallampatti	2	0	0	0	0	0	0	0	0	0	0	0
12	6	Arasapatti	1	0	0	1	0	0	0	0	0	0	0	0
13	7	Valayankulam	2	0	0	0	0	0	0	0	0	0	0	0
14	8	Koodakovil	1	0	1	1	1	1	0	0	1	1	0	1
15	9	Thoombakulam	2	0	0	0	0	0	0	0	0	0	0	0
16	10	Kokkulam (Thirumal)	2	0	0	0	0	0	0	0	0	0	0	0
<b>Thirumangalam Sub-District, Madurai District</b>														
17	1	Nedumadurai	1	0	0	1	0	0	0	0	0	0	0	0
18	2	Kombadi	2	0	0	0	0	0	0	0	0	0	0	0
19	3	Othaiyangulam	2	0	0	0	0	0	0	0	0	0	0	0
20	4	Periya Koodakoil	2	0	0	0	0	0	0	0	0	0	0	0
21	5	Paraipathi	2	0	0	0	0	0	0	0	0	0	0	0
		<b>total (B)</b>		<b>0</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>
<b>5-10 km, Madurai South Sub-District, Madurai District</b>														
22	1	Perungudi	1	0	0	1	0	0	0	0	0	0	0	0
23	2	Valanendal	2	0	0	0	0	0	0	0	0	0	0	0
24	3	Nilaiyur (Part)	1	0	0	1	0	0	0	0	0	0	0	0
25	4	Periya Alangulam	2	0	0	0	0	0	0	0	0	0	0	0
26	5	Soorakkulam	2	0	0	0	0	0	0	0	0	0	0	0
27	6	Valayapatti	2	0	0	0	0	0	0	0	0	0	0	0
28	7	Thottiyapatti	2	0	0	0	0	0	0	0	0	0	0	0
29	8	Valayankulam	1	0	1	1	1	1	0	0	1	1	0	1
30	9	Pappanodai	2	0	0	0	0	0	0	0	0	0	0	0
31	10	Ramankulam	2	0	0	0	0	0	0	0	0	0	0	0
32	11	Kudiraikutti	2	0	0	0	0	0	0	0	0	0	0	0
33	12	Solankuruni	1	0	0	1	0	0	0	0	0	0	0	0

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)
34	13	Eliyarpatti	2	0	0	0	0	0	0	0	0	0	0	0
35	14	Nallur	2	0	0	0	0	0	0	0	0	0	0	0
<b>Thirumangalam Sub-District, Madurai District</b>														
36	1	Dharmathupatti	2	0	0	0	0	0	0	0	0	0	0	0
37	2	Palakkapudupatti	2	0	0	0	0	0	0	0	0	0	0	0
38	3	Chockanathanpatti	2	0	0	0	0	0	0	0	0	0	0	0
39	4	S.Puliankulam	2	0	0	0	0	0	0	0	0	0	0	0
40	5	Kappalur	1	0	0	1	0	0	0	0	0	0	0	0
41	6	Maravankulam	2	0	0	0	0	0	0	0	0	0	0	0
42	7	Kudiraicharikulam	2	0	0	0	0	0	0	0	0	0	0	0
43	8	Andipatti	2	0	0	0	0	0	0	0	0	0	0	0
44	9	Karisalpatti	2	0	0	0	0	0	0	0	0	0	0	0
45	10	Melakottai	1	0	0	1	0	0	0	0	0	1	0	0
46	11	Vadagarai	1	0	0	1	0	0	0	0	0	0	0	0
47	12	Giriyagoundanpatti	2	0	0	0	0	0	0	0	0	0	0	0
48	13	Chettipillayarnatham	2	0	0	0	0	0	0	0	0	0	0	0
49	14	Rayapalayam	2	0	0	0	0	0	0	0	0	0	0	0
50	15	Melanesaneri	2	0	0	0	0	0	0	0	0	0	0	0
51	16	Karisalkalpatti	2	0	0	0	0	0	0	0	0	0	0	0
52	17	Keelanesaneri	2	0	0	0	0	0	0	0	0	0	0	0
53	18	Sivarakottai	1	0	0	1	0	0	0	0	0	1	0	0
54	19	Tirumal	1	0	0	1	0	0	0	0	0	0	0	0
55	20	Paraikulam	2	0	0	0	0	0	0	0	0	0	0	0
56	21	Saluppapillayarnatham	1	0	0	1	0	0	0	0	0	0	0	0
57	22	Vellakulam (K)	1	0	0	1	0	0	0	0	0	0	0	0
58	23	Kalligudi	1	1	1	1	1	1	0	0	1	0	0	1
59	24	Idayanathan	2	0	0	0	0	0	0	0	0	0	0	0
60	25	Chennampatti	2	0	0	0	0	0	0	0	0	0	0	0
61	26	Kurayur	1	0	0	1	0	0	0	0	0	0	0	0
62	27	Maruthangudi	1	0	0	1	0	0	0	0	0	0	0	0
63	28	Vellakulam (S)	2	0	0	0	0	0	0	0	0	0	0	0
64	29	Karukkuvaipatti	2	0	0	0	0	0	0	0	0	0	0	0
65	30	Sundarangundu	2	0	0	0	0	0	0	0	0	0	0	0
66	31	Veppankulam	2	0	0	0	0	0	0	0	0	0	0	0
<b>Kariapatti Sub-District, Virudhunagar District</b>														
67	1	Mangulam	2	0	0	0	0	0	0	0	0	0	0	0
68	2	Kurandi	2	0	0	0	0	0	0	0	0	0	0	0
69	3	Aviyoor	1	0	0	1	0	0	0	0	0	0	0	0
70	4	D.Kadambankulam	1	0	0	1	0	0	0	0	0	0	0	0
71	5	Arasakulam	1	0	0	1	0	0	0	0	0	0	0	0
72	6	Kambikudi	1	0	0	1	0	0	0	0	0	0	0	0

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)
73	7	S.Kallupatti	2	0	0	0	0	0	0	0	0	0	0	0
		<b>total (C)</b>		1	2	18	2	2	0	0	2	3	0	2
		<b>Grand Total (A+B+C)</b>		1	3	21	3	3	0	0	3	5	0	3

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

Note : A: Available, NA- Not Available

**INFRASTRUCTURAL FACILITIES IN THE STUDY AREA**

Sl.No	No. of Villages	Name of village	Tap Water-Treated (Status A(1)/NA(2))	Covered Well (Status A(1)/NA(2))	Hand Pump (Status A(1)/NA(2))	Tube Wells/Borehole (Status A(1)/NA(2))	Spring (Status A(1)/NA(2))	River/Canal (Status A(1)/NA(2))	Tank/Pond/Lake (Status A(1)/NA(2))	Post Office (Status A(1)/NA(2))	Sub Post Office (Status A(1)/NA(2))	Post And Telegraph Office (Status A(1)/NA(2))	Telephone (landlines) (Status A(1)/NA(2))	Mobile Phone Coverage (Status A(1)/NA(2))	Public Bus Service (Status A(1)/NA(2))	Railway Station (Status A(1)/NA(2))	Commercial Bank (Status A(1)/NA(2))	Cooperative Bank (Status A(1)/NA(2))	Agricultural Credit Societies (Status A(1)/NA(2))
<b>0-2 km,Thirumangalam Sub-District, Madurai District</b>																			
1	1	Ulagani	1	2	2	1	1	2	2	2	2	2	1	1	1	2	2	2	2
2	2	Nedungulam	2	2	2	1	2	2	2	2	1	2	1	1	1	2	2	2	2
3	3	Chinnaulagani	1	2	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
4	4	Kallanai	1	2	1	1	2	1	2	2	2	2	1	1	1	2	2	2	2
5	5	Achangulam	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	6	Melauppiligundu	1	2	1	1	2	1	2	2	1	2	1	1	1	2	2	2	2
<b>2-5 km,Thirumangalam Sub-District, Madurai District</b>																			
7	1	Vidathakulam	1	2	2	2	2	2	2	2	1	2	1	1	2	2	2	2	1
8	2	Virusankulam	1	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2
9	3	Maikkudi	1	2	1	1	2	2	2	2	2	2	1	1	2	2	2	2	2
10	4	Nadukottai	1	2	2	2	2	2	2	2	2	2	1	1	1	2	2	1	1
11	5	Mallampatti	1	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2
12	6	Arasapatti	1	2	2	2	2	2	2	2	1	2	1	1	1	2	2	1	2
13	7	Valayankulam	1	2	1	1	2	2	2	2	2	2	1	1	1	2	2	2	2
14	8	Koodakovil	1	1	2	2	1	2	2	2	1	2	1	1	1	2	1	1	2
15	9	Thoombakulam	1	1	1	1	2	2	2	2	2	2	1	1	1	2	2	2	2
16	10	Kokkulam (Thirumal)	1	2	2	1	2	2	2	2	1	2	1	1	1	2	2	2	2
<b>Thirumangalam Sub-District, Madurai District</b>																			
17	1	Nedumadurai	1	2	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
18	2	Kombadi	2	2	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
19	3	Othaialangulam	1	2	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
20	4	Periya Koodakoil	2	2	2	2	2	2	2	2	1	2	2	1	1	2	1	2	2
21	5	Paraipathi	1	2	1	2	2	2	2	2	2	2	1	1	1	2	2	2	2
<b>5-10 km,Madurai South Sub-District, Madurai District</b>																			
22	1	Perungudi	1	1	1	1	2	2	2	2	1	2	1	1	1	2	2	2	2

Sl.No	No. of Villages	Name of village	Tap Water-Treated (Status A(1)/NA(2))	Covered Well (Status A(1)/NA(2))	Hand Pump (Status A(1)/NA(2))	Tube Wells/Borehole (Status A(1)/NA(2))	Spring (Status A(1)/NA(2))	River/Canal (Status A(1)/NA(2))	Tank/Pond/Lake (Status A(1)/NA(2))	Post Office (Status A(1)/NA(2))	Sub Post Office (Status A(1)/NA(2))	Post And Telegraph Office (Status A(1)/NA(2))	Telephone (landlines) (Status A(1)/NA(2))	Mobile Phone Coverage (Status A(1)/NA(2))	Public Bus Service (Status A(1)/NA(2))	Railway Station (Status A(1)/NA(2))	Commercial Bank (Status A(1)/NA(2))	Cooperative Bank (Status A(1)/NA(2))	Agricultural Credit Societies (Status A(1)/NA(2))
23	2	Valanendal	1	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2
24	3	Nilaiyur (Part)	1	2	2	2	2	2	2	2	1	2	1	1	1	2	2	2	2
25	4	Periya Alangulam	1	1	2	1	1	2	2	2	2	2	1	1	1	2	2	2	2
26	5	Soorakkulam	1	2	2	1	2	2	2	2	2	2	1	1	2	2	2	2	2
27	6	Valayapatti	1	1	1	1	2	2	2	2	1	2	1	1	1	2	1	2	2
28	7	Thottiyapatti	1	2	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
29	8	Valayankulam	1	2	1	1	1	2	2	2	1	2	1	1	1	2	2	1	1
30	9	Pappanodai	1	2	1	2	2	2	2	2	2	2	1	1	1	2	2	2	2
31	10	Ramankulam	1	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2
32	11	Kudiraikutti	1	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2
33	12	Solankuruni	1	2	1	1	2	2	2	2	1	2	1	1	1	2	2	2	2
34	13	Eliyarpatti	1	2	2	2	2	2	2	2	2	2	1	1	1	2	2	2	2
35	14	Nallur	1	2	2	1	2	2	2	2	1	2	1	1	1	2	2	2	2
<b>Thirumangalam Sub-District, Madurai District</b>																			
36	1	Dharmathupatti	1	1	2	1	2	2	2	2	1	2	1	1	1	2	2	2	2
37	2	Palakkapudupatti	1	2	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
38	3	Chockanathanpatti	1	2	2	1	2	2	2	2	2	2	1	1	2	2	2	2	2
39	4	S.Puliankulam	1	2	2	1	2	2	2	2	2	2	1	1	2	2	2	2	2
40	5	Kappalur	1	2	2	1	2	2	2	2	1	2	1	1	2	2	2	2	2
41	6	Maravankulam	1	1	1	1	1	2	2	2	2	2	1	1	2	2	2	2	2
42	7	Kudiraicharikulam	1	2	1	2	2	2	2	2	2	2	2	1	2	2	2	2	2
43	8	Andipatti	1	2	2	1	2	2	2	2	2	2	1	1	2	2	2	2	2
44	9	Karisalpatti	1	1	1	1	2	2	2	2	2	2	1	1	2	2	2	2	2
45	10	Melakottai	1	1	1	1	1	2	2	2	1	2	1	1	2	2	1	2	1
46	11	Vadagarai	1	2	1	1	2	2	2	2	2	2	1	1	2	2	2	2	2
47	12	Giriyagoundanpatti	1	2	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
48	13	Chettipillayarnatham	1	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2
49	14	Rayapalayam	1	2	1	1	2	2	2	2	1	2	1	1	2	2	2	2	2

Sl.No	No. of Villages	Name of village	Tap Water-Treated (Status A(1)/NA(2))	Covered Well (Status A(1)/NA(2))	Hand Pump (Status A(1)/NA(2))	Tube Wells/Borehole (Status A(1)/NA(2))	Spring (Status A(1)/NA(2))	River/Canal (Status A(1)/NA(2))	Tank/Pond/Lake (Status A(1)/NA(2))	Post Office (Status A(1)/NA(2))	Sub Post Office (Status A(1)/NA(2))	Post And Telegraph Office (Status A(1)/NA(2))	Telephone (landlines) (Status A(1)/NA(2))	Mobile Phone Coverage (Status A(1)/NA(2))	Public Bus Service (Status A(1)/NA(2))	Railway Station (Status A(1)/NA(2))	Commercial Bank (Status A(1)/NA(2))	Cooperative Bank (Status A(1)/NA(2))	Agricultural Credit Societies (Status A(1)/NA(2))
50	15	Melanesaneri	1	2	1	2	2	2	2	2	2	2	2	1	1	2	2	2	2
51	16	Karisalkalpatti	1	2	2	2	2	2	2	2	2	2	1	1	1	2	2	2	2
52	17	Keelanesaneri	1	2	1	1	2	2	2	2	2	2	1	1	1	2	2	2	2
53	18	Sivarakottai	1	2	1	1	2	2	2	2	1	2	1	1	1	2	2	1	2
54	19	Tirumal	1	1	2	1	2	2	2	2	1	2	1	1	1	2	2	2	1
55	20	Paraikulam	1	2	1	1	2	2	2	2	2	2	1	1	2	2	2	2	2
56	21	Saluppapillayarnatham	1	1	1	1	2	2	2	2	1	2	1	1	1	2	2	2	2
57	22	Vellakulam (K)	1	1	1	1	1	2	2	2	1	2	1	1	1	1	1	1	1
58	23	Kalligudi	1	2	1	1	2	2	2	1	1	1	1	1	1	2	2	2	1
59	24	Idayanathan	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2
60	25	Chennampatti	1	2	2	1	2	2	2	2	1	2	1	1	1	2	2	2	2
61	26	Kurayur	1	1	1	1	2	2	2	2	1	2	1	1	1	2	2	1	1
62	27	Maruthangudi	1	1	2	2	2	2	2	2	1	2	1	1	1	2	2	2	1
63	28	Vellakulam (S)	2	2	1	1	2	2	2	2	2	2	1	1	1	2	2	2	2
64	29	Karukkuvaipatti	1	2	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
65	30	Sundarangundu	1	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2
66	31	Veppankulam	1	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2

**Kariapatti Sub-District, Virudhunagar District**

67	1	Mangulam	1	2	1	1	2	2	2	2	2	2	1	1	1	2	2	2	2
68	2	Kurandi	1	1	1	1	2	2	2	2	1	2	1	1	1	2	2	1	1
69	3	Aviyoor	1	1	1	1	2	2	2	2	1	2	1	1	1	2	2	1	1
70	4	D.Kadambankulam	1	2	2	1	2	2	2	2	2	2	1	1	1	2	2	2	2
71	5	Arasakulam	2	2	1	1	2	2	2	2	2	2	1	1	1	2	2	1	1
72	6	Kambikudi	1	1	1	1	2	2	2	2	1	2	1	1	1	2	2	2	2
73	7	S.Kallupatti	1	2	2	2	2	2	2	2	1	2	1	1	1	2	2	2	2

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

Note : A: Available, NA- Not Available

Status: A(1)/NA(2)

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

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)
<b>0-2 km,Thirumangalam Sub-District, Madurai District</b>													
1	1	Ulagani	441.25	0	149.43	0	0	0	6.78	151.87	70.39	6.89	55.89
2	2	Nedungulam	233.34	0	79.74	0	0	0.63	0	112.42	0	5.04	35.51
3	3	Chinnaulagani	321.75	0	88.63	0	0	0	12	30.2	133.39	0.15	57.38
4	4	Kallanai	276.33	0	101.53	0	0	1	0	12.24	40.7	16.57	104.29
5	5	Achangulam	173.39	0	44.66	0	0	0	34.34	70.05	0	1.01	23.33
6	6	Melauppiligundu	210.38	0	71.75	0	0	0	10.02	0	42.62	14.57	71.42
		<b>total (A)</b>	<b>1656.44</b>	<b>0</b>	<b>535.74</b>	<b>0</b>	<b>0</b>	<b>1.63</b>	<b>63.14</b>	<b>376.78</b>	<b>287.1</b>	<b>44.23</b>	<b>347.82</b>
<b>2-5 km,Thirumangalam Sub-District, Madurai District</b>													
7	1	Vidathakulam	572.1	0	170.17	0	0	0	14.65	202.91	12.39	19.91	152.07
8	2	Virusankulam	357.7	0	157.9	0	0	0	0.39	116.98	8.88	13.66	59.89
9	3	Maikkudi	608.89	0	126.61	0	0	0.06	7.04	344.36	26.25	0	104.57
10	4	Nadukottai	818.74	0	209.3	0.48	0	0.68	1.3	237.77	11.5	301.08	56.63
11	5	Mallampatti	177.99	0	4.17	0	0	0	0	0	21.37	144.6	7.85
12	6	Arasapatti	753.45	0	130.98	0	0	0	0.53	43.95	104.82	142.76	330.41
13	7	Valayankulam	225.82	0	66.33	0	0	0	0	0	19.4	27.4	112.69
14	8	Koodakovil	436.05	0	82.16	2	0	0	19.24	213.68	0	25.96	93.01
15	9	Thoombakulam	743.97	0	151.59	0	0	0	1.09	63.16	353.82	25.44	148.87
16	10	Kokkulam (Thirumal)	515.73	0	89.8	0	0	0	1.61	105.12	204.29	56.86	58.05
<b>Thirumangalam Sub-District, Madurai District</b>													
17	1	Nedumadurai	515.13	0	131.77	0	0	0	0	237.3	47.67	27.83	70.56
18	2	Kombadi	238.26	0	27.84	0	0	0	8.03	37.87	81.11	31.96	51.45
19	3	Othaiyangulam	256.44	0	65.34	0	0	0	3.53	70.99	17.37	24.01	75.2
20	4	Periya Koodakoil	412.75	0	74.26	5.31	0	0	37.42	160.97	1.03	114.49	19.27
21	5	Paraipathi	387.98	0	77.37	0.33	0	0	0	203.37	0	59.83	47.08
		<b>total (B)</b>	<b>7021</b>	<b>0</b>	<b>1565.59</b>	<b>8.12</b>	<b>0</b>	<b>0.74</b>	<b>94.83</b>	<b>2038.43</b>	<b>909.9</b>	<b>1015.79</b>	<b>1387.6</b>
<b>5-10 km,Madurai South Sub-District, Madurai District</b>													
22	1	Perungudi	973.75	0	340.12	0	0	0	0	377.47	42	25.31	188.85
23	2	Valanendal	220.04	0	48.75	0	0	0	0	50.15	31.44	4.74	84.96
24	3	Nilaiyur (Part)	771.09	0	82.92	0	0	0	0	280.79	134.94	6.73	265.71
25	4	Periya Alangulam	323.59	0	24.47	18.43	0	0	0	126.84	31.49	54.62	67.74
26	5	Soorakkulam	72.52	0	22.75	0	0	0	0	29.58	3.03	0.74	16.42
27	6	Valayapatti	296.22	0	60.47	0	0	0	0	151.08	0	31.72	52.95
28	7	Thottiyapatti	293.57	0	101.18	0	0	0	20.84	26.51	33.03	71.25	40.76
29	8	Valayankulam	608.99	0	193.49	0	0	0	70	179.21	80.54	24.04	61.71
30	9	Pappanodai	134.3	0	91.48	0	0	0	2.23	0.82	15.87	0.39	23.51
31	10	Ramankulam	183.41	0	105.91	0	0	0	0	45.14	4.07	0	28.29
32	11	Kudiraikutti	134.96	0	51.07	0	0	0	7.08	33.46	16.63	14.32	12.4
33	12	Solankuruni	737.3	0	140.61	0	0	0	0	383.24	34.79	68.31	110.35



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)
34	13	Eliyarpatti	351.76	0	41.61	0	0	0	9.29	171.71	3.51	120.56	5.08
35	14	Nallur	1258.46	0	355.47	0	0	0	143.24	481.06	18.47	30.5	229.72
<b>Thirumangalam Sub-District, Madurai District</b>													
36	1	Dharmathupatti	220.33	0	57.35	0.04	0	0.47	4.21	120.25	8.02	7.53	22.46
37	2	Palakkapudupatti	91.02	0	62.59	0	0	0	1.29	12.27	1.08	8.5	5.29
38	3	Chockanathanpatti	151.33	0	32.39	0.11	0	0.17	0.15	76.45	13.51	11.97	16.58
39	4	S.Puliankulam	263.87	0	115.32	0	0	0.49	0	40.79	12.74	14.08	80.45
40	5	Kappalur	388.39	0	114.25	0	0	0.68	0.11	225.67	12.5	13.49	21.69
41	6	Maravankulam	533.61	0	264.46	40	0	0	1.79	132.21	46.17	17.24	31.74
42	7	Kudiraicharikulam	27.27	0	1.03	0	0	0	0	0	1.92	0	24.32
43	8	Andipatti	141.28	0	26.64	0	0	0.01	2.11	62.75	13.34	31.52	4.91
44	9	Karisalpatti	234.31	0	66.13	0	0	0.66	0	139.79	11.28	7.84	8.61
45	10	Melakottai	1019.24	0	260.46	0	0	5.05	2.49	464.67	103.54	152.71	30.32
46	11	Vadagarai	1007.28	0	386.68	0	0	0.17	26.78	364.93	0.63	65.16	162.93
47	12	Giriyagoundanpatti	128.97	0	4.18	0	0	0	0	27.1	3.09	94.28	0.32
48	13	Chettipillayarnatham	249.03	0	25.16	0	0	0.09	0.37	122.79	34.82	61.16	4.64
49	14	Rayapalayam	170.93	0	32.48	0	0	0.7	0	55.17	6.38	69.75	6.45
50	15	Melanesaneri	517.47	0	162.47	0	0	0	0	203.81	7.16	72.84	71.19
51	16	Karisalkalampatti	621.52	0	45.52	0	0	0	2.71	94.17	99.35	357.46	22.31
52	17	Keelanesaneri	137.49	0	62.14	0	0	0	0	34.59	4.5	6.04	30.22
53	18	Sivarakottai	915.27	0	219.41	0	0	0	1.48	338.43	127.54	202.37	26.04
54	19	Tirumal	934.25	0	191.71	0	0	0	0	167.09	354.11	61.45	159.89
55	20	Paraikulam	119.38	0	40.58	0	0	0	0	39.33	0	23.45	16.02
56	21	Saluppapillayarnatham	1025.59	0	170.64	0	0	0	1.12	412.67	0	418.93	22.23
57	22	Vellakulam (K)	1684.99	0	224.24	1.16	0	6.05	1.44	764.83	493.45	175.01	18.81
58	23	Kalligudi	1947.16	0	251.92	33.65	0	0.68	0.18	638.71	612.11	370.26	39.65
59	24	Idayanathan	216.7	0	86.51	0	0	0	0	23.46	19.91	85.52	1.3
60	25	Chennampatti	755.23	0	130.09	0	0	0	0	442.8	4.18	124.93	53.23
61	26	Kurayur	1544.73	0	446.59	0	0	0	0	386.8	377.41	66.89	267.04
62	27	Maruthangudi	538.06	0	119.55	0	0	0	0	0	257.78	100.52	60.21
63	28	Vellakulam (S)	241.51	0	63.01	0	0	0	0	129.67	0	15.37	33.46
64	29	Karukkuvaipatti	49.43	0	14.26	0	0	0	0	0	28.96	2.32	3.89
65	30	Sundarangundu	230.2	0	42.82	0	0	0	0.11	55.11	92.21	23.23	16.72
66	31	Veppankulam	352.06	0	82.2	0	0	0	0.05	0	84.37	126.51	58.93
<b>Kariapatti Sub-District, Virudhunagar District</b>													
67	1	Mangulam	784.65	0	134.58	0	0	0	0	410.86	76.56	25.72	136.93
68	2	Kurandi	640.99	0	100.55	0	2.82	2.81	2	103.75	74.49	142.41	212.16
69	3	Aviyoor	740.63	0	117.65	0	0	28.18	50	264.8	122.15	36.79	121.06
70	4	D.Kadambankulam	1085.32	0	272.53	0	0	0	400.25	0	0	315.1	97.44
71	5	Arasakulam	730	0	214.29	0	0	0	2.08	0	318.29	46.95	148.39

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 & Un-cultivable Land Area (in Hectares)	Permanent Pastures and Other Grazing Land Area (in Hectares)	Land Under Miscellaneous Tree Crops etc. Area (in Hectares)	Culturable Waste Land Area (in Hectares)	Fallows Land other than Current Fallows Area (in Hectares)	Current Fallows Area (in Hectares)	Total Unirrigated Land Area (in Hectares)	Area Irrigated by Source (in Hectares)
72	6	Kambikudi	1485.34	0	121.44	0	0	10	25	1031.25	148.5	17.77	131.38
73	7	S.Kallupatti	699.28	0	149.65	0	0	0	1.96	0	366.31	23.18	158.18
		<b>total (C)</b>	<b>28984.07</b>	<b>0</b>	<b>6573.77</b>	<b>93.39</b>	<b>2.82</b>	<b>56.21</b>	<b>780.36</b>	<b>9724.03</b>	<b>4388.17</b>	<b>3849.48</b>	<b>3515.84</b>
		<b>Grand Total (A+B+C)</b>	<b>37661.51</b>	<b>0</b>	<b>8675.1</b>	<b>101.51</b>	<b>2.82</b>	<b>58.58</b>	<b>938.33</b>	<b>12139.24</b>	<b>5585.17</b>	<b>4909.5</b>	<b>5251.26</b>

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



# CREATIVE ENGINEERS & CONSULTANTS

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

## AMBIENT AIR QUALITY

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

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	07.03.2022	57.7	28.8	7.2	12.8
2	08.03.2022	53.5	26.7	6.5	11.4
3	18.03.2022	50.5	25.2	6.1	10.2
4	19.03.2022	54.7	27.3	6.7	11.8
5	21.03.2022	62.5	31.5	7.9	15.2
6	22.03.2022	58.9	29.4	7.4	13.2
7	01.04.2022	49.3	24.6	5.8	9.6
8	02.04.2022	54.1	27.1	6.6	11.6
9	04.04.2022	58.3	29.1	7.3	13.1
10	05.04.2022	63.1	32.1	7.9	15.8
11	15.04.2022	59.5	29.7	7.5	13.4
12	16.04.2022	51.1	25.5	6.1	10.4
13	18.04.2022	55.9	27.9	6.9	12.2
14	19.04.2022	49.9	24.9	5.9	9.8
15	29.04.2022	57.1	28.5	7.1	12.6
16	30.04.2022	55.3	27.6	6.8	12.1
17	02.05.2022	60.1	29.9	7.6	13.6
18	03.05.2022	51.7	25.8	6.2	10.6
19	13.05.2022	61.9	30.9	7.9	14.9
20	14.05.2022	52.3	26.1	6.3	10.8
21	16.05.2022	56.5	28.2	7.1	12.4
22	17.05.2022	60.7	30.3	7.7	13.8
23	27.05.2022	52.9	26.4	6.4	11.2
24	28.05.2022	61.3	30.6	7.8	14.5
	<b>MIN</b>	<b>49.3</b>	<b>24.6</b>	<b>5.8</b>	<b>9.6</b>
	<b>AVE</b>	<b>56.2</b>	<b>28.1</b>	<b>6.9</b>	<b>12.4</b>
	<b>MAX</b>	<b>63.1</b>	<b>32.1</b>	<b>7.9</b>	<b>15.8</b>

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

Prepared by



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# CREATIVE ENGINEERS & CONSULTANTS

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

## AMBIENT AIR QUALITY

Project	:	Rough Stone and Gravel Quarry Of Thiru. S. Rathinam
Name of the Location	:	Ulagani Village
Station Code	:	A2

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	07.03.2022	46.7	22.3	5.5	8.6
2	08.03.2022	49.5	23.1	6.2	10.1
3	18.03.2022	54.7	25.4	7.5	12.6
4	19.03.2022	51.9	24.1	6.8	11.2
5	21.03.2022	53.5	24.8	7.2	12.1
6	22.03.2022	47.9	22.6	5.8	9.2
7	01.04.2022	53.9	25.1	7.3	12.2
8	02.04.2022	48.3	22.7	5.9	9.4
9	04.04.2022	46.3	22.2	5.4	8.4
10	05.04.2022	49.1	22.9	6.1	9.8
11	15.04.2022	55.1	25.6	7.6	12.7
12	16.04.2022	53.1	24.6	7.1	11.8
13	18.04.2022	48.7	22.8	6.1	9.6
14	19.04.2022	51.1	23.6	6.6	10.8
15	29.04.2022	47.1	22.4	5.6	8.8
16	30.04.2022	49.9	23.1	6.3	10.2
17	02.05.2022	51.5	23.8	6.7	11.1
18	03.05.2022	52.3	24.2	6.9	11.4
19	13.05.2022	55.5	25.8	7.7	13.7
20	14.05.2022	52.7	24.4	7.1	11.6
21	16.05.2022	47.5	22.5	5.7	9.1
22	17.05.2022	50.3	23.2	6.4	10.4
23	27.05.2022	54.3	25.2	7.4	12.3
24	28.05.2022	50.7	23.4	6.5	10.6
	MIN	46.3	22.2	5.4	8.4
	AVE	50.9	23.7	6.6	10.7
	MAX	55.5	25.8	7.7	13.7

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

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# CREATIVE ENGINEERS & CONSULTANTS

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

## AMBIENT AIR QUALITY

Project	:	Rough Stone and Gravel Quarry Of Thiru. S. Rathinam
Name of the Location	:	Nedungulam Village
Station Code	:	A3

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	09.03.2022	48.3	23.7	5.8	9.3
2	10.03.2022	51.9	26.4	6.7	11.1
3	16.03.2022	55.7	28.8	7.5	12.7
4	17.03.2022	53.7	27.6	7.1	11.9
5	23.03.2022	49.9	24.9	6.2	10.1
6	24.03.2022	52.3	26.7	6.8	11.3
7	30.03.2022	56.7	29.4	7.7	13.1
8	31.03.2022	54.2	27.9	7.2	12.1
9	06.04.2022	49.1	24.3	6.0	9.7
10	07.04.2022	49.5	24.6	6.1	9.9
11	13.04.2022	47.5	23.1	5.6	8.9
12	14.04.2022	51.1	25.8	6.5	10.7
13	20.04.2022	48.7	23.9	5.9	9.5
14	21.04.2022	52.7	27.1	6.9	11.5
15	27.04.2022	50.7	25.5	6.4	10.5
16	28.04.2022	55.2	28.5	7.4	12.5
17	04.05.2022	58.1	30.1	7.9	14.2
18	05.05.2022	56.2	29.1	7.6	12.9
19	11.05.2022	47.9	23.4	5.7	9.1
20	12.05.2022	51.5	26.1	6.6	10.9
21	18.05.2022	53.2	27.3	7.0	11.7
22	19.05.2022	57.2	29.7	7.8	13.5
23	25.05.2022	50.3	25.2	6.3	10.3
24	26.05.2022	54.7	28.2	7.3	12.3
	MIN	47.5	23.1	5.6	8.9
	AVE	52.3	26.6	6.8	11.2
	MAX	58.1	30.1	7.9	14.2

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

Prepared by



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DEPARTMENT OF INDUSTRIES AND COMMERCE REGISTERED COMPANY)

## AMBIENT AIR QUALITY

Project	:	Rough Stone and Gravel Quarry Of Thiru. S. Rathinam
Name of the Location	:	Kallanai Village
Station Code	:	A4

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	09.03.2022	48.3	25.2	6.3	10.6
2	10.03.2022	50.1	25.7	6.7	11.4
3	16.03.2022	52.2	26.7	7.2	12.3
4	17.03.2022	50.6	25.9	6.8	11.6
5	23.03.2022	44.2	24.2	5.3	8.6
6	24.03.2022	46.6	24.8	5.9	9.8
7	30.03.2022	49.8	25.5	6.6	11.2
8	31.03.2022	51.2	26.1	6.9	11.8
9	06.04.2022	45.4	24.5	5.6	9.2
10	07.04.2022	47.1	24.9	6	10.1
11	13.04.2022	55.1	27.5	7.6	13.2
12	14.04.2022	52.6	26.9	7.3	12.6
13	20.04.2022	44.6	24.3	5.4	8.8
14	21.04.2022	47.8	25.1	6.2	10.4
15	27.04.2022	51.4	26.3	7	12.1
16	28.04.2022	46.2	24.7	5.8	9.6
17	04.05.2022	54.3	27.3	7.5	13.1
18	05.05.2022	53.5	27.1	7.4	12.8
19	11.05.2022	45.3	24.4	5.5	9.1
20	12.05.2022	48.6	25.3	6.4	10.8
21	18.05.2022	47.4	25.1	6.1	10.2
22	19.05.2022	51.8	26.5	7.1	12.4
23	25.05.2022	45.8	24.6	5.7	9.4
24	26.05.2022	49.4	25.4	6.5	11.1
	MIN	44.2	24.2	5.3	8.6
	AVE	49.1	25.6	6.5	10.9
	MAX	55.1	27.5	7.6	13.2

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

Prepared by



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DEPARTMENT OF INDUSTRIES AND COMMERCE REGISTERED COMPANY)

## AMBIENT AIR QUALITY

Project	:	Rough Stone and Gravel Quarry Of Thiru. S. Rathinam
Name of the Location	:	Kokkulam Village
Station Code	:	A5

SL.NO	DATE	PM10	PM2.5	SO2	NO2
1	11.03.2022	43.9	21.7	5.1	8.6
2	12.03.2022	47.1	23.3	5.9	10.2
3	14.03.2022	50.3	24.9	6.7	11.8
4	15.03.2022	45.5	22.5	5.5	9.4
5	25.03.2022	51.5	25.5	7.1	12.4
6	26.03.2022	48.7	24.1	6.3	11.1
7	28.03.2022	45.1	22.3	5.4	9.2
8	29.03.2022	50.7	25.1	6.8	12.1
9	08.04.2022	44.3	21.9	5.2	8.8
10	09.04.2022	46.7	23.1	5.8	10.2
11	11.04.2022	52.3	25.9	7.2	12.8
12	12.04.2022	49.9	24.7	6.6	11.6
13	22.04.2022	43.1	21.3	4.9	8.2
14	23.04.2022	47.5	23.5	6.1	10.4
15	25.04.2022	44.7	22.1	5.3	9.1
16	26.04.2022	48.3	23.9	6.2	10.8
17	06.05.2022	51.1	25.3	6.9	12.2
18	07.05.2022	46.3	22.9	5.7	9.8
19	09.05.2022	49.1	24.3	6.4	11.2
20	10.05.2022	45.9	22.7	5.6	9.6
21	20.05.2022	43.5	21.5	5.1	8.4
22	21.05.2022	47.9	23.7	6.1	10.6
23	23.05.2022	51.9	25.7	7.1	12.6
24	24.05.2022	49.5	24.5	6.5	11.4
	MIN	43.1	21.3	4.9	8.2
	AVE	47.7	23.6	6.1	10.5
	MAX	52.3	25.9	7.2	12.8

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

Prepared by



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**WATER QUALITY DATA**

<b>Project Name</b>	:	<b>Rough Stone and Gravel Quarry of Thiru. S. Rathinam</b>	
<b>Location Name</b>	:	<b>Location Code</b>	<b>Location Name</b>
		W1	Near Mine Lease Area
		W2	Ulagani Village
		W3	Nedungulam Village
		W4	Kallanai Village
		W5	Kokkulam Village

S. No	Parameter	Unit	AW1	W 2	W 3	W 4	W 5	*Permissible Limits
1	pH	-	7.54	7.03	6.97	7.04	7.32	6.5-8.5
2	Electrical Conductivity	µmhos /cm	976.4	858.9	1470	1868	1426	-
3	Odor	-	AGREEABLE	AGREEABLE	AGREEABLE	AGREEABLE	AGREEABLE	AGREEABLE
4	Turbidity	NTU	<1	<1	<1	<1	<1	5.0
5	Total Hardness as CaCO <sub>3</sub>	mg/L	321	439	521	559	439	600
6	Calcium Hardness CaCO <sub>3</sub>	mg/L	176	208	321	333	298	-
7	Magnesium Hardness CaCO <sub>3</sub>	mg/L	145	231	200	225	141	-
8	Calcium Ca	mg/L	70.6	83.1	129	133	119	200

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S. No	Parameter	Unit	AW1	W 2	W 3	W 4	W 5	*Permissible Limits
9	Magnesium Mg	mg/L	34.8	55.5	48	54.1	33.9	100
10	Alkalinity CaCO <sub>3</sub>	mg/L	286	314	223	186	290	600
11	Chloride Cl <sup>-</sup>	mg/L	76.3	56.7	276	440	174	1000
12	Sulphate SO <sub>4</sub> <sup>2-</sup>	mg/L	183	173	167	344	330	400
13	Iron Fe	mg/L	0.05	0.06	0.04	0.07	0.11	0.3
14	Nitrate NO <sub>3</sub>	mg/L	5.12	BDL (D.L - 1.0)	6.54	4.26	3.25	45
15	Fluoride F	mg/L	0.53	0.56	0.49	0.51	0.42	1.5
16	Total Dissolved Solids	mg/L	580	560	870	1110	850	2000
17	Free Residual Chlorine Cl <sup>-</sup>	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)	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)	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.

  
Prepared by



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**MINING PLAN & ENVIRONMENT MANAGEMENT  
PLAN FOR ROUGH STONE & GRAVEL**

(PREPARED UNDER RULE 19 (1) & 22 OF TNMMCR1959  
AMENDED 2015)

MINING PLAN SUBMITTED UNDER RULE NO. 41 & 42 OF TNMMCR  
AMENDED 2015

**For Obtaining Environmental Clearance from  
State Environmental Authority**

**PATTA LAND LEASE PERIOD TEN YEARS**

**LOCATION OF THE AREA**

**EXTENT** : **1.62.17 HECTARE**  
**S.F. Nos.** : **84/2C1,2D1,2E1,2C2,  
2D2A,2E2,2J,2K,2L**  
**VILLAGE** : **KALLANAI**  
**TALUK** : **KALLIGUDI**  
**PANCHAYATH UNION** : **KALLIGUDI**  
**DISTRICT** : **MADURAI**  
**STATE** : **TAMIL NADU**

**APPLICANT**

**THIRU. S.RATHINAM,  
S/o. SRI. S. SINNA VEERAN,  
10, NORTH STREET, CHINNA UDAIPPU,  
PERUNGUDI POST, MADURAI SOUTH,  
MADURAI DISTRICT - 625 022.**

**PREPARED BY**

**G. RAVICHANDRAN, Msc(Geol.),  
RECOGNISED QUALIFIED PERSON  
REGISTRATION NO: RQP/MAS/197/2005/A**

**Shri. S. RATHINAM,**  
**S/o. Sri. S. Sinna Veeran,**

**10, North street,**  
**Chinna Udaippu,**  
**Perungudi Post.**

**Madurai District -625 022.**

**Mobile No. 88708 58456**

**e.mail:- ranjithkumarbe1994@gmail.com**

**CONSENT LETTER FROM THE APPLICANT**

The Mining Plan in respect of **ROUGH STONE AND GRAVEL** deposit over Extent of 1-62.17 Hectares in S.F. Nos. 84/2C1,2D1,2E1,2C2,2D2A,2E2,2J,2L,2L (Patta Land) in Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu state has been prepared by

**Shri. G. RAVICHANDRAN,**

**RQP/MAS/197/2005/A**

I request the District Collector Madurai, State Environmental Authority to make further correspondence regarding the mining plan with the said Recognized Qualified Person in his following addresses:

**Shri. G. RAVICHANDRAN, MSc (Geol).,**

**Vennila Livings, G-H, B – Block,**

**Reddaivaykkal Vayalur Road,**

**Trichy - 620 102.**

**Mobile No. 87783 11236**

**RQP/MAS/197/2005/A**

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

**Place: Madurai**

**Date: .04.2023**

**Signature of the Applicant**



**S. Rathinam**

**Shri. S. RATHINAM,**  
**S/o. Sri. S. Sinna Veeran,**

**10, North street,**  
**Chinna Udaippu,**  
**Perungudi Post.**

**Madurai District -625 022.**

**Mobile No. 88708 58456**

**e.mail:- ranjithkumarbe1994@gmail.com**

**DECLARATION OF THE APPLICANT**

The Mine Plan In Respect of **ROUGH STONE AND GRAVEL** deposit over an Extent of 1-62.17 Hectares in S.F. Nos. 84/2C1,2D1,2E1,2C2,2D2A,2E2,2J,2L,2L (Patta Land) in Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu state has been prepared with full consultation with me. I have understood its contents and I agree to implement the same in accordance with the Laws applicable to mines.

I am also giving further undertaking to plant the species as specified in the afforestation plan to provide Green belt to protect the environmental aspects while quarrying Rough Stone and Gravel in the Patta Land.

Place: Madurai

Date: .04.2023

Signature of the Applicant



**S. Rathinam**

**Shri. G. RAVICHANDRAN, MSc (Geol.),**  
**Recognised Qualified Person**  
**Reg. No. RQP/MAS/194/2005/A**

**Vennila Livings,**  
**G-H, B- Block,**  
**Rettai Vaykkal Vayalur Road,**  
**Trichy - 620 102.**  
**Mobile No. 87783 11236**

**CERTIFICATE FROM THE RECOGNISED QUALIFIED PERSON**

This is to certify that the provisions of the Mines Act, Metalliferrous Mines Rules and Regulations, Minor Mineral Conservation and Development Rules, 2010 & Minerals Amended Rules of Tamilnadu Minor Mineral Concession Rule 1959 etc, made there under have been observed in the preparation of Mining Plan for **ROUGH STONE AND GRAVEL** deposit over an Extent of 1-62.17 Hectares in S.F. Nos. 84/2C1,2D1,2E1,2C2,2D2A,2E2,2J,2L,2L (Patta Land) in Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu state.

**THIRU. S. RATHINAM,**  
**S/o. SRI. S. SINNA VEERAN,**  
**10, NORTH STREET, CHINNA UDAIPPU,**  
**PERUNGUDI POST, MADURAI SOUTH,**  
**MADURAI DISTRICT 625 022.**

Wherever Specific permission are required , the applicant will approach the concerned authorities of state, central Government and State Environmental Authority officers, for such permission, approvals, exemption or relaxation Standards prescribed by Rules and regulations in respect of miners health and the rules will be strictly implemented.

It is also certified that the information furnished in the mining plan is true and correct to the best of my knowledge.

Place: Trichy - 620 102

Date: .04.2023



**G. RAVICHANDRAN**

G. RAVICHANDRAN, M.Sc., P.G.D.M.E.M.,  
G.R.A.V. MINING GEOLOGIST M.E.M.,  
RQP / MAS / 194 / 2005 / A  
VALID UPTO: 12.12.2025

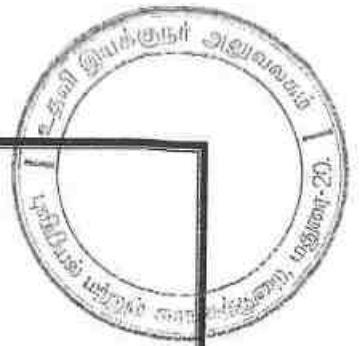


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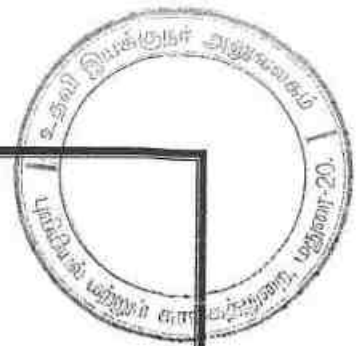
*S. S. S. S.*



## LIST OF ANNEXURES

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*S. S. S. S.*

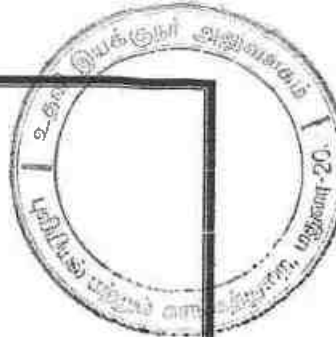


## LIST OF PLATES

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*S. S. S. S.*





**MINING PLAN INCLUDING  
ENVIRONMENT MANAGEMENT PLAN FOR  
ROUGH STONE & GRAVEL QUARRY**

**Over an Extent of 1.62.17 Hectares in S.F. Nos. 84/2C1,2D1,2E1,  
2C2,2D2A,2E2,2J,2K,2L (Patta Land) in Kallanai Village,  
Kalligudi Taluk, Madurai District, Tamilnadu**

**INTRODUCTION**

Extracting minor minerals from an area of less than 5 hectares will need environment clearance from the Union ministry of environment and forest (MOEF). The EIA (Environmental Impact Assessment) notification 2006, requires mining projects, including new projects, expansion, modernization, or renewal of mine leases, with lease area of 5 hectare and above irrespective of major or minor mineral to obtain prior environment clearance. Mining projects with lease area of 5 hectares and above but less than 50 hectares are categorized as category 'B' whereas projects with lease area of 50 hectares and above are categorized as category 'A'. The category 'A' projects are to be given clearance by MOEF while category 'B' projects are considered by the respective state-level EIA authority.

The mining plan has been prepared towards the order of Supreme Court of India 27 February, 2012, based on the Supreme court order, Tamilnadu Government , Secretary, Industry Department (NCI) as issued order vide G.O.Ms.No.79 dated 06.04.2015. In this order Tamilnadu Minor Mineral Concession Rule 1959 as amended rule 41 & 42 as the approved mining plan is required to the grant of mining lease and the lessee of existing quarry which has already granted with quarry lease should also obtain environmental clearance from SEIAA, Tamilnadu.

The approved mining plan has to be obtained and prior environment clearance by the committee formed recently by the SEIAA. The government of tamilnadu has formed one committee headed by the chairmen of SEIAA and the nominated members from each department as members. The environment clearance has to be issued by the SEIAA to grant of quarry lease and this mining plan is submitted based on the above orders to obtain environment clearance from SEIAA Tamilnadu committee.

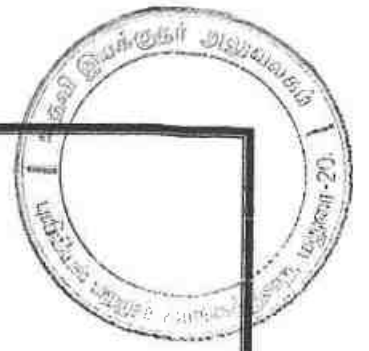


The applicant, Thiru. S.Rathinam, S/o. Sri. S. Sinnaveeran, No.10, North Street, Chinna Udaippu Village, Perungudi Post, Madurai District as an individual having good experience and skill on quarrying of Rough Stone and Gravel. He has applied for fresh grant of Quarry lease to the state government over an extent 1-62.17 Hectares in S.F. Nos. 84/2C1,2D1,2E1,2C2,2D2A,2E2,2J,2K,2L (Patta Land) in Kallanai Village, Kalligudi Taluk, Madurai District, Tamil Nadu.

### 1. General Information

- a) Name of the applicant : THIRU. S. RATHINAM
- b) Address of the Applicant : S/o. SRI. S. SINNA VEERAN,  
10, NORTH STREET,  
CHINNA UDAIPPU VILLAGE,  
PERUNGUDI POST,  
MADURAI SOUTH,  
MADURAI DISTRICT - 625 022.  
e.mail:-  
ranjithkumarbe1994@gmail.com
- c) Mobile No. : 88708 58456
- d) Status of the applicant : Private Individual
- e) Mineral which the applicant Intends to mine : Rough Stone and Gravel
- f) Precise area communication letter details received from the competent authority of Government : 08/Mines/2023  
Dated : 14.03.2023
- g) Period of Permission / lease to be granted : 10 Years.
- h) Name and address of the RQP /Authorised person preparing the Mining plan : G. Ravichandran,  
Vennila Livings, G-H B Block  
Rettaivayakkal Vayalur Road,  
Trichy - 620 102.  
Mobile No. 87783 11236  
Registration No : RQP/MAS/197/2005/A

S. Rathinam



## 2. LOCATION

a)

STATE	DISTRICT	PANCHA YATH UNION	TALUK	VILLAGE	S.F.NO	EXTENT (Hectares)
Tamil nadu	Madurai	Kalligudi	Kalligudi	Kallanai	84/2C1,2D1,2E1, 2C2,2D2A,2E2, 2J,2K,2L (Patta Land)	1-62.17 Hect

b) Classification of the area : Patta Lands

c) Ownership / Occupancy of the applied area : Own Patta lands  
(Surface right)

d) Toposheet No : 58-K/01

Latitude : 09° 45' 54.5"N to 09° 45' 57.3"N

Longitude : 78° 02' 40.4"E to 78° 02' 46.3"E

e) Accessibility of public road / Railway line, : As shown in ROUTE MAP (Plate No. IA), the applied area can be easily accessible Viralipatti at a distance of 18Kms from Madurai to Thoothukudi road, and then to the applied area at a distance of 5Km towards west of Paraipatti. The nearest railway station is Thirumangalam at a distance of 13km.

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## MARKETING OF ROUGH STONE AND GRAVEL

The boulders will be marketed to the nearby crushers for producing crusher aggregates. The gravel & reject hard boulders will be marketed to filling and foundation works for construction works. The crusher aggregate will be marketed to nearby areas.

## CONCEPTUAL MINING PLAN

Conceptual mining plan is prepared in a scale of 1:2000 in an object of long-term systematic development of bench layouts. In addition to consider the above factors, to avoid re-handling, setting roads, to determine ultimate pit limit depth of mining and ultimate pit slope, selection of sites for construction of infrastructures etc.,

### Ultimate pit limit dimension:

The ultimate pit size is designed based on certain practical factor such as the economical depth of mining safety zones permissible area etc. The ultimate pit of the mine is given as under 117meter Length, 112.5meter Width, 47meter Depth. However during extraction of ROM bench will be 5m height with a slope of  $60^{\circ}$  for proper quarrying. After quarrying the mined out area will be used as water reservoir for making artificial recharge factor to the nearby areas.

The Conceptual Plan and Sections is shown in Plate No. VI. The mineable reserves calculated for a depth of 47meter a total Roughstone of  $2,42,467.5\text{m}^3$  and Gravel  $26,325\text{m}^3$ . Based on an average production of maximum quantity of  $25,000\text{m}^3$  to  $28,000\text{m}^3$ /year the life of the mine will be  $2,68,792.5/25,000\text{m}^3 = 10$  years. The available reserve below 47m can be mined in the next quarry renewal period after 10 years.

## 5. BLASTING

### 5.1 BLASTING PATTERN

The massive formation shall be broken in to pieces of portable size by drilling and blasting using jack hammers and shot holes blasting. Powder factor of explosives for breaking such hard rock shall be in the order of 1.8 to 2.0 cub.m. Blasting parameter proposed to be adopted for shot holes shall be

Spacing of 0.9 m, burden 0.60m and depth 1.5m

Output per hole =  $0.9\text{m} \times 0.60\text{m} \times 1.5\text{m} = 0.810\text{ cub.m}$

Output per hole will be 0.810 cub.m with 90% blasting efficiency

Quantity of explosive required to blast one hole with a powder factor of 1.8

Explosive required will be  $.810 / 1.8 = 0.450\text{ kg per hole}$

In the above quantity booster Cap sensitive explosives will be one third 0.150 kg per hole

Daily consumption of explosive will depend upon the number of shot holes drilled.

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## 5.2 TYPES OF EXPLOSIVES

Following explosives are recommended for efficient blasting with safe practice

Sl.No	Description	Class/ Division	Type	Size
1	Slurry Explosive	Class - 3	Nitro compound mixer	25mm X 0.125 kg
2	Delay Detonators	Class - 6	Ordinary and elect. (OD & ED)	Standard size of IDL
3	Safety Fuse	Class - 6 Div - 1	Blue sump fuse coil of 10 meter each	

## 5.3 MEASURES PROPOSED TO MINIMISE GROUND VIBRATION DUE TO BLASTING

There are no villages near by the area applied for mining lease. To control ground vibration, delay electric detonator will be used.

## 5.4 STORAGES AND SAFETY MEASURES

The proposed rate of production is about 90m<sup>3</sup> or 22loads / day of 10tonnes capacity of ROM boulder in one day with average working days of 25 in a month.

The applicant has made an agreement with explosive dealer V. Selva Vignesh, M/s. Sri Selva Vignesh Explosives, No.9/99, Lakshmi colony, Udayanathapuram Road, Pandalgudi - 626113, Aruppukottai Taluk, Virudhunagar District, who is having explosive licence bearing no: E/SC/TN/22/655 (E83542) received from chief controller of explosive, Chennai. The owner of the Firm made agreement with Sri. S. Rathinam to make necessary safety practice to blast in his licence and supply of explosives will be made in Form22 as specified by Indian Explosives Act 1884. (Annexure enclosed)

After blasting no explosives will be kept in the mine area and the unused explosives will be taken up by the explosive dealer. Before blasting the explosives will be carried by the dealer in his own explosive van and the unused quantity will be returned to the explosive van for keeping the explosive in his Magazine. Before blasting men and animals will be cleared in a surrounding distance of 500m and three sirens will be made before blast and after completing blasting a long siren will be given. Safety guards with red flags will be posted on all the four side direction.

## 6. MINE DRAINAGE

From the local enquiry the ground water table in this area is ranging from 50 to 55m. The open dug wells are noted around the applied lease area. The wells are having a depth ranging from 15 to 16m and the wells are dry. There are also no joints or fractures in the hard rock. The area attains rain fall during northeast monsoon. Hence there will be no adverse effect by the mining to the nearby areas.

Sl. No.	Details	Direction	Distance (m)	Depth(m)	Water level
1.	Kundar	West	50	1.5	Dry
2.	Kanmoi	East	125	2.5	Dry
3.	Well	East	195	15.0	Dry

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## 7. OTHER PERMANENT STRUCTURES

There is no hospital or Primary school, village temples and primary health centres within 500m radius of the quarry. There is no river, lake nearby this area. There are also no historical monuments nearby this area. There are also no worship places, reserve forest, social forest, and wild life sanctuaries near this area. The water bodies are dry in all the season.

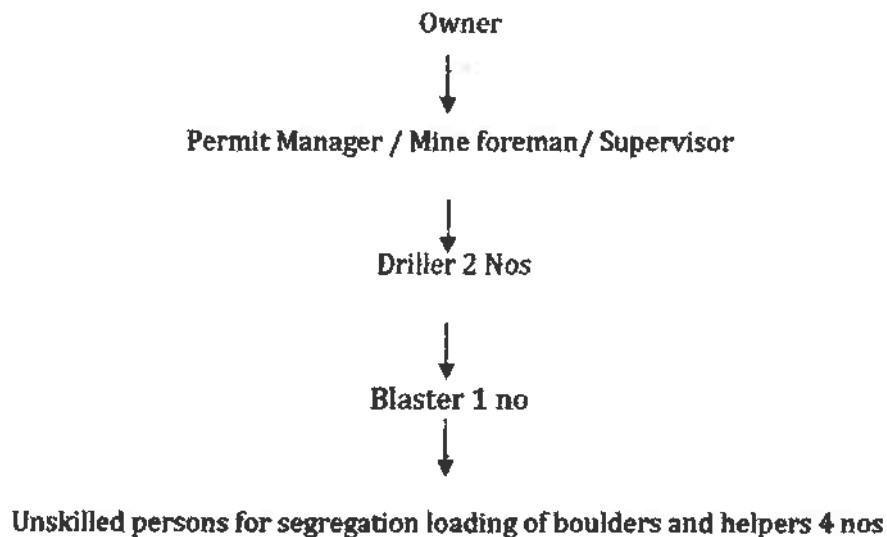
SL. NO	DIRECTION	VILLAGE	HABITATION	DISTANCE
1	North	Chinna Ulagani	200 houses	2 km
2	South	Kallanai	300 houses	2 km
3	East	Kallanai colony	50 houses	3km
4	West	Nedunkulam	300 houses	3 km

Nearest infrastructures

Sl. No	Name of infrastructure	Name of village	Distance from area applied for M.L
1	Post office	Kallanai	2 Km
2	Police station	Koodakovil	5 Km
3	Town	Thirumangalam	13 Km
4	DSP office	Thirumangalam	13 Km
5	Register office	Thirumangalam	13 Km
6	Hospital	Koodakovil	5 Km
7	School	Kallanai	2 Km
8	Railway station	Thirumangalam	13 Km
9	Airport	Madurai	15 km
10	Sea Port	Thoothukudi	140 km

## 8. EMPLOYMENT POTENTIAL & WELFARE MEASURES

### ORGANISATION CHART



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The workers will be provided with drinking water facility, sanitation facility in the proposed office building. A bore well will be drilled near the office building.

First aid and labour health facility will be arranged from the nearby hospital at Koodakovil. All safety equipment's will be provided for the persons employed in the mine. The supervisor will be provided with mobile phone to contact the owner or any officials during emergency time.

#### **SAFETY AND SOCIAL SECURITY MEASURES**

Safety equipment's to be provided for the persons employed in the mines.

1. Safety helmet approved by Director General of mines Safety
2. Nesc Mask
3. Ear Plug for machine operators and drillers
4. Safety shoes as specified by Director General of Mines Safety
5. Safety Goggles for drillers
6. Safety Belt and safety rope approved by Director General Mines of Safety - for labourers, working in the mine for removing danger over hang and undercut boulders. Employment of child labour will be strictly prohibited in the mines. All persons employed in the mines will be provided with Group Insurance System from a Govt. Recognised insurance Agency.

The applicant has given Notary Affidavit for Non employment of child labour directly or indirectly while operating the mine. The Affidavit is enclosed in Annexure.



## PART - B

### **9. ENVIRONMENT MANAGEMENT PLAN**

#### **9.1 Existing land use pattern**

The area applied for mining lease is a gentle plain terrain and having dry lands with no. vegetation available nearby this area. From the study of the nearby well the ground water table is ranging from 50 to 55m.

The area will obtain rain fall during NE monsoon in summer the climate will be very hot and the temp will be up to 42°C.

#### **Present land use planning (break up along with green belt etc).-**

<b>S.No.</b>	<b>Land Use Category</b>	<b>At the end of life of mine</b>
1.	Mining \Excavation	1-32.0 hectares
2.	Storage of Top Soil	0.00.0 hectares
3.	Sorting and Mineral Dressing Yard	0.00.0 hectares
4.	Infrastructure & Road	0.05.0 hectares
5.	Afforestation(Greenbelt& Plantation)	0-09.0 hectares
6.	Rain Water Storage	1-32.0 - (After closure of mine)
7.	Undisturbed Area	0.11.17 hectares
8.	Fencing	0.05.0 hectares
	<b>TOTAL</b>	<b>1.62.17 hectares</b>

The area applied for mining lease is a plain terrain and having dry lands. The patta land is used for quarrying Rough Stone blue metal. Infra structure will be provided in the patta land. First aid, sanitation facilities is also provided in the office building. The Patta Land is with Surface right.

#### **9.2 Water regime:**

Ground water occurrence in this area is below 50m depth. The quarrying is restricted up to 47m below Ground Level. Hence the quarry operation will not affect the ground water.

#### **9.3 Flora and Funna:**

There are no trees observed in the area. Thorny bushes, neem and palm are found in around the area, No plants of botanical interest or animals of zoological interest are noticed. There is no cultivation, plantation or agriculture found within the vicinity of the area.

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#### 9.4 Climatic condition

The area receives rainfall of about 850mm/per annum and the rainy season is mainly from Oct - Jan during North East monsoon. The summer is hot with maximum temperature of 42°C and winter encounters a minimum temperature of 23°C.

#### 9.5 Human settlement

There is no hospital or Primary school, villages, temples and primary health centres within 500m radius of the quarry. There is no river, lake nearby this area. There are also no historical monuments nearby this area. There are also no worship places, reserve forest, social forest, and wild life sanctuaries near this area. The water bodies are dry in all the season.

SL. NO	DIRECTION	VILLAGE	HABITATION	DISTANCE
1	North	Chinna Ulagani	200 houses	2 km
2	South	Kallanai	300 houses	2 km
3	East	Kallanai colony	50 houses	3km
4	West	Nedunkulam	300 houses	3 km

Basic human welfare Amenities such as Health centre, schools, communication facilities, and commercial centres etc., are available at Kallanai located at a distance of 2Km on the southern side of the area.

#### 9.6 Plan for Air, Dust suppression

The air quality will be affected by the Suspended Particle Matter (SPM) generated by the blasting, Jack hammer drilling, Loading and unloading during the Rough stone quarry operation.

The following Mitigations measures will be carried out:

- Mist Water spraying will be carried out by means of water sprinklers to suppress the dust emission in the Haul roads.
- Vegetations will be formed around the quarry to trap the dust.
- Avoiding spillages during the transportation.

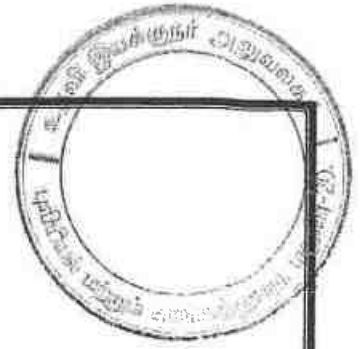
#### AMBIENT AIR QUALITY (AAQ):

The ambient air quality depends upon the emission sources, meteorological conditions and the background concentration of specific contaminants. The principal objective of the Ambient Air Quality Monitoring (AAQM) is to assess the existing levels of ambient air quality in and around the lease area for assessing the impact on air quality due to future mining activity in the region.

With the above objective, the following parameters were analysed at the sampling locations established in the study area.

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- ❖ Particulate Matter (PM<sub>10</sub>)
- ❖ Particulate Matter (PM<sub>2.5</sub>)
- ❖ Sulphur Dioxide
- ❖ Oxides of Nitrogen
- ❖ Carbon Monoxide



**DESIGN CRITERIA FOR AMBIENT AIR QUALITY MONITORING STUDY NETWORK:**

Ambient Air quality has been assessed through a network of 3 ambient air quality stations. The following methodology has been considered for design of ambient air quality monitoring network in the area.

- ❖ Topography / terrain of study area.
- ❖ Populated areas within study area
- ❖ Residential /sensitive areas within study area
- ❖ Predominant wind direction and wind pattern

**9.7 Plan for noise level control:**

Shallow holes of 32mm diameter and 1.5m depth will be drilled and to control ground vibration conventional low power explosives such as slurry explosives, delay electric detonator will be used for rough stone. Hence ground vibration and noise pollution will be minimal and restricted within the quarry workings. There are no villages near by the area applied for mining lease.

The drivers will be strictly instructed to move the vehicle during the transportation not exceed 40km per hour. Sentries with flags & whistle will posted in village junction and populated area to control and regulate traffic.

**9.8 Environment impact assessment statement**

The mining plan proposed is for a production of Rough stone with involving deep hole drilling and heavy blasting permission as per MMR1961 Regulation 106 (2b) against Director General of Mines Safety, Chennai Region. Such limited mining activity is not likely to cause any impact adversely on environment as for as pollution of air, water and noise is concentrated, anyhow environmental impact studies will be conducted as per EIA notification issued by MOEF. It is B2 category mine. For the average production of 25,000 m<sup>3</sup> to 28,000 m<sup>3</sup>/year is planned. Besides **one working Quarry** and No villages in the surrounding radius of 500 metres.

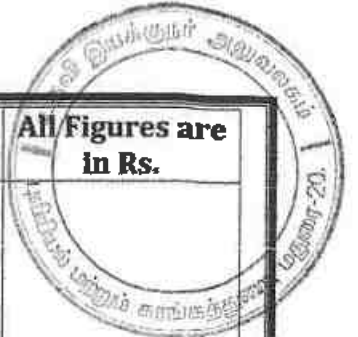


### 9.12 Proposal for water management

	DETAILS	SOURCE	PROVISION QUANTITY/DAY
A	Drinking water & Domestic	From existing bore well & water vender	1.500KLD
B	Dust Suppression-water sprinkling	From existing bore well	2.300 KLD
C	Green belt	From the water tanker and the bore well	1.200 KLD
		<b>TOTAL</b>	<b>5.000KLD</b>

### 9.13 PROPOSED FINANCIAL ESTIMATE BUDGET FOR (EMP) ENVIRONMENT MANAGEMENT

Sl.no.	Details	All Figures are in Rs.
1.	<b><u>LAND INVESTMENT COST</u></b> Total Applied SF Nos. 84/2C1,2D1,2E1,2C2,2D2A, 2E2,2J,2K,2L =1.62.17 Ha. As per Government of Tamilnadu Market Value as per document. = Rs. 2,19,445	<b>Rs.2,19,445</b>
2.	<b><u>FIXED INVESTMENT COST</u></b>	
i)	Labour shed	Rs. 1,00,000
ii)	First aid room and accessories	Rs. 1,50,000
iii)	Toilet room with septic tank Facility construction & sanitary facility	Rs. 50,000
iv)	Drinking water for staffs & Labour from water vendors	<u>Rs. 1,50,000</u>
	<b>TOTAL FIXED INVESTMENT COST =</b>	<b>Rs. 4,50,000</b>
3.	<b><u>OPERATIONAL COST</u></b> (Siegnorage fee per unit for transport permit to be paid to state government Rs.26/m <sup>3</sup> at the time of marketing will be paid by Purchaser only.)	
i)	<b><u>Machinery to be used for Quarrying &amp; Cost</u></b> Total Number of Excavator = 1No Total operational cost = 4,480Ex.hours x Rs.1000 = (The Hired vehicle charges per hour inclusive of diesel around Rupees 1000/hour) (The Excavators of 0.90cu.m. bucket capacity and tippers of 10/20Ts capacity will be used. The quantity of Diesel consumption is based on the working hours of excavators {filling factor and loading cycling}. In the open cast quarry project excavators are proposed to quarry). (One excavators will be excavate = 60cu.m/Hr. For ten years Project = 2,68,792.5cu.m./60cu.m. = 4,480 excavator hours) {Diesel Consumption Tata Hitachi (Model EX200) = 9Ltr/Hr Diesel Price around = Rs.100 (At present scenario) Hence 4,480 Hours x 9Ltrs/Hr = 40,320 Ltrs of HSD will be utilized for the 10year.}	<b>Rs. 44,80,000</b>



Sl.no.	Details	All Figures are in Rs.		
ii)	<p><b>Compressor with Drilling Cost</b></p> <p>Total Number of compressor with Drilling Machine used for quarrying = 1No            (One Compressor with Drilling Machine will be Drilling = 100Cu.m./Hr.)</p> <p>The Hired vehicle charges per hour inclusive of diesel around Rs 750/Hour = 2,425 hours x Rs.750 =            (For ten year project Roughstone = 2,42,467.5cu.m./100cu.m. = 2,425 Running Hours)            {Diesel Consumption = 8Ltr/Hr            Diesel Price around = Rs.100 (At present scenario)            Hence 2,425 Hours x 8Ltrs/Hr = <b>19,400Ltrs of HSD</b> will be utilized for the 10year.}</p>	Rs. 18,18,750		
iii)	<p><b>Explosives Cost</b></p> <p>Total cost for the Ten year Roughstone =            (2,42,467.5Cu.m./100Cu.m.) x Rs. 700 =            (For ten year project explosives-charging and blasting used for Rs.700/100Cu.m. Total drilling material for quarrying = 2,42,467.5Cu.m. of Roughstone for ten years.)</p>	Rs. 16,97,273		
<b>TOTAL OPERATIONAL COST =</b> (Machinery operational +Drilling with Compressor + Explosives)		<b>79,96,023</b>		
<b>4. EMP COST</b>				
Sl.no.	Details	Cost per Month (Rs.)	Total Cost per Year (Rs.)	Total cost for 10 years lease period (Rs.)
i)	Greenbelt development (plantation & maintenance)	1,200	14,400	1,44,000
ii)	Fencing arrangements & wind net arrester	-	-	2,00,000
iii)	Occupational health safety kits (mask, helmet, sanitizer, gloves, etc.,)	1,200	14,400	1,44,000
iv)	Water sprinkling using own tractor for the area (Control of Dust suppression)	2,000	24,000	2,40,000
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	10,000 (bi-annual)	20,000	2,00,000
<b>Total EMP Cost=</b>				<b>Rs. 9,28,000</b>

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1.	<b>Land Investment Cost</b>	<b>Rs. 2,19,445</b>
2.	<b>Fixed Investment Cost</b>	<b>Rs. 4,50,000</b>
3.	<b>Operational Cost</b>	<b>Rs. 79,96,023</b>
4.	<b>EMP Cost</b>	<b>Rs. 9,28,000</b>
<b>TOTAL PROJECT COST</b>		<b>Rs. 95,93,468</b>
<b>CER @ 2% Project cost</b> Carrying out provisions of Drinking water with dispensations Toilet/sanitary especially for girls students in Viralipatti Government School, Vadipatti Taluk, Madurai District.		<b>Rs. 1,91,870</b>

#### 10. MINE CLOSURE PLAN

- The mined out area will be suitably fenced to avoid inadvertent entry of men and animal to the quarry area.
- After closure of mine the applicant will adhere the rules and regulations governed by state and central government
- All safety measures and mitigations will be maintained properly in the mined out area. Security persons will be engaged in all three shifts to ensure safety in the quarry.

The progressive mine closure plan is enclosed in Plate No. VIII.

#### 11. ANY OTHER DETAILS INTEND TO FURNISH BY THE APPLICANT

- Permission will be obtained from the District Mines Office to extract the Rough Stone from the Boundary barriers and for slopes.
- Care and precautionary measures will be taken for the safety of workers as per Mines Rules-1955 and Mines Acts-1952.
- The applicant will endeavor every attempt to quarry the Rough Stone economically without any wastage and to improve the environment and ecology.
- Any violation pointed out by the inspecting authorities shall be rectified as per the guidelines of the Department.

PLACE: TRICHY

DATE: .04.2023

  
Signature of the RQP

**G.RAVICHANDRAN, M.Sc., P.G.D.M.E.M.,**  
**MINING GEOLOGIST**  
RQP / MAS / 197 / 2005 / A  
VALID UPTO: 12.12.2025

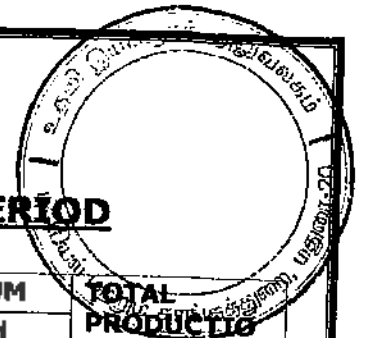






## ANNEXURE - II

### PRODUCTION SCHEDULE FOR 10 YEARS PERIOD



YEAR	SECTION	BENCH	LENGTH (M)	WIDTH (M)	DEPTH (M)	VOLUME IN CUM		TOTAL PRODUCTION IN CUM
						GRAVEL	ROUGH STONE	
I	PQ-AB	I	40	112.5	2.0	9000	----	28,702.5
	PQ-AB	II	37	106.5	5.0	----	19702.5	
II	PQ-AB	I	40	112.5	2.0	9000	----	28,702.5
	PQ-AB	II	37	106.5	5.0	----	19702.5	
III	PQ-AB	I	40	112.5	2.0	8325	----	28,027.5
	PQ-AB	II	37	106.5	5.0	----	19702.5	
IV	PQ-AB	III	60	96.5	5.0	----	28950.0	28,950.0
V	PQ-AB	III	41	96.5	5.0	----	19782.5	26,702.5
	PQ-AB	IV	16	86.5	5.0	----	6920.0	
<b>FIRST FIVE YEAR PRODUCTION (I TO V)</b>						<b>26325</b>	<b>114760</b>	<b>1,41,085</b>
VI	PQ-AB	IV	63	86.5	5.0	----	27247.5	27,247.5
VII	PQ-AB	IV	12	86.5	5.0	----	5190.0	26,610.0
	PQ-AB	V	56	76.5	5.0	----	21420.0	
VIII	PQ-AB	V	25	76.5	5.0	----	9562.5	26,520.0
	PQ-AB	VI	51	66.5	5.0	----	16,957.5	
IX	PQ-AB	VI	20	66.5	5.0	----	6650.0	23,882.5
	PQ-AB	VII	61	56.5	5.0	----	17232.5	
X	PQ-AB	VIII	51	46.5	5.0	----	11857.5	23,447.5
	PQ-AB	IX	41	36.5	5.0	----	7482.5	
<b>NEXT FIVE YEAR PRODUCTION (VI TO X)</b>						<b>----</b>	<b>127707.5</b>	<b>1,27,707.5</b>
<b>PRODUCTION</b>						<b>26325</b>	<b>242467.5</b>	<b>2,68,792.5</b>

*G. Ravichandran*

G. RAVICHANDRAN, M.Sc., P.G.D.M.E.M.,  
 MINING GEOLOGIST  
 RQP / MAS / 187 / 2005 / A  
 VALID UPTO: 12.12.2025

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## ANNEXURE - III

### Base Line Studies

The base line studies is prepared for Rough stone & Gravel quarry Kallanai Village, Kalligudi Taluk, Madurai District, over an extent of 1-62.17 hectares in SF Nos. 84/2C1,2D1,2E1,2C2,2D2A,2E2,2J,2K,2L. The proposed quarry lease will be granted for a period of 10 years. The total planned production quantity for 10 year in Rough Stone 2,42,467.5cum, & gravel 26,325cum.

The project in the area will provide a quit considerable employment to nearby village which in turn enhance the earning source of the nearby villagers. The comprehensive base line studies and standards constitute of collecting data on ambient air quality, dust fall rate, water quality, soil analyze, noise level and ground vibration study in the area proposed for quarrying along with flora and fauna statistics.

#### **General approach to Environment:**

The environment studies besides data comprise of the features present in the site area it includes environmental features such as forest area, conservation area, water bodies, industries, wild life and fauna place of historic and importance etc.,

1. Air environment
2. Noise environment
3. Water environment
4. Ecology (biological and cultural environment)
5. Physical environment

#### **Air Environment**

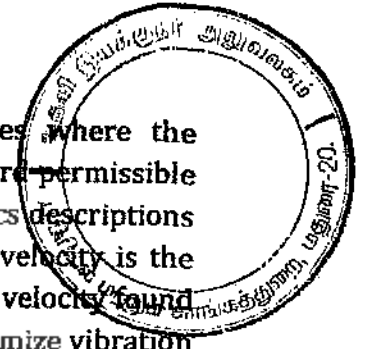
The rough stone quarry is non toxic which does not emit any undesirable pollution in the form of solid, liquid and gas. The dust emitted during the transportation of vehicles and the drilling will be carried out in wet condition to prevent dust into air and the haul roads will be periodically sprinkled with mist water spray to prevent dust into the atmosphere. The area in and around is quit fresh and the impact on air environment will always be under control and will be monitored. No processing or beneficiation is proposed except quarrying hence the impact on air will be controlled, monitored and mitigated.

#### **Noise Environment**

The noise will be only during blasting. For controlling noise proper and adequate explosives will be charged to the short holes. The machineries will be properly made preventive maintenance to avoid much noise during machinery working. Except these features there are no possibilities of producing much noise during quarry working.

### Ground vibration studies

The vibration source only through the movement of vehicles where the frequency is also very less. Hence the vibration is well below the standard permissible by MOEF. Displacement, velocity and acceleration of the three kinematics descriptions which are to be studied to describe ground motion. The peak particle velocity is the more referred since the area is virgin there is no significant measured velocity found in the area. During blasting delay electric detonators will be used to minimize vibration during blasting.



### Water Environment

Geo - physical investigation was carried out by adopting schlumberger method. To find out the lateral variation and vertical in homogeneity's. The hydro - geological report is enclosed.

### Soil analysis

The area applied for mining lease is flat terrain with little undulations covered by gravel for a depth of 2m followed by massive rock. The gravel is loose and natural growths to trees or plants are negligible except small bushes.

### Climate

The area receives annual average rain fall of 825mm during southwest monsoon (June - Sep) and northeast monsoon (Oct - Dec). Temperature falls between 42°C - 23°C. Rainy season is three months in a year from October to December during monsoon. Temperature is maximum during May - June in a year.

### Flora and fauna in and around the area

In small quarrying projects like this which involves very limited operations like secondary drilling and blasting conservation of flora and fauna along with ecology does not have significant impact of the overall eco system. A detailed survey related to flora and fauna was observed physically, the in and around area was seasonal dry cultivation, predominantly maize, cotton and millet and naturally grown trees like neem tree, karuvelam (juliflora) etc. The fauna is goat, rat crow, cat, ant, cow and squirrel etc.

**Conclusion** The base line studies relents no hazardous levels of dust and noise and prevailing at the project area. A well implemented environment management plan as discussed in the mining plan will help in mitigation of the adverse effects due to quarry activities.

The flora in the area is only small thorny bushes as much of the area exhibits flat terrain. No trees are proposed to uproot for the project and new trees will be planted on boundary barrier which will act as acoustic sound barriers. Environment care and attitude preventing environment is instructed to the proponent and advice to carry out and mitigate the minor impacts due to quarrying.

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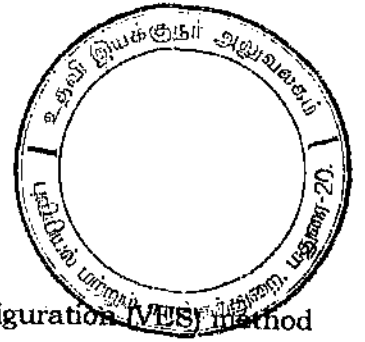
## **HYDROGEOLOCAL SURVEY REPORT**

1. Name of the Applicant : Sri, S. Rathinam, S/o. Sri. S. Sinnaveeran.
2. Major/ minor mineral : Roughstone and gravel (minor mineral)
3. Location :
- i). Survey nos : 84/2C1,2D1,2E1,2C2,2D2A,2E2,2J,2K,2L
- ii). Village : Kallanai
- iii). Taluk : Kalligudi
- iv). District : Madurai
4. Total Extent : 1-62.17 Hectares
5. Category of ground water : safe category (over all district)
6. Geomorphology : plain terrain covered with gravel  
thorny bushes and no vegetations and the  
slope of the land is very gentle towards west.
7. Geology : weathered gravel & massive charnockite.
8. Climate : Tropical
9. Average annual rainfall : 825mm
10. Nearby recharging sources : There are water recharging source of  
Kanmoi on east & Kundar on west side.  
These are mostly dry in all seasons and will  
have water staged only during heavy rainy  
season. Due to monsoon failure the Kanmoi  
and Kundar cannot be taken as a recharge  
source.
11. Water level in near area : 50 to 55 meters from the local enquire.
12. Quality of the ground water : Not potable CaCl, NaCl, & CaCo3.
13. Hydro- geological conditions: The hard rock area allows rain water see page  
Only in weathered, fissured and fracture  
zones And the ground water storage and  
Movement is very poor in the study area.
14. Geophysical study : Geophysical Electrical Resistivity survey  
conducted in schlumberger configuration  
(VES) method using IPI2win software for a  
depth of 45m. The VES-Interpreted curve and  
Layers by using IPI2win software shows  
occurrence of hard rock formations below 2m  
depth.



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**1. GEOPHYSICAL ELECTRICAL RESISTIVITY SURVEY:  
THE SCHLUMBERGER ARRAY**

Geophysical Electrical Resistivity survey conducted in schlumberger Configuration (VES) method using IPI2win Software. The Schlumberger array is an array where four electrodes are placed in line around a common midpoint. The two outer electrodes, A and B, are current electrodes, and the two inner electrodes, M and N, are potential electrodes placed close together. With the Schlumberger array, for each measurement the current electrodes A and B are moved outward to a greater separation throughout the survey, while the potential electrodes M and N stay in the same position until the observed voltage becomes too small to measure (source). At this point, the potential electrodes M and N are moved outward to a new spacing. As a rule of the thumb, the reasonable distance between M and N should be equal or less than one-fifth of the distance between A and B at the beginning. This ratio goes about up to one-tenth or one-fifteenth depending on the signal strength. The Schlumberger array is commonly used for vertical electrical sounding (VES) for groundwater and aggregate minerals. Vertical electrical sounding (VES) using the Schlumberger array provides better resolution.

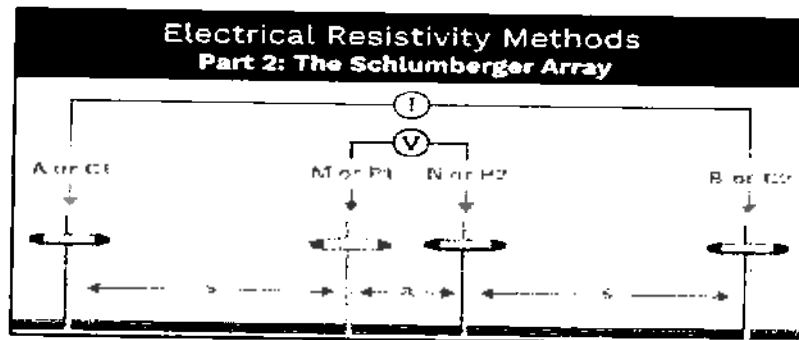


Fig No:1, Schlumberger Array

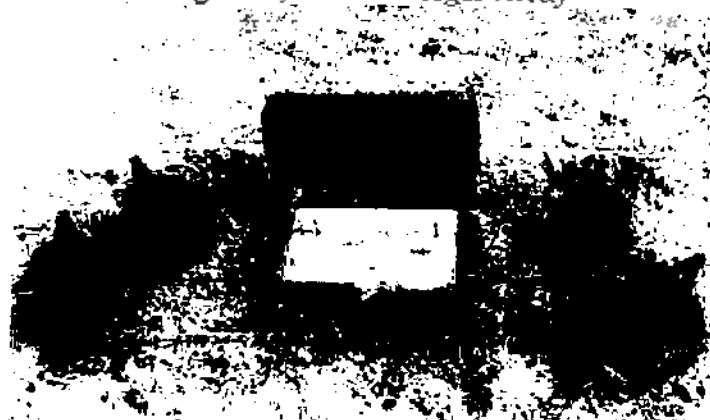


Fig No: 2. Model DDR-3 Electrical Resistivity Meter

S. DA-62

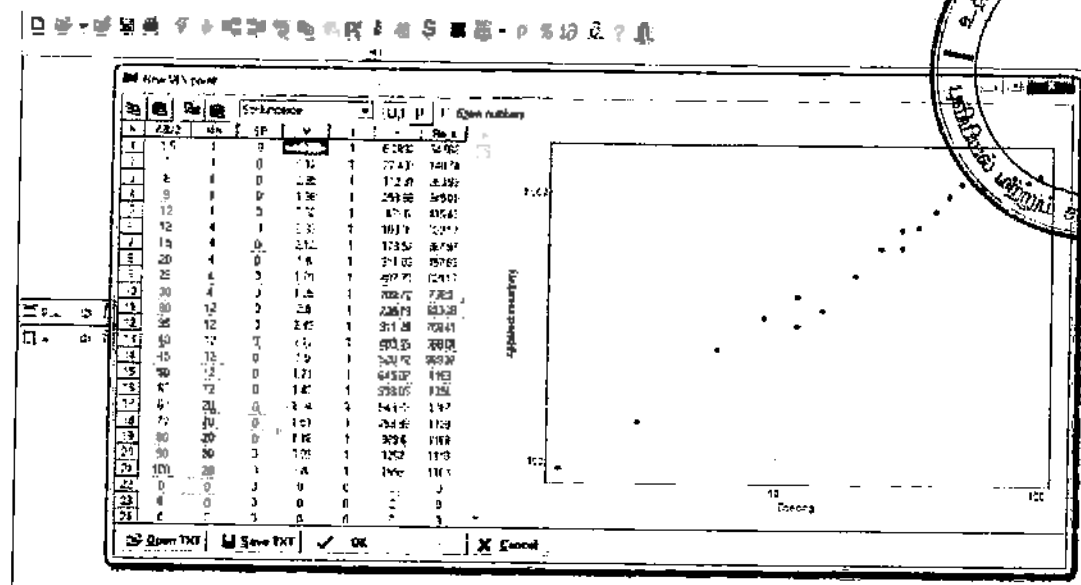
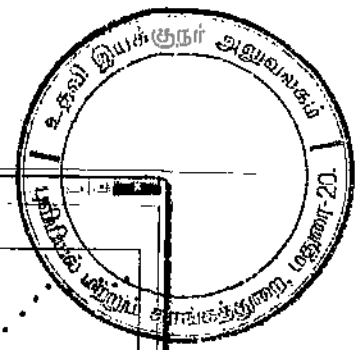


Figure No.3. Image showing VES data sheet by using IPI2win software.

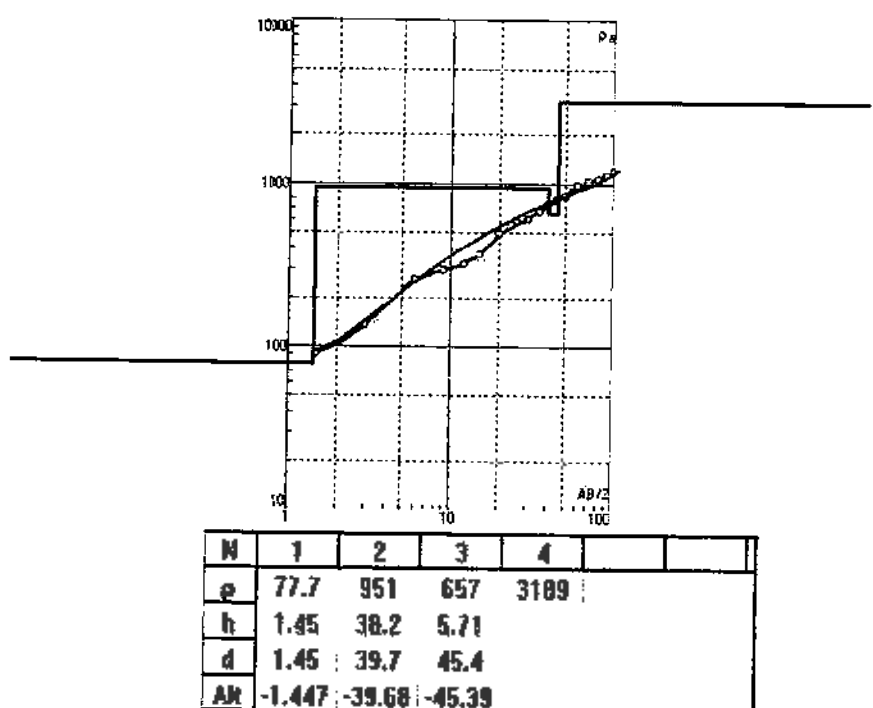


Figure No.4. Vertical electrical Sounding Interpreted curve & Layers by using IPI2win software


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**YES- INFERRED STRATA**


- 0-2 m : Gravel with (Resistivity 78 Ohm)
- 2 m-50m : Hard Charnockite formation (951 Ohm. Resistivity)
- 50m-55m : Charnockite rock with water potential fracture (Resistivity 197 Ohm)
- Above 55m : Massive charnockite formation. (Resistivity 3189 Ohm.)


The presence of soil with gravel shows low resistivity followed by Charnockite formation with high resistivity is indication of the poor water bearing capacity at shallow depth. The deeper layer is having curve break at 55m with comparatively less resistivity shows possibility of fracture with water table. Above 55m the resistance is high (3189 Ohm) shows massive formation of charnockite at depth.

  
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This Mining Plan is approved subject to the conditions stipulate on indicated in the Mining Plan Approval Roc. No. <sup>08/minu</sup> 2023 Dated. 10/1/2023

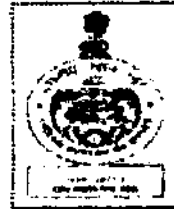
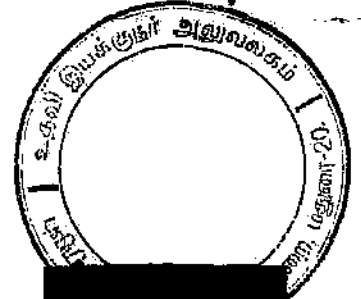
This Mining Plan is approved based on incorporation of the particulars specified under guidelines given by the Commissioner of Geology and Mining (i/c.) Roc. No. JBOSL/2012 Dated 19-11-2012

  
Assistant Director  
Geology and Mining  
Madurai

  
6.11.23



भारत सरकार / GOVERNMENT OF INDIA  
खान मंत्रालय / MINISTRY OF MINES  
भारतीय खान ब्यूरो / INDIAN BUREAU OF MINES



*G. Ravichandran*

अर्हताप्राप्त व्यक्ति के रूप में मान्यता प्रमाण पत्र  
(खनिज सियायत नियमावली, 1960 के नियम 22सी के तहत)  
**CERTIFICATE OF RECOGNITION AS QUALIFIED PERSON**  
(Under Rule 22C of Mineral Concession Rules, 1960)

श्री जी रविचंद्रण, वेनिता लिविंग्स, जी-एच, बी ब्लॉक, रेट्टावयक्कल, वययलु, रोड, तिरुची - 620 102, निम्नका फोटो और हस्ताक्षर ऊपर दिया हुआ है, तथा किन्होंने अपनी अर्हता और अनुभव का तृतीयजनक साक्ष्य दिया है, को खनन योजना तैयार करने हेतु खनिज सियायत नियमावली, 1960 के नियम 22सी के तहत अर्हताप्राप्त व्यक्ति के रूप में मान्यता प्रदान की जाती है।

Shri. G. Ravichandran, Vennita Livings, G-H, B block, Rettaivaykkal Vayyalu Road, Trichy - 620 102, whose **Photograph and signature** is affixed herein above, having given satisfactory evidence of his qualifications & experience hereby **RECOGNISED** under Rule 22C of the Mineral Concession Rule, 1960 as a Qualified Person to prepare Mining Plans.

उनकी पंजीयन संख्या है

His registration number is

RQP / MAS / 197 / 2005 / A

यह मान्यता 10 वर्षों की अवधि के लिए मान्यता है जो दिनांक 12.12.2025 को समाप्त होगी।  
This recognition is valid for a period of 10 years ending on 12.12.2025.

उनके द्वारा प्रस्तुत खनन योजना में गलत जानकारी / दस्तावेज दिए 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 : 13.11.2015

*G. Ravichandran*

G.RAVICHANDRAN, M.Sc., M.S.E.M.E.M.,  
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RQP / MAS / 197 / 2005 / A  
VALID UPTO: 12.12.2025

*mas*  
क्षेत्रीय खान नियंत्रक/ Regional Controller of Mines  
भारतीय खान ब्यूरो/ Indian Bureau of Mines  
चेन्नई क्षेत्र/ Chennai Region

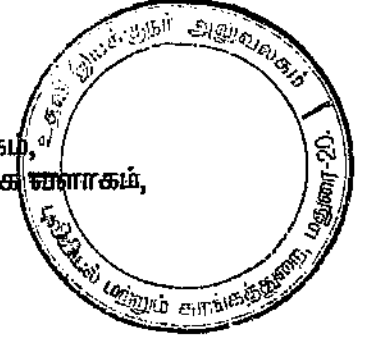
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புவியியல் மற்றும் சுரங்கத்துறை

ந.க.எண்.08/கனிமம்/2023,

உதவி இயக்குநர் அலுவலகம்,  
மாவட்ட ஆட்சியர் அலுவலகக் களாகம்,  
மதுரை.

நாள்: 14.03.2023

குறிப்பாணை

**பொருள்:** கனிமங்களும், குவாரிகளும் - சிறுகனிமம் - உடைகல் மற்றும் கிராவல் - மதுரை மாவட்டம் - கள்ளிக்குடி வட்டம் - கல்லணை கிராமம் - புல எண்கள். 84/2C1 (0.08.0), 84/2D1 (0.06.5), 84/2E1 (0.08.0), 84/2C2 (0.13.0), 84/2D2A (0.08.67), 84/2E2 (0.14.50), 84/2J (0.37.5), 84/2K (0.36.0), 84/2L (0.30.0) - பரப்பு 1.62.17 ஹெக்டேர் பரப்பு நிலத்தில் 10 (பத்து) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்கல் - சரியான பரப்பு (Precise Area) தேர்வு செய்யப்பட்டது - சுரங்கத்திட்டம் மற்றும் மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்க கோருவது - தொடர்பாக.

- பார்வை:**
1. திரு.S.ரத்தினம், த/பெ.சின்னவீரன், சின்னஉடைப்பு கிராமம், மதுரை - 625022 என்பவரது விண்ணப்பம் நாள். 19.01.2023.
  2. இவ்வலுவலக கடிதம் எண் ந.க.எண்.08/கனிமம்/2023, நாள்: 19.01.2023.
  3. திருமங்கலம் வருவாய் கோட்டாட்சியர் கடிதம் ந.க. எண். 299/2023/அ1, நாள்.25.02.2023.
  4. உதவி புவியியலாளர், புவியியல் மற்றும் சுரங்கத்துறை, புலத்தணிக்கை அறிக்கை, நாள்.11.03.2023.
  5. 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 41 மற்றும் 42.
  6. அரசாணை எண்.169 தொழில் (எம்.எம்.சி.1) துறை, நாள்: 04.08.2020.
  7. தொடர்புடைய ஆவணங்கள்.

\*\*\*\*\*

மதுரை மாவட்டம், பெருங்குடி அஞ்சல், சின்னஉடைப்பு கிராமம், என்ற முகவரியில் குடியிருந்து வரும் திரு.S.ரத்தினம், த/பெ.சின்னவீரன் என்பவர் மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்லணை கிராமம், பட்டா புல எண்கள்.84/2AI (0.09.0),

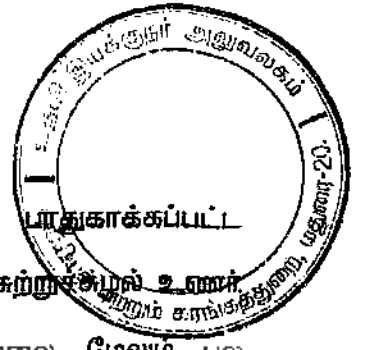
S. A. 66

84/2B1, (0.06.5), 84/2C1 (0.08.0), 84/2D1 (0.06.5), 84/2E1 (0.08.0), 84/2A2 (0.16.0), 84/2B2 (0.11.5), 84/2C2 (0.13.0), 84/2D2A (0.08.67), 84/2E2 (0.14.50), 84/2J (0.37.5), 84/2K (0.36.0), 84/2L (0.30.0)-இல் 2.05.17 ஹெக்டேரில் 10 வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமை வழங்க கேட்டு பார்வை 1-இல் காணும் விண்ணப்பத்தினை சுழப்பித்துள்ளார்.

திருமங்கலம், வருவாய் கோட்டாட்சியர் மற்றும் புவியியல் மற்றும் சாங்கத்துறை, உதவி புவியியலாளர் ஆகியோரின் அறிக்கையில், கள்ளிக்குடி வட்டம், கல்லணை கிராமம், பட்டா புல எண்கள்.84/2A1, 84/2B1, 84/2C1, 84/2D1, 84/2E1, 84/2A2, 84/2B2, 84/2C2, 84/2D2A, 84/2E2, 84/2J, 84/2K, 84/2L-இல் 2.05.17 ஹெக்டேர் பரப்பு விண்ணப்பதாரர் திரு.S.ரத்தினம் என்பவர் பெயரில் பட்டா தாக்கவாகியுள்ளதால் குவாரிப்பணி மேற்கொள்ள விண்ணப்பதாரரான திரு.S.ரத்தினம் என்பவருக்கு ஸ்தல உரிமை உள்ளது எனவும், இதில் புல எண்கள். 84/2A1, 84/2B1, 84/2A2 மற்றும் 84/2B2 ஆகியவற்றில் பாதுகாப்பு இடைவெளி விட்டு குவாரிப்பணி செய்ய போதிய பரப்பு இல்லாத காரணத்தினால் மேற்கண்ட புல எண்கள் நீங்கலாக மீதமுள்ள புல எண்களான 84/2C1, 84/2D1, 84/2E1, 84/2C2, 84/2D2A, 84/2E2, 84/2J, 84/2K, 84/2L -இல் 1.62.17 ஹெக்டேர் பரப்பு நிலங்களில் மட்டும் 10 (பத்து) ஆண்டுகளுக்கு திரு.S.ரத்தினம் என்பவருக்கு கிராவல் மற்றும் சாதாரண கற்கள் குவாரி குத்தகை உரிமை வழங்கலாம் எனவும் அறிக்கை செய்துள்ளார்.

மேலும், விண்ணப்பிக்கப்பட்ட புலங்களை சுற்றிலும் 300 மீட்டர் சுற்றளவில் குடியிருப்புகள், தெல்லியல் துறையின் மூலம் பாதுகாக்கப்பட்ட பகுதிகளாக அறிவிக்கப்பட்ட இடங்கள் மற்றும் வரலாற்று சின்னங்கள் எதும் இல்லை. 60 மீட்டர் சுற்றளவில் காப்பு காடுகள் மற்றும் 50 மீட்டர் சுற்றளவில் தேசிய / மாநில நெடுஞ் சாலைகள், கட்டிடங்கள் எதும் இல்லை. விண்ணப்பப் புல எண்களுக்கு மேற்கே புல எண்.85-இல் குண்டாறு செல்கிறது. மேலும் விண்ணப்பப் புல எண்களுக்கு வடக்கு மற்றும் கிழக்குப் பகுதியில் புல எண் 84/4 மற்றும் 82/1-இல் அரசுப் புறம்போக்கு நிலம்

S. S. S.




அமைந்துள்ளது. மேலும், 10 கி.மீ சுற்றளவில் வனத்துறையால் பாதுகாக்கப்பட்ட பகுதியாக அறிவிக்கப்பட்ட சரணாலயங்கள், தேசிய பூங்காக்கள் சுற்றுச்சூழல் உணர் திறன் மிக்க பகுதிகள் (ECO-SENSITIVE ZONE) ஏதும் இல்லை. மேலும் புல வரைபடத்தில் விண்ணப்பப் புலங்களின் தென்புரத்தில் ஒடை செல்வதாக குறிப்பிடப்பட்டுள்ளது, ஆனால் புலத்தில் அதற்கான தடயங்கள் ஏதும் காணப்படவில்லை. விண்ணப்பப் புலங்களுக்கு சென்று வர பாதை வசதி உள்ளது என அறிக்கை செய்து, பின்வரும் நிபந்தனைகளுக்கு உட்பட்டு 10 (பத்து) ஆண்டுகளுக்கு கிராவல் மற்றும் சாதாரண கற்கள் குவாரி உரிமை வழங்கப் பரிந்துரை செய்துள்ளனர்.

#### நிபந்தனைகள்:

1. மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்ணை கிராமம், புல எண்கள். 84/2C1, 84/2D1, 84/2E1, 84/2C2, 84/2D2A, 84/2E2, 84/2J, 84/2K, 84/2L மொத்தம் 1.62.17 ஹெக்டேர் பரப்பளவில் உடைகல் மற்றும் கிராவல் கனிமம் வெட்டியெடுக்க குவாரி குத்தகை உரிமை வழங்குவது தொடர்பாக, ஏற்பளிக்கப்பட்ட கரங்கத் திட்டம் மற்றும் சுற்றுச்சூழல் ஒப்புதல் ஆகியவற்றை பெற்றறிக்கப்பட வேண்டும்.
2. விண்ணப்பப் புலங்களுக்கு மேற்கில் புல எண்.85-இல் அமைந்துள்ள குண்டாறு-க்கு 50 மீட்டர் பாதுகாப்பு இடைவெளி விட வேண்டும்.
3. விண்ணப்பப் புலங்களுக்கு கிழக்குப் பகுதியில் புல எண்.82/1 மற்றும் வடக்குப் பகுதியில் புல எண்.84/4-இல் அமைந்துள்ள அரகப் புறம்போக்கு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளி விட வேண்டும்.
4. விண்ணப்பப் புலங்களைச் சுற்றியுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி விட வேண்டும்.
5. பொதுமக்கள் / விவசாய நிலங்களுக்கு பாதிப்பு ஏற்படாத வகையில் தகுதி வாய்ந்த அங்கீகரிக்கப்பட்ட நபர்கள் மூலம் வெடிமருந்துகள் சேமிக்கப்பட்டு குவாரியில் வெடித்தல் வேண்டும். குவாரியில் குறைந்த சக்தி கொண்ட வெடி மருந்துகளை பயன்படுத்தல் வேண்டும்.
6. குவாரியில் வேலை செய்யும் தொழிலாளர்கள் தொழிலாளர் நலவாரியம் மற்றும் காப்பீடு திட்டத்தில் பதிவு செய்து தொழிலாளர் நலன் பேண்பட வேண்டும்.
7. கனிமங்களை வாகனங்களில் கொண்டு செல்லும் போது பாதுகாப்பிகள், பொது மக்கள் மற்றும் பிற வாகனங்கள் பாதிக்காதவண்ணம் தூள்பாய்கள் கொண்டு மூடி எடுத்துச் செல்ல வேண்டும்.

எனவே, துறை அலுவலர்களின் பரிந்துரையினை ஏற்றும் நிபந்தனைகளுக்கு உட்பட்டும், மதுரை மாவட்டம், கள்ளிக் குடி வட்டம், கல்லணை கிராமம், பட்டா புல எண்கள்: 84/2C1 (0.08.0), 84/2D1 (0.06.5), 84/2E1 (0.08.0), 84/2C2 (0.13.0), 84/2D2A (0.08.67), 84/2E2 (0.14.50), 84/2J (0.37.5), 84/2K (0.36.0), 84/2L (0.30.0)-இல் 1.62.17 ஹெக்டேர் பரப்பு நிலத்திற்கு 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதி எண்: 19 மற்றும் 20-இன்படி 10 (பத்து) ஆண்டுகளுக்கு சாதாரண கற்கள் மற்றும் கிராவல் சுவாமி உரிமம் வழங்க தகுதி வாய்ந்த நிலப்பரப்பாக (Precise area) கருதப்படுகிறது.

தமிழ்நாடு சிறுகனிம சலுகை விதிகள்-1959 விதி எண்:41-இன்படி சுவாமிப்பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்கத் திட்டத்தினை (Mining Plan) 90 தினங்களுக்குள் சமர்ப்பிக்குமாறும், விதி எண்: 42-இன்படி மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (State Level Environmental Impact Assessment Authority) இசைவினைப் பெற்று சமர்ப்பிக்குமாறும் மனுதாரர் திரு.S.ரத்தினம் என்பவர் கேட்டுக் கொள்ளப்படுகிறார்.

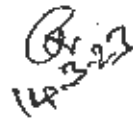
  
உதவி இயக்குநர் (பெர்),  
புவியியல் மற்றும் சுரங்கத்துறை,  
மதுரை.

பெறுநர்

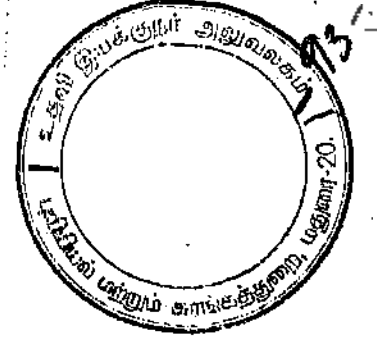
திரு.S.ரத்தினம்,  
த/பெ.சின்னவீரன்,  
சின்னஉடைப்பு கிராமம்,  
பெருங்குடி அஞ்சல்,  
மதுரை மாவட்டம்- 625022

நகல்

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

  
14-3-23





தணிக்கைக் குறிப்பு

- புலத்தணிக்கை நாள் : 11.03.2023
1. மனுதாரர் பெயர் மற்றும் முகவரி : திரு.S.ரத்தினம்,  
த/பெ.சின்னவீரன்,  
சின்னஉடைப்பு கிராமம்,  
பெருங்குடி அஞ்சல்,  
மதுரை - 625 022
  2. குத்தகை அனுமதி கோரும் சிறுகனிமத்தின் பெயர் : உடைகல் மற்றும் கிராவல்
  3. குத்தகை அனுமதி கோரும் காலம் : பத்து ஆண்டுகள்
  4. குத்தகை அனுமதி கோரும் புலத்தின் விவரங்கள் :

வட்டம்	கிராமம்	புல எண்	குத்தகை கோரும் புலத்தின் மொத்த பரப்பு	குத்தகை கோரும் பரப்பு
கள்ளிக் குடி	கல்லணை	84/2A1	0.09.0	0.09.0
		84/2B1	0.06.5	0.06.5
		84/2C1	0.08.0	0.08.0
		84/2D1	0.06.5	0.06.5
		84/2E1	0.08.0	0.08.0
		84/2A2	0.16.0	0.16.0
		84/2B2	0.11.5	0.11.5
		84/2C2	0.13.0	0.13.0
		84/2D2A	0.08.67	0.08.67
		84/2E2	0.14.50	0.14.50
		84/2J	0.37.5	0.37.5
		84/2K	0.36.0	0.36.0
		84/2L	0.30.0	0.30.0
		மொத்தம்		2.05.17

5. குவாரி குத்தகை அனுமதி கோரும் புலத்தின் மீது மனுதாரரின் ஸ்தல உரிமை தொடர்பான விவரம்:

மதுரை மாவட்டம், கள்ளிக் குடி வட்டம், கல்லணை கிராமம், கிராமக் கணக்கு பட்டா எண்.674 மற்றும் 1185-ன்படி புல எண்கள். 84/2A1, 84/2B1, 84/2C1, 84/2D1, 84/2E1, 84/2A2, 84/2B2, 84/2C2, 84/2D2A, 84/2E2, 84/2J, 84/2K, 84/2L மொத்தம்

S. R. R.

2.05.17 ஹெக்டேர் பரப்பு நிலம் மனுதாரர் சின்னவீரன் மகன் ரத்தினம் என்ற பெயரில் கல்லணை கிராமக்கணக்கில் தூக்கலாகியுள்ளது.

6. குவாரி குத்தகை அனுமதி கோரும் புலத்தில் ஏற்கனவே மாவட்ட ஆட்சியரின் ஆணைப்படி குவாரி குத்தகை நடத்தியிருந்தால் அது தொடர்பான விவரங்கள்:-

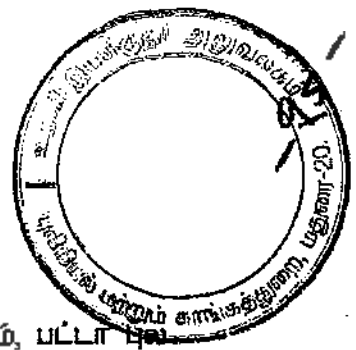
மேற்படி விண்ணப்ப புலங்களில் குவாரி குத்தகை உரிமம் ஏதும் ஏற்கனவே வழங்கப்படவில்லை.

7. குவாரி குத்தகைகோரும் புலத்தில் உள்ள கனிமத்தின் விவரங்கள்:-

அனுமதி கோரும் விண்ணப்ப புலத்தின் அருகிலுள்ள குவாரியை ஆய்வு செய்ததில், 1-2 மீட்டர் ஆழம் வரை கிராவல் மண் மற்றும் அதற்கு கீழாக வெடிப்புகள் மற்றும் பிளவுகளுடன் கூடிய சார்னோடைட் வகை பாறை அமைந்துள்ளது தெரியவருகிறது. இவ்வகைப் பாறைகள் சாதாரணக் கற்கள், ஜவ்லிக் கற்கள் மற்றும் M-சேன்ட் உற்பத்தி செய்ய ஏற்றவையாகும்.

8. நிலையான அமைப்புகள் இருப்பு குறித்தான விவரங்கள்:-

விண்ணப்பிக்கப்பட்ட புலங்களை சுற்றிலும் 300 மீட்டர் சுற்றளவில் குடிநீருப்புகள், தெல்லியல் துறையின் மூலம் பாதுகாக்கப்பட்ட பகுதிகளாக அறிவிக்கப்பட்ட இடங்கள் மற்றும் வரலாற்று சின்னங்கள் எதும் இல்லை. 60 மீட்டர் சுற்றளவில் காப்பு காடுகள் மற்றும் 50 மீட்டர் சுற்றளவில் தேசிய / மாநில நெடுஞ்சாலைகள், கட்டிடங்கள் எதும் இல்லை. விண்ணப்பப் புல எண்களுக்கு மேற்கே புல எண்.85-இல் குண்டாறு செல்கிறது. மேலும் விண்ணப்பப் புல எண்களுக்கு வடக்கு மற்றும் கிழக்குப் பகுதியில் புல எண் 84/4 மற்றும் 82/1-இல் அரசுப் புறம்போக்கு நிலம் அமைந்துள்ளது. மேலும், 10 கி.மீ சுற்றளவில் வனத்துறையால் பாதுகாக்கப்பட்ட பகுதியாக அறிவிக்கப்பட்ட சரணாலயங்கள், தேசிய பூங்காக்கள் சுற்றுச்சூழல் உணர் திறன் மிக்க பகுதிகள் (ECO-SENSITIVE ZONE) ஏதும் இல்லை. மேலும் புல வரைபடத்தில் விண்ணப்பப் புலங்களின் தென்புரத்தில் ஓடை செல்வதாக குறிப்பிடப்பட்டுள்ளது, ஆனால் புலத்தில் அதற்கான தடயங்கள் ஏதும் காணப்படவில்லை. விண்ணப்பப் புலங்களுக்கு சென்று வர பாதை வசதி உள்ளது.



### 9. பரிந்துரை:-

எனவே, மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்லணை கிராமம், பட்டா புல எண்கள். 84/2A1 (0.09.0), 84/2B1, (0.06.5), 84/2C1 (0.08.0), 84/2D1 (0.06.5), 84/2E1 (0.08.0), 84/2A2 (0.16.0), 84/2B2 (0.11.5), 84/2C2 (0.13.0), 84/2D2A (0.08.67), 84/2E2 (0.14.50), 84/2J (0.37.5), 84/2K (0.36.0), 84/2L (0.30.0)-இல் மொத்தம் 2.05.17 ஹெக்டேரில், புல எண்கள். 84/2A1 (0.09.0), 84/2B1, (0.06.5), 84/2A2 (0.16.0), 84/2B2 (0.11.5) ஆகியவற்றில் பாதுகாப்பு இடைவெளி விட்டு குவாரிப்பணி செய்ய போதிய பரப்பு இல்லாத காரணத்தினால் மேற்கண்ட புல எண்கள் நீங்கலாக கீழ்க்கண்ட புல எண்கள். 84/2C1 (0.08.0), 84/2D1 (0.06.5), 84/2E1 (0.08.0), 84/2C2 (0.13.0), 84/2D2A (0.08.67), 84/2E2 (0.14.50), 84/2J (0.37.5), 84/2K (0.36.0), 84/2L (0.30.0) 1.62.17 ஹெக்டேர் பரப்பளவில் மட்டும் உடைகல் மற்றும் கிராவல் குவாரிப்பணி செய்ய திரு.S.ரத்தினம் என்பவருக்கு கீழ்க்காணும் நிபந்தனைகளுக்குட்பட்டு குவாரி குத்தகை உரிம அனுமதி வழங்க பரிந்துரை செய்யப்படுகிறது.

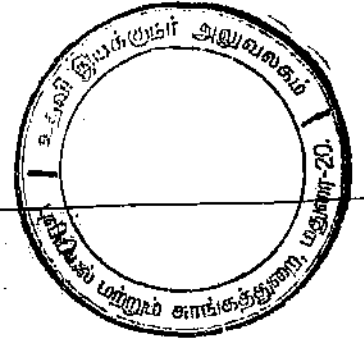
### நிபந்தனைகள்:

1. மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்லணை கிராமம், புல எண்கள். 84/2C1, 84/2D1, 84/2E1, 84/2C2, 84/2D2A, 84/2E2, 84/2J, 84/2K, 84/2L மொத்தம் 1.62.17 ஹெக்டேர் பரப்பளவில் உடைகல் மற்றும் கிராவல் கனிமம் வெட்டியெடுக்க குவாரி குத்தகை உரிமம் வழங்குவது தொடர்பாக, ஏற்பளிக்கப்பட்ட சுரங்கத்திட்டம் மற்றும் சுற்றுச்சூழல் ஒப்புதல் ஆகியவற்றை பெற்றெடுக்கப்பட வேண்டும்.
2. விண்ணப்பப் புலங்களுக்கு மேற்கில் புல எண்.85-இல் அமைந்துள்ள குண்டாறுக்கு 50 மீட்டர் பாதுகாப்பு இடைவெளி விட வேண்டும்.
3. விண்ணப்பப் புலங்களுக்கு கிழக்குப் பகுதியில் புல எண்.82/1 மற்றும் வடக்குப் பகுதியில் புல எண். 84/4-இல் அமைந்துள்ள அரசுப் புறம்போக்கு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளி விட வேண்டும்.
4. விண்ணப்பப் புலங்களைச் சுற்றியுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி விட வேண்டும்.

S. S. S.

B. S. S.  
11/02/2023  
உதவி புவியியலாளர்,  
புவியியல் மற்றும் சுரங்கத்துறை,  
மதுரை.





आयकर विभाग  
INCOME TAX DEPARTMENT

भारत सरकार  
GOVERNMENT OF INDIA

S RATHINAM

SIVANGALAI SINNAVEERAN

08/10/1964

Permanent Account Number

AHYPR5779E

Signatures

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

यह कार्ड खो जाने पर कृपया सूचित करें/ लौटायें :  
आयकर पैन सेवा यूनिट, UTIISL  
प्लॉट नं. 3, सेक्टर 11, सी.बी.डी. बेलपुर,  
नवी मुंबई - 400 614.



भारत सरकार

GOVERNMENT OF INDIA



ரத்தினம் சின்னவேரன்  
Rathinam Chinnaveeran

பிறந்த திகதி / DOB : 13/03/1963

பாலம் / MALE

5354 2757 4061



भारतीय विनिष्ठ पहचान प्राधिकरण

INCOME TAX PAN SERVICES UNIT, GOVERNMENT OF INDIA

முகவரி:

S/O சின்னவேரன், ஸ்டாட் 10,  
வடக்கு தெரு, சின்னலுடி அப்பு,  
சின்னலுடி, மதுரை,  
தமிழ்நாடு. 625022

Address:

S/O Chinnaveeran, NO 10,  
NORTH STREET,  
CHINNALUDEPPU,  
CHINNALUDEPPI, Madurai, Tamil  
Nadu, 625022



சாதாரண மனிதனின் அதிகாரம்

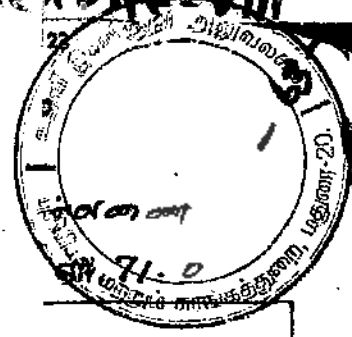
1947  
590 300 1947

help@udai.gov.in

www.udai.gov.in

P.O. Box No.1947,  
Bengaluru-560 001

Handwritten signature and initials



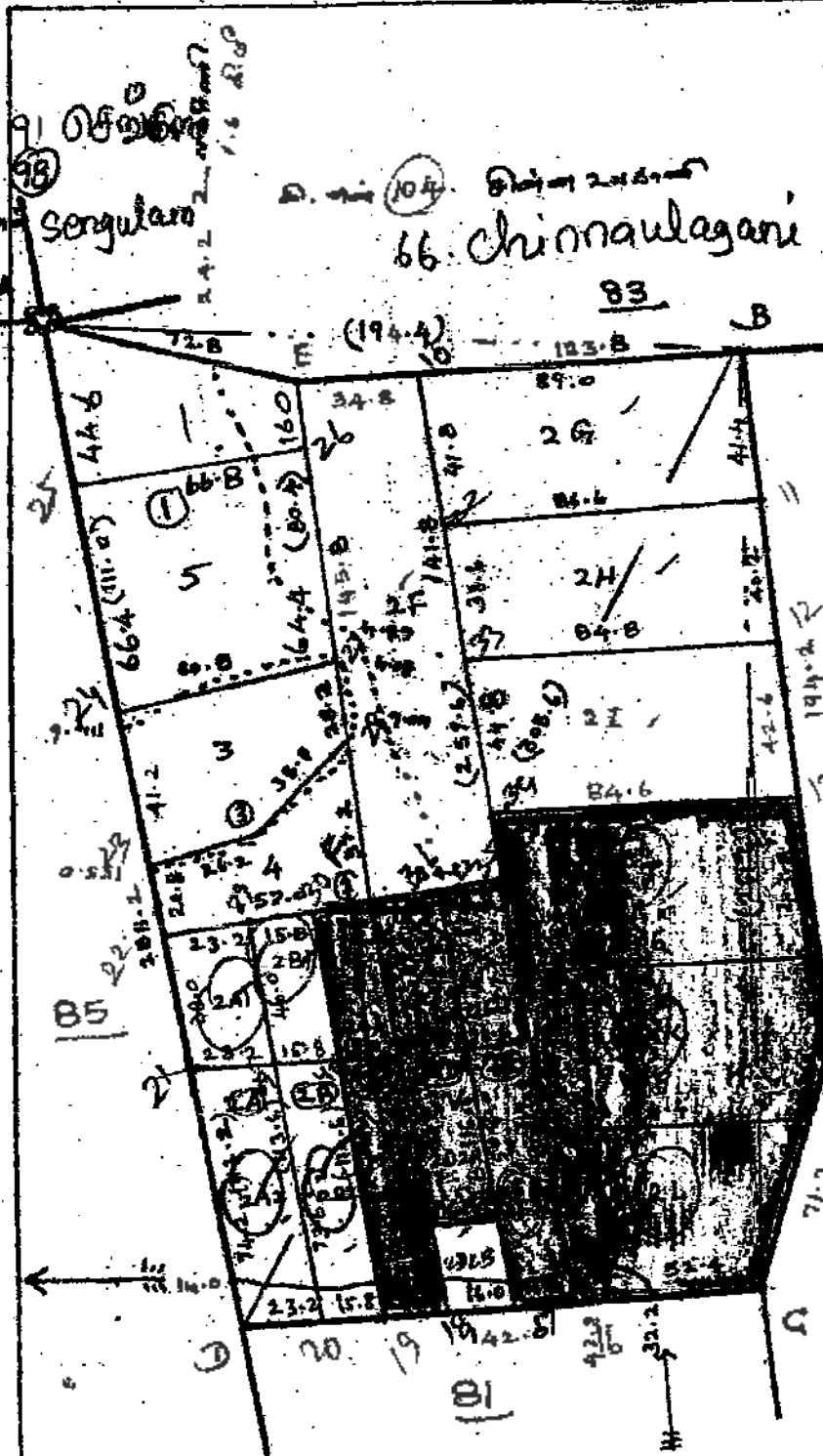
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சிறுமடம்

புள்ளி 20 க்கான பகுதி

பகுதி எண், 84

பகுதி: செங்கடூர்



New Subs 2A1, 2A2, 2B1, 2B2, 2C1, 2C2, 2D1, 2D2, 2E1, 2E2 as per plot plan TICBA/207/1417 dt 17.9.07

New Subs 2D2A, 2D2B as per plan TICBA/1245/1432 dt: 13.01.20  
G. Ravichandran

LEASE AREA

82

		(45.2)
Dist.	2.6	70.6
		E
		D
		(285.2)
3	30.2	151.0
		A
		B
		(305.6)
DE	35.2	157.4
DE	12.6	120.8
Line		115.0
		D
		C
		(261.6)
1	20.2	193.6
		B
		(94.4)
		TK 4-2 E

*[Signature]*  
Village Administrative Officer  
A. Kallanahalli Kodakovil  
Group Village  
Kallikudi (Tk)

*[Signature]*  
G. RAVICHANDRAN, M.Sc., P.G.D.M., M.E.  
MINING GEOLOGIST  
ROP / MAS / 197 / 2005 / A

New Subs 1, 5 Plotted  
A74 TK-8A/384/1416  
DT 23.3.07

No. 132-67

KALLANAI  
TRUMANGALAM TALUK

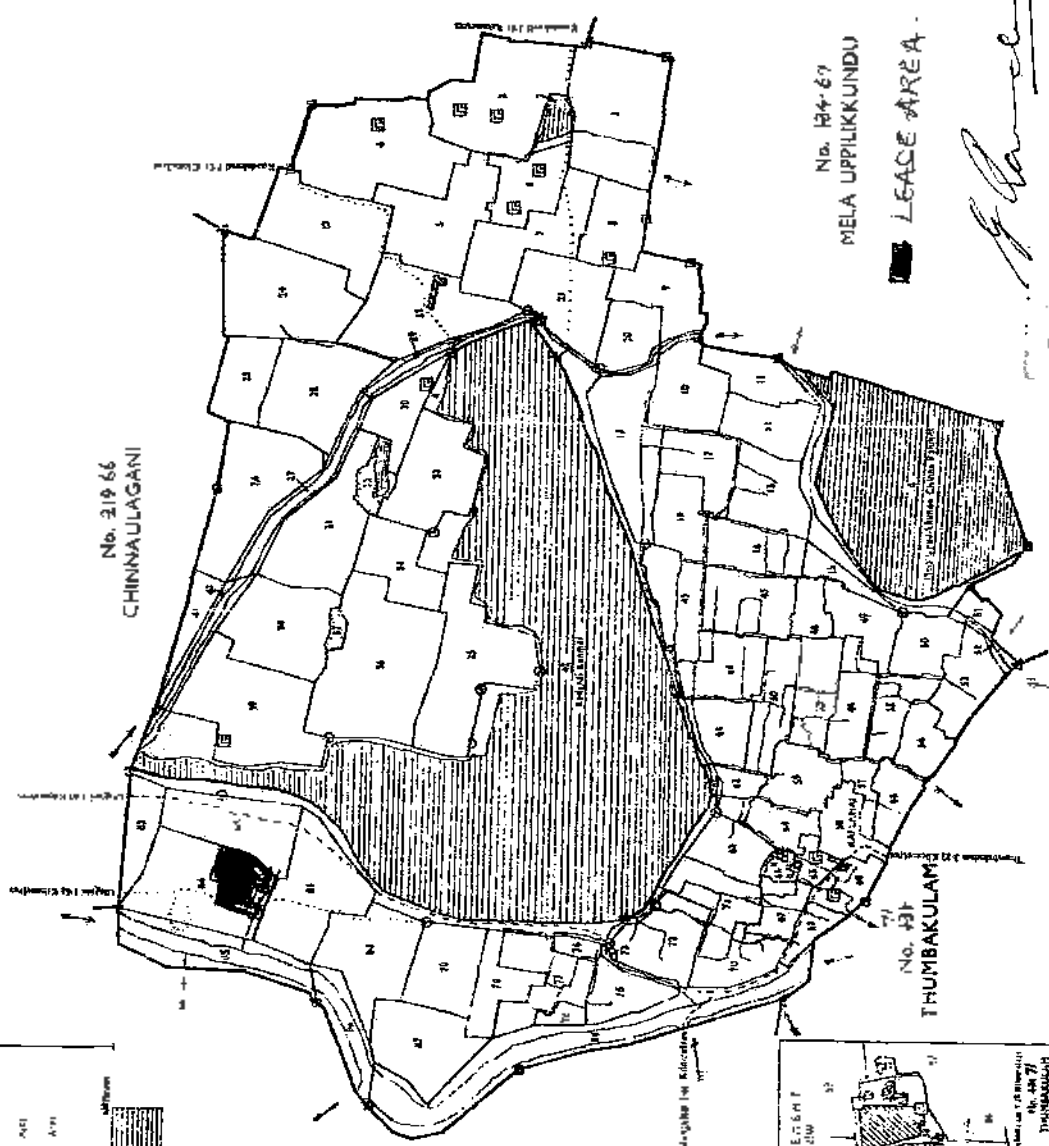
MAHARAJ DISTRICT

Area 318 55  
Scale 1:1000

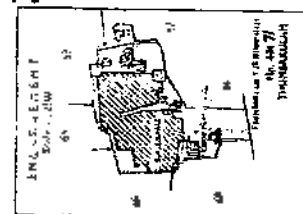


No. 318 55  
ACHANGULAM

Symbol	Name of Block
1	1. Vac.
2	2. Agriculture (Paddy Field)
3	3. Other Cultivable
4	4. Non-Cultivable (Road)



No. 134-67  
MELA UPELLIKKUNDU  
LEASE AREA



No. 433 66  
KOODAKOVIL

**SYMBOLS**

1	1. Vac.
2	2. Agriculture (Paddy Field)
3	3. Other Cultivable
4	4. Non-Cultivable (Road)
5	5. Non-Cultivable (Water)
6	6. Non-Cultivable (Forest)
7	7. Non-Cultivable (Barren Land)
8	8. Non-Cultivable (Mud)
9	9. Non-Cultivable (Salt)
10	10. Non-Cultivable (Other)
11	11. Non-Cultivable (Other)
12	12. Non-Cultivable (Other)
13	13. Non-Cultivable (Other)
14	14. Non-Cultivable (Other)
15	15. Non-Cultivable (Other)
16	16. Non-Cultivable (Other)
17	17. Non-Cultivable (Other)
18	18. Non-Cultivable (Other)
19	19. Non-Cultivable (Other)
20	20. Non-Cultivable (Other)
21	21. Non-Cultivable (Other)
22	22. Non-Cultivable (Other)
23	23. Non-Cultivable (Other)
24	24. Non-Cultivable (Other)
25	25. Non-Cultivable (Other)
26	26. Non-Cultivable (Other)
27	27. Non-Cultivable (Other)
28	28. Non-Cultivable (Other)
29	29. Non-Cultivable (Other)
30	30. Non-Cultivable (Other)
31	31. Non-Cultivable (Other)
32	32. Non-Cultivable (Other)
33	33. Non-Cultivable (Other)
34	34. Non-Cultivable (Other)
35	35. Non-Cultivable (Other)
36	36. Non-Cultivable (Other)
37	37. Non-Cultivable (Other)
38	38. Non-Cultivable (Other)
39	39. Non-Cultivable (Other)
40	40. Non-Cultivable (Other)



*G. Ravichandran*

**G. RAVICHANDRAN, M.Sc., P.G.D.M.E.M.,**  
**MINING GEOLOGIST**  
 RQP / MAS / 197 / 2005 / A  
 VALID UPTO: 12.12.2025

Survey of India, Madras, 1977  
Scale 1:1000

*Handwritten signature*

139

**MINES LAND PHOTO**

மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்லணை கிராமம் பட்டா புலன்கள். 84/2C1,2C2,2D1,2D2A,2E1,2E2,2J,2K,2L மொத்தம் 1-62.17 ஹெக்டேரில் மட்டும் 10 வருடங்களுக்கு உதவிஇயக்குனர், புனிபிபல் மற்றும் சுரங்கத்துறை, மதுரை மாவட்ட ஆட்சியர் அலுவலக வளாகம், மதுரை அவர்களின் செயல்முறை ஆணை எண். 08/கனிமம்/2023 நாள் 14.03.2023ன் படி திரு. S. ரத்தினம், த/பெ. S. சின்னவீரன் அவர்கள் மனு செய்துள்ளார்கள். மேற்படி இடம் உடைகல், ஜல்லி மற்றும் கிராவல் வெட்டி எடுப்பதற்கு அங்கீகரிக்கப்பட்ட இடம் என்பதை இதன் மூலம் சான்றளிக்கிறேன்.

மேற்படி இடத்திற்கு செல்வதற்கு பாதை வசதி உள்ளது என்றும் சான்றளிக்கிறேன்.

இடம்:

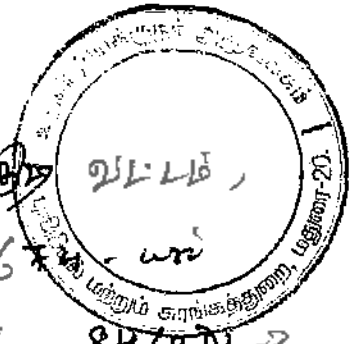
நாள்:

மனுதாரர் கையெழுப்பம்

கிராம நிர்வாக அலுவலர்.

Village Administrative Officer  
Kallanai & Koodakovil  
Group Village  
Kallikudi ( Tk)

சான்றி:



லக்ஷ்மீ லக்ஷ்மீ, கர்னல்  
 கல்வண சிற்றம், டீலா சாண்: 67  
 கர்னல் சாண்: 84/201 -> 0.08.00 சர்ன், 84/201 ->  
 0.06.50 சர்ன், 84/201 -> 0.08.00 சர்ன் லக்ஷ்மீ  
 டீலா சாண்: 1185 - டீலா கர்னல் சாண்: 84/202 -> 0.13.00  
 சர்ன், 84/202A -> 0.08.67 சர்ன், 84/202 -> 0.14.50  
 சர்ன், 84/203 -> 0.37.50 சர்ன், 84/204 -> 0.36.00  
 சர்ன், 84/205 -> 0.30.00 சர்ன் உள்ம டீலா  
 சர்ன் டீலா லக்ஷ்மீ டீலா டீலா டீலா டீலா டீலா  
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 Village Administrative Officer  
 Kallanai & Koodakovil  
 Group Village  
 Kallikudi ( Tk)

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தமிழக அரசு

வருவாய்த் துறை

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

மாவட்டம் : மதுரை

ஸட்டம் : கள்ளிக் குடி

வருவாய் கிராமம் : 100 கல்லளை

பட்டா எண் : 674

உரிமையாளர்கள் பெயர்

1. சின்னவீரன்

மகன்

ரத்தினம்

புல எண்	உட்பிரிவு	புன்செய்		நுன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட-ஏர்	ரூ-பை	ஹெக்ட-ஏர்	ரூ-பை	ஹெக்ட-ஏர்	ரூ-பை	
84	2A1	0-9.00	0.33	-	-	-	-	3910/07-08- -207/1417-20- 09-2007 ✓
84	2B1	0-6.50	0.24	-	-	-	-	3910-1/07- -207/1417-20- 09-2007 ✓
84	2C1	0-8.00	0.30	-	-	-	-	3910-2/07- -207/1417-20- 09-2007 ✓
84	2D1	0-6.50	0.23	-	-	-	-	3910-3/07- -207/1417-20- 09-2007 ✓
84	2E1	0-8.00	0.30	-	-	-	-	3910-4/07- -207/1417-20- 09-2007 ✓
		0-38.00	1.40					

குறிப்பு2:



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.in.gov.in> என்ற இணைய தளத்தில் 24/24/100/00674/60087 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 09-02-2023 அன்று 02:58:16 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode பயன்பாள் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

*(Handwritten signature)*



தமிழக அரசு

வருவாய்த் துறை

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

மாவட்டம் : மதுரை

வட்டம் : கள்ளக்குடி

வருவாய் கிராமம் : 100 கல்லளை

பட்டா எண் : 1185

உரிமையாளர்கள் பெயர்

1. சின்னவீரன்

மகன்

ராஜ்ஜிதன்



புல எண்	உபபிரிவு	புன்செய்		நுன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட-ஏர்	ரூ-பை	ஹெக்ட-ஏர்	ரூ-பை	ஹெக்ட-ஏர்	ரூ-பை	
81	2A1	0-19.50	0.75	-	-	-	-	2022/0103/24/238384- -- 25-11-2022
84	2A2	0-16.00	0.59	-	-	-	-	2022/0103/24/234945- -- 03-11-2022 ✓
84	2B2	0-11.50	0.45	-	-	-	-	2022/0103/24/234945- -207/1417 - 03-11- 2022 ✓
84	2C2	0-13.00	0.48	-	-	-	-	2022/0103/24/234945- -207/1417 - 03-11- 2022 ✓
84	2D2A	0-8.67	0.32	-	-	-	-	2023/0105/24/468529- 2023/24/24/000065SD - 13-01-2023 ✓
84	2E2	0-14.50	0.54	-	-	-	-	2022/0103/24/234945- -207/1417 - 03-11-2022 ✓
84	2J	0-37.50	1.40	-	-	-	-	2022/0103/24/234945- -- 03-11-2022 ✓
84	2K	0-36.00	1.24	-	-	-	-	2022/0103/24/234945- -- 03-11-2022 ✓
84	2L	0-30.00	1.13	-	-	-	-	2022/0103/24/234945- -- 03-11-2022 ✓
		1-86.67	6.90					

குறிப்பு2 :



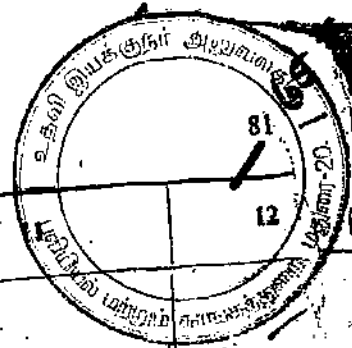
1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 24/24/100/01185/10095 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
2. இத் தகவல்கள் 09-02-2023 அன்று 02:48:44 PM நேரத்தில் அச்சடிக்கப்பட்டது.
3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

*S. S. S. S.*





அ. எண் - 100. கல்லை.



1	2	3	4	5	6	7	8	9	10	
83	1	83-1	அ	4	...	7-1	3	3 71	0 27.5	1 02
83	2	83-2	அ	4	...	7-1	3	3 71	1 24.0	4 60
	2	-2	அ	4	...	7-1	3	3 71	0 60.5	2 25
83	3	83/3	அ	4	...	7-1	3	3 71	1 51.5	5 62
	1	84/1	அ	4	...	7-1	3	3 71	0 20.5	0 75
84	1	84-1	அ	4	...	7-1	3	3 71	0 64.0	2 37
	2A	-2A	அ	4	...	7-1	3	3 71	0 43.5	1 62
	2B	-2B	அ	4	...	7-1	3	3 71	0 25.0	0 92
	2B	-2B	அ	4	...	7-1	3	3 71	0 18.0	0 68
	2C	-2C	அ	4	...	7-1	3	3 71	0 21.0	0 78
	2D	-2D	அ	4	...	7-1	3	3 71	0 19.0	0 70
	2E	-2B	அ	4	...	7-1	3	3 71	0 22.5	0 84
	2F	-2F	அ	4	...	7-1	3	3 71	0 52.5	1 91
	2G	-2G	அ	4	...	7-1	3	3 71	0 36.0	1 33
	2H	-2H	அ	4	...	7-1	3	3 71	0 34.0	1 26
		-2I	அ	4	...	7-1	3	3 71	0 38.5	1 40
			அ	4	...	7-1	3	3 71	0 37.5	1 40

தரிக -  
மயாண்டி.  
தரிக -  
654 மயாண்டி  
454 மயாண்டி  
655 (655) மயாண்டி  
461 க. சுப்பிர மணியத் தேவர் மற்றும் நான்கு பேர்களும். \*  
461 க. சுப்பிர மணியத் தேவர் மற்றும் நான்கு பேர்களும். \*  
461 க. சுப்பிர மணியத் தேவர் மற்றும் நான்கு பேர்களும். \*  
461 க. சுப்பிர மணியத் தேவர் மற்றும் நான்கு பேர்களும். \*  
461 க. சுப்பிர மணியத் தேவர் மற்றும் நான்கு பேர்களும். \*  
601 க. சுப்பிர மணியத் தேவர் மற்றும் நான்கு பேர்களும். \*  
461 க. சுப்பிர மணியத் தேவர் மற்றும் நான்கு பேர்களும். \*  
461 க. சுப்பிர மணியத் தேவர் மற்றும் நான்கு பேர்களும். \*  
461 க. சுப்பிர மணியத் தேவர் மற்றும் நான்கு பேர்களும். \*  
461 க. சுப்பிர மணியத் தேவர் மற்றும் நான்கு பேர்களும். \*

Village Administration Officer  
Kattankulam & Koodekottai  
Kallakudi (TK)





2

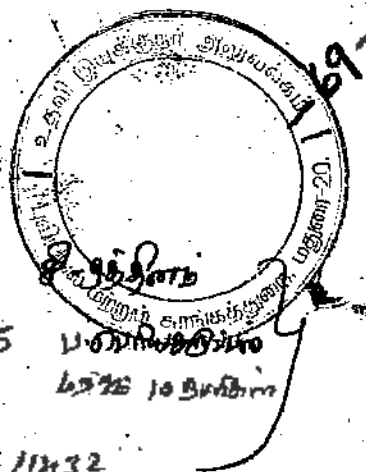
82

கி. எண்- 100. கல்லைகள்.

81-1	1	2	3	4	5	6	7	8	9	10	11
								கு. ஸ்ப. நெ. ஏர்ஸ்.	கு. ஸ்ப.		
84	2K	84-2K	ர	4	...	7-1	3	3 71	0 36.0	1 34	461 க. சுப்பிர மணியத் தேவர் மற்றும் நான்கு பேர்களும். *
	2L	-2L	ர	4	...	7-1	3	3 71	0 30.0	1 13	461 க. சுப்பிர மணியத் தேவர் மற்றும் நான்கு பேர்களும். *
	3	-3	அ	4	...	7-1	3	3 71	0 22.5	0 84	..... தரிசு.
	4	-4	அ	4	...	7-1	3	3 71	0 14.5	0 54	..... தரிசு.
									4. 71.0	17 44	
		85	அ	4D	...				3 08.5	...	குண்டா சதுரக் கிளறு.
		86	அ	4D	...				1 76.0	...	குண்டா சதுரக் கிளறு.
		87-1	ர	4	...	7-1	3	3 71	0 80.0	3 06	298 க. ராமத் தேவர். சதுரக் கிளறு.
	2A	-2A	ர	4	...	7-1	3	3 71	0 05.5	0 19	514 ப. இகுளப் பன் (1). ப. தங்கத் துரை (2). ப. செல்வ ராக (3).
	2B	-2B	ர	4	...	7-1	3	3 71	0 08.0	0 31	521 மா. கத்தத் தேவர்.
	2C	-2C	ர	4	...	7-1	3	3 71	0 19.5	0 75	243 க. முத்துராஜ்.
	2D	-2D	ர	4	...	7-1	3	3 71	0 13.5	0 50	249 க. ராமனாதன்.
	2E	-2E	ர	4	...	7-1	3	3 71	0 16.0	0 56	161 க. பழனி யாண்டி.
	2F	-2F	ர	4	...	7-1	3	3 71	0 25.0	0 94	514 ப. இகுளப் பன் (1). ப. தங்கத் துரை (2). ப. செல்வ ராக (3).
	2G	-2G	ர	4	...	7-1	3	3 71	0 23.0	0 87	249 க. ...

A-82

Village Administrative Officer  
Kallanai & Koodakuvil



84/2D2A → 9-4 → 0-08-67 → 0-32 → 1185

84/2D2B → 9-4 → 0-03-83 → 0-14 → 1125

Handwritten notes in Tamil: க. சி. சார்பு, ப. சி. சார்பு, க. சி. சார்பு, ப. சி. சார்பு

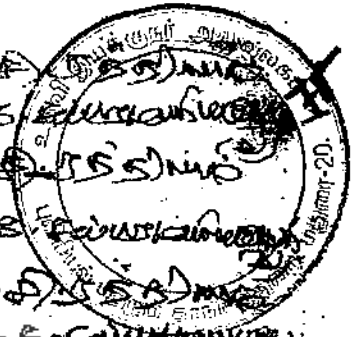
TIRBA/1245/11232  
3643-01-23

Handwritten note: / க. சி. சார்பு /

*[Signature]*  
Village Administrative Officer  
Kallanai & Koodzkavil  
Group Village  
Kalikudi (Tk)

Handwritten signature: S. S. S. S.

2A1 84/2AUN 54 71-3-371 0140 033 674  
 2A2 84/2AUN 54 71-3-371 0160 059 461  
 2B1 84/2BUN 54 71-3-371 0065 023 674  
 2B2 84/2BUN 54 71-3-371 0115 045 461  
 2C1 84/2CUN 54 71-3-371 0080 030 674  
 2C2 84/2CUN 54 71-3-371 0130 048 461  
 2D1 84/2DUN 54 71-3-371 0065 023 674  
 2D2 84/2DUN 54 71-3-371 0125 047 461  
 2E1 84/2EUN 54 71-3-371 0080 030 674  
 2E2 84/2EUN 54 71-3-371 0145 054 461

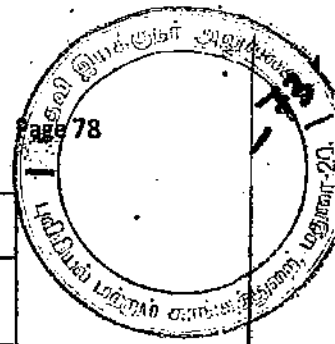


T.E. 20/207/142/1990  
 [Signature]  
 [Signature]

10/00000 1000

Village Administrative Officer  
 Kallanai & Koodakovil  
 Group Village  
 Kallikudi (Tk)

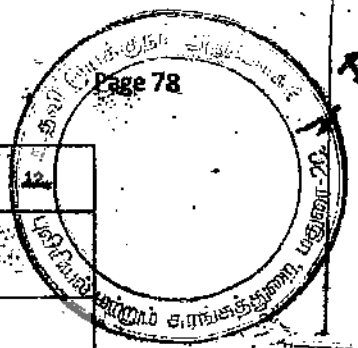
S. S. A. K.



1	2	3	4	5	6	7	8	9	10	11	12					
81	1J	1P	ர	பு		0	7-1	3	3	71	0	31.50	1	18	7-அண்ணாமலை	
81	1K	1P	ர	பு		0	7-1	3	3	71	0	29.00	1	6	268-ராமனாதன்	
81	1L	1P	ர	பு		0	7-1	3	3	71	0	32.50	1	18	5-அடியாவு	
81	2A1	2AP	ர	பு		0	7-1	3	3	71	6	18.50	0	75	218- மீனாட்சியம்மாள்	
81	2A2	2A,2B, 2C,2D,	P	ர	பு	8	8	7-1	3	3	71	1	81.00	6	0	67-ராமத்தேவர் மற்றும் 7 நபர்கள்
81	2B1	2BP	ர	பு		0	7-1	3	3	71	0	18.00	0	69	298-ராமத்தேவர்	
81	2C1	2CP	ர	பு		0	7-1	3	3	71	0	19.00	0	68	219-மீனாட்சி	
81	2D1	2DP	ர	பு		0	7-1	3	3	71	0	20.00	0	75	713-விசயம்மாள் என்ற செவ்வையம்மாள்	
81	2E1	2EP	ர	பு		0	7-1	3	3	71	6	21.00	0	76	160- புனிதபாளையத்தேவர்	
TOTAL FOR SURVEY NUMBER-81									4	18.00	15	35				
82	1	1	அ	பு			7-1	3	3	71	2	2.50	7	50	தரிசு	
82	2A	2	P	ர	பு	0	0	7-1	3	3	71	0	55.00	2	6	100-ராமத்தேவர் மற்றும் 7 நபர்கள்
82	2B	2	P	ர	பு	0	0	7-1	3	3	71	0	10.50	0	35	60-ராமத்தேவர் மற்றும் 3 நபர்கள்
82	3	3	அ	பு		0	7-1	3	0	0	0	44.50	0	40	தரிசு	
TOTAL FOR SURVEY NUMBER-82									3	12.50	9	92				
83	1	1	அ	பு			7-1	3	3	71	0	27.50	1	3	மய்யாணம்	
83	2	83-2	அ	பு			7-1	3	3	71	1	24.00	2	35	தரிசு	
TOTAL FOR SURVEY NUMBER-83									1	51.50	3	38				
84	1	84-1	P	ர	பு	0	0	7-1	3	3	71	0	20.50	0	75	854-செவ்வையம்மாள்
84	2A1	84-2A	P	ர	பு		0	7-1	3	3	71	0	8.00	0	33	874-ரத்தினம்

S. S. S. S.

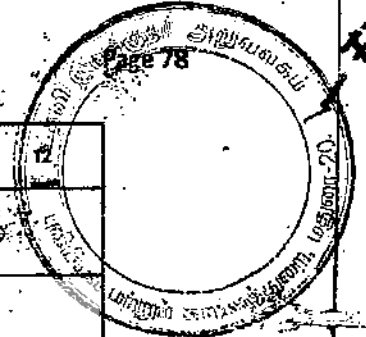
Village Administrator  
Kallakudi & Koodakudi  
Kallakudi (Tk)



1		2		3		4		5		6		7		8		9		10		11	
81	1J	1P		ர	பு			0	7-1	3	3	71	0	31.50	1	18	7-அண்ணாமலை				
81	1K	1P		ர	பு			0	7-1	3	3	71	0	29.00	1	6	248-ராமசாத்தன்				
81	1L	1P		ர	பு			0	7-1	3	3	71	0	32.50	1	18	5-அடியாவு				
81	2A1	2AP		ர	பு			0	7-1	3	3	71	0	19.50	0	75	218-யீனா சியுமமாள்				
81	2A2	2A,2B, 2C,2D,	P	ர	பு			0	7-1	3	3	71	1	51.00	6	0	557-ராமத்தேவர் மற்றும் 7 நபர்கள்				
81	2B1	2BP		ர	பு			0	7-1	3	3	71	0	18.00	0	69	298-ராமத்தேவர்				
81	2C1	2CP		ர	பு			0	7-1	3	3	71	0	19.00	0	68	219-யீனா சி				
81	2D1	2DP		ர	பு			0	7-1	3	3	71	0	20.00	0	75	713-சூர் சியுமமாள் கையறு வெள்ளையம்மாள்				
81	2E1	2EP		ர	பு			0	7-1	3	3	71	0	21.00	0	75	160-புத்தியாசுத்தேவர்				
TOTAL FOR SURVEY NUMBER-81														4	18.00	15	35				
82	1	1		அ	பு				7-1	3	3	71	2	2.50	7	50	தரிசு				
82	2A	2	P	ர	பு			0	7-1	3	3	71	0	55.00	2	6	500-ராமத்தேவர் மற்றும் 7 நபர்கள்				
82	2B	2	P	ர	பு			0	7-1	3	3	71	0	10.50	0	25	500-ராமத்தேவர் மற்றும் 7 நபர்கள்				
82	3	3		அ	பு			0	7-1	3	0	0	0	44.50	20	40	தரிசு				
TOTAL FOR SURVEY NUMBER-82														3	12.50	9	92				
83	1	1		அ	பு				7-1	3	3	71	0	27.50	1	3	முயானம்				
83	2	83-2		அ	பு				7-1	3	3	71	1	24.00	2	25	தரிசு				
TOTAL FOR SURVEY NUMBER-83														1	51.50	3	38				
84	1	84-1	P	ர	பு			0	7-1	3	3	71	0	20.50	0	75	654-சைலம்மாள்				
84	2A1	84-2A	P	ர	பு			0	7-1	3	3	71	0	9.00	0	33	874-ரத்தினம் ✓				

S. Sathish

Village Administration Officer  
Kallanai & Koodakovi  
Group Village  
Kallanai (Tk)



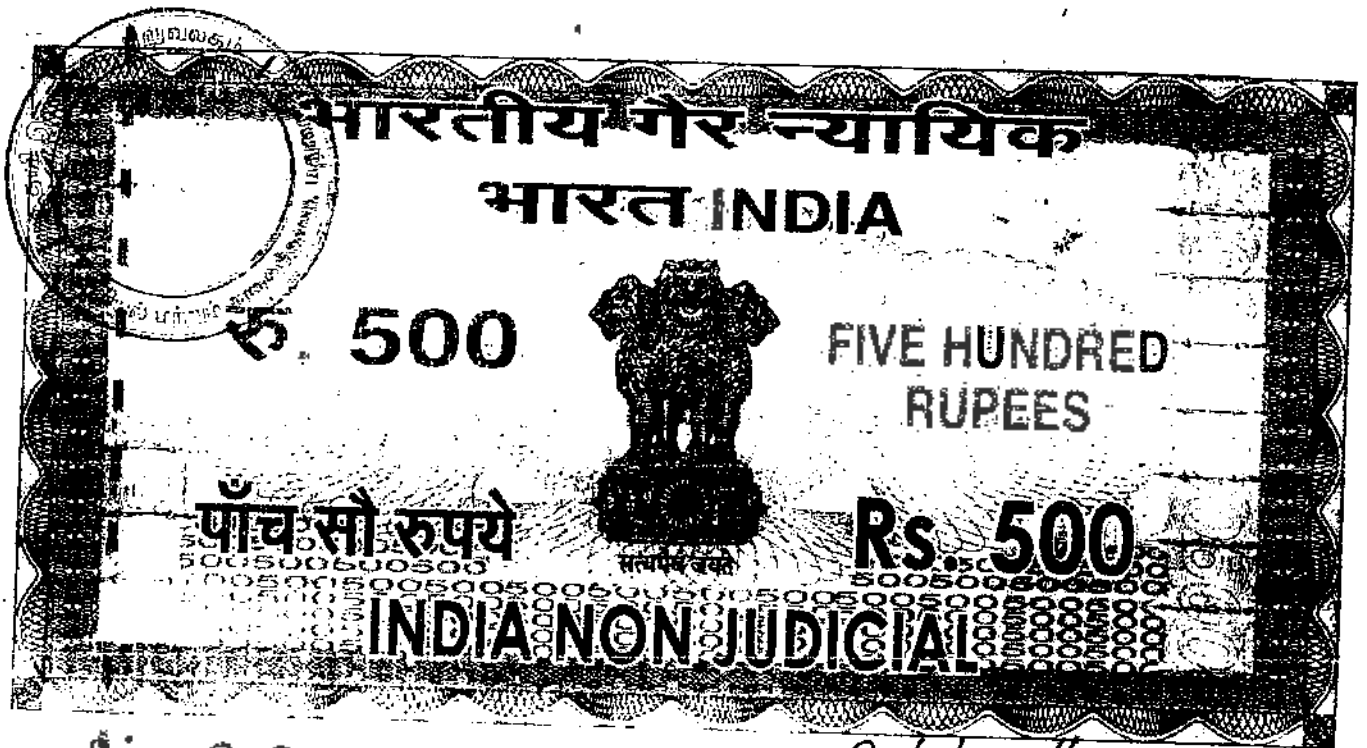
1		2		3		4		5		6		7		8		9		10		11		12	
81	1J	1P	ர	பு		0	7-1	3	3	71	0	31.50	1	18	7-அண்ணாமலை								
81	1K	1P	ர	பு		0	7-1	3	3	71	0	29.00	1	6	248-ராமணாதன்								
81	1L	1P	ர	பு		0	7-1	3	3	71	0	32.50	1	18	5-அய்யாபவ								
81	2A1	2AP	ர	பு		0	7-1	3	3	71	0	18.50	0	75	218- மீனாட்சியம்மாள்								
81	2A2	2A,2B, 2C,2D	P	ர	பு	0	0	7-1	3	3	71	1	61.00	6	0	557-ராமத்தேவர் மற்றும் 7 நபர்கள்							
81	2B1	2BP	ர	பு		0	7-1	3	3	71	0	18.00	0	68	298-ராமத்தேவர்								
81	2C1	2CP	ர	பு		0	7-1	3	3	71	0	12.00	0	68	218-மீனாட்சி								
81	2D1	2DP	ர	பு		0	7-1	3	3	71	0	20.00	0	75	713-சுப்பிரமணியம் என்ற வேலம்மாள்								
81	2E1	2EP	ர	பு		0	7-1	3	3	71	0	21.00	0	75	160- புஷ்பாண்டியத்தேவர்								
TOTAL FOR SURVEY NUMBER-81												4	16.00	75	35								
82	1	1	அ	பு			7-1	3	3	71	2	2.50	7	50	தரிக								
82	2A	2	P	ர	பு	0	0	7-1	3	3	71	0	55.00	2	6	100-ராமத்தேவர் மற்றும் 7 நபர்கள்							
82	2B	2	P	ர	பு	0	0	7-1	3	3	71	0	10.50	0	0	50-ராமத்தேவர் மற்றும் 7 நபர்கள்							
82	3	3	அ	பு		0	7-1	3	0	0	0	44.50	0	10	தரிக								
TOTAL FOR SURVEY NUMBER-82												3	12.50	9	62								
83	1	1	அ	பு			7-1	3	3	71	0	27.50	1	3	மயானம்								
83	2	83-2	அ	பு			7-1	3	3	71	1	24.00	2	35	தரிக								
TOTAL FOR SURVEY NUMBER-83												1	51.50	3	38								
84	1	84-1	P	ர	பு	0	0	7-1	3	3	71	0	20.50	0	75	654-வேலம்மாள்							
84	2A1	84-2A	P	ர	பு	0	7-1	3	3	71	0	9.00	0	33	674-ரத்தினம்								

S. S. S. S.

Village Administrative Officer  
Kallanai & Koodakovil  
Group Village  
Kallakudi (Tk)







தமிழ்நாடு தமிழ்நாடு TAMILNADU ரூபாய் ரூபாய் *Delashimolka* AT 918024

20.10.2022 9 நினைம்  
தினமலம்

ச. ஜெயசிபிமுத்து  
சுத்திசைத்தரம் விநியோகம்  
EO. உசிலம்பட்டி ரோடு  
திருமங்கலம், தமிழ்நாடு  
ROC No: 3332 / C2 / 97

2.

மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், மேலஉப்பிலிக்குண்டு அஞ்சல், கல்லணை கிராமம், மேற்கு தெரு, கதவு எண்.3/38-ல் வசிக்கும் திரு.பழனிபாண்டி அவர்கள் குமாரர் திரு.P.பெரியகருப்பன் (ஆதார் அடையாள அட்டை எண்.2224 0576 3399)-1,

மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், நெடுங்குளம் அஞ்சல், T.புதூர் கிராமம், கதவு எண்.3/37-ல் வசிக்கும் மேற்படி 1வது நபரின் குமாரர் திரு.P.அண்ணாமலை (ஆதார் அடையாள அட்டை.எண்.6848 0353 0228)-2,

கிரையம் கொடுப்பவர்கள்

→ கிரையம் கொடுப்பவர்  
கிரையம் பெறப்பவர்

P. பெரியகருப்பன்



S. *[Signature]*

P. சிவசுப்பிரமணியன்

P. விஜயலட்சுமி

→ கிரையம் பெறப்பவர்  
S. *[Signature]*

P. Velumangalam

R. லக்ஷ்மி

10022 10033

P. கிருஷ்ணமூர்த்தி

R. *[Signature]*

25

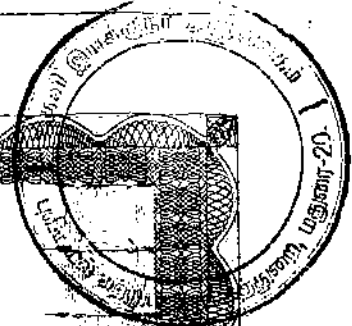
P. கிருஷ்ணமூர்த்தி

R. *[Signature]*

2

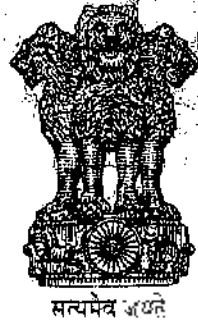
K. *[Signature]*

S. *[Signature]* 89



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भारत INDIA

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Rs. 500

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தமிழ்நாடு தமிழ்நாடு TAMILNADU கோலாடு *Dulashiboundu* AT 918025

20.10.2022 29 சிமம்  
சிவசைவம்

ச. சூலாசிபிரநந்தன்  
சுவிதிரத்தாள் விற்பனைகளை  
60, உசிலம்பட்டி ரோடு,  
திருமங்கலம், தமிழ்நாடு  
ROC No: 3332 / C2 / 97

3.

மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், மேலஉப்பிலிக்குண்டு அஞ்சல், சல்லலாண கிராமம், மேற்கு தெரு, கதவு எண்.3/38-ல் வசிக்கும் மேற்படி 1வது நபரின் குமாரத்தியும், 2வது நபரின் உடன்பிறந்த சகோதரியுமான திருமதி.விஜயலெட்சுமி (ஆதார் அடையாள அட்டை எண்.8199 1407 6576)-3,

மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், சிவரக்கோட்டை கிராமம், பாண்டியன் தெரு என்ற முகவரியில் வசிக்கும் மேற்படி 1வது நபரின் குமாரத்தியும், மேற்படி 2,3 நபர்களின் உடன்பிறந்த சகோதரியும், திரு.பகவதி அவர்கள் மனைவியுமான திருமதி.ப.ஜெயக்கொடி (ஆதார் அடையாள அட்டை எண்.2482 5824 4375)-4, கிரையம் பெறுபவர்

M. சுவாமிசுப்பன் K. Kannan S. *[Signature]*  
P. சுவாமிசுப்பன்  
P. ஜெயலட்சுமி → திரு. ப. ஜெயலட்சுமி  
→ திரு. டி.வி. ஜெயலட்சுமி

P. *[Signature]*  
P. ஜெயலட்சுமி  
K. சுவாமிசுப்பன்

→ திரு. K. ஜெயலட்சுமி  
R. *[Signature]* புத்தகம் 022 ம் வருடத்தி... 10033  
R. *[Signature]* 25 தாள் கணக்கு கொண்டு  
R. *[Signature]* 3 வது நாள் மதிவு அலுவலர்

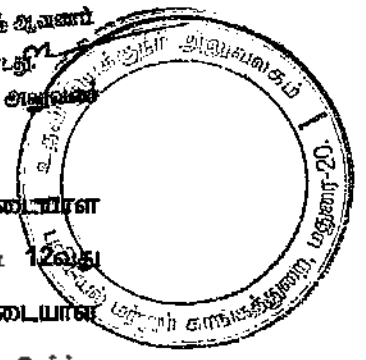
S. *[Signature]*

A-90

149



.....புத்தகம்.....  
 .....  
 .....  
 5. ....



மேற்படி 11வது நபரின் குமாரசாதி R.சந்தியா (ஆதார் அட்டையின் அட்டைஎண்.9507 8552 7950)-12, மேற்படி 11வது நபரின் குமாரசாதி, மேற்படி 12வது நபரின் உடன்பிறந்த சகோதரகுமாரன் திரு.R.சந்திரா (ஆதார் அட்டையின் அட்டைஎண்.4131 1118 6939)-13 ஆகிய நாங்கள் பதிவு செய்து பேர்களுக்கும் சேர்ந்து எழுதிக்கொடுத்த நஞ்சை நிலம் சுத்தக் கிரையப்பத்திரம்.

என்னவென்றால், 02.04.1986 ஆம் தேதியில் திருமங்கலம் சபரி ஆபீஸ் 1-1533-149-152-521/1986 நம்பராக பதிவு செய்துள்ள கிரைய ஆவணத்தின் மூலமாகவும்,

10.07.1990 ஆம் தேதியில் திருமங்கலம் சபரி ஆபீஸ் 1-1626-11-14-1464/1990 நம்பராக பதிவு செய்துள்ள கிரைய ஆவணத்தின் மூலமாகவும், ஆகிய இரண்டு கிரைய ஆவணங்களின் மூலம் எங்களில் 1வது நபர் தனித்து சுயாஜிதமாய் கிரையம் பெற்றும் எங்களில் 1,6,9,10,11,12,13 நபர்களின் பெயராலும், கே.பிரமன், சக்திவேல், பழனிமாண்டி, கச்சம்மாள் ஆகிய நான்கு பேர்கள் பெயராலும் கல்லணை கிராமக்கணக்கில் கூட்டுப்பட்டா எண்.1125 என ஏற்பட்டும், எங்களில் 1,6,9,10,11,12,13 நபர்களின் பெயராலும், ராமன் அவர்கள் பெயராலும் கல்லணை கிராமக்கணக்கில் கூட்டுப்பட்டா எண்.1126 என ஏற்பட்டும், எங்களில் 9,10,11,12,13 நபர்களின் பெயரால் கல்லணை கிராமக்கணக்கில் கூட்டுப்பட்டா எண்.1127 என ஏற்பட்டும், எங்களில் 1,6 நபர்களின் பெயராலும், ராமன் அவர்கள் பெயராலும் கல்லணை கிராமக்கணக்கில் கூட்டுப்பட்டா எண்.1128 என ஏற்பட்டும், எங்களில் 1 வது நபரின் பெயராலும், மீனாட்சி அவர்கள் பெயராலும் கல்லணை கிராமக்கணக்கில் கூட்டுப்பட்டா எண்.219 என ஏற்பட்டும், அது முதல் எவ்வித வில்லங்கமும் இல்லாமல் எங்கள் கைவசம் வைத்து நாங்கள் அனுபவித்து வருகின்ற புஞ்சை நிலங்களையும் அதன் சகல உரிமைகளையும் சேர்த்து இன்று தேதியில் நாங்கள் தங்களுக்கு சுத்தக்கிரையம் செய்து எங்களது குடும்ப அவசிய செலவிற்காகவும், சில்லரைக் கடன்களைத் தீர்த்துக்கொடுக்கவும் நாங்கள் தங்களிடம் நேரில் ரொக்கம் பெற்றுக் கொண்டது ரூபாய்.2,28,490/- இந்த ரூபாய் இரண்டு லட்சத்தி இருபத்தி எட்டாயிரத்தி நானூற்றி தொண்ணூறாயும் தங்களிடமிருந்து எங்களுக்கு வரவு வந்து விட்டபடியால் இதுமுதல் நாங்கள் இதன் நபரில் கண்ட புஞ்சை நிலங்களை என்மென்றைக்கும் சர்வசத்திர பத்தியமாய் பத்திரபெளத்திர பரம்பரையாய் தானாதிவினிமய வீற்கிரையங்களுக்கு யோக்கியமாய் ஆண்டலுயவித்துக் கொண்டு சகத்தின் இருப்பீர்களாகவும்.

கிரையம் கொடுப்பவர்கள் கிரையம் பெறுபவர்

V. வெளிய நடுப்பன் K. Karunan S. [Signature]

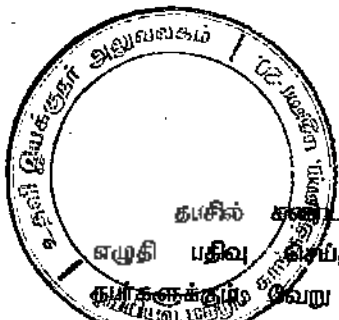
P. [Signature] -> [Signature]

P. வினாயலட்சுமி -> [Signature]

R. [Signature] -> [Signature]

P. Velmarayan R. [Signature]

P. [Signature] A-92 S. [Signature] (5)



புத்தகம்..... 10033  
 25  
 உறுப்பினர் பதிவு அலுவலர்

6.

தபசில் கண்ட புஞ்சை நிலங்களைப் பொறுத்து நாங்கள் தங்களுக்கு கிராமம் எழுதி பதிவு செய்து கொடுத்திருப்பதைத் தவிர வேறு யாருக்கும், வேறு எந்த நபர்களுக்கும் வேறு எவ்வித வில்லங்கங்களுக்கும் உள்படுத்தவில்லையென்றும், மேலும் இச்சொத்துக்களைப் பொறுத்து எங்களுக்கோ, எங்களது வாரிசுகளுக்கோ, பின் வழி வாரிசுகளுக்கோ யாதொரு பாத்தியமும், உரிமையும், பின்தொடர்ச்சியும் கிடையாதென்றும், அப்படி ஏதேனும் வில்லங்க விவகாரங்கள் ஏற்பட்டால் அதனை நாங்களே முன்னிருந்து எங்களுக்குப் பாத்தியப்பட்ட இதர சொத்துக்களிலிருந்து தீர்த்துக் கொடுப்போமாகவும். இத்துடன் தபசில் கண்ட சொத்துக்களுக்கு தங்கள் பெயரால் பட்டா மாறுதல் நடுனாவும் ஆன்லைன் மூலம் தாக்கல் செய்துள்ளோம். மேற்படி சொத்துக்களின் சுவாதினத்தை தங்கள் வசம் ஒப்படைத்து விட்டோம். மேற்படி சொத்து கல்லணை கிராம புஞ்சாயத்து எல்லைக்குள்பட்டது.

இதற்கு ஆதரவாக மேலே விவரித்துள்ள 521/1986, 1464/1990 கிராம ஆலணங்களின் ஐஜராக்ஸ் நகலையும் தங்கள் வசம் ஒப்படைத்து விட்டோம்.

**கிராம சொத்து விபரம்**

1. மதுரை தெற்கு ரீடி திருமங்கலம் சட்ட கல்லணை கிராமம் கூட்டுப்பட்டா எண்.1125-க்கு சேர்ந்த புஞ்சை சர்வே 84/2A2 நம்பர் 0.16.0 ஏர்ஸ்க்கு செண்டு 40 உள்ள புஞ்சை நிலம் இதுவும்,
2. மேற்படி சட்ட கல்லணை கிராமம் கூட்டுப்பட்டா எண்.1125-க்கு சேர்ந்த புஞ்சை சர்வே 84/2B2 நம்பர் 0.11.5 ஏர்ஸ்க்கு செண்டு 28 உள்ள புஞ்சை நிலம் இதுவும்,
3. மேற்படி சட்ட கல்லணை கிராமம் கூட்டுப்பட்டா எண்.1125-க்கு சேர்ந்த புஞ்சை சர்வே 84/2C2 நம்பர் 0.13.0 ஏர்ஸ்க்கு செண்டு 32 உள்ள புஞ்சை நிலம் இதுவும்,
4. மேற்படி சட்ட கல்லணை கிராமம் கூட்டுப்பட்டா எண்.1125-க்கு சேர்ந்த புஞ்சை சர்வே 84/2E2 நம்பர் 0.14.5 ஏர்ஸ்க்கு செண்டு 36 உள்ள புஞ்சை நிலம் இதுவும்,
5. மேற்படி சட்ட கல்லணை கிராமம் கூட்டுப்பட்டா எண்.1125-க்கு சேர்ந்த புஞ்சை சர்வே 84/2J நம்பர் 0.37.5 ஏர்ஸ்க்கு செண்டு 92.62-ல் தென்புறம் செண்டு 35.24 உள்ள புஞ்சை நிலம் இதுவும்,

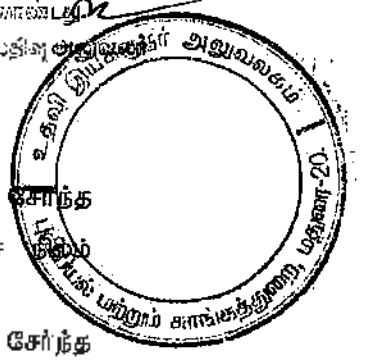
கிராமம் கொடுப்பவர்கள்

ப. வெளியகடுப்பன்  
 P. சிவசுப்பிரமணியன்  
 P. விசுவலட்சுமி  
 P. விசுவலட்சுமி  
 P. வெளியகடுப்பன்  
 P. வெளியகடுப்பன்  
 P. வெளியகடுப்பன்

கிராமம் பெறுபவர்

P. சிவசுப்பிரமணியன்  
  
 P. சிவசுப்பிரமணியன்  
 R. சந்திரன்  
 R. சந்திரன்  
 R. சந்திரன்

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.7.

6. மேற்படி சட்ட கல்லணை கிராமம் கூட்டுப்பட்டா எண்.1125-க்கு சேர்ந்த புஞ்சை சர்வே 84/2K நம்பர் 0.36.0 ஏர்ஸ்க்கு செண்டு 89 உள்ள புஞ்சை நிலம் இதுவும்,

7. மேற்படி சட்ட கல்லணை கிராமம் கூட்டுப்பட்டா எண்.1125-க்கு சேர்ந்த புஞ்சை சர்வே 84/2L நம்பர் 0.30.0 ஏர்ஸ்க்கு செண்டு 74-ல் வடபுறம் செண்டு 61.21 உள்ள புஞ்சை நிலம் இதுவும்,

ஆக ஏழு லக்க சொத்துக்களுக்கும் சேர்ந்து மொத்தம் ஏக்கர் 3 செண்டு 21.45 உள்ள புஞ்சை நிலங்களுக்கு ஒரே நான்குமால்:-

- வடக்கே:- கிரையம் பெறுபவராகிய தங்கள் (C.ரத்தினம்) கைவசமுள்ள புஞ்சை நிலம்
- கிழக்கே:- சர்வே 82 நம்பர் புஞ்சை நிலம்
- தெற்கே:- ரஞ்சிங்குமார் புஞ்சை நிலம்
- மேற்கே:- குண்டாறு

இந்தநான்குமாலுக்குள்பட்டது. ஏக்கர் 3 செண்டு 21.45 உள்ள புஞ்சை நிலங்கள் இதுவும்.

இதன் மதிப்பு ரூபாய்.1,43,050/-

8. மேற்படி சட்ட கல்லணை கிராமம் கூட்டுப்பட்டா எண்.1126-க்கு சேர்ந்த புஞ்சை சர்வே 81/2B1 நம்பர் 0.18.0 ஏர்ஸ்க்கு செண்டு 44 உள்ள புஞ்சை நிலம் இதுவும்,

9. மேற்படி சட்ட கல்லணை கிராமம் கூட்டுப்பட்டா எண்.219-க்கு சேர்ந்த புஞ்சை சர்வே 81/2C1 நம்பர் 0.19.0 ஏர்ஸ்க்கு செண்டு 47 உள்ள புஞ்சை நிலம் இதுவும்,

10. மேற்படி சட்ட கல்லணை கிராமம் கூட்டுப்பட்டா எண்.1127-க்கு சேர்ந்த புஞ்சை சர்வே 81/2D1 நம்பர் 0.20.0 ஏர்ஸ்க்கு செண்டு 49 உள்ள புஞ்சை நிலம் இதுவும்,

11. மேற்படி சட்ட கல்லணை கிராமம் கூட்டுப்பட்டா எண்.1128-க்கு சேர்ந்த புஞ்சை சர்வே 81/2E1 நம்பர் 0.21.0 ஏர்ஸ்க்கு செண்டு 52 உள்ள புஞ்சை முழுஸ்தலம் இதுவும்,

ஆக 8,9,10,11 லக்க சொத்துக்களுக்கும் சேர்ந்து மொத்தம் ஏக்கர் 1 செண்டு 92 உள்ள புஞ்சை நிலங்களுக்கு ஒரே நான்குமால்:-

- |                       |                  |
|-----------------------|------------------|
| கிரையம் கொடுப்பவர்கள் | கிரையம் பெறுபவர் |
| M. வெலியாசாமி         | S. இராஜா         |
| P. சிவசுந்தரி         | B. குமாரசாமி     |
| P. விஜயலக்ஷ்மி        | K. கல்யாண        |
| B. சிவசுந்தரி         |                  |

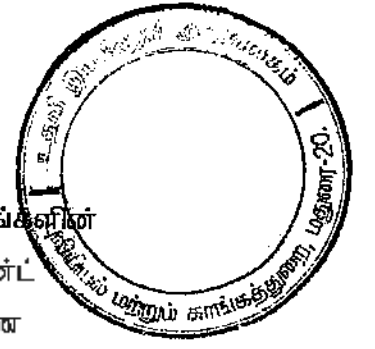
p. velmasiam  
 P8ருப்புவாசாமி  
 K. KANNAN

R. சுவாமி  
 R. சுவாமி  
 R. சுவாமி  
 A-94

S. இராஜா 153



1968-ம் வருடத்திய சென்னை முத்திரைச்சட்டம் விதி 3 (1) பத்திரங்களின்  
குறைவு மதிப்பீடு தடுப்பு விதிகள் (ன்) கீழ்க்கும் ஸ்டேட்மெண்ட்  
கிராமம் : கல்லணை



வரிசை எண்	சர்வே எண்	விஸ்தீரணம்	சொத்தின் தன்மை	நடைமுறை நில வரப்படி எழுதிக் கொடுப்பவர்களின் மதிப்பீடு	
1	2	3	4	5	
		ஏ - செ		ரூ.	பை.
1.	84/2A2	0-40	பஞ்சை	17,800	00
2.	84/2B2	0-28	பஞ்சை	12,460	00
3.	84/2C2	0-32	பஞ்சை	14,240	00
4.	84/2E2	0-36	பஞ்சை	16,020	00
5.	84/2J	0-35.24	பஞ்சை	15,685	00
6.	84/2K	0-89	பஞ்சை	39,605	00
7.	84/2L	0-61.21	பஞ்சை	27,240	00
8.	81/2B1	0-44	பஞ்சை	19,580	00
9.	81/2C1	0-47	பஞ்சை	20,915	00
10.	81/2D1	0-49	பஞ்சை	21,805	00
11.	81/2E1	0-52	பஞ்சை	23,140	00
		5-13.45	ஆக மொத்தம்	2,28,490	00

கிராமம் கொடுப்பவர்கள்

V. ரமணிசாமிநாயகர்

P. சிவசாமிநாயகர்

P. வீரையாசாமிநாயகர்

→ கி. சிவசாமிநாயகர்

B. ரமணிசாமிநாயகர்

P. Velumaniyan

P. Senthil Kumar

K. Ramanathan

K. Ramanathan

கிராமம் பெறுபவர்

S. Senthil Kumar

B. Senthil Kumar

→ கி. சிவசாமிநாயகர்

R. Senthil Kumar

R. Senthil Kumar

R. Senthil Kumar





தமிழக அரசு  
வருவாய்த் துறை

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

வட்டம் : கள்ளிக்கோட்டை வட்டம்  
பட்டா எண் : 1125

பதிவு செய்துள்ள உரிமையாளர்: **சுப்பிரமணியன் குமார்**  
பதிவு செய்துள்ள முகவரி: **சுப்பிரமணியன் குமார்**

உரிமையாளர்கள் பெயர்

- |          |      |               |                                     |
|----------|------|---------------|-------------------------------------|
| 1. மகன்  | மகன் | பெரியகருப்பன் | <input checked="" type="checkbox"/> |
| 2. மகன்  | மகன் | கருப்பத்தேவர் | <input checked="" type="checkbox"/> |
| 3. மகன்  | மகன் | கே. பிரமன்    | <input checked="" type="checkbox"/> |
| 4. மகன்  | மகன் | சந்திரவேல்    | <input checked="" type="checkbox"/> |
| 5. மகன்  | மகன் | பழனிபாண்டி    | <input checked="" type="checkbox"/> |
| 6. மகன்  | மகன் | கச்சம்மாள்    | <input checked="" type="checkbox"/> |
| 7. மகன்  | மகன் | குருசம்மாள்   | <input checked="" type="checkbox"/> |
| 8. மகன்  | மகன் | உலாபாயி       | <input checked="" type="checkbox"/> |
| 9. மகன்  | மகன் | லக்ஷ்மி       | <input checked="" type="checkbox"/> |
| 10. மகன் | மகன் | சந்திர        | <input checked="" type="checkbox"/> |
| 11. மகன் | மகன் | சந்திரா       | <input checked="" type="checkbox"/> |

பல எண்	உட்பிரிவு	பள்ளி		நள்ளி		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்டேர்	ரூ - பை	ஹெக்டேர்	ரூ - பை	ஹெக்டேர்	ரூ - பை	
84	2A4	0 - 28.00	0.59	--	--	--	--	2021/0103/24/162796- -- 24-05-2021
84	2B2	0 - 11.50	0.45	--	--	--	--	2021/0103/24/162796- -207/1417 -- 24-05- 2021
84	2C1	0 - 13.00	0.49	--	--	--	--	2021/0103/24/162796- -207/1417 -- 24-05- 2021
84	2A2	0 - 11.50	0.45	--	--	--	--	2021/0103/24/162796- -207/1417 -- 24-05- 2021
84	2B1	0 - 11.50	0.45	--	--	--	--	2021/0103/24/162796- -207/1417 -- 24-05- 2021
84	2D	0 - 37.17	1.40	--	--	--	--	2021/0103/24/162796- -- 24-05-2021
84	2K	0 - 39.00	1.24	--	--	--	--	2021/0103/24/162796- -- 24-05-2021
84	2L	0 - 30.00	1.13	--	--	--	--	2021/0103/24/162796- -- 24-05-2021
		1 - 71.00	6.29					

**குறிப்பு:**

1. மேற்கண்ட தகவல் / சான்றிதழ் தகவல் விவரங்கள் மின் பதிவு செய்யப்பட்டுள்ள பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 24/24/100/01235/10099 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.

2. இது அகலப்படுகின்ற 20-10-2022 அன்று 11:16:49 AM நேரத்தில் அச்சுறுத்தப்பட்டது.

3. இது 20-10-2022 அன்று 11:16:49 AM நேரத்தில் அச்சுறுத்தப்பட்டது.

சுப்பிரமணியன் குமார்  
P. சண்முகம்  
P. விஜயலக்ஷ்மி  
சுப்பிரமணியன் குமார்  
B. சண்முகம்  
P. Velmurugan  
P. சண்முகம் குமார்  
11-10-2022

சுப்பிரமணியன் குமார்  
சுப்பிரமணியன் குமார்  
சுப்பிரமணியன் குமார்  
R. சண்முகம்  
R. சண்முகம்  
R. சண்முகம்

சுப்பிரமணியன் குமார்  
சுப்பிரமணியன் குமார்  
சுப்பிரமணியன் குமார்



தமிழக அரசு

வருவாய்த் துறை

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

மாவட்டம் : மதுரை

வட்டம் : கள்ளிக்குடி

வருவாய் கிராமம் : கல்லணை

பட்டர் எண் : 219

உரிமையாளர்கள் பெயர்

1. சின்னகருப்பத்தேவர்

மனைவி

மீனாட்சி

2. பழனியாண்டித்தேவர்

மகன்

பெரியகருப்பன்

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
81	2C1	0 - 19.00	0.69	--	--	--	--	2021/0103/24/162796- -- -- 24-05-2021
		0 - 19.00	0.69					

குறிப்பு 2 :



1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 24/24/100/00219/20032 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.

2. இத் தகவல்கள் 20-10-2022 அன்று 11:21:11 AM நேரத்தில் அச்சடிக்கப்பட்டது.

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

P. வெளியகருப்பன்

P. சின்னகருப்பன்

P. கல்லணை

→ தலைவர்

B. சிவசுப்பிரமணியன்

R. Sankar

R. Sankar

S. Sankar

P. Velmurugan

P. சின்னகருப்பன்

P. வெளியகருப்பன்

K. KANNAN

புல எண் 81/24/100/00219/20032

புல எண் 81/24/100/00219/20032

புல எண் 81/24/100/00219/20032

→ தலைவர் B. சிவசுப்பிரமணியன்

→ தலைவர் K. KANNAN

R. Sankar

A-98



தமிழக அரசு  
வருவாய்த் துறை

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

மாநாட்டின் மகாராஜா கல்வணை  
வருவாய்த் துறை : கல்வணை

வட்டம் : கள்ளக்குடி

பட்டா எண் : 1126

உரிமையாளர்கள் பெயர்

1. பெரியகருப்பத்தேவர்	மகன்	ராமன்	
2. பழனியாண்டித்தேவர்	மகன்	பெரியகருப்பன்	
3. பழனியாண்டித்தேவர்	மகன்	கருப்பத்தேவர்	
4. சுப்பிரமணியத்தேவர்	மகன்	குருவம்மாள்	
5. சுப்பிரமணியத்தேவர்	மகன்	வேலாயி	
6. ராமர்	மனைவி	வதா	
7. ராமர்	மகன்	சந்திரா	
8. ராமர்	மகன்	சந்திரா	

புல் எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
81	281	0 - 18.00	0.69	--	--	--	--	2021/0103/24/162796- --- 24-05-2021
		0 - 18.00	0.69					

குறிப்பு 2 :

	1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <a href="https://eservices.tn.gov.in">https://eservices.tn.gov.in</a> என்ற இணைய தளத்தில் 24/24/100/01126/10000 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
	2. இத் தகவல்கள் 20-10-2022 அன்று 11:18:07 AM நேரத்தில் அச்சடிக்கப்பட்டது.
	3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

W. வநிய கல்வணை

P. சண்முகம்

P. வினாயகம்

→ தோல்  
R. சுவாமி

S. இராஜா

R. சுவாமி

R. சுவாமி

R. சுவாமி

P. Velumayyan

P. சுவாமி

P. சுவாமி

K. KARANAN

→ தோல்  
R. சுவாமி

A-99

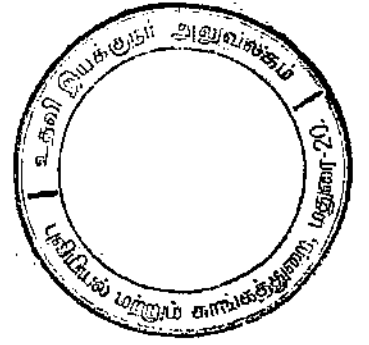
158

S. இராஜா



தமிழக அரசு  
வருவாய்த் துறை

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



மாவட்டம் : மதுரை

வட்டம் : கள்ளக்குடி

வருவாய் திர்சமம் : கல்லணை

பட்டா எண் : 1127

உரிமையாளர்கள் பெயர்

- |                       |       |             |       |
|-----------------------|-------|-------------|-------|
| 1. சுப்பிரமணியத்தேவர் | மகன்  | குருவம்மாள் | பட்டா |
| 2. சுப்பிரமணியத்தேவர் | மகன்  | வேலாபி      | பட்டா |
| 3. ராமர்              | மனைவி | லதா         | பட்டா |
| 4. ராமர்              | மகன்  | சந்திரா     | பட்டா |
| 5. ராமர்              | மகன்  | சந்திரா     | பட்டா |

பட்டா எண்	உரிபிரிவு	புள்ளியம்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		வெய் - ஏர்	ரூ - சை	வெய் - ஏர்	ரூ - சை	வெய் - ஏர்	ரூ - சை	
81	201	3 - 23.03	0.75	--	--	--	--	2021/0103/24/152796- ---- 24-05-2021
		6 - 23.03	0.75					

குறிப்பு 2 :

1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விபரங்கள் பின் படுகேட்டிலிருந்து பெறப்பட்டன. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 24/24/100/01127/10011 என்ற குறியிட எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.

2. இக் தகவல்கள் 20-10-2022 அன்று 11:19:10 AM நேரத்தில் அச்சடிக்கப்பட்டது.

3. கேட்புச் சேமராவில் 2D barcode படப்பான் மூலம் படத்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

M. வெளியாடுகியன்

P. சின்னசாமி

→ கை  
K. கண்ணன்

S. இராஜா

P. விவேகாநந்தன்

R. சந்திரா  
R. சந்திரா  
R. சந்திரா

→ கை  
B. சிவசுப்பிரமணியன்

P. வெள்ளையன்

P. சிவசுப்பிரமணியன்  
K. வெளியாடுகியன்

.....  
.....  
.....

K. KANNAN

→ கை  
K. கண்ணன்



தமிழக அரசு

வருவாய்த் துறை

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

மாவட்டம் : மதுரை

வட்டம் : கள்ளிக்குடி

வருவாய் இராமம் : கல்லணை

பட்டா எண் : 1128

உரிமையாளர்கள் பெயர்

1. பழனியாண்டித்தேவர்

மகன்

பெரியகருப்பன்



2. பழனியாண்டித்தேவர்

மகன்

கருப்பத்தேவர்



புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
81	2E1	0 - 21.00	0.75	--	--	--	--	2021/0103/24/162796- --- 24-05-2021
		0 - 21.00	0.75					

குறிப்பு2 :

	1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <a href="https://eservices.tn.gov.in">https://eservices.tn.gov.in</a> என்ற இணைய தளத்தில் 24/24/100/01128/10022 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
	2. இத் தகவல்கள் 20-10-2022 அன்று 11:20:08 AM நேரத்தில் அச்சடிக்கப்பட்டது.
	3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

M. விநாயகமணி

P. சிவசுந்தரம்

P. விஜயலக்ஷ்மி

→ தலைவர்

ச. சிவசுந்தரம்

P. Velumayyan

P. சிவசுந்தரம்

M. விநாயகமணி

K. KANNAN

→ தலைவர் ச. சிவசுந்தரம்

→ தலைவர் K. சிவசுந்தரம்

R. சிவசுந்தரம் 160

A-101





2482 5824 4375

ஆதர - சாதாரண மனிதனின் அதிகாரம்

சென்னை - I. B. ரெய்லாண்ட்



கண்ணம் கருப்புதேவர்  
KANNAN KARUPPUDEVAR  
பிறந்த நாள் / DOB : 20/03/1987  
ஆண் / MALE

6437 9471 3574

ஆதர - சாதாரண மனிதனின் அதிகாரம்

K. KANNAN

இந்திய அரசாங்கம்  
Government of India



கண்ணம் கருப்புதேவர்  
KANNAN KARUPPUDEVAR  
பிறந்த நாள் / DOB : 22/03/1985  
ஆண் / Male

6848 0353 0228

ஆதர - சாதாரண மனிதனின் அதிகாரம்

P. சின்னவேலு



ரத்தினசு சின்னவேலர்  
Rathnasu Chinnaveeran  
பிறந்த நாள் / DOB : 13/03/1983  
ஆண் / MALE

5354 2757 4061

ஆதர - சாதாரண மனிதனின் அதிகாரம்

S. சைலா



முனை: வர 1947  
மக்கள் தொடர்பு மற்றும்  
ஆய்வு, அபிவிருத்தி, மது  
தமிழ்நாடு, 625022

Address: VRO Expressy,  
PANDHAN THERU  
THIRUMANGALAM  
TALUKA, Sivasakotai,  
Sévarakottai, Madurai, Tamil  
Nadu, 625706

2482 5824 4375



முனை: தந்தை தாய் பெயர்  
தந்தை / தாய் பெயர்:  
கருப்புதேவர், 1/38, கிழக்கு  
செரு, கல்லனா, திருமங்கலம்  
தாலுகா, கன்னடம், மதுரை,  
தமிழ்நாடு, 625022

Address:  
S/O: Karuppudevan, 1/38, EAST  
STREET, KALLANAI,  
THIRUMANGALAM TALUK,  
Kallanai, Madurai, Tamil Nadu,  
625022



1947  
1840 500 1947



help@tamil.gov.in



www.tamil.gov.in

P.O. Box No.1947,  
Madurai-625 021



முனை: தந்தை தாய் பெயர்  
பெரியசெரு 257, து. பூசூர்,  
தெருக்குளம், திருமங்கலம்  
தாலுகா, மதுரை,  
தமிழ்நாடு, 625022

Address: S/O: Periyasewaran,  
307, T PUDUR, NEDUNKULAM,  
THIRUMANGALAM, Nedungulam,  
Madurai, Nedungulam, Tamil  
Nadu, 625706

6848 0353 0228



1947  
1840 500 1947



help@tamil.gov.in



www.tamil.gov.in

P.O. Box No.1947,  
Madurai-625 021



முனை: S/O சின்னவேலர், எண் 10,  
வடக்கு தெரு, சின்னவேலர்,  
மதுரை தெரு, மதுரை,  
தமிழ்நாடு, 625022

Address:  
S/O Chinnaveeran, NO 10,  
NORTH STREET,  
CHINNAVEERAN,  
Chinnaveeran, Madurai, Tamil  
Nadu, 625022



1947  
1840 500 1947



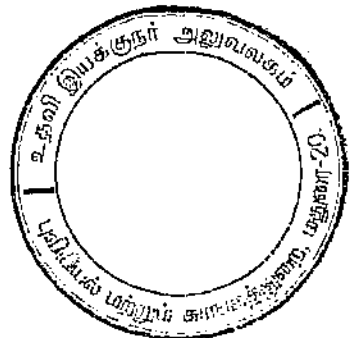
help@tamil.gov.in



www.tamil.gov.in

P.O. Box No.1947,  
Madurai-625 021

Handwritten signatures and notes at the bottom of the page, including 'சென்னை - I. B. ரெய்லாண்ட்' and '16'.



இந்திய அடையாள அமைப்பு  
Unique Identification Authority of India  
GOVERNMENT OF INDIA

இந்திய அரசாங்கம்  
Unique Identification Authority of India  
GOVERNMENT OF INDIA

ஆதார அடையாளம் / Enrollment No. : 2007/20858/21149

ஆதார அடையாளம் / Enrollment No. : 2007/20858/30845

To  
Miyalakashmi P  
வெங்கடசாமி பி  
S/O Periyakumar  
178  
KALLANA  
1 - THIRUMANGALAM TALUK  
Kallana  
Metupalpattu  
Thirumangalam Madurai  
Tamil Nadu 625022

To  
செல்முத்துக்குடி  
Velmurugan P  
S/O Periyakumar  
277 MIDDLE STREET  
KALLANA THIRUMANGALAM TALUK  
Kallana  
Metupalpattu  
Thirumangalam Madurai  
Tamil Nadu 625022



20858452

3084520



உங்கள் ஆதார எண் / Your Aadhaar No. :  
**8199 1407 6576**

உங்கள் ஆதார எண் / Your Aadhaar No. :  
**7975 6389 5054**

ஆதார - சாதாரண மனிதனின் அதிகாரம்



ஆதார - சாதாரண மனிதனின் அதிகாரம்

இந்திய அரசாங்கம்  
GOVERNMENT OF INDIA

வெங்கடசாமி பி  
Miyalakashmi P  
சாதி: அடையாளம்  
பெயர்: Periyakumar

ஆதார அடையாளம் / Enrollment No. : 2007/20858/21149

**8199 1407 6576**

இந்திய அரசாங்கம்  
GOVERNMENT OF INDIA

செல்முத்துக்குடி  
Velmurugan P  
சாதி: அடையாளம்  
பெயர்: Periyakumar

ஆதார அடையாளம் / Enrollment No. : 2007/20858/30845

**7975 6389 5054**




ஆதார - சாதாரண மனிதனின் அதிகாரம்  
**P. விஜயகுமார்**



ஆதார - சாதாரண மனிதனின் அதிகாரம்  
**P. Velmurugan**

இந்திய அரசாங்கம்  
GOVERNMENT OF INDIA

செல்முத்துக்குடி  
Velmurugan P  
சாதி: அடையாளம்  
பெயர்: Periyakumar

ஆதார அடையாளம் / Enrollment No. : 2007/20858/30845

**2224 0576 3399**

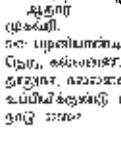
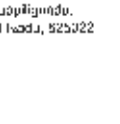



இந்திய அரசாங்கம்  
GOVERNMENT OF INDIA

செல்முத்துக்குடி  
Velmurugan P  
சாதி: அடையாளம்  
பெயர்: Periyakumar

ஆதார அடையாளம் / Enrollment No. : 2007/20858/30845

**2224 0576 3399**

ஆதார - சாதாரண மனிதனின் அதிகாரம்

ஆதார - சாதாரண மனிதனின் அதிகாரம்

**P. விஜயகுமார்**

செல்முத்துக்குடி, அடையாளம் (0033) உடையவர்  
25  
சாதி: அடையாளம்  
பெயர்: Periyakumar

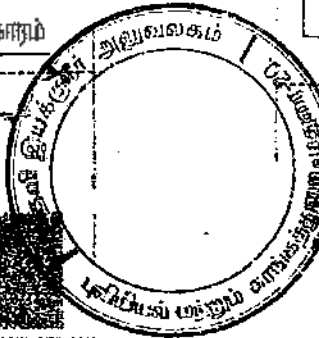
**S. Sathya**



3747 9097 0751

ஆதார - சாதாரண மனிதனின் அதிகாரம்

- Applicant is well recognized in the country.
- Applicant will be helpful in availing Government and Non-Government services in future.



சுருதுவரை சுவாமி  
Suvarammal Bose  
மனை : புதுச்சேரி  
Pattinai - RIVERAMANI

தொலைபேசி : 008 10041899  
உதவகம் - புதுச்சேரி

3747 9097 0751

Address: W/O: Bose, NO  
2787, WEST STREET,  
KALLANAI,  
THIRUMANGALAM TALUK,  
Kallanai, Meluruppaligundur,  
Madurai, Tamil Nadu,  
625022

3747 9097 0751

ஆதார - சாதாரண மனிதனின் அதிகாரம்

சுருதுவரை சுவாமி  
KARUPADEVAR PALANIYANDI

மனை : புதுச்சேரி  
Pattinai - RIVERAMANI  
தொலைபேசி : 008 10041899  
உதவகம் - புதுச்சேரி

4831 0302 9293

ஆதார - சாதாரண மனிதனின் அதிகாரம்

பதிவு செய்யப்பட்டது

சுருதுவரை சுவாமி  
Government of India

மனை : புதுச்சேரி

தொலைபேசி : 008 10041899  
உதவகம் - புதுச்சேரி

5491 1542 3240

ஆதார - சாதாரண மனிதனின் அதிகாரம்

சுருதுவரை சுவாமி  
Peranthappan Karuppu

மனை : புதுச்சேரி  
Pattinai - RIVERAMANI  
தொலைபேசி : 008 10041899  
உதவகம் - புதுச்சேரி

4434 9046 9180

ஆதார - சாதாரண மனிதனின் அதிகாரம்

பதிவு செய்யப்பட்டது

1800 220 1807

சுருதுவரை சுவாமி  
Palaniyandi

மனை : புதுச்சேரி  
Pattinai - RIVERAMANI  
தொலைபேசி : 008 10041899  
உதவகம் - புதுச்சேரி

Address: S/O: Palaniyandi, 1/32, EAST STREET, Kallanai, Thirumangalam Taluk, Meluruppaligundur, Madurai, Tamil Nadu, 625022

4831 0302 9293

1800 220 1807

1800 220 1807

சுருதுவரை சுவாமி  
Karuppan

மனை : புதுச்சேரி  
Pattinai - RIVERAMANI  
தொலைபேசி : 008 10041899  
உதவகம் - புதுச்சேரி

Address: V/O: Karuppana NO 1/45, EAST STREET KALLANAI, THIRUMANGALAM TALUK Kallanai, Meluruppaligundur, Madurai, Tamil Nadu, 625022

5491 1542 3240

1800 220 1807

சுருதுவரை சுவாமி  
Karuppu

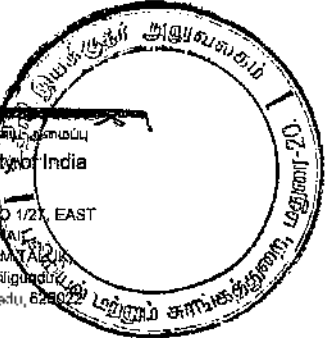
மனை : புதுச்சேரி  
Pattinai - RIVERAMANI  
தொலைபேசி : 008 10041899  
உதவகம் - புதுச்சேரி

Address: S/O: Karuppu, NO 1/107, SOUTH STREET, KALLANAI, THIRUMANGALAM TALUK, Kallanai, Meluruppaligundur, Madurai, Tamil Nadu, 625022

4434 9046 9180

1800 220 1807

பதிவு செய்துள்ள புகார் 2022  
பதிவு செய்துள்ள புகார் 2022  
பதிவு செய்துள்ள புகார் 2022



**இந்திய அடையாள அமைப்பு**  
**Government Identification Authority of India**

ஆதர் (முகவர்)  
 W/O ராமர், கதவு எண் 127,  
 சிழக்குத் தெரு, கல்லணை,  
 திருமங்கலம் தாலுகா,  
 கல்லணை, மேல்  
 உட்பிரிவுக்குண்டு, மதுரை, தமிழ்  
 நாடு, 625022

Address:  
 W/O: Ramar, D NO 127, EAST  
 STREET, KALLANAI,  
 THIRUMANGALAM TALUK,  
 Kallanai, Melappiligundi,  
 Madurai, Tamil Nadu, 625022

4442 9099 3847

ஆதர் - சாதாரண மனிதனின் அதிகாரம்

**இந்திய அடையாள அமைப்பு**  
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ஆதர் (முகவர்)  
 W/O ராமர், கதவு எண் 127,  
 சிழக்குத் தெரு, கல்லணை,  
 திருமங்கலம் தாலுகா,  
 கல்லணை, மேல்  
 உட்பிரிவுக்குண்டு, மதுரை, தமிழ்  
 நாடு, 625022

Address:  
 W/O: Ramar, D NO 127, EAST  
 STREET, KALLANAI,  
 THIRUMANGALAM TALUK,  
 Kallanai, Melappiligundi,  
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4442 9099 3847

**இந்திய அடையாள அமைப்பு**  
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 திருமங்கலம் தாலுகா,  
 கல்லணை, மேல்  
 உட்பிரிவுக்குண்டு, மதுரை, தமிழ்  
 நாடு, 625022

Address:  
 W/O: Ramar, D NO 127, EAST  
 STREET, KALLANAI,  
 THIRUMANGALAM TALUK,  
 Kallanai, Melappiligundi,  
 Madurai, Tamil Nadu, 625022

9507 8552 7950

ஆதர் - சாதாரண மனிதனின் அதிகாரம்

**இந்திய அடையாள அமைப்பு**  
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ஆதர் (முகவர்)  
 W/O ராமர், கதவு எண் 127,  
 சிழக்குத் தெரு, கல்லணை,  
 திருமங்கலம் தாலுகா,  
 கல்லணை, மேல்  
 உட்பிரிவுக்குண்டு, மதுரை, தமிழ்  
 நாடு, 625022

Address:  
 W/O: Ramar, D NO 127, EAST  
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 THIRUMANGALAM TALUK,  
 Kallanai, Melappiligundi,  
 Madurai, Tamil Nadu, 625022

9507 8552 7950

**இந்திய அடையாள அமைப்பு**  
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ஆதர் (முகவர்)  
 W/O ராமர், கதவு எண் 127,  
 சிழக்குத் தெரு, கல்லணை,  
 திருமங்கலம் தாலுகா,  
 கல்லணை, மேல்  
 உட்பிரிவுக்குண்டு, மதுரை, தமிழ்  
 நாடு, 625022

Address:  
 W/O: Ramar, D NO 127, EAST  
 STREET, KALLANAI,  
 THIRUMANGALAM TALUK,  
 Kallanai, Melappiligundi,  
 Madurai, Tamil Nadu, 625022

4131 1118 6939

ஆதர் - சாதாரண மனிதனின் அதிகாரம்

**இந்திய அடையாள அமைப்பு**  
**Government Identification Authority of India**

ஆதர் (முகவர்)  
 W/O ராமர், கதவு எண் 127,  
 சிழக்குத் தெரு, கல்லணை,  
 திருமங்கலம் தாலுகா,  
 கல்லணை, மேல்  
 உட்பிரிவுக்குண்டு, மதுரை, தமிழ்  
 நாடு, 625022

Address:  
 W/O: Ramar, D NO 127, EAST  
 STREET, KALLANAI,  
 THIRUMANGALAM TALUK,  
 Kallanai, Melappiligundi,  
 Madurai, Tamil Nadu, 625022

4131 1118 6939

R. Sathya

R. Sathya

R. Sathya

2022  
 25  
 19

R. Sathya

Government of India  
 SANKUSAVEL SUBRAMANIAM  
 6829 3661 1557  
 VID : 9184 4392 6276 8724

Ministry of External Affairs  
 S/O: Subramani, 1/31, EAST STREET  
 KALLANAI, THIRUVANGALAM TALUK,  
 Madurai, Madurai,  
 Tamil Nadu - 625022  
 6829 3661 1557  
 VID : 9184 4392 6276 8724

S. Sankusavel

Ministry of External Affairs  
 Ramar S  
 பிறந்த நாள் / DOB : 10/11/1975  
 ஆண் / MALE  
 5061 6034 5070

Ministry of External Affairs  
 Address: S/O: Subramani, 1/119,  
 EAST STREET, Kallanai,  
 Thiruvangalam TALUK, Kallanai,  
 Madurai, Tamil Nadu, 625022  
 1800 200 1947

ஆதாரம் - சாதாரண மனிதனின் அதிகாரம்

சுருதி

Thayyavani Pandi  
 Father: Pandi  
 6899 6448 2926

Address: S/O: Pandi,  
 2/124A, KANJIRANGULAM,  
 THIRUPULASSARI TALUK,  
 Kanjirangulam, Sivaganga,  
 Arambalur, Tamil Nadu,  
 630811  
 6899 6448 2926

ஆதாரம் - சாதாரண மனிதனின் அதிகாரம்

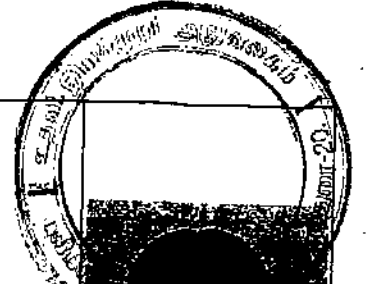
P. Pandian

பி.பி.என். 2022 கி.பி.என். 10033  
 25  
 20

166

S. Sankusavel

சுதிரும்ங்கலம்/புத்தகம்-1/10033/2022



எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர்  
இட பெருவிரல்



சீரல் ரஜயக் ரொடி

"சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்" என்ற  
வழி இந்த நபரின் அடையாளம் விரல் ரேகை  
மூலம் ஆதார் ஆணையத்துடன்  
சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் :  
UKC:859332e5d2a6aaf6a0401c93dbe51278fb9533  
(Details from UIDAI : Jayakkodi Bagavathy W/O  
Bagavathy, 02-04-1975, xxxxxxxx4375)



எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர்  
இடது பெருவிரல்



P. Velmurugan.

"சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்" என்ற  
வழி இந்த நபரின் அடையாளம் விரல் ரேகை  
மூலம் ஆதார் ஆணையத்துடன்  
சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் :  
UKC:953742bd4c43c276b7144b5b0c0297b5d7e1b599  
(Details from UIDAI : Velmurugan P S/O: Periyakaruppan,  
04-04-1981, xxxxxxxx5054)



எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர்  
இடது பெருவிரல்



புதருப்பு ருபுலி

"சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்" என்ற  
வழி இந்த நபரின் அடையாளம் விரல் ரேகை  
மூலம் ஆதார் ஆணையத்துடன்  
சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் :  
UKC:131779df0a55fe17894d7ea15b34ce9844824b  
(Details from UIDAI : KARUPADEVAR PALANIYANDI S/O:  
Palaniyandi, 09-10-1960, xxxxxxxx9293)



எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர்  
இடது பெருவிரல்










K. வசிக் கடுப்பன்

"சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்" என்ற  
வழி இந்த நபரின் அடையாளம் விரல் ரேகை  
மூலம் ஆதார் ஆணையத்துடன்  
சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் :  
UKC:17828958f4b561810a4a59b16d47720875fe0a  
(Details from UIDAI : Periyakaruppan K S/O Krishnan, 05-  
10-1980, xxxxxxxx9180)



R/திருமங்கலம்/புத்தகம்-1/10033/2022

2022 ஆம் ஆண்டு அக்டோபர் மாதம் 20ம் தேதி பி.ப. 14:14 மணியளவில் திருமங்கலம் சார்பதிவாளர் அலுவலகத்தில் தூக்கல் செலுத்தும் தொகை ரூ 10330/- செலுத்தியவர்.

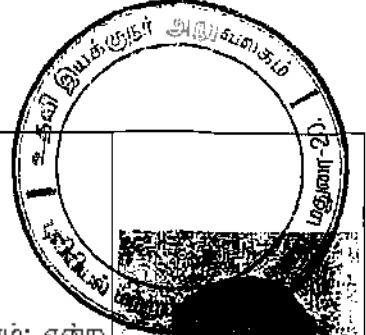
<p>இடது பெருவிரல்</p> 	<p>S. சிவசுப்பிரமணியன்</p> <p>கூடுதல் விவரங்கள் ஆவண வாசகத்தில் உள்ளபடி</p>	
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p> 	<p>ப. வசுதேவன்</p> <p>"சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்" என்ற வழி இந்த நபரின் அடையாளம் விரல் ரேகை மூலம் ஆதார் ஆணையத்துடன் சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் : UKC:5603182d3c2177cc214abb914c579b80e5a840 (Details from UIDAI : Periyakruppan P S/O: Palanlyandi, 17-05-1945, xxxxxxxx3399)</p>	
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p> 	<p>ரஜினிசா மே</p> <p>"சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்" என்ற வழி இந்த நபரின் அடையாளம் விரல் ரேகை மூலம் ஆதார் ஆணையத்துடன் சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் : UKC:742359500d0593b2db42c480705ecb5e0480c1 (Details from UIDAI : Annamalai P S/O: Periyakaruppan, 22-03-1965, xxxxxxxx0228)</p>	
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p> 	<p>ரவிஜயலட்சுமி</p> <p>"சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்" என்ற வழி இந்த நபரின் அடையாளம் விரல் ரேகை மூலம் ஆதார் ஆணையத்துடன் சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் : UKC:8153359886bf89b8814a899ac1d839fd0b36f1 (Details from UIDAI : Vijayalakshmi P D/O: Periyakaruppan, 07-12-1975, xxxxxxxx6576)</p>	






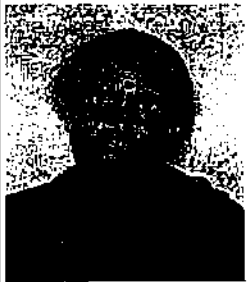


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S. சிவசுப்பிரமணியன்

A-109 புத்தகம் 1022 / 10033 ஆவண  
 1/19 25 தூக்கல் செலுத்தும் தொகை ரூ 10330/-  
 செலுத்தியவர்

R/திருமங்கலம்/புத்தகம்-1/10033/2022



<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p> 	<p><b>K. KANNAN</b></p> <p>'சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்' என்ற வழி இந்த நபரின் அடையாளம் விரல் ரேகை மூலம் ஆதார் ஆணையத்துடன் சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் : UKC:211093a04669340a0f4d7965782eb0e802684 (Details from UIDAI : KANNAN KARUPPUDEVAR S/O: Karuppuvar, 20-03-1987, xxxxxxxx3574)</p>	
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p> 	<p><b>சுரேஷ் குருவேமலா</b></p> <p>"சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்" என்ற வழி இந்த நபரின் அடையாளம் விரல் ரேகை மூலம் ஆதார் ஆணையத்துடன் சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் JKC:346988757a74e921d441feb0364ef78ac97c6 (Details from UIDAI : Gurevammal Bose W/O: Bose, 10-04-1959, xxxxxxxx0751)</p>	
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p> 	<p><b>சுரேஷ் குருவேமலா</b></p> <p>'சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்' என்ற வழி இந்த நபரின் அடையாளம் விரல் ரேகை மூலம் ஆதார் ஆணையத்துடன் சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் : UKC:10944530181ac2ccc64b5b9a00ccea720da34b (Details from UIDAI : Vellayl Karuppanan W/O: Karuppanan, 03-04-1991, xxxxxxxx3240)</p>	
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p> 	<p><b>R.லதா</b></p> <p>"சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்" என்ற வழி இந்த நபரின் அடையாளம் விரல் ரேகை மூலம் ஆதார் ஆணையத்துடன் சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் UKC:9326045541d0c247754f86922832a0820466d1 (Details from UIDAI : Latha R W/O: Ramai, 01-02-1982, xxxxxxxx3847)</p>	

சுரேஷ் குருவேமலா

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திருமங்கலம்/புத்தகம்-1/10033/2022

நாடுவாசிகள் பதிவுகாணொலி அலுவலகம்

வழிநடப்பு நபர் பதிவுகாணொலி அலுவலர்

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R/திருமங்கலம்/புத்தகம்-1/10033/2022

<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இட பெருவிரல்</p>  	<p>R. Santhiya</p> <p>"சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்" என்ற வழி இந்த நபரின் அடையாளம் விரல் ரேகை மூலம் ஆதார் ஆணையத்துடன் சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் : UKC:139201794b50d9c23244d49f96686d2acb1b5c (Details from UIDAI : Santhiya R D/O: Ramar, 09-05-1999, xxxxxxxx7950)</p>	
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p>  	<p>R. Santhuru</p> <p>"சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்" என்ற வழி இந்த நபரின் அடையாளம் விரல் ரேகை மூலம் ஆதார் ஆணையத்துடன் சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் : UKC:0847152872917377943b19477251020c6a0ddd (Details from UIDAI : Santhuru R S/O: Ramar, 15-06-2002, xxxxxxxx6939)</p>	
<p>எழுதி வாங்கியதாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p>  	<p>S. Rathinam</p> <p>"சம்மதத்துடன் கூடிய ஆதார் அங்கீகாரம்" என்ற வழி இந்த நபரின் அடையாளம் விரல் ரேகை மூலம் ஆதார் ஆணையத்துடன் சரிபார்க்கப்பட்டது. ஒப்பீட்டு எண் : UKC:3831607dda810c16ea4de48b3dc605e1addf7c (Details from UIDAI : Rathinam Chinnaveeran S/O Chinnaveeran, 13-03-1963, xxxxxxxx4081)</p>	

2022 ஆம் ஆண்டு அக்டோபர் மாதம் 20ம் நாள்

  
பாண்டியராஜன் க  
சார்பதிவாளர்  
திருமங்கலம்

10033/2022  
சார்பதிவாளர்  
பதிவு செய்த நாள்  
பதிவு எண்

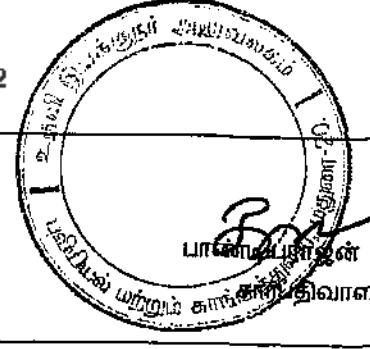
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R/திருமங்கலம்/புத்தகம்-1/10033/2022

R/திருமங்கலம்/புத்தகம்-1/10033/2022 எண்ணாகப் பதிவு செய்யப்பட்டது.

நாள் 20/10/2022  
திருமங்கலம்



1. 2022  
25  
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பதிவு செய்யப்பட்டது.  
பதிவு செய்யப்பட்டது.

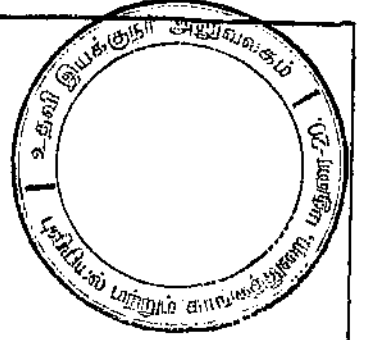
S. S. S.

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**தமிழ்நாடு அரசு  
பதிவுத்துறை  
ஒப்புக்கைச்சீட்டு**

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விண்ணப்ப எண்	S01LANDVV202210207586394
பரிவர்த்தனை எண்	REG202210205650919
பரிவர்த்தனை நாள்	20/10/2022

**விண்ணப்ப விவரங்கள்**

விண்ணப்பதாரர் பெயர்	RATHINAM
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தொகை செலுத்திய நாள்	20/10/2022

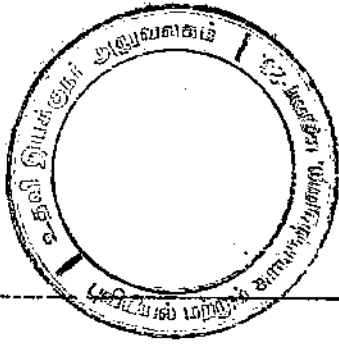
ஏதேனும் சந்தேகங்கள்/குறைகள் இருப்பின் கீழ்க்கண்ட வழிமுறைகளில் தெரிவிக்கலாம்

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**தமிழ்நாடு அரசு  
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முன்பதிவு செய்ததற்கான ஒப்புக்கட்சீட்டு**

**முன்பதிவு விவரம்**

பதிவு செய்த நாள்	20/10/2022
முன்பதிவு நாள்	20/10/2022
முன்பதிவு நேரம்	12:00 - 13:00
முன்பதிவு வரிசை எண்	9 [0309]
பதிவு வகை	ஆவணப் பதிவு
தற்காலிக எண்	TP/135463245/2022

**விண்ணப்பதாரர் விவரம்**

விண்ணப்பதாரர் பெயர்	திரு. ரத்தினம்
தந்தை / கணவர் பெயர்	திரு. சின்னவீரன்
சார்பதிவாளர் அலுவலகம்	திருமங்கலம்
சொத்து அமைந்துள்ள கிராமம்	கல்லணை

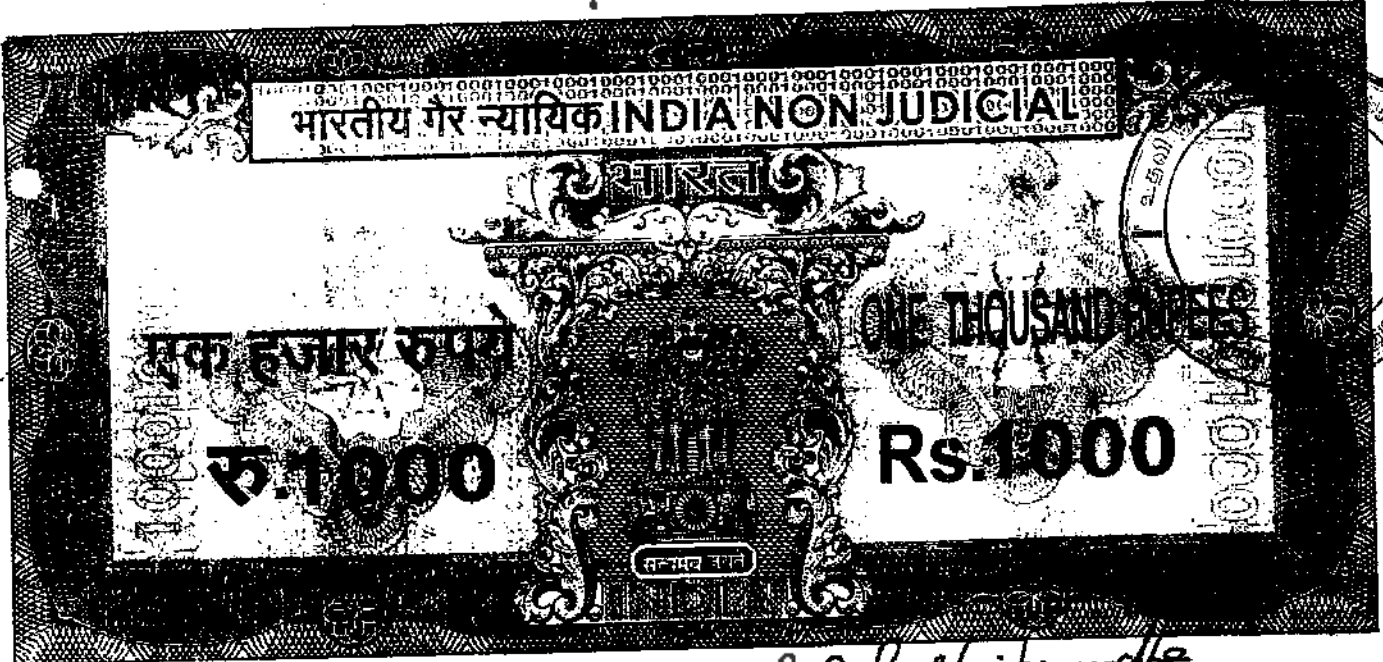
**குறிப்பு:**

- முன்பதிவு செய்த நபர் அவருக்காக ஒதுக்கப்பட்ட நேரத்திற்கு தவறாமல் அலுவலகத்திற்கு வந்து ஆவணத்தை பதிவுக்கு தாக்கல் செய்ய கோரப்படுகிறார்.
- முன்பதிவு செய்த நபர் குறித்த நேரத்தில் வரவில்லையெனில் அடுத்த முன்பதிவு செய்த நபரின் ஆவணம் பதிவுக்கு எடுத்துக்கொள்ளப்படும். தவறவிட்டவரின் முன்பதிவு அடுத்த முன்பதிவு நேரத்தில் கடைசியாக வைக்கப்படும்.
- முன்பதிவு நேரத்தில் ஒதுக்கப்பட்ட அனைத்து வரிசை எண்களுக்கான பதிவு மேற்கொண்ட பின்பே அடுத்த முன்பதிவு நேரத்தின் வரிசை எண்களுக்கான பதிவு தொடங்கும்.
- ஆவணப்பதிவிற்கான அனைத்து ஆதாரங்களும் தாக்கல் செய்யப்படும் நிலையில் ஆவணம் பதிவு செய்யப்படும். ஆவணப்பதிவிற்கு தேவையான ஆதாரங்கள் ஏதும் இல்லாத நிலை மற்றும் பதிவுக்கு ஏதும் தடையிருப்பின் பதிவு மறுப்புச் சீட்டு உருவாக்கப்பட்டு சார்பதிவாளரால் கையொப்பமிடப்பட்டு வழங்கப்படும்.
- பதிவு செய்யப்பட்ட ஆவணம், தாக்கல் செய்தவருக்கு திரும்ப வழங்கப்படும். தாக்கல் செய்தவர் வர இயலாத நிலையில் ஆவணப்பதிவின் போதே வேறொரு நபரை ஆவணம் திரும்ப பெற நியமிக்கலாம். ஆவணப்பதிவின் போது நியமனம் செய்யப்பட்டவரின் விரல் ரேகை கவரப்படும். ஆவணம் திரும்ப அளிக்கும் போது அவரின் விரல் ரேகை மீண்டும் கவரப்பட்டு ஒப்பிட்டு சரிபார்த்தபின்பே ஆவணம் திரும்ப வழங்கப்படும்.

ஏதேனும் சந்தேகங்கள்/குறைகள் இருப்பின் கீழ்க்கண்ட வழிமுறைகளில் தெரிவிக்கலாம்

கட்டணமில்லா தொலைபேசி எண்	1800 102 5174
மாற்று மின்னஞ்சல் முகவரி	helpdesk@tnreginet.net

*(Handwritten Signature)*



தமிழ்நாடு தமிழ்நாடு TAMILNADU

செலிட் 21776  
 நாள் 7.7.2020  
 ரூ. 1000 சிந்தினம்  
 சின்மடைய்ய

B. Dulashibramtha  
 B. துளசிபிரமதா AT 507867  
 சத்திரத்தாள் விற்பனை  
 60, உசிலம்பட்டி ரோடு  
 திருமங்கலம், தமிழ்நாடு  
 ROC No: 3332 / C2 / 97

TP/92539618/2019

ரூபாய்.62,000/-க்கு புஞ்சை நிலங்கள் கிரையம்

2020 ஆம் ஆண்டு ஜூலை மாதம் 07 ஆம் தேதிக்கு,  
 தமிழ் ஸ்ரீ சார்வரி வருடம் ஆனி மாதம் 23 ஆம் நாள்,  
 மதுரை மாவட்டம், மதுரை - 12, அவனியாபுரம், சின்ன உடைப்பு, கதவு எண்.69G-ல்  
 வசிக்கும் திரு.சின்னவீரன் அவர்கள் குமாரர் திரு.C.ரத்தினம் (ஆதார் அட்டை எண்.5354  
 2757 4061) அவர்களுக்கு,  
 மதுரை மாவட்டம், திருமங்கலம் வட்டம், பாண்டியநகர், சின்னவட்டசுரை காலனி, கதவு  
 எண்.2/180-ல் வசிக்கும் திரு.பெரியசுருப்பன் அவர்கள் குமாரர் திரு.P.சக்திவேல் (ஆதார்  
 அட்டை எண்.7692 1575 6381)-1, மதுரை மாவட்டம், திருமங்கலம் வட்டம், பாண்டியன் நகர்,  
 கிரையம் பெறுபவர்

கொடுப்பவர்கள்  
 சிந்தினம் P.சக்திவேல்  
 M. Konappayee  
 P. Kalaswari  
 P. Ramas.

சுருப்பன்

சிந்தினம்  
 7/7/2020

புத்தம்பட்டி 3673  
 17

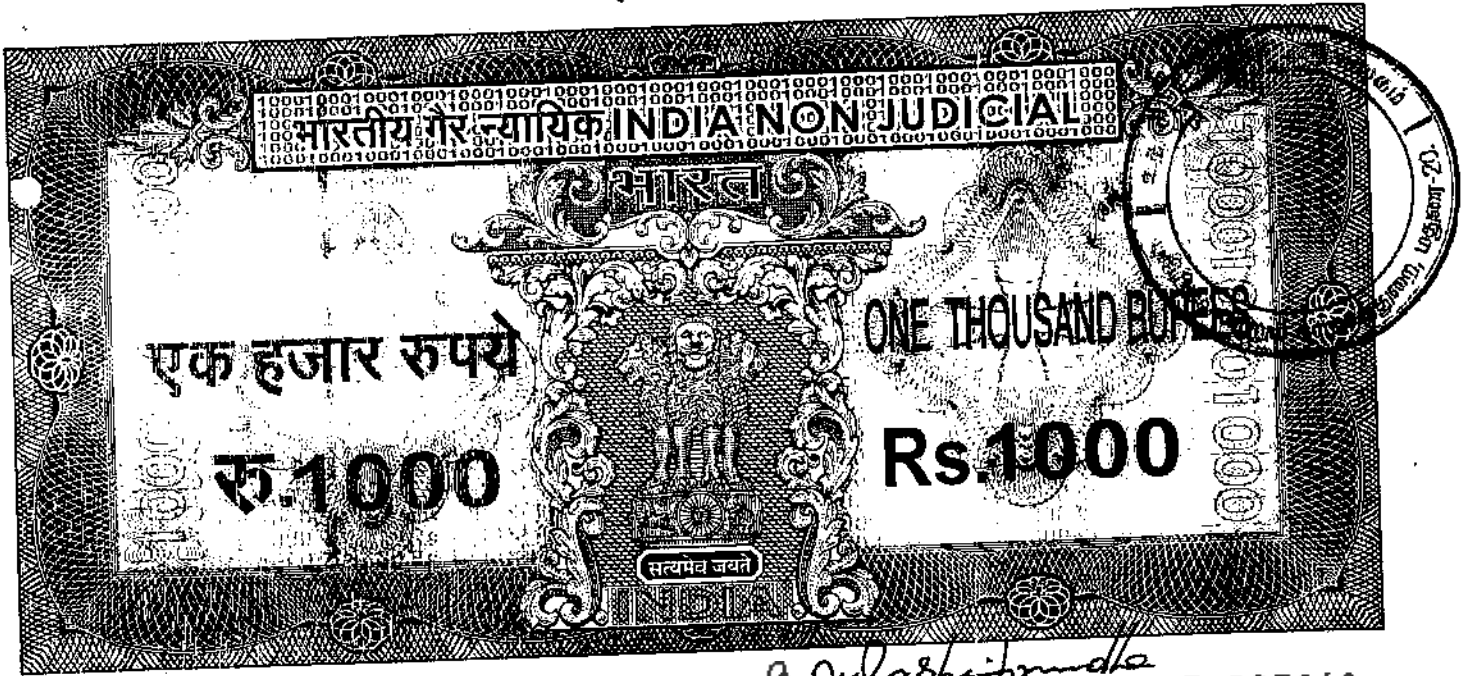
சிந்தினம்  
 A-117

செய்ய:

அனைத்து தகவல்கள் கருவியாக  
அனைத்து மூலம் தான்  
கொண்டிருக்கப்படுகிறது

சாண்டிவாணி  
தீர்மானகலம்

14.7.2020



தமிழ்நாடு தமில்நாடு TAMILNADU

B. Dulabhisundar

AT 507868

எண்: 21777

தி. துளசிபிரகாசம்

5000

தாள்: 7.7.2020

சுத்திரைத்தூள் சிற்பனைப்பணி

ரூ. 1000

சுத்திரைத்தூள்

EO, உதவிப்பலகை ரோடு

திருமங்கலம், தமிழ்நாடு

ROG No: 3332 / C2 / 97

சின்னமடையி

2.

சின்னவடகரை சுலனி, கதவு எண்.2/180-ல் வசிக்கும் மேற்படி 1வது நபரின் குமாரர் திரு.S.கண்ணன் (வாக்காளர் அடையாள அட்டை எண்.ZFI1314996)-2, மதுரை மாவட்டம், திருமங்கலம் வட்டம், பாண்டியநகர், சின்னவடகரை சுலனி, கதவு எண்.2/180-ல் வசிக்கும் மேற்படி 1வது நபரின் குமாரர் திரு.S.சுவாமிநாதன் (ஆதார் அட்டை எண்.6924 7042 3290)-3, மதுரை மாவட்டம், திருமங்கலம் வட்டம், மேலா பிளிக்ஞண்டு அஞ்சல், கல்லறை கிராமம், கிழக்குக்கேடு, கதவு எண்.1/17-ல் வசிக்கும் திரு.பெரியசுந்தர்பன் அவர்கள் குமாரர் திரு.P.அம்மாவாசி என்ற பழனியாண்டி (ஆதார் அட்டை எண்.9197 7667 6796)-4, மதுரை மாவட்டம், திருமங்கலம் வட்டம், மேலா பிளிக்ஞண்டு அஞ்சல், கல்லறை கிராமம், மேலக்கேடு, பழைய கதவு எண்.2/135, புதிய கதவு எண்.982-ல் வசிக்கும் மேற்படி 1வது நபரின் குமாரத்தியர் திரு.முனியாண்டி அவர்கள் மனைவியான திருமதி.M.கருப்பாமி (ஆதார் அட்டை எண்.9713 9477 1965)-5, மதுரை மாவட்டம், திருமங்கலம் வட்டம்,

கிராமம் கொடுப்பவர்கள்

கிராமம் பெறுபவர்



திரு. P. சந்திரன்

*(Signature)*

M. Karuppayee

*(Signature)*  
சு. சந்திரன்

P. Kalleshwari

P. Ramas

17.07.2020 3673  
பதிவு செய்த  
பதிவு செய்த

*(Signature)*

*(Signature)*

A-119 -







தமிழ்நாடு தமிழ்நாடு TAMILNADU  
 எண் 21780  
 நாள் 7.7.2020 அறிமை  
 ரூ. 100 சிற்றைமையு

494092  
 சி. சுவாமிநாதன்  
 சத்திரத்தாள் விற்பனையகம்  
 60, உசிலம்பட்டி ரோடு  
 திருமங்கலம், தமிழ்நாடு  
 RQC No: 3332 / C2 / 97

.5.

ஏற்பட்டால் அதனை நானே முன்விடுத்து எங்களுக்கு பங்கித்யப்பட்ட இது சொத்துக்களிலிருந்து தீர்த்துக் கொடுப்போமாகவும். இத்துடன் தபசில் கண்ட சொத்துக்கு தங்கள் பெயரால் பட்டா, மாறுதல் நலனாவும் தாக்கல் செய்துள்ளோம். மேற்படி சொத்தின் சுவாதினத்தை தங்கள் வசம் ஒய்யடைத்து விட்டோம். மேற்படி சொத்து கல்லணை கிராம பஞ்சாயத்து எல்லைக்குள்பட்டது.

**கிரையச் சொத்து விபரம்**

1. மதுரை தெற்கு ரீடி திருமங்கலம் சட்டி கல்லணை கிராமம் பஞ்சை சர்வே எண் 84/2J கிளர் 0.37.5 ஏக்கர் கொண்ட பகுதி 92.62 சதுர மீட்டர் பரம்பளவு 57.28 சதுர மீட்டர் நிலத்திற்கு நாள்குமசல்:-

கிரையம் கொடுப்பவர்கள்

கிரையம் பெறுபவர்

சின்னி P.கந்தசாமி M. Karuppayar  
 P. Iyaloghuari  
 P. Ramaf.

S. S. S. S.

கொடுப்பவர்கள்

3673  
 517

S. S. S. S.

- வடக்கே:— சர்வே 84/21 நம்பர் நிலம்
- கிழக்கே:— சர்வே 82 நம்பர் நிலம்
- தெற்கே:— சின்னகருயத்தேவர் மனைவி மீனாட்சியம்மாள் நிலம்
- மேற்கே:— சர்வே 84/2F,84/2E1 நம்பர் நிலங்கள்

இந்தநான்குமால்களுள்பட்டது செண்டு 57.38 உள்ள நிலம் இதுவும்,

இதன் மதிப்பு ரூபாய்.25,535/-

2 மேற்படி கல்லைண கிராமம் புஞ்சை சர்வே எண்.84/2D2 நம்பர் 0.12.5

ஏர்ஸ்க்கு செண்டு 31-ல் வடபுரம் செண்டு 21.5 உள்ள புஞ்சை நிலத்திற்கு நான்குமால்:—

- வடக்கே:— சர்வே 84/2D1 நம்பர் நிலம்
- கிழக்கே:— சர்வே 84/2E1 நம்பர் நிலம்
- தெற்கே:— K.P.ராஜா நிலம்
- மேற்கே:— சர்வே 84/2C நம்பர் நிலம்

இந்தநான்குமால்களுள்பட்டது செண்டு 21.5 உள்ள நிலம் இதுவும்,

இதன் மதிப்பு ரூபாய்.9,568/-

3 மேற்படி கல்லைண கிராமம் புஞ்சை சர்வே எண்.84/2L நம்பர் 0.30.0

ஏர்ஸ்க்கு செண்டு 74-ல் தென்புரம் செண்டு 12.79 உள்ள புஞ்சை நிலத்திற்கு நான்குமால்:—

- வடக்கே:— சின்னகருயத்தேவர் வணகயநா
- கிழக்கே:— சர்வே 82 நம்பர் நிலம்
- தெற்கே:— சர்வே 81 நம்பர் நிலம்
- மேற்கே:— சர்வே 84/2E2 நம்பர் நிலம்

1. 2020 3673  
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இந்தநான்குமால்களுள்பட்டது செண்டு 12.79 உள்ள நிலம் இதுவும்,

இதன் மதிப்பு ரூபாய்.5,692/-



சாடுபயலவர்கள்  
சர்வே P. சக்திமதி

கிராமம் பெறுபவர்

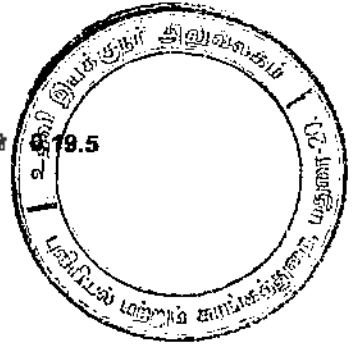
*[Handwritten signature]*

*[Handwritten signature]*  
ச. சக்திமதி

M. Karuppayee  
P. Vaseeshan  
P. Ramaj

K.P. சக்திமதி

A-122 *[Handwritten signature]*



4. மேற்படி கல்லணை கிராமம் புஞ்சை சர்வே எண்.81/2A1 நம்பர்

ஏர்ஸ்க்டு செண்டு 48.165 உள்ள புஞ்சை நிலத்திற்கு நான்குமால்:-

வடக்கே:- சர்வே 81/1G நம்பர் நிலம்

கிழக்கே:- சர்வே 82 நம்பர் நிலம்

தெற்கே:- சர்வே 81/2B1 நம்பர் நிலம்

மேற்கே:- சர்வே 81/1G,81/1J நம்பர் நிலங்கள்

இந்தநான்குமால்குள்பட்டது செண்டு 48.165 உள்ள நிலம் இதுவும்,

இதன் மதிப்பு ரூபாய்.21,434/-

ஆக மேற்கண்ட. நான்கு லக்க சொத்துக்களுக்கும் சேர்த்து அதாவது ஏக்கர் 1 செண்டு

39.835 உள்ள புஞ்சை நிலங்கள் இதன் மூலம் தங்களுக்கு சுத்தக் கிரையம் செய்து

செய்யப்படுவது

இதன் மதிப்பு ரூபாய்.62,229/-



கொடுப்பவர்கள்

சுயம்சரி P. சந்திரன்

M. Korappaiah

P. Kalleshwari

P. Ramaiah

கிரையம் பெறுபவர்

S. Arivudurai

15  
சு-837 சண்ணி

17/07/2020 3673  
7/17/2020 3673

சார்பு குண்டுவாரி  
சார்பிகள்:-

L. Narayana Rao, S. Arivudurai, M. S. Srinivasan



சுயம்சரி

12-தச்சம்பலம் w/o கிருஷ்ணயா, 1-88 அண்டு 1  
சுயம்சரி.

நயாசிக்கவர்:-

M. Sureshbabu

M.சுரஸ்வதி, D/o.S.மேகவண்ணம்

அனந்தன் தெரு, திருமங்கலம்

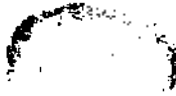
உரிமம் எண் A55/2009/MDU(S).

S. Arivudurai


1968-ம் வருடத்திய சென்னை முத்திரைச்சட்டம் விதி 3(1)  
பத்திரங்களின் குறைவு மதிப்பீடு தடுப்பு விதிகள்-(ன்) கீழ்க்கும்  
ஸ்டீட்டமெண்ட் கல்லணை கிராமம்

வரி எண்	சர்வீஸ் எண்	விலை விலை	சொத்தின் கன்மை	நடைமுறை நில வரப்படி எழுதிக் கொடுப்பவர்களின் மதிப்பீடு
1	2	3	4	5
		ஏக்கர்- செண்டு		ரூ. பை.
1.	84 2J	0-57.38	பஞ்சை	25,535 00
2.	84 2D2	0-21.5	பஞ்சை	9,588 00
3.	84 2L	0-12.79	பஞ்சை	5,692 00
4.	81 2A1	0-48.165	பஞ்சை	21,434 00
		1-39.835	ஆக மொத்தம்	62,229 00

கிராமம் கொடுப்பவர்கள்

 - சுவாமி P. ராமசுவாமி

கிராமம் பெறுபவர்





P. Ramaswami

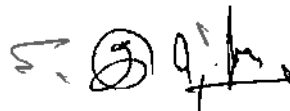
17/10/20 3673  
17  
8

Kopaswami

M. Karuppayee

P. Ramaswami

P. Ramaswami





தமிழக அரசு

வருவாய்த் துறை

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

மாவட்டம் : மதுரை

வட்டம் : கள்ளக்குடி

வருவாய் கிராமம் : கல்லணை

பட்டா எண் : 461

உரிமையாளர்கள் பெயர்

- |                         |       |                                  |
|-------------------------|-------|----------------------------------|
| 1. கருப்பத்தேவர்        | மகன்  | புழனியாண்டத்தேவர்                |
| 2. பெரிடகருப்பத்தேவர்   | மனைவி | மீனாட்சியம்மாள்                  |
| 3. கின்னக்கருப்பத்தேவர் | மகன்  | கருப்பாயி                        |
| 4. சின்ன கருப்பத்தேவர்  | மனைவி | மீனாட்சியம்மாள்                  |
| 5. கப்பியமணிபத்தேவர்    | மனைவி | பேச்சியம்மாள் என்ற வெள்ளையம்மாள் |

புல எண்/உட்பிரிவு	புன்செய்		நுன்செய்		மற்றவை		குறிப்புகள்
	பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
	ஹெக்டே - ஏர்	ரூ - பை	ஹெக்டே - ஏர்	ரூ - பை	ஹெக்டே - ஏர்	ரூ - பை	
84	2A7	0 - 16.00	0.59	--	--	--	-- 14-09-2014
84	2P2	0 - 21.50	0.45	--	--	--	3910-1/07--207/1417 -- 20-09-2007
84	2K	0 - 3.00	0.48	--	--	--	3910-2/07 207/1417 -- 20-09-2007
84	2L3	0 - 12.50	0.46	--	--	--	3910-3/07--207/1417 -- 20-09-2007
84	2H2	0 - 14.50	0.54	--	--	--	3910-4/07--207/1417 -- 20-09-2007
84	2J	0 - 37.50	1.40	--	--	--	----- 23-02-2001
84	2K	0 - 36.00	1.24	--	--	--	----- 23-02-2001
84	2L	0 - 30.00	1.13	--	--	--	----- 23-02-2001
		1 - 71.00	6.29				

குறிப்பு 2 :



1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 24/24/100/00461/40051 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.

2. இத் தகவல்கள் 24-01-2020 அன்று 05:02:39 PM நேரத்தில் அச்சடிக்கப்பட்டது.

3. என்கேபிசி கோமராவினது barcode பயிபரன் மூலம் படித்து 3G/GPRS வழி இணைப்புகளில் சரிபார்க்கவும்

*[Redacted]* -கல்யாணி  
P.கல்யாணி

M. Koruppayee  
P. Karashevari  
P. Rema

*[Handwritten signature]*

*[Handwritten signature]*  
K. P. S. Srinivasan

*[Handwritten signature]*

A-125

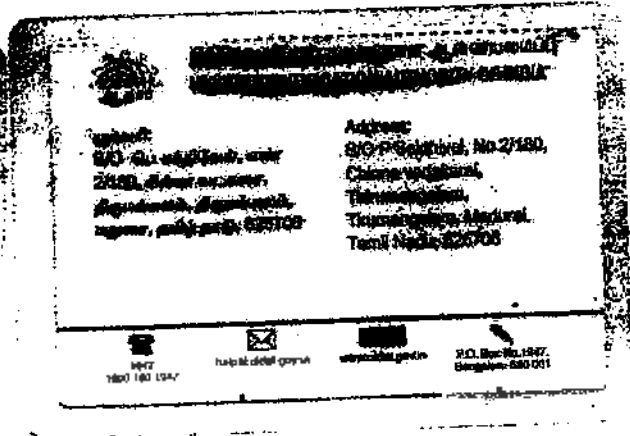
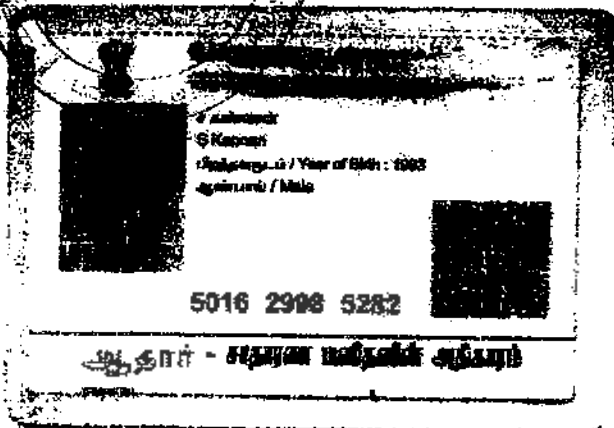
1. 2020-21-3673  
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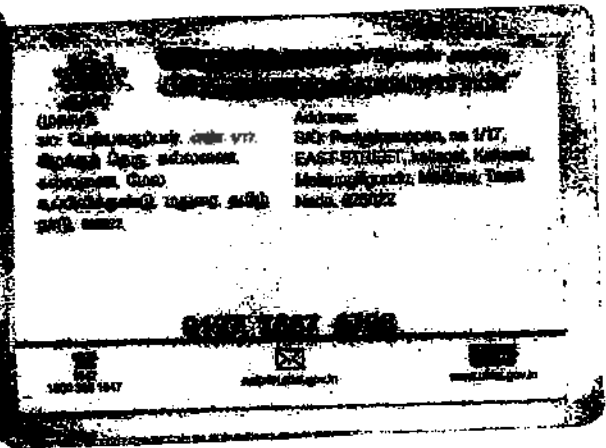
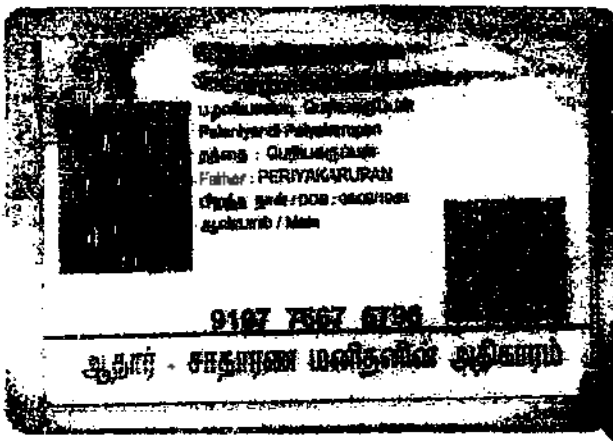
184



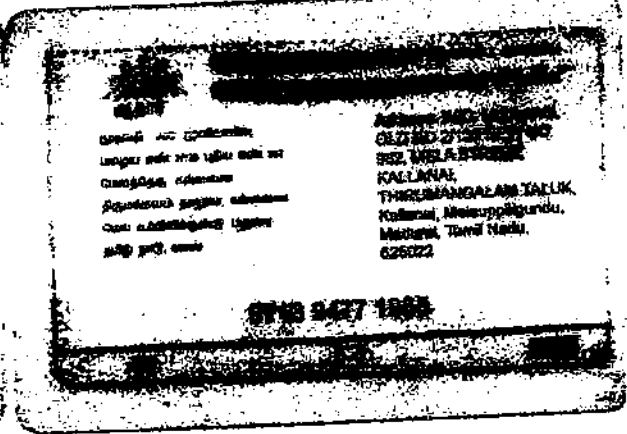
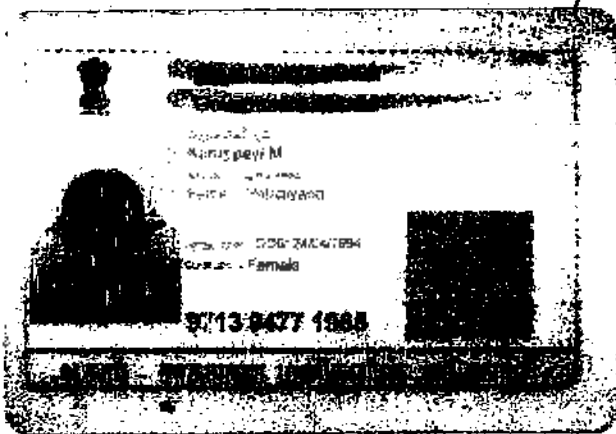




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*K.P. U.S. of [Redacted]*



*M. Karuppayee*

*12/17/2020 3673*  
*[Signature]*  
*[Stamp]*

*[Handwritten signature]*

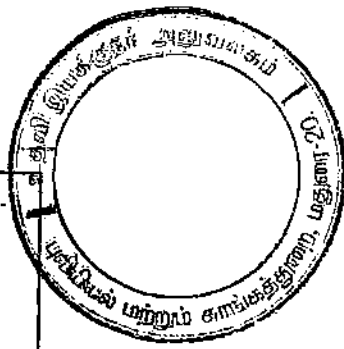


Thirumangalam Taluk  
Thirumbakulam  
Veerapandiapuram Thirumangalam, Madurai,  
Tamil Nadu - 625706  
9159185861



உங்கள் ஆதார் எண் / Your Aadhaar No. :  
**4448 2875 8205**  
எனது ஆதார், எனது அடையாளம்

- INFORMATION
- Aadhaar is proof of identity, not of citizenship.
  - To establish identity, authenticate online.



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

**கல்யாணப் பதிவுகள்**  
Kalyanam Patisyamsi  
கல்யாணப் பதிவுகள்  
Kalyanam / Family  
**4448 2875 8205**  
எனது ஆதார், எனது அடையாளம்

**ஆதார்**  
Address: G/O Parthiban, 146, - Thirumangalam Taluk, Thirumbakulam, Veerapandiapuram, Madurai, Tamil Nadu, 625706  
**4448 2875 8205**

P. Lakshmi Shree

**பி. ராமர் P**  
Father: Palaniyandi  
DOB: 31/03/1988  
Male  
**5876 8213 9340**  
ஆதார் - சாதாரண மனிதனின் அடையாளம்

**பி. ராமர் P**  
Address: G/O Parthiban, 146, Thirumangalam Taluk, Thirumbakulam, Veerapandiapuram, Madurai, Tamil Nadu, 625706  
**5876 8213 9340**

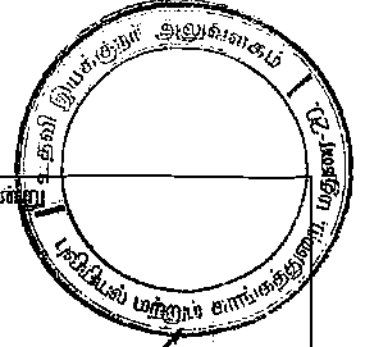
P. Ramar

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S. S. S. S.



R/திருமங்கலம்/புத்தகம்-1/3673/2020



1899ம் ஆண்டு இந்திய முத்திரைச் சட்டம் 42வது பிரிவின் கீழான சான்று



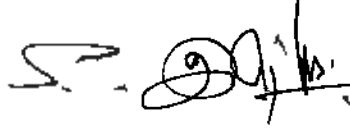




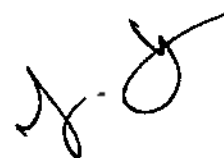
2020ம் ஆண்டு வரிசை எண் 1349

ஜி.சி.என்.உடைப்பு, அவனியாபுரம், மதுரை, தமிழ்நாடு, இந்தியா, 625012-ல் வசிக்கும் திரு சிரத்தினம் என்பவரிடமிருந்து ₹ 268/- ரூபாய் இருநூற்று அறுபத்தாறு மட்டும் இந்த ஆவணத்திற்காக இந்திய முத்திரைச் சட்டம் 42வது பிரிவின் படி குறைவாயிருந்த முத்திரைக் கட்டணம் வசூலிக்கப்பட்டது என நான் இதன் மூலம் சான்றளிக்கிறேன்.

சார்பதிவாளர் திருமங்கலம்  
நாள்: 07/07/2020

சார்பதிவாளர் மற்றும் இந்திய முத்திரைச் சட்டம் பிரிவு  
41ன் படி ஆட்சியர்










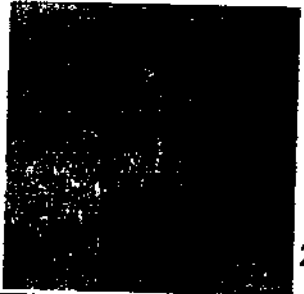
2020 ஆம் ஆண்டு ஜூலை மாதம் 07ம் தேதி பி.ப. 01:34 மணியளவில் திருமங்கலம் சார்பதிவாளர் அலுவலகத்தில் தூக்கல் செய்து கட்டணம் ₹ 2,875/- செலுத்தியவர்.

<p>இடது பெருவிரல்</p>  	 <p>கூடுதல் விவரங்கள் ஆவண வாசகத்தில் உள்ளபடி</p>
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p>  	<p>சிரத்தினம் P.சுந்திரமல்</p> <p>கூடுதல் விவரங்கள் ஆவண வாசகத்தில் உள்ளபடி</p>
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p>  	 <p>கூடுதல் விவரங்கள் ஆவண வாசகத்தில் உள்ளபடி</p>

S. Arathi

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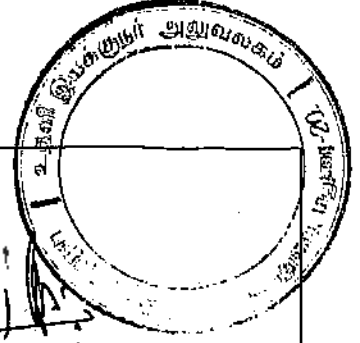
R/திருமங்கலம்/புத்தகம்-1/3673/2020

<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p>  	<p><i>S. Srinivasan</i></p> <p>கூடுதல் விவரங்கள் ஆவண வாசகத்தில் உள்ளபடி</p>
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p>  	<p><i>K. P. Govindan</i></p> <p>கூடுதல் விவரங்கள் ஆவண வாசகத்தில் உள்ளபடி</p>
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p>  	<p><i>M. Kokkuyyaz</i></p> <p>கூடுதல் விவரங்கள் ஆவண வாசகத்தில் உள்ளபடி</p>
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p>  	<p><i>P. Kalleshwari</i></p> <p>கூடுதல் விவரங்கள் ஆவண வாசகத்தில் உள்ளபடி</p>
<p>எழுதிக் கொடுத்ததாக ஒப்புக் கொண்டவர் இடது பெருவிரல்</p>  	<p><i>P. Rana</i></p> <p>23 கூடுதல் விவரங்கள் ஆவண வாசகத்தில் உள்ளபடி</p>

191 *S. Srinivasan*

Jan 2020 3673  
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R/திருமங்கலம்/புத்தகம்-1/3673/2020




எழுதி வாங்கியதாக ஒப்புக் கொண்டவர்  
இடது பெருவிரல்

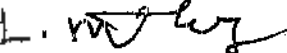


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கூடுதல் விவரங்கள் ஆவண வாய்க்கத்தில் உள்ளது

இன்னொன்று நிருபித்தவர்கள்

- 

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திருமதி கச்சம்மாள் க/பெ கருப்பையா 1-22,கல்லணை, கள்ளிக்கூடி, மதுரை, தமிழ்நாடு, இந்தியா, 625022
- 

திரு முத்துக்கருப்பன் த/பெ லெட்சுமணன் 1/37ஏ,நடுத்தெரு, ஒத்தையூலங்களம், திருப்பரங்குன்றம் மதுரை, தமிழ்நாடு, இந்தியா, 625022

2020 ஆம் ஆண்டு ஜூலை மாதம் 17 நாள்

*[Handwritten signature]*  
கார்த்திகேயன் ம  
சார்பதிவாளர்  
திருமங்கலம்

R/திருமங்கலம்/புத்தகம்-1/3673/2020 எண்ணாகப் பதிவு செய்யப்பட்டது.

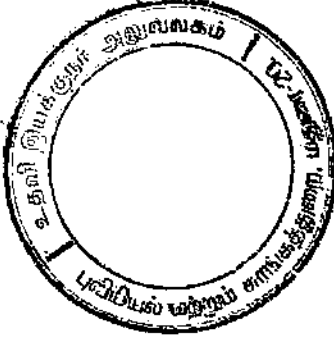
நாள்: 07/07/2020  
திருமங்கலம்



*[Handwritten signature]*  
கார்த்திகேயன் ம  
சார்பதிவாளர்

17/07/2020 3673  
17/07/2020  
17/07/2020

*[Handwritten signature]*



**தமிழ்நாடு அரசு  
பதிவுத்துறை  
ஒப்புக்கேச்சீட்டு**

**பார்வைக்குறிப்பு விவரங்கள்**

சார்பதிவாளர் அலுவலகப் பெயர்	திருமங்கலம்
விண்ணப்ப எண்	S01LANDVV202007072426242
பரிவர்த்தனை எண்	REG202007071731498
பரிவர்த்தனை நாள்	07/07/2020

**விண்ணப்ப விவரங்கள்**

விண்ணப்பதாரர் பெயர்	Rathinam
சேவை வகை	சார்பதிவாளர் அலுவலகத்தில் ஆவணப் பதிவு (புதியது)
முத்திரைத்தீர்வை (₹)	268/-
பதிவுக் கட்டணம் (₹)	2496/-
கணினிக் கட்டணம் (₹)	160/-
குறுந்தகடுக் கட்டணம் (₹)	100/-
உட்பிரிவுக் கட்டணம் (₹)	120/-

**தொகை செலுத்திய விவரங்கள்**

வங்கியின் பெயர்	பாரத ஸ்டேட் வங்கி
வங்கிக்குறிப்பு எண்	CPAAEOEFY9
பணம் செலுத்திய விதம்	இணைய வழி
செலுத்தப்பட்ட தொகை (₹)	3142/-
தொகை செலுத்தும் நிலைப்பாடு	வெற்றி
தொகை செலுத்திய நாள்	07/07/2020

ஏதேனும் சந்தேகங்கள்/குறைகள் இருப்பின் கீழ்க்கண்ட வழிமுறைகளில் தெரிவிக்கலாம்

கட்டணமில்லா தொலைபேசி எண்

1800 102 5174

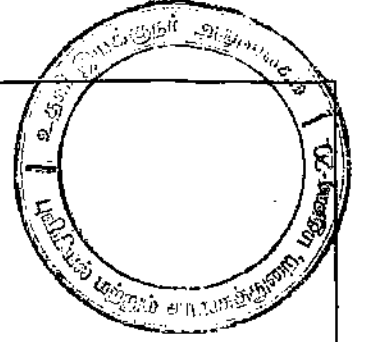
மின்னஞ்சல் முகவரி

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*(Handwritten signature)*



தமிழ்நாடு அரசு  
பதிவுத்துறை  
முன்பதிவு செய்ததற்கான ஒப்புக்கட்சீட்டு



முன்பதிவு விவரம்

பதிவு செய்த நாள்	07/07/2020
முன்பதிவு நாள்	07/07/2020
முன்பதிவு நேரம்	11:00 - 12:00
முன்பதிவு வரிசை எண்	9 [D209]
பதிவு வகை	ஆவணப் பதிவு
தற்காலிக எண்	TP/92539818/2020

விண்ணப்பதாரர் விவரம்

விண்ணப்பதாரர் பெயர்	திரு. சி.ரத்தினம்
தந்தை / கணவர் பெயர்	திரு. சின்னவீரன்
சார்பதிவாளர் அலுவலகம்	திருமங்கலம்
சொத்து அமைந்துள்ள கிராமம்	கல்லணை

குறிப்பு:

- முன்பதிவு செய்த நபர் அவருக்காக ஒதுக்கப்பட்ட நேரத்திற்கு தவறாமல் அலுவலகத்திற்கு வந்து ஆவணத்தை பதிவுக்கு தாக்கல் செய்ய கோரப்படுகிறார்.
- முன்பதிவு செய்த நபர் குறித்த நேரத்தில் வரவில்லையெனில் அடுத்த முன்பதிவு செய்த நபரின் ஆவணம் பதிவுக்கு எடுத்துக்கொள்ளப்படும். தவறவிட்டவரின் முன்பதிவு அடுத்த முன்பதிவு நேரத்தில் கடைசியாக வைக்கப்படும்.
- முன்பதிவு நேரத்தில் ஒதுக்கப்பட்ட அனைத்து வரிசை எண்களுக்கான பதிவு மேற்கொண்ட பின்பே அடுத்த முன்பதிவு நேரத்தின் வரிசை எண்களுக்கான பதிவு தொடங்கும்.
- ஆவணப்பதிவிற்கான அனைத்து ஆதாரங்களும் தாக்கல் செய்யப்படும் நிலையில் ஆவணம் பதிவு செய்யப்படும். ஆவணப்பதிவிற்கு தேவையான ஆதாரங்கள் ஏதும் இல்லாத நிலை மற்றும் பதிவுக்கு ஏதும் தடையிருப்பின் பதிவு மறுப்புச் சீட்டு உருவாக்கப்பட்டு சார்பதிவாளரால் கையொப்பமிடப்பட்டு வழங்கப்படும்.
- பதிவு செய்யப்பட்ட ஆவணம், தாக்கல் செய்தவருக்கு திரும்ப வழங்கப்படும். தாக்கல் செய்தவர்\* வர இயலாத நிலையில் ஆவணப்பதிவின் போது வேறொரு நபரை ஆவணம் திரும்ப பெற நியமிக்கலாம். ஆவணப்பதிவின் போது நியமனம் செய்யப்பட்டவரின் விரல் ரேகை கவரப்படும். ஆவணம் திரும்ப அளிக்கும் போது அவரின் விரல் ரேகை மீண்டும் கவரப்பட்டு ஒப்பீட்டு சரிபார்த்தபின்பே ஆவணம் திரும்ப வழங்கப்படும்.

ஏதேனும் சந்தேகங்கள்/குறைகள் இருப்பின் கீழ்க்கண்ட வழிமுறைகளில் தெரிவிக்கலாம்

கட்டணமில்லா தொலைபேசி எண்

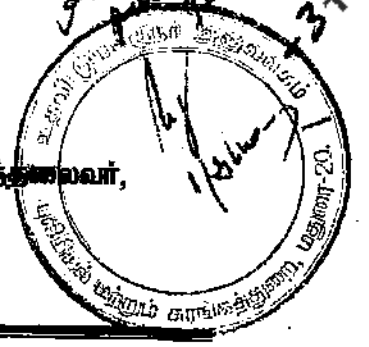
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அனுப்புநர்  
திரு.மு.கோட்டைக்குமார்,பி.ஏ.,  
மாவட்ட ஆய்வுக்குழு அலுவலர் (மற்றும்)  
வருவாய் கோட்டாட்சியர்,(கூ.பொ)  
திருமங்கலம்.

பெறுநர்:  
மாவட்ட ஆட்சித்தலைவர்,  
மதுரை.



ந.க.எண். 299/2023/அ1

நாள்: 25.02.2023

அய்யா,

87



பொருள்:	கனிமங்களும் சுரங்கங்களும் - மதுரை மாவட்டம் - கள்ளிக்குடி வட்டம் - கல்லணை கிராமம் - புல எண்: 84/2A1,2A2,2B1,2B2,2C1,2C2,2D1,2D2A,2E1,2E2,2J,2K,2L - மொத்தம் (2.05.17 ஹெக்டேர்ஸ்) - சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுத்தல் - அனுமதி வழங்கிட கேட்டது - அறிக்கை அனுப்பதல் - தொடர்பாக.
பார்வை:	1. திரு. S. ரத்தினம் த/பெ. சின்னவீரன் என்பவரின் மனு நாள்: 19.01.2023 2. துணை இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை அவர்கள் கடிதம் ந.க.எண்: 08/கனிமம்/ 2023 நாள்: 19.01.2023 3. கள்ளிக்குடி வட்டாட்சியர் அறிக்கை ந.க.எண்:256/2023/அ1 நாள்:10.02.2023 4. இவ்வலுவலக வருவாய் கோட்டாட்சியரின் இடப்பார்வை நாள்:24.02.2023



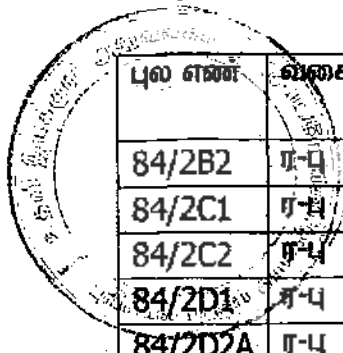
மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்லணை கிராமம் புல எண்: 84/2A1, 2A2, 2B1, 2B2, 2C1, 2C2, 2D1, 2D2A, 2E1, 2E2, 2J, 2K, 2L மொத்தம் (2.05.17 ஹெக்டேர்ஸ்) பட்டா நிலத்தில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க குவாரி உரிமம் வழங்குமாறு கேட்ட பார்வை 1-ல் கண்ட மனுவின் பேரில், அறிக்கை செய்திட பார்வை 2-இல் கண்ட கடிதத்தில் அறிவுறுத்தப்பட்டுள்ளது. அதன்படி பார்வை 3ல் கண்ட கள்ளிக்குடி வட்டாட்சியரின் அறிக்கையினை பரிசீலனை செய்தும், கிராம கணக்குகளை சரிபார்த்தும், இடப்பார்வை செய்தும் எனது அறிக்கையினை பின்வருமாறு சமர்ப்பிக்கின்றேன்.

கிராவல் அனுமதி வழங்கிட கேட்ட புலங்கள் கல்லணை கிராம கணக்கு கீழ்க்கண்டவாறு தாக்கலாகியுள்ளது

புல எண்	வகைப்பாடு	விஸ்தீரணம் (ஹெக்டேர்)	பட்டா எண்	பட்டாதாரர் விவரம்
84/2A1	ர-4	0.09.00	674	சின்னவீரன் மகன் ரத்தினம்
84/2A2	ர-4	0.16.00	1185	சின்னவீரன் மகன் ரத்தினம்
84/2B1	ர-4	0.06.50	674	சின்னவீரன் மகன் ரத்தினம்

S. S. S. S.





புல எண்	வகைப்பாடு	விஸ்தீரணம் (ஹெக்ட)	பட்டா எண்	பட்டாதாரர் விவரம்
84/2B2	ர-பு	0.11.50	1185	சின்னவீரன் மகன் ரத்தினம்
84/2C1	ர-பு	0.08.00	674	சின்னவீரன் மகன் ரத்தினம்
84/2C2	ர-பு	0.13.00	1185	சின்னவீரன் மகன் ரத்தினம்
84/2D1	ர-பு	0.06.50	674	சின்னவீரன் மகன் ரத்தினம்
84/2D2A	ர-பு	0.08.67	1185	சின்னவீரன் மகன் ரத்தினம்
84/2E1	ர-பு	0.08.00	674	சின்னவீரன் மகன் ரத்தினம்
84/2E2	ர-பு	0.14.50	1185	சின்னவீரன் மகன் ரத்தினம்
84/2J	ர-பு	0.37.50	1185	சின்னவீரன் மகன் ரத்தினம்
84/2K	ர-பு	0.36.00	1185	சின்னவீரன் மகன் ரத்தினம்
84/2L	ர-பு	0.30.00	1185	சின்னவீரன் மகன் ரத்தினம்

மேற்குறிப்பிட்ட புலங்களின் நான்குமால் விவரம்:

புல எண்	வகைப்பாடு	விஸ்தீரணம் (ஹெக்ட)	நான்குமால் விவரம்
84/2A1	ர-பு	0.09.00	வ - புல எண்:84/4 அரக புறம்புகல் நிலம் தெ - புல எண்: 84/2A2- மனுதாரர் நிலம் கி - புல எண்: 84/2B1- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2A2	ர-பு	0.16.00	வ - புல எண்:84/2A1- மனுதாரர் நிலம் தெ - புல எண்: 81/1A- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2B2- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2B1	ர-பு	0.06.50	வ - புல எண்:84/4- அரக புறம்புகல் நிலம் தெ - புல எண்: 84/2B2- மனுதாரர் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A1 - மனுதாரர் நிலம்
84/2B2	ர-பு	0.11.50	வ - புல எண்:84/2B1- மனுதாரர் நிலம் தெ - புல எண்: 81/1E- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A2 - மனுதாரர் நிலம்
84/2C1	ர-பு	0.08.00	வ - புல எண்:84/4- அரக புறம்புகல் நிலம் தெ - புல எண்: 84/2D2A- மனுதாரர் நிலம் கி - புல எண்: 84/2D2- மனுதாரர் நிலம் மே - புல எண்: 84/2B1 - மனுதாரர் நிலம்
84/2C2	ர-பு	0.13.00	வ - புல எண்:84/2C1- மனுதாரர் நிலம் தெ - புல எண்: 81/1F- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2D2A- மனுதாரர் நிலம் மற்றும் புல எண்: 84/2D2B- பெரியகருப்பன் (வ) நிலம் மே - புல எண்: 84/ 2B2- மனுதாரர் நிலம்

புல எண்	வகைப்பாடு	விஸ்தீரணம் (ஹெக்ட)	நான்குமால் விவரம்
84/2D1	ர-பு	0.06.50	வ - புல எண்:84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2A - மனுதாரர் நிலம் கி - புல எண்: 84/2E1- மனுதாரர் நிலம் மே - புல எண்: 84/2C1 - மனுதாரர் நிலம்
84/2D2A	ர-பு	0.08.67	வ - புல எண்:84/2D1- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2B - பெரியகருப்பன்(வ) நிலம் கி - புல எண்: 84/2E2- மனுதாரர் நிலம் மே - புல எண்: 84/2C2 - மனுதாரர் நிலம்
84/2E1	ர-பு	0.08.00	வ - புல எண்:84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2E2 - மனுதாரர் நிலம் கி - புல எண்: 84/2J, 2K - மனுதாரர் நிலம் மே - புல எண்: 84/2D1- மனுதாரர் நிலம்
84/2E2	ர-பு	0.14.50	வ - புல எண்:84/2E1- மனுதாரர் நிலம் தெ - புல எண்: 81/1G- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2L, 2K - மனுதாரர் நிலம் மே - புல எண்: 84/2D2A, - மனுதாரர் நிலம் புல எண்: 84/2D2B - பெரியகருப்பன்(வ) நிலம்
84/2J	ர-பு	0.37.50	வ - புல எண்:84/2I- மனுதாரர் நிலம் தெ - புல எண்: 84/2L- மனுதாரர் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் மே - புல எண்: 84/2E1,2E2 - மனுதாரர் நிலம்
84/2K	ர-பு	0.36.00	வ - புல எண்:84/2J- மனுதாரர் நிலம் தெ - புல எண்: 84/2L- மனுதாரர் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் மே - புல எண்: 84/2E1,2E2 - மனுதாரர் நிலம்
84/2L	ர-பு	0.30.00	வ - புல எண்:84/2K- மனுதாரர் நிலம் தெ - புல எண்: 81/1I, 1H- ரஞ்சித்குமார் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் புல எண்: 82/2A - ராமத்தேவர் (வ) நிலம் மே - புல எண்: 84/2E2 - மனுதாரர் நிலம்

மனுதாரர் பட்டா நிலங்களின் ஒட்டுமொத்த நான்குமால் எல்லை சிலகரம்:

வடக்கு	: புல எண்: 84/4 - அரசு புஞ்சை (கீ.ஏற்பட்டது) தரிசு : புல எண்: 84/2F, 2F - மனுதாரர் பட்டா நிலம் (குவாரி)
தெற்கு	: புல எண்: 81 - பட்டா நிலங்கள்
கிழக்கு	: புல எண்: 82/1- அரசு புஞ்சை (கீ.ஏற்பட்டது) தரிசு : புல எண்:2A - ராமத்தேவர் (வ) பட்டா நிலம்
மேற்கு	: புல எண்: 85 - குண்டாறு

பிரஸ்தாப புலங்கள் அனைத்தும் தரிசாக உள்ளது. மனுதாரரின் பட்டாநிலங்கள் தடையாணை புத்தகத்தில் இடம்பெறவில்லை. மேற்படி நிலம் நில உச்சவரம்புச் சட்டத்தின் கீழ்



கொண்டுவில்லை. பிரஸ்தாப புலத்தில் விஸையுர்ந்த ஐாதி மரங்கள், புராதனச் சின்னங்கள் மற்றும் தொல்லியல் துறை நினைவுச் சின்னங்கள் ஏதுமில்லை. மனுதாரரின் பட்டாநிலங்களுக்கருகில் காப்புக்காடுகள் ஏதும் அமையவில்லை. மேற்குறிப்பிட்ட பட்டா நிலங்கள் யாவும் கல்லணை குடியிருப்பு பகுதியிலிருந்து சுமார் 300 மீட்டர் தொலைவில் அமைந்துள்ளது. பிரஸ்தாப புலத்தின் வழியாக உயர்/ தாழ்வழுத்த கீள் கம்பிகள் செல்லவில்லை. மனுதாரரின் பட்டா நிலங்கள் அரசு பயன்பாட்டிற்காக நில ஆர்ஜிதம் / நில எடுப்பு பட்டியில் இடம்பெறவில்லை.

மனுதாரருக்கு மேற்குறிப்பிட்ட பட்டாநிலங்களில் குவாசி உரிமம் வழங்குவது தொடர்பாக கல்லணை கிராமத்தில் கூந்த 23.01.2023 அன்று A1 நோட்டீஸ் செய்யப்பட்டு 15 தினங்கள் கால அவகாசம் வழங்கப்பட்டது. அதன்படி மேற்படி நோட்டீஸ் காப்பு செய்யப்பட்ட 23.01.2023 முதல் 07.02.2023 வரை ஆட்சேபணை ஏதும் வரப்பெறவில்லை.

அதன்பேரில் கள்ளிக்குடி வட்டம், கல்லணை கிராமம் புல எண்: 84/2A1, 2A2, 2B1, 2B2, 2C1, 2C2, 2D1, 2D2A, 2E1, 2E2, 2J, 2K, 2L மொத்தம்(2.05.17 ஹெக்டேர்ஸ்) பட்டா நிலத்தில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க மனுதாரர் திரு. S. ரத்தினம் என்பவருக்கு அனுமதி வழங்கிடலாம் என பரிந்துரை செய்து கள்ளிக்குடி வட்டாட்சியர் அறிக்கை சமர்ப்பித்துள்ளார்.

எனவே, வட்டாட்சியரின் அறிக்கையின்படியும், மனுதாரர் சமர்ப்பித்துள்ள ஆவணங்களின் படியும் சாதாரண உடைகற்கள் மற்றும் கிராவல் மண் வெட்டி எடுக்க கனிம விதிகளின்படி அனுமதி வழங்க நடவடிக்கை மேற்கொள்ளலாம் என்ற விடயத்தினை பணிவுடன் தெரிவித்துக் கொள்கிறேன்.

இணைப்பு: மேற்கண்டவாறு

தங்கள் நம்பிக்கையுள்ள,

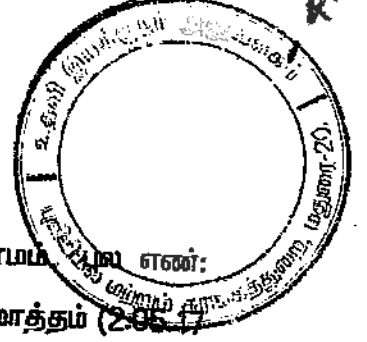
ஓம்/மு.கோட்டைக்குமார்  
வருவாய் கோட்டாட்சியர்,  
திருமங்கலம்.

/உ.ந.உ.ப./

நேர்முடிவுகளைவிட  
25.12.23

புலத்தணிக்கை குறிப்பு

நாள்: 24.02.2023



மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்லணை கிராமம் (புல எண்: 84/2A1, 2A2, 2B1, 2B2, 2C1, 2C2, 2D1, 2D2A, 2E1, 2E2, 2J, 2K, 2L மொத்தம் (2.06.17 ஹெக்டேர்ஸ்) யட்டா நிலத்தில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க குவாரி உரிமம் வழங்குவது தொடர்பாக பிரஸ்தாப புலங்கள் 24.02.2023 அன்று எத்தலப்பார்வை செய்யப்பட்டது. புலத்தணிக்கையின்போது சம்பந்தப்பட்ட குறுவட்ட நில அளவர், உள்வட்ட வருவாய் ஆய்வாளர், கிராம நிர்வாக அலுவலர் மற்றும் மனுதாரர் ஆகியோர் உடனிருந்தனர். மேற்குறிப்பிட்ட புலங்களின் நான்குமால் விவரம்:

புல எண்	வகைப்பாடு	விஸ்தீரணம் (ஹெக்டேர்ஸ்)	நான்குமால் விவரம்
84/2A1	ர-பு	0.09.00	வ - புல எண்:84/4 அரசு புறம்புகல் நிலம் தெ - புல எண்: 84/2A2- மனுதாரர் நிலம் கி - புல எண்: 84/2B1- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2A2	ர-பு	0.16.00	வ - புல எண்:84/2A1- மனுதாரர் நிலம் தெ - புல எண்: 81/1A- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2B2- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2B1	ர-பு	0.06.50	வ - புல எண்:84/4- அரசு புறம்புகல் நிலம் தெ - புல எண்: 84/2B2- மனுதாரர் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A1 - மனுதாரர் நிலம்
84/2B2	ர-பு	0.11.50	வ - புல எண்:84/2B1- மனுதாரர் நிலம் தெ - புல எண்: 81/1E- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A2 - மனுதாரர் நிலம்
84/2C1	ர-பு	0.08.00	வ - புல எண்:84/4- அரசு புறம்புகல் நிலம் தெ - புல எண்: 84/2D2A- மனுதாரர் நிலம் கி - புல எண்: 84/2D2- மனுதாரர் நிலம் மே - புல எண்: 84/2B1 - மனுதாரர் நிலம்
84/2C2	ர-பு	0.13.00	வ - புல எண்:84/2C1- மனுதாரர் நிலம் தெ - புல எண்: 81/1F- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2D2A- மனுதாரர் நிலம் மற்றும் புல எண்: 84/2D2B- பெரியகருப்பன் (வ) நிலம் மே - புல எண்: 84/ 2B2- மனுதாரர் நிலம்

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புல எண்	வகைப்பாடு	விஸ்தீரணம் (ஹெக்ட)	நான்குமால் விவரம்
84/2D1	ர-பு	0.06.50	வ - புல எண்:84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2A - மனுதாரர் நிலம் கி - புல எண்: 84/2E1- மனுதாரர் நிலம் மே - புல எண்: 84/2C1 - மனுதாரர் நிலம்
84/2D2A	ர-பு	0.08.67	வ - புல எண்:84/2D1- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2B - பெரியகரும்பன்(வ) நிலம் கி - புல எண்: 84/2E2- மனுதாரர் நிலம் மே - புல எண்: 84/2C2 - மனுதாரர் நிலம்
84/2E1	ர-பு	0.08.00	வ - புல எண்:84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2E2 - மனுதாரர் நிலம் கி - புல எண்: 84/2J, 2K - மனுதாரர் நிலம் மே - புல எண்: 84/2D1- மனுதாரர் நிலம்
84/2E2	ர-பு	0.14.50	வ - புல எண்:84/2E1- மனுதாரர் நிலம் தெ - புல எண்: 81/1G- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2L, 2K - மனுதாரர் நிலம் மே - புல எண்: 84/2D2A, - மனுதாரர் நிலம் புல எண்: 84/2D2B - பெரியகரும்பன்(வ) நிலம்
84/2J	ர-பு	0.37.50	வ - புல எண்:84/2I- மனுதாரர் நிலம் தெ - புல எண்: 84/2L- மனுதாரர் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் மே - புல எண்: 84/2E1,2E2 - மனுதாரர் நிலம்
84/2K	ர-பு	0.36.00	வ - புல எண்:84/2J- மனுதாரர் நிலம் தெ - புல எண்: 84/2L- மனுதாரர் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் மே - புல எண்: 84/2E1,2E2 - மனுதாரர் நிலம்
84/2L	ர-பு	0.30.00	வ - புல எண்:84/2K- மனுதாரர் நிலம் தெ - புல எண்: 81/1I, 1H- ரஞ்சித்குமார் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் புல எண்: 82/2A - ராமத்தேவர் (வ) நிலம் மே - புல எண்: 84/2E2 - மனுதாரர் நிலம்

மனுதாரர் பட்டா நிலங்களின் ஒட்டுமொத்த நான்குமால் எல்லை விவரம்:

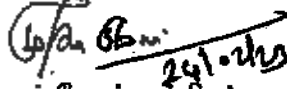
வடக்கு	: புல எண்: 84/4 - அரசு புஞ்சை (தீ.ஏற்பட்டது) தரிசு : புல எண்: 84/2F, 2F - மனுதாரர் பட்டா நிலம் (குவாரி)
தெற்கு	: புல எண்: 81 - பட்டா நிலங்கள்
கிழக்கு	: புல எண்: 82/1- அரசு புஞ்சை (தீ.ஏற்பட்டது) தரிசு : புல எண்: 2A - ராமத்தேவர் (வ) பட்டா நிலம்
மேற்கு	: புல எண்: 85 - குண்டாறு


S. S. S.

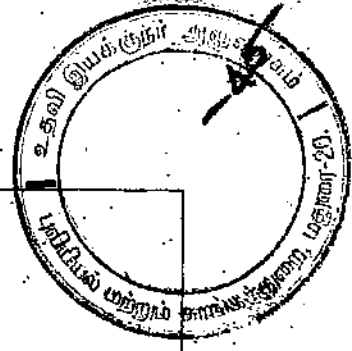
பிரஸ்தாப புலங்கள் அனைத்தும் தரிசாக உள்ளது. மனுதாரரின் பட்டாநிலங்கள் தடையாணை பத்திரத்தில் இடம்பெறவில்லை. மேற்படி நிலம் நில உச்சவரம்புச் சட்டத்தின் கீழ் கொணரப்படவில்லை. பிரஸ்தாப புலத்தில் விலையுயர்ந்த ஜாதி மரங்கள், கிராமத்தின் சின்னங்கள் மற்றும் தொல்லியல் துறை நினைவுச் சின்னங்கள் ஏதுமில்லை. மனுதாரரின் பட்டாநிலங்களுக்கருகில் காப்புக்காடுகள் ஏதும் அமையவில்லை. மேற்குறிப்பிட்ட பட்டா நிலங்கள் யாவும் கல்லணை குடியிருப்பு பகுதியிலிருந்து கமார் 300 மீட்டர் தொலைவில் அமைந்துள்ளது. பிரஸ்தாப புலத்தின் வழியாக உயர்/ தாழ்வழுத்த மின் கம்பிகள் செல்லவில்லை. மனுதாரரின் பட்டா நிலங்கள் அரசு பயன்பாட்டிற்காக நில ஆர்ஜிதம் செய்ய எடுப்பு பட்டியில் இடம்பெறவில்லை.

மனுதாரருக்கு மேற்குறிப்பிட்ட பட்டாநிலங்களில் குவாசி உரிமம் வழங்குவது தொடர்பாக கல்லணை கிராமத்தில் கடந்த 23.01.2023 அன்று A1 நோட்டீஸ் செய்யப்பட்டு 15 தினங்கள் கால அலகாசம் வழங்கப்பட்டது. அதன்படி மேற்படி நோட்டீஸ் சார்பு செய்யப்பட்ட 23.01.2023 முதல் 07.02.2023 வரை ஆட்சேபணை ஏதும் வரப்பெறவில்லை.

அதன்பேரில் கள்ளிக்குடி வட்டம், கல்லணை கிராமம் புல எண்: 84/2A1, 2A2, 2B1, 2B2, 2C1, 2C2, 2D1, 2D2A, 2E1, 2E2, 2J, 2K, 2L மொத்தம்(2.05.17 ஹெக்டேர்ஸ்) பட்டா நிலத்தில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க மனுதாரர் திரு. S. ரத்தினம் என்பவருக்கு அனுமதி வழங்கிடலாம்.

  
 வருவாய் கோட்டாட்சியர்  
 திருமங்கலம்





<b>அனுப்புநர்</b> திரு. தே. சுரேந்திரன், M.Com., M.Phil., வட்டாட்சியர், கள்ளிக்குடி	<b>பெறுநர்</b> துணை இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை, மதுரை மாவட்டம்.
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அய்யா,

ந.க.எண்: அ1/253/2023 நாள்: 02.2023

பொருள்:	கனிமங்களும் சுரங்கங்களும் - மதுரை மாவட்டம் - கள்ளிக்குடி வட்டம் - கல்லணை கிராமம் - புல எண்: 84/2A1,2A2,2B1,2B2,2C1,2C2,2D1,2D2A,2E1,2E2,2J,2K,2L - மொத்தம் (2.05.17 ஹெக்டேர்ஸ்) - சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுத்தல் - அனுமதி வழங்கிட கேட்டது - அறிக்கை அனுப்புதல் - தொடர்பாக.
பார்வை:	1. திரு. S. ரத்தினம் த/பெ. சின்னவிரன் என்பவரின் மனு நாள்: 19.01.2023 2. துணை இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை அவர்கள் கடிதம் ந.க.எண்: 08/கனிமம்/ 2023 நாள்: 19.01.2023 3. சிவரக்கோட்டை உள்வட்ட வருவாய் ஆய்வாளரின் அறிக்கை நாள்: 09.02.2023 4. கல்லணை கிராம நிர்வாக அலுவலரின் அறிக்கை நாள்: 09.02.2023

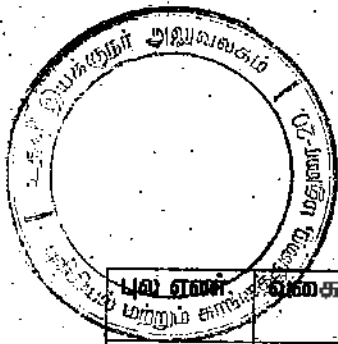
மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்லணை கிராமம் புல எண்: 84/2A1,2A2,2B1,2B2,2C1,2C2,2D1,2D2A,2E1,2E2,2J,2K,2L மொத்தம்(2.05.17 ஹெக்டேர்ஸ்) பட்டா நிலத்தில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க குவாரி உரிமம் வழங்குமாறு கேட்ட பார்வை 1-ல் கண்ட மனுவின் பேரில், அறிக்கை செய்திட பார்வை 2-இல் கண்ட கடிதத்தில் அறிவுறுத்தப்பட்டுள்ளது. அதன்படி பார்வை 3 மற்றும் 4-இல் கண்ட கடிதங்களில் சம்பந்தப்பட்ட அலுவலர்களின் கன அறிக்கையைப் பெற்றும், மேற்குறிப்பிட்ட புலங்களை 23.01.2023 அன்று ஸ்தலப்பார்வை செய்தும், எனதறிக்கையை கீழ்க்கண்டவாறு சமர்ப்பிக்கிறேன்.

கிராவல் அனுமதி வழங்கிட கேட்ட புலங்கள் கல்லணை கிராம கணக்கு கீழ்க்கண்டவாறு தாக்கலாகியுள்ளது

புல எண்	வகைப்பாடு	விலைநீரணம் (ஹெக்ட)	பட்டா எண்	பட்டாதாரர் விவரம்
84/2A1	ர-பு	0.09.00	574	சின்னவிரன் மகன் ரத்தினம்
84/2A2	ர-பு	0.16.00	1185	சின்னவிரன் மகன் ரத்தினம்
84/2B1	ர-பு	0.06.50	674	சின்னவிரன் மகன் ரத்தினம்

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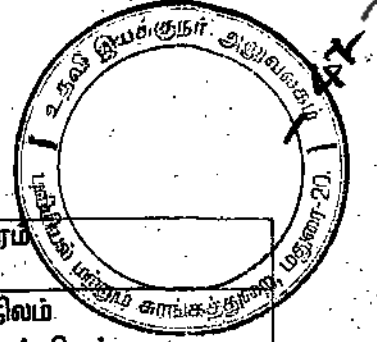
புல எண்	வகைப்பாடு	விஸ்தீரணம் (ஹெக்ட)	பட்டா எண்	பட்டாதாரர் விவரம்
84/2B2	ர-பு	0.11.50	1185	சின்னவீரன் மகன் ரத்தினம்
84/2C1	ர-பு	0.08.00	674	சின்னவீரன் மகன் ரத்தினம்
84/2C2	ர-பு	0.13.00	1185	சின்னவீரன் மகன் ரத்தினம்
84/2D1	ர-பு	0.06.50	674	சின்னவீரன் மகன் ரத்தினம்
84/2D2A	ர-பு	0.08.67	1185	சின்னவீரன் மகன் ரத்தினம்
84/2E1	ர-பு	0.08.00	674	சின்னவீரன் மகன் ரத்தினம்
84/2E2	ர-பு	0.14.50	1185	சின்னவீரன் மகன் ரத்தினம்
84/2J	ர-பு	0.37.50	1185	சின்னவீரன் மகன் ரத்தினம்
84/2K	ர-பு	0.36.00	1185	சின்னவீரன் மகன் ரத்தினம்
84/2L	ர-பு	0.30.00	1185	சின்னவீரன் மகன் ரத்தினம்

மேற்கூறியபட்ட புலங்களின் நான்குமால் விவரம்:

புல எண்	வகைப்பாடு	விஸ்தீரணம் (ஹெக்ட)	நான்குமால் விவரம்
84/2A1	ர-பு	0.09.00	வ - புல எண்:84/4 அரக புறம்புகல் நிலம் தெ - புல எண்: 84/2A2- மனுதாரர் நிலம் கி - புல எண்: 84/2B1- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2A2	ர-பு	0.16.00	வ - புல எண்:84/2A1- மனுதாரர் நிலம் தெ - புல எண்: 81/1A- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2B2- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2B1	ர-பு	0.06.50	வ - புல எண்:84/4- அரக புறம்புகல் நிலம் தெ - புல எண்: 84/2B2- மனுதாரர் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A1 - மனுதாரர் நிலம்
84/2B2	ர-பு	0.11.50	வ - புல எண்:84/2B1- மனுதாரர் நிலம் தெ - புல எண்: 81/1E- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A2 - மனுதாரர் நிலம்
84/2C1	ர-பு	0.08.00	வ - புல எண்:84/4- அரக புறம்புகல் நிலம் தெ - புல எண்: 84/2D2A- மனுதாரர் நிலம் கி - புல எண்: 84/2D2- மனுதாரர் நிலம் மே - புல எண்: 84/2B1 - மனுதாரர் நிலம்
84/2C2	ர-பு	0.13.00	வ - புல எண்:84/2C1- மனுதாரர் நிலம் தெ - புல எண்: 81/1F- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2D2A- மனுதாரர் நிலம் மற்றும் புல எண்: 84/2D2B- பெரியகருப்பன் (வ) நிலம் மே - புல எண்: 84/ 2B2- மனுதாரர் நிலம்

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புல எண்	வகைப்பாடு	விஸ்தீரணம் (ஹெக்டர்)	நான்குமால் கிவரம்
84/2D1	ர-பு	0.06.50	வ - புல எண்:84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2A - மனுதாரர் நிலம் கி - புல எண்: 84/2E1- மனுதாரர் நிலம் மே - புல எண்: 84/2C1 - மனுதாரர் நிலம்
84/2D2A	ர-பு	0.08.67	வ - புல எண்:84/2D1- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2B - பெரியகரும்பன்(வ) நிலம் கி - புல எண்: 84/2E2- மனுதாரர் நிலம் மே - புல எண்: 84/2C2 - மனுதாரர் நிலம்
84/2E1	ர-பு	0.08.00	வ - புல எண்:84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2E2 - மனுதாரர் நிலம் கி - புல எண்: 84/2J, 2K - மனுதாரர் நிலம் மே - புல எண்: 84/2D1- மனுதாரர் நிலம்
84/2E2	ர-பு	0.14.50	வ - புல எண்:84/2E1- மனுதாரர் நிலம் தெ - புல எண்: 81/1G- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2L, 2K - மனுதாரர் நிலம் மே - புல எண்: 84/2D2A, - மனுதாரர் நிலம் புல எண்: 84/2D2B - பெரியகரும்பன்(வ) நிலம்
84/2J	ர-பு	0.37.50	வ - புல எண்:84/2I- மனுதாரர் நிலம் தெ - புல எண்: 84/2L- மனுதாரர் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் மே - புல எண்: 84/2E1,2E2 - மனுதாரர் நிலம்
84/2K	ர-பு	0.36.00	வ - புல எண்:84/2J- மனுதாரர் நிலம் தெ - புல எண்: 84/2L- மனுதாரர் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் மே - புல எண்: 84/2E1,2E2 - மனுதாரர் நிலம்
84/2L	ர-பு	0.30.00	வ - புல எண்:84/2K- மனுதாரர் நிலம் தெ - புல எண்: 81/1I, 1H- ரஞ்சித்குமார் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் புல எண்: 82/2A - ராமத்தேவர் (வ) நிலம் மே - புல எண்: 84/2E2 - மனுதாரர் நிலம்

மனுதாரர் பட்டா நிலங்களின் ஒட்டுமொத்த நான்குமால் எல்லை கிவரம்:

வடக்கு	: புல எண்: 84/4 - அரசு புஞ்சை (தீ.ஏற்பட்டது) தரிசு : புல எண்: 84/2F, 2F - மனுதாரர் பட்டா நிலம் (குவாரி)
தெற்கு	: புல எண்: 81 - பட்டா நிலங்கள்
கிழக்கு	: புல எண்: 82/1- அரசு புஞ்சை (தீ.ஏற்பட்டது) தரிசு : புல எண்:2A - ராமத்தேவர் (வ) பட்டா நிலம்
மேற்கு	: புல எண்: 85 - குண்டராறு

(..4)

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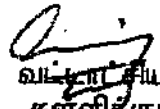
பிரஸ்தாப புலங்கள் அனைத்தும் தரிசாக உள்ளது. மனுதாரரின் பட்டாநிலங்கள் தண்டயாணை புத்தகத்தில் இடம்பெறவில்லை. மேற்படி நிலம் நில உச்சவரம்புச் சட்டத்தின் கீழ் கொண்டுவரப்படவில்லை. பிரஸ்தாப புலத்தில் விலையுயர்ந்த ஜாதி மரங்கள், புராதனச் சின்னங்கள் மற்றும் தொல்லியல் துறை நினைவுச் சின்னங்கள் ஏதுமில்லை. மனுதாரரின் பட்டாநிலங்களுக்கருகில் காப்புக்காடுகள் ஏதும் அமையவில்லை. மேற்குறிப்பிட்ட பட்டா நிலங்கள் யாவும்கல்வணை குடியிருப்பு பகுதியிலிருந்து சுமார் 300 மீட்டர் தொலைவில் அமைந்துள்ளது. பிரஸ்தாப புலத்தின் வழியாக உயர்/ தாழ்வழுத்த மின் கம்பிகள் செல்லவில்லை. மனுதாரரின் பட்டா நிலங்கள் அரசு பயன்பாட்டிற்காக நில ஆர்ஜிதம் / நில எடுப்பு பட்டியில் இடம்பெறவில்லை.

மனுதாரருக்கு மேற்குறிப்பிட்ட பட்டாநிலங்களில் குவாரி உரிமம் வழங்குவது தொடர்பாக கல்வணை கிராமத்தில் கடந்த 23.01.2023 அன்று A1 நோட்டீஸ் செய்யப்பட்டு 15 தினங்கள் கால அவகாசம் வழங்கப்பட்டது. அதன்படி மேற்படி நோட்டீஸ் சார்பு செய்யப்பட்ட 23.01.2023 முதல் 07.02.2023 வரை ஆட்சேபணை ஏதும் வரப்பெறவில்லை.

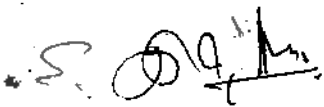
அதன்பேரில் கள்ளிக்குடி வட்டம், கல்வணை கிராமம் புல எண்: 84/2A1,2A2,2B1,2B2,2C1,2C2,2D1,2D2A,2E1,2E2,2J,2K,2L மொத்தம்(2.05.17 ஹெக்டேர்ஸ்) பட்டா நிலத்தில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க மனுதாரர் திரு. S. ரத்தினம் என்பவருக்கு அனுமதி வழங்கிடலாம். இத்துடன் புலத்தணிக்கை குறிப்பு, சம்பந்தப்பட்ட அலுவலர்களின் அறிக்கை மற்றும் கிராம கணக்குகளின் நகல் ஆகியவற்றை இணைத்தனுப்பியுள்ளேன் என்பதை பணிவுடன் தெரிவித்துக்கொள்கிறேன்.

இணைப்பு: மேற்சொன்னவாறு.

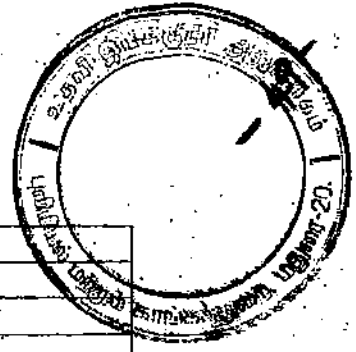
தங்கள் நம்பிக்கையுள்ள,

  
வட்டாட்சியர்,  
கள்ளிக்குடி.

நகல்: திருமங்கலம் வருவாய்க்கோட்டாட்சியர் அவர்களுக்கு முன்னகல் பணித்தனுப்புகிறது.



புலத்தணிக்கை குறிப்பு



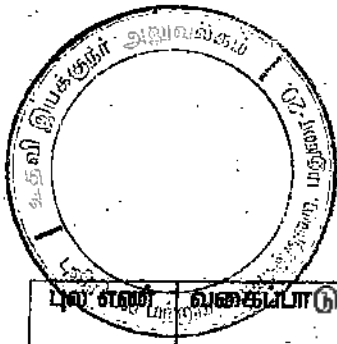
மாவட்டம்	: மதுரை
கோட்டம்	: திருமங்கலம்
வட்டம்	: கள்ளிக்குடி
கிராமம்	: கல்லணை
புல எண்	: 84/2A1,2A2,2B1,2B2,2C1,2C2,2D1,2D2A,2E1,2E2,2J,2K,2L

மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்லணை கிராமம் புல எண்: 84/2A1,2A2,2B1,2B2,2C1,2C2,2D1,2D2A,2E1,2E2,2J,2K,2L மொத்தம் (2.05.17 ஹெக்டேர்ஸ்) பட்டா நிலத்தில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க குவாரி உரியம் வழங்குவது தொடர்பாக பிரஸ்தாப புலங்கள் 23.01.2023 அன்று ஸ்தலப்பார்வை செய்யப்பட்டது. புலத்தணிக்கையின்போது சம்பந்தப்பட்ட உள்வட்ட வருவாய் ஆய்வாளர், குறுவட்ட நில அளவர், கிராம நிர்வாக அலுவலர் மற்றும் மனுதாரர் ஆகியோர் உடனிருந்தனர்.

மேற்கூறப்பட்ட புலங்களின் நான்குமால் விவரம்:

புல எண்	உடைப்பாடு	விஸ்தீரணம் (ஹெக்ட)	நான்குமால் விவரம்
84/2A1	ர-பு	0.09.00	வ - புல எண்:84/4 அரசு புறம்புகல் நிலம் தெ - புல எண்: 84/2A2- மனுதாரர் நிலம் கி - புல எண்: 84/2B1- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2A2	ர-பு	0.16.00	வ - புல எண்:84/2A1- மனுதாரர் நிலம் தெ - புல எண்: 81/1A- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2B2- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2B1	ர-பு	0.06.50	வ - புல எண்:84/4- அரசு புறம்புகல் நிலம் தெ - புல எண்: 84/2B2- மனுதாரர் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A1 - மனுதாரர் நிலம்
84/2B2	ர-பு	0.11.50	வ - புல எண்:84/2B1- மனுதாரர் நிலம் தெ - புல எண்: 81/1E- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A2 - மனுதாரர் நிலம்
84/2C1	ர-பு	0.08.00	வ - புல எண்:84/4- அரசு புறம்புகல் நிலம் தெ - புல எண்: 84/2D2A- மனுதாரர் நிலம் கி - புல எண்: 84/2D2- மனுதாரர் நிலம் மே - புல எண்: 84/2B1 - மனுதாரர் நிலம்
84/2C2	ர-பு	0.13.00	வ - புல எண்:84/2C1- மனுதாரர் நிலம் தெ - புல எண்: 81/1F- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2D2A- மனுதாரர் நிலம் மற்றும் புல எண்: 84/2D2B- பெரியகருப்பன் (வ) நிலம் மே - புல எண்: 84/ 2B2- மனுதாரர் நிலம்

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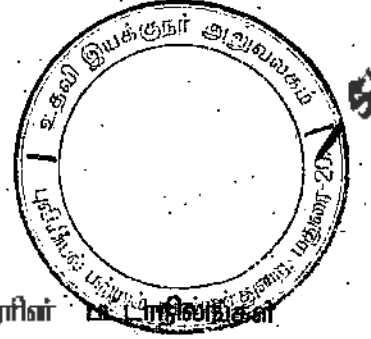
-2-

புல எண்	வகைப்பாடு	விஸ்தரணம் (ஹெக்ட)	நான்குமால் விவரம்
84/2D1	ர-பு	0.06.50	வ - புல எண்:84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2A - மனுதாரர் நிலம் கி - புல எண்: 84/2E1- மனுதாரர் நிலம் மே - புல எண்: 84/2C1 - மனுதாரர் நிலம்
84/2D2A	ர-பு	0.08.67	வ - புல எண்:84/2D1- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2B - பெரியகரும்பன்(வ) நிலம் கி - புல எண்: 84/2E2- மனுதாரர் நிலம் மே - புல எண்: 84/2C2 - மனுதாரர் நிலம்
84/2E1	ர-பு	0.08.00	வ - புல எண்:84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2E2 - மனுதாரர் நிலம் கி - புல எண்: 84/2J, 2K - மனுதாரர் நிலம் மே - புல எண்: 84/2D1- மனுதாரர் நிலம்
84/2E2	ர-பு	0.14.50	வ - புல எண்:84/2E1- மனுதாரர் நிலம் தெ - புல எண்: 81/1G- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2L, 2K - மனுதாரர் நிலம் மே - புல எண்: 84/2D2A, - மனுதாரர் நிலம் புல எண்: 84/2D2B - பெரியகரும்பன்(வ) நிலம்
84/2J	ர-பு	0.37.50	வ - புல எண்:84/2I- மனுதாரர் நிலம் தெ - புல எண்: 84/2L- மனுதாரர் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் மே - புல எண்: 84/2E1,2E2 - மனுதாரர் நிலம்
84/2K	ர-பு	0.36.00	வ - புல எண்:84/2J- மனுதாரர் நிலம் தெ - புல எண்: 84/2L- மனுதாரர் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் மே - புல எண்: 84/2E1,2E2 - மனுதாரர் நிலம்
84/2L	ர-பு	0.30.00	வ - புல எண்:84/2K- மனுதாரர் நிலம் தெ - புல எண்: 81/1I, 1H- ரஞ்சித்குமார் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் புல எண்: 82/2A - ராமத்தேவர் (வ) நிலம் மே - புல எண்: 84/2E2 - மனுதாரர் நிலம்

மனுதாரர் பட்டா நிலங்களின் ஒட்டுமொத்த நான்குமால் எல்லை விவரம்:

வடக்கு	: புல எண்: 84/4 - அரசு புஞ்சை (தீ.ஏற்பட்டது) தரிசு : புல எண்: 84/2F, 2F - மனுதாரர் பட்டா நிலம் (குவாரி)
தெற்கு	: புல எண்: 81 - பட்டா நிலங்கள்
கிழக்கு	: புல எண்: 82/1- அரசு புஞ்சை (தீ.ஏற்பட்டது) தரிசு : புல எண்:2A - ராமத்தேவர் (வ) பட்டா நிலம்
மேற்கு	: புல எண்: 85 - குண்டாறு

S. S. S.



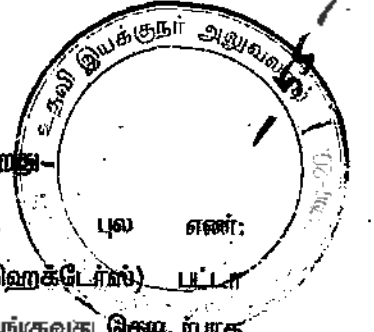
பிரஸ்தாப புலங்கள் அனைத்தும் தரிசாக உள்ளது. மனுதாரரின் பட்டாநிலங்கள் தடையாணை புத்தகத்தில் இடம்பெறவில்லை. மேற்படி நிலம் நில உச்சவரம்புக் கட்டத்தின் கீழ் கொண்டுவரப்படவில்லை. பிரஸ்தாப புலத்தில் விவசாயபுரந்த ஜாதி மரங்கள், புராதனச் சின்னங்கள் மற்றும் தொல்லியல் துறை நினைவுச் சின்னங்கள் ஏதுமில்லை. மனுதாரரின் பட்டாநிலங்களுக்கருகில் காப்புக்காடுகள் ஏதும் அமையவில்லை. மேற்குறிப்பிட்ட பட்டா நிலங்கள் யாவும் கல்லணை குடியிருப்பு பகுதியிலிருந்து சுமார் 300 மீட்டர் தொலைவில் அமைந்துள்ளது. பிரஸ்தாப புலத்தின் வழியாக உயர்/ தாழ்வழுத்த யின் கம்பிகள் செல்லவில்லை. மனுதாரரின் பட்டா நிலங்கள் அரசு பயன்பாட்டிற்காக நில ஆர்ஜிதம் / நில எடுப்பு பட்டியில் இடம்பெறவில்லை.

மனுதாரருக்கு மேற்குறிப்பிட்ட பட்டாநிலங்களில் குவாரி உரிமம் வழங்குவது தொடர்பாக கல்லணை கிராமத்தில் கடந்த 23.01.2023 அன்று A1 நோட்டீஸ் செய்யப்பட்டு 15 தினங்கள் கால அவகாசம் வழங்கப்பட்டது. அதன்படி மேற்படி நோட்டீஸ் சார்பு செய்யப்பட்ட 23.01.2023 முதல் 07.02.2023 வரை ஆட்சேபணை ஏதும் வரப்பெறவில்லை.

அதன்பேரில் கள்ளிக்குடி வட்டம், கல்லணை கிராமம் புல எண்: 84/2A1,2A2,2B1,2B2,2C1,2C2,2D1,2D2A,2E1,2E2,2J,2K,2Lமொத்தம்(2.05.17 ஹெக்டேர்ஸ்) பட்டா நிலத்தில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க மனுதாரர் திரு. S. ரத்தினம் என்பவருக்கு அனுமதி வழங்கிடலாம்.

மாநிலப் பேரவை  
கள்ளிக்குடி.

S. R. R.



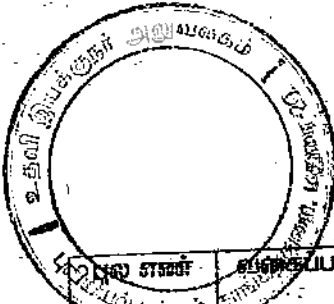
**கள்ளிக் குடி வருவாய் வட்டாட்சியருக்கு பணிந்து சமர்ப்பிக்கப்படுகிறது-**

மதுரை மாவட்டம், கள்ளிக் குடி வட்டம், கல்லணை கிராமம் புல எண்: 84/2A1, 2A2, 2B1, 2B2, 2C1, 2C2, 2D1, 2D2A, 2E1, 2E2, 2J, 2K, 2L மொத்தம் (2.05.17 ஹெக்டேயர்) பட்டா நிலத்தில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க குவாரி உரிமம் வழங்குவது தொடர்பாக பிரஸ்தாப புலங்கள் 23.01.2023 அன்று வருவாய் வட்டாட்சியரால் ஸ்தலப்பரிசை செய்யப்பட்டது. புலத்தணிக்கையின்போது உடனிருக்கப்பட்டது.

மேற்குறிப்பிட்ட புலங்களின் நாள்குமால் விலரம்:

புல எண்	வகைப்பாடு	விஸ்தரணம் (ஹெக்)	நாள்குமால் விலரம்
84/2A1	ர-பு	0.09.00	வ - புல எண்: 84/4 அரசு புறம்புகல் நிலம் தெ - புல எண்: 84/2A2- மனுதாரர் நிலம் கி - புல எண்: 84/2B1- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2A2	ர-பு	0.16.00	வ - புல எண்: 84/2A1- மனுதாரர் நிலம் தெ - புல எண்: 81/1A- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2B2- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2B1	ர-பு	0.06.50	வ - புல எண்: 84/4- அரசு புறம்புகல் நிலம் தெ - புல எண்: 84/2B2- மனுதாரர் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A1 - மனுதாரர் நிலம்
84/2B2	ர-பு	0.11.50	வ - புல எண்: 84/2B1- மனுதாரர் நிலம் தெ - புல எண்: 81/1E- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A2 - மனுதாரர் நிலம்
84/2C1	ர-பு	0.08.00	வ - புல எண்: 84/4- அரசு புறம்புகல் நிலம் தெ - புல எண்: 84/2D2A- மனுதாரர் நிலம் கி - புல எண்: 84/2D2- மனுதாரர் நிலம் மே - புல எண்: 84/2B1 - மனுதாரர் நிலம்
84/2C2	ர-பு	0.13.00	வ - புல எண்: 84/2C1- மனுதாரர் நிலம் தெ - புல எண்: 81/1F- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2D2A- மனுதாரர் நிலம் மற்றும் புல எண்: 84/2D2B- பெரியகருப்பன் (வ) நிலம் மே - புல எண்: 84/ 2B2- மனுதாரர் நிலம்
84/2D1	ர-பு	0.06.50	வ - புல எண்: 84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2A - மனுதாரர் நிலம் கி - புல எண்: 84/2E1- மனுதாரர் நிலம் மே - புல எண்: 84/2C1 - மனுதாரர் நிலம்
84/2D2A	ர-பு	0.08.67	வ - புல எண்: 84/2D1- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2B - பெரியகருப்பன் (வ) நிலம் கி - புல எண்: 84/2E2- மனுதாரர் நிலம் மே - புல எண்: 84/2C2 - மனுதாரர் நிலம்

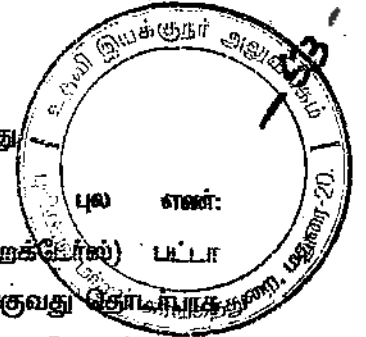
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புல எண்	பகுதி	விஸ்தரணம் (ஹெக்டர்)	நான்குமால் விவரம்
84/2E1	ர-பு	0.08.00	வ - புல எண்:84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2E2 - மனுதாரர் நிலம் கி - புல எண்: 84/2J, 2K - மனுதாரர் நிலம் மே - புல எண்: 84/2D1- மனுதாரர் நிலம்
84/2E2	ர-பு	0.14.50	வ - புல எண்:84/2E1- மனுதாரர் நிலம் தெ - புல எண்: 81/1G- ரஞ்சிக்குமார் நிலம் கி - புல எண்: 84/2L, 2K - மனுதாரர் நிலம் மே - புல எண்: 84/2D2A, - மனுதாரர் நிலம் புல எண்: 84/2D2B - பெரியகருப்பன்(வ) நிலம்
84/2J	ர-பு	0.37.50	வ - புல எண்:84/2I- மனுதாரர் நிலம் தெ - புல எண்: 84/2L- மனுதாரர் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் மே - புல எண்: 84/2E1,2E2 - மனுதாரர் நிலம்
84/2K	ர-பு	0.36.00	வ - புல எண்:84/2J- மனுதாரர் நிலம் தெ - புல எண்: 84/2L- மனுதாரர் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் மே - புல எண்: 84/2E1,2E2 - மனுதாரர் நிலம்
84/2L	ர-பு	0.30.00	வ - புல எண்:84/2K- மனுதாரர் நிலம் தெ - புல எண்: 81/1I, 1H- ரஞ்சிக்குமார் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் புல எண்: 82/2A - ராமத்தேவர் (வ) நிலம் மே - புல எண்: 84/2E2 - மனுதாரர் நிலம்

பிரஸ்தாப புலங்கள் அனைத்தும் தரிசாக உள்ளது. மனுதாரரின் பட்டாநிலங்கள் தடையாணை பத்தகத்தில் இடம்பெறவில்லை. மேற்படி நிலம் நில உச்சவரம்புச் சட்டத்தின் கீழ் கொண்டாடப்படவில்லை. பிரஸ்தாப புலத்தில் விவையாய்ந்த ஐந்தி மரங்கள், புராதனச் சின்னங்கள் மற்றும் தெரஸ்லியல் துறை நினைவுச் சின்னங்கள் ஏதுமில்லை. மனுதாரரின் பட்டாநிலங்களுக்கருகில் காப்புக்காடுகள் ஏதும் அமையவில்லை. மேற்குறிப்பிட்ட பட்டா நிலங்கள் யாவும் கல்லணை குடியிருப்பு பகுதியிலிருந்து சுமார் 300 மீட்டர் தொலைவில் அமைந்துள்ளது. விஸ்தாப புலத்தின் வழியாக உயர்/ தாழ்வழுத்த மின் கம்பிகள் செல்லவில்லை. மனுதாரரின் பட்டா நிலங்கள் அரசு பயன்பாட்டிற்காக நில ஆர்ஜிதம் / நில எடுப்பு பட்டியில் இடம்பெறவில்லை. மனுதாரருக்கு மேற்குறிப்பிட்ட பட்டாநிலங்களில் குவாரி உரிமை வழங்குவது தொடர்பாக கல்லணை கிராமத்தில் கடந்த 23.01.2023 அன்று A1 நோட்டீஸ் செய்யப்பட்டு 15 தினங்கள் கால அவகாசம் வழங்கப்பட்டது. அதன்படி மேற்படி நோட்டீஸ் சார்பு செய்யப்பட்ட 23.01.2023 முதல் 07.02.2023 வரை ஆட்சேபணை ஏதும் வரப்பெறவில்லை. அதன்பேரில் மேற்குறிப்பிட்ட பட்டா நிலத்தில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க மனுதாரர் திரு. S. ரத்தினம் என்பவருக்கு அனுமதி வழங்கி பரிந்துரை செய்கிறேன். இத்துடன் கிராம நிர்வாக அலுவலரின் அறிக்கை, கிராமக்கணக்கு நகல், A-1 நோட்டீஸ் ஆகியவற்றை இணைத்துள்ளேன் என்பதை பணிவுடன் தெரிவித்துக்கொள்கிறேன்.

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கள்கிக்குடி வருவாய் வட்டாட்சியருக்கு பணிபுரிந்து சமர்ப்பிக்கப்படுகிறது.

மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்லண்ண கிராமம் புல எண்: 84/2A1, 2A2, 2B1, 2B2, 2C1, 2C2, 2D1, 2D2A, 2E1, 2E2, 2J, 2K, 2L மொத்தம் (2.05.17 ஹெக்டேர்ஸ்) மட்டா நிலத்தில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க குவாரி உரிமை வழங்குவது தொடர்பான பிரஸ்தாப புலங்கள் 23.01.2023 அன்று வருவாய் வட்டாட்சியரால் எதுவப்பாள்வை செய்யப்பட்டது. புலத்தணிக்கையின்போது உடனிருக்கப்பட்டது.

மேற்குறிப்பிட்ட புலங்களின் நான்குமால் விவரம்:

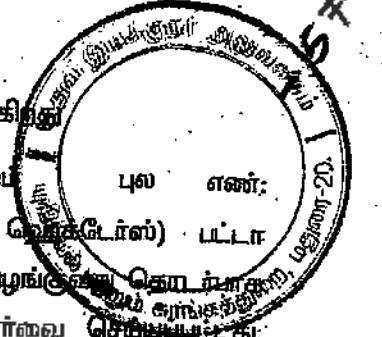
புல எண்	வகைப்பாடு	விஸ்தரணம் (ஹெக்)	நான்குமால் விவரம்
84/2A1	ர-பு	0.09.00	வ - புல எண்: 84/4 அரசு புறம்புகல் நிலம் தெ - புல எண்: 84/2A2- மனுதாரர் நிலம் கி - புல எண்: 84/2B1- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2A2	ர-பு	0.16.00	வ - புல எண்: 84/2A1- மனுதாரர் நிலம் தெ - புல எண்: 81/1A- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2B2- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2B1	ர-பு	0.06.50	வ - புல எண்: 84/4- அரசு புறம்புகல் நிலம் தெ - புல எண்: 84/2B2- மனுதாரர் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A1 - மனுதாரர் நிலம்
84/2B2	ர-பு	0.11.50	வ - புல எண்: 84/2B1- மனுதாரர் நிலம் தெ - புல எண்: 81/1E- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A2 - மனுதாரர் நிலம்
84/2C1	ர-பு	0.08.00	வ - புல எண்: 84/4- அரசு புறம்புகல் நிலம் தெ - புல எண்: 84/2D2A- மனுதாரர் நிலம் கி - புல எண்: 84/2D2- மனுதாரர் நிலம் மே - புல எண்: 84/2B1 - மனுதாரர் நிலம்
84/2C2	ர-பு	0.13.00	வ - புல எண்: 84/2C1- மனுதாரர் நிலம் தெ - புல எண்: 81/1F- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2D2A- மனுதாரர் நிலம் மற்றும் புல எண்: 84/2D2B- பெரியகருப்பன் (வ) நிலம் மே - புல எண்: 84/ 2B2- மனுதாரர் நிலம்
84/2D1	ர-பு	0.06.50	வ - புல எண்: 84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2A - மனுதாரர் நிலம் கி - புல எண்: 84/2E1- மனுதாரர் நிலம் மே - புல எண்: 84/2C1 - மனுதாரர் நிலம்
84/2D2A	ர-பு	0.08.67	வ - புல எண்: 84/2D1- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2B - பெரியகருப்பன்(வ) நிலம் கி - புல எண்: 84/2E2- மனுதாரர் நிலம் மே - புல எண்: 84/2C2 - மனுதாரர் நிலம்

*(Handwritten signature)*





கள்ளிக்குடி வருவாய் வட்டாட்சியருக்கு பணிந்து சமர்ப்பிக்கப்படுகிறது



மதுரை மாவட்டம், கள்ளிக்குடி வட்டம், கல்லணை கிராமப் புல எண்: 84/2A1, 2A2, 2B1, 2B2, 2C1, 2C2, 2D1, 2D2A, 2E1, 2E2, 2J, 2K, 2L மொத்தம் (2.05.17 ஏக்கர்கள்) மட்டா நிலத்தில் சாதாரண கழிகள் மற்றும் கிராவல் வெட்டி எடுக்க குவாரி உரிமம் வழங்குவது தொடர்பான பிரஸ்தாப புலங்கள் 23.01.2023 அன்று வருவாய் வட்டாட்சியரால் எந்தலப்பார்வை செய்யப்பட்டு புலத்தணிக்கையின்போது உடனிருக்கப்பட்டது.

மேற்கூறியபுல புலங்களின் நான்குமால் விவரம்:

புல எண்	வகைப்பாடு	விஸ்தீரணம் (ஹெக்ட)	நான்குமால் விவரம்
84/2A1	ர-பு	0.09.00	வ - புல எண்: 84/4 அரக புறம்புகல் நிலம் தெ - புல எண்: 84/2A2- மனுதாரர் நிலம் கி - புல எண்: 84/2B1- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2A2	ர-பு	0.16.00	வ - புல எண்: 84/2A1- மனுதாரர் நிலம் தெ - புல எண்: 81/1A- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2B2- மனுதாரர் நிலம் மே - புல எண்: 85 - குண்டாறு
84/2B1	ர-பு	0.06.50	வ - புல எண்: 84/4- அரக புறம்புகல் நிலம் தெ - புல எண்: 84/2B2- மனுதாரர் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A1 - மனுதாரர் நிலம்
84/2B2	ர-பு	0.11.50	வ - புல எண்: 84/2B1- மனுதாரர் நிலம் தெ - புல எண்: 81/1E- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2C1- மனுதாரர் நிலம் மே - புல எண்: 84/2A2 - மனுதாரர் நிலம்
84/2C1	ர-பு	0.08.00	வ - புல எண்: 84/4- அரக புறம்புகல் நிலம் தெ - புல எண்: 84/2D2A- மனுதாரர் நிலம் கி - புல எண்: 84/2D2- மனுதாரர் நிலம் மே - புல எண்: 84/2B1 - மனுதாரர் நிலம்
84/2C2	ர-பு	0.13.00	வ - புல எண்: 84/2C1- மனுதாரர் நிலம் தெ - புல எண்: 81/1F ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2D2A- மனுதாரர் நிலம் மற்றும் புல எண்: 84/2D2B- பெரியகருப்பன் (வ) நிலம் மே - புல எண்: 84/ 2B2- மனுதாரர் நிலம்
84/2D1	ர-பு	0.06.50	வ - புல எண்: 84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2A - மனுதாரர் நிலம் கி - புல எண்: 84/2E1- மனுதாரர் நிலம் மே - புல எண்: 84/2C1 - மனுதாரர் நிலம்
84/2D2A	ர-பு	0.08.67	வ - புல எண்: 84/2D1- மனுதாரர் நிலம் தெ - புல எண்: 84/2D2B - பெரியகருப்பன்(வ) நிலம் கி - புல எண்: 84/2E2- மனுதாரர் நிலம் மே - புல எண்: 84/2C2 - மனுதாரர் நிலம்

5. 09/10

புல எண்	கிண்கப்பாடு	விஸ்தரணம் (ஹெக்ட)	நான்குமாவ் விவரம்
84/2E1	ர-பு	0.08.00	வ - புல எண்:84/2F- மனுதாரர் நிலம் தெ - புல எண்: 84/2E2 - மனுதாரர் நிலம் கி - புல எண்: 84/2J, 2K - மனுதாரர் நிலம் மே - புல எண்: 84/2D1- மனுதாரர் நிலம்
84/2E2	ர-பு	0.14.50	வ - புல எண்:84/2E1- மனுதாரர் நிலம் தெ - புல எண்: 81/1G- ரஞ்சித்குமார் நிலம் கி - புல எண்: 84/2L, 2K - மனுதாரர் நிலம் மே - புல எண்: 84/2D2A, - மனுதாரர் நிலம் புல எண்: 84/2D2B - பெரியகருப்பன்(வ) நிலம்
84/2J	ர-பு	0.37.50	வ - புல எண்:84/2I- மனுதாரர் நிலம் தெ - புல எண்: 84/2L- மனுதாரர் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் மே - புல எண்: 84/2E1,2E2 - மனுதாரர் நிலம்
84/2K	ர-பு	0.36.00	வ - புல எண்:84/2I- மனுதாரர் நிலம் தெ - புல எண்: 84/2L- மனுதாரர் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் மே - புல எண்: 84/2E1,2E2 - மனுதாரர் நிலம்
84/2L	ர-பு	0.30.00	வ - புல எண்:84/2K- மனுதாரர் நிலம் தெ - புல எண்: 81/1I, 1H- ரஞ்சித்குமார் நிலம் கி - புல எண்: 82/1 - அரசு புறம்புகல் நிலம் புல எண்: 82/2A - ராமத்தேவர் (வ) நிலம் மே - புல எண்: 84/2E2 - மனுதாரர் நிலம்

பிரஸ்தாப புலங்கள் அனைத்தும் தரிசாக உள்ளது. மனுதாரரின் பட்டாநிலங்கள் தடையாணை பத்திரத்தில் இடம்பெறவில்லை. மேற்படி நிலம் நில உச்சவரம்புச் சட்டத்தின் கீழ் கொணரப்படவில்லை. பிரஸ்தாப புலத்தில் விலையுயர்ந்த ஜாதி மரங்கள், புராதனச் சின்னங்கள் மற்றும் தொல்லியல் துறை நினைவுச் சின்னங்கள் ஏதுமில்லை. மனுதாரரின் பட்டாநிலங்களுக்கருகில் காப்புக்காடுகள் ஏதும் அமையவில்லை. மேற்குறிப்பிட்ட பட்டா நிலங்கள் யாவும் கல்லணை குடியிருப்பு பகுதியிலிருந்து சுமார் 300 மீட்டர் தொலைவில் அமைந்துள்ளது. பிரஸ்தாப புலத்தின் வழியாக உயர்/ தாழ்வழுத்த மின் கம்பிகள் செல்லவில்லை. மனுதாரரின் பட்டா நிலங்கள் அரசு பயன்பாட்டிற்காக நில ஆர்ஜிதம் / நில எடுப்பு பட்டியில் இடம்பெறவில்லை. மனுதாரருக்கு மேற்குறிப்பிட்ட பட்டாநிலங்களில் குவார்டி உரிமம் வழங்குவது தொடர்பாக கல்லணை கிராமத்தில் கடந்த 23.01.2023 அன்று A1 நோட்டீஸ் செய்யப்பட்டு 15 தினங்கள் கால அவகாசம் வழங்கப்பட்டது. அதன்படி மேற்படி நோட்டீஸ் சார்பு செய்யப்பட்ட 23.01.2023 முதல் 07.02.2023 வரை ஆட்சேபகணை ஏதும் வரப்பெறவில்லை. அதன்பேரில் மேற்குறிப்பிட்ட பட்டா நிலத்தில் சாதாரண கற்கள் மற்றும் கிராவல் வெட்டி எடுக்க மனுதாரர் திரு. S. ரத்தினம் என்பவருக்கு அனுமதி வழங்கிட பரிந்துரை செய்கிறேன். இத்துடன் கிராமக்கணக்கு நகல், A-1 நோட்டீஸ் ஆகியவற்றை இணைத்துள்ளேன் என்பதை பணிவுடன் தெரிவித்துக்கொள்கிறேன்.

S. S. S.

Age Administrative Office  
Kallanai & Koodakovil  
Group Village  
Kallikudi ( Tk)

சென்னை அலுவலகம்

21

சென்னை அலுவலகம்

சென்னை அலுவலகம்

22

23

24

25

26

27

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Village Activist Welfare Centre  
Kalland & Kalland  
Gandhi Nagar  
Kallandur

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1430.6

151  
A-1751

10. 1887

Village Administration  
Kalamet & Kambalakovil  
Group Villages  
Kollikudi (T.N.)

AT 1887

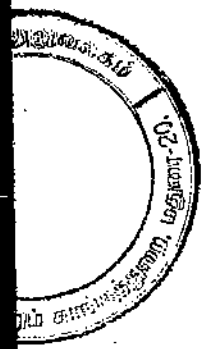
6-

சென்னை

சென்னை

சென்னை

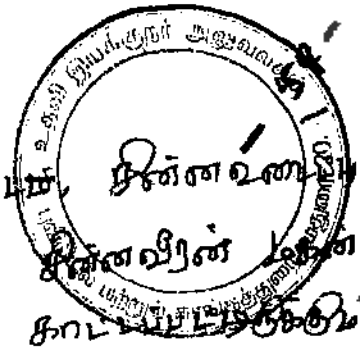
சென்னை



சென்னை & கோட்டகம்  
கலிங்கம்  
கலிங்கம் (T.K)

சென்னை

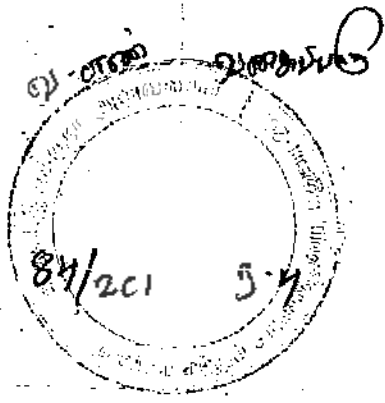




மதுரை மாவட்டம், மதுரை நகரம் வட்டம், சின்னவீதி  
 எழுத்து (அ) எழுல் இயங்கியல் சேந்தி  
 சீதலம் என்பவர் கீழ்க்கண்ட அட்டவணையில் காட்டப்பட்டுள்ள  
 மட்டா நியமனத்தில் சாதாரண கற்கள் பற்றும் பிறாவல் துவரல்  
 எய்ய மாவட்ட அபிவிருத்தித் தலைவர், மதுரை அபிவிருத்தி  
 அலுவலகம் எய்ய சிபார்சு செய்திருக்கின்றார். இதனால் அறிவிக்க  
 யுள்ளது. மேற்படி மட்டா நியமனத்தில் சாதாரண கற்கள் பற்றும்  
 சிறாவல் மண் துவரல் எய்யக்கூடியதென்று அட்டவணைப்படி  
 சீதலம் அறிவிக்க யுள்ளது. மதுரையில் தேயிலாத்துறை 15 அபிவிருத்தி  
 அலுவலகம் இது கால அமலில் சம்பந்தப்பட்ட வட்டமாவது,  
 மதுரை அபிவிருத்தித் தலைவர் பற்றும் கல்வணம் நிறுவல் அலுவலகத்தில்  
 சாதாரண மட்டா அட்டவணையைத் தெரிவிக்க வேண்டும்.

ம.அ. எண்	அளவு	அளவு	மட்டா எண் பற்றும் மட்டா அட்டவணை/சாதாரண அட்டவணை	நாள்/மாவட்ட அபிவிருத்தி
84/2A1	3-4	0-09-0	674 - சின்னவீதி மட்டா சீதலம்	உ - 84/4 (அபிவிருத்தி துறை) கி - 84/2B1 (மதுரை நகரம்) கெ - 85 (மதுரை) கச - 84/2A2 (மதுரை நகரம்)
84/2A2	3-4	0-16-0	1185 - சின்னவீதி மட்டா சீதலம்	உ - 84/2A1 (மதுரை நகரம்) கி - 84/2B2 (மதுரை நகரம்) கெ - 85 (மதுரை) கச - 81/1A (மதுரை நகரம்)
84/2B1	3-4	0-06-5	674 - சின்னவீதி மட்டா சீதலம்	உ - 84/4 (அபிவிருத்தி துறை) கி - 84/2C1 (மதுரை நகரம்) கெ - 84/2B2 ( " ) கச - 84/2A1 ( " )
84/2B2	3-4	0-11-5	1185 - சின்னவீதி மட்டா சீதலம்	உ - 84/2B1 (மதுரை நகரம்) கி - 84/2C1 ( " ) கெ - 84/2B2 ( " )

ச. சிவசாமி



പ്രൈമറി ഹെൽത്ത് സെന്റർ  
 പബ്ലിക് ഹെൽത്ത് ഓഫീസ്  
 തൃശ്ശൂർ

ക്രമ നമ്പർ	തീയതി	സമയം	പ്രതികരണം	പ്രതികരണങ്ങൾ
84/201	3.4	0.08.0	പ്രൈമറി ഹെൽത്ത് സെന്റർ പ്രതികരണം	എ- 84/4 (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 84/272 (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 84/272 (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 84/272A ( " ) ടി- 84/272A ( " )
84/2E2	3.4	0.14.5	പ്രൈമറി ഹെൽത്ത് സെന്റർ പ്രതികരണം	എ- 84/2E1 (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 84/2E, 2H ( " ) ടി- 84/272A (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 81/16 (പ്രൈമറി ഹെൽത്ത് സെന്റർ)
84/207	3.4	0.13.0	പ്രൈമറി ഹെൽത്ത് സെന്റർ പ്രതികരണം	എ- 84/201 (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 84/272A (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 84/202 (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 81/1F (പ്രൈമറി ഹെൽത്ത് സെന്റർ)
84/2D1	3.4	0.06.5	പ്രൈമറി ഹെൽത്ത് സെന്റർ പ്രതികരണം	എ- 84/2F (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 84/2E1 ( " ) ടി- 84/201 ( " ) ടി- 84/272A ( " )
84/272A	3.4	0.08.67	പ്രൈമറി ഹെൽത്ത് സെന്റർ പ്രതികരണം	എ- 84/2D1 (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 84/2E2 ( " ) ടി- 84/202 ( " ) ടി- 84/272B (പ്രൈമറി ഹെൽത്ത് സെന്റർ)
84/2E1	3.4	0.08.0	പ്രൈമറി ഹെൽത്ത് സെന്റർ പ്രതികരണം	എ- 84/2F (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 84/25, 2H ( " ) ടി- 84/2D1 ( " ) ടി- 84/2E2 ( " )
84/23	3.4	0.37.5	പ്രൈമറി ഹെൽത്ത് സെന്റർ പ്രതികരണം	എ- 84/23 (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 82-1 (21.4 മുൻപ്, തൃശ്ശൂർ) ടി- 84-2E1, 2E2 (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 84-2L (പ്രൈമറി ഹെൽത്ത് സെന്റർ)
84/24	3.4	0.36.0	പ്രൈമറി ഹെൽത്ത് സെന്റർ പ്രതികരണം	എ- 84/23 (പ്രൈമറി ഹെൽത്ത് സെന്റർ) ടി- 82-1 (21.4, മുൻപ്, തൃശ്ശൂർ) ടി- 84-2E1, 2E2 (പ്രൈമറി ഹെൽത്ത് സെന്റർ)

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தமிழ்நாடு தமில்நாடு TAMILNADU 22-3-2023 DB 003779  
 சி. வி. ஜி. சி. வி. ஜி. சி. வி. ஜி.  
 Sri Selvavignesh  
 Explosives  
 Thirumal  
 M. சந்திரசேகரன்  
 திருச்சி மாவட்டம் திருச்சி மாவட்டம்  
 திருச்சி மாவட்டம் திருச்சி மாவட்டம்  
 திருச்சி மாவட்டம் திருச்சி மாவட்டம்

**AGREEMENT**

This Agreement made on the 23<sup>rd</sup> day of March 2023 Licence to be granted Thiru. S. Rathinam, S/o. Sinnaveeran, Chinnaudaippu Village, Madurai - 625 022, Madurai District (hereinafter called the owner of quarry) and Mr. V. Selva Vignesh, son of Vijay Shasthri, D.No. 9/99, Lakshmi Colony, Udayanathapuram Road, Pandalgudi - 626 113, Aruppukottai Taluk, Virudhunagar District Licence No. E/SC/TN/22/655 (E83542) in Form 22. Hereinafter called as Dealer of Explosives.

Whereas the owner of the quarry having licence to be granted for Survey No. 84/2C1 (0.08.0), 84/2D1 (0.06.5), 84/2E1 (0.08.0), 84/2C2 (0.13.0), 84/2D2A (0.08.67), 84/2E2 (0.14.50), 84/2J (0.37.5), 84/2K (0.36.0), 84/2L (0.30.0) 1.62.17 Hectare, Kallanai Village, Kallikudi Taluk, Madurai District.

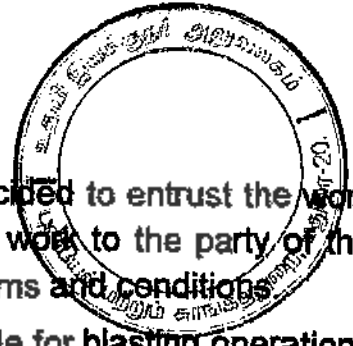
And whereas the dealer of Explosives have agree to carry our the blasting operation in skillful scientific short firer till the valid date.

*S. Rathinam*

For Sri Selvavignesh Explosives

*V. Selva Vignesh*

22/3



Whereas the Party of the Second Part has decided to entrust the work of conducting blasting operation in his / their quarry work to the party of the first part on contract basis as per mutually agreed terms and conditions

Whereas the Party of the first part is responsible for blasting operations and also making his own agreements for the explosives and exploding machines / equipments required for the work. The entire blasting in the above quarry and the possession of blasting equipments will be handled by the party of the first part having valid licence and short firer permits under the Explosives Rules, 2008 issued by the Department of Explosives and hereby undertake the responsibility for the work entrusted.

Whereas payments will be made periodically by the party of the second part for the quantity of explosives used and hours and time of the exploding equipments put into use calculations will be made and element will be arrived at on the completion of blasting operations.

*S. Sathish Kumar*

For Sri Selvavignesh Explosives

*V. D. A.*

Managing Partner

**Witness :**

1.

*Sathish Kumar*

SATHISH KUMAR. R  
S/o Ratha Krishnan,  
Chinnaiyandiappu,  
Madurai - 22

2.

*S. S. Sathish Kumar*

S/o. Ratha Krishnan,  
Thangal, Kottipatti,  
Madurai - 22



भारत सरकार | Government of India  
 वाणिज्य और उद्योग मंत्रालय | Ministry of Commerce & Industry  
 पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो) | Petroleum & Explosives Safety Organisation (PESO)  
 पूर्व नाम- विस्फोटक विभाग | Formerly- Department of Explosives  
 A और D - विंग, ब्लॉक 1-8, दूसरा तल, शास्त्री भवन | A & D - Wing, Block 1-8, 2nd Floor, Shastry Bhawan  
 26 हुदुदुस रोड, नुंगम्बकम चेन्नै | 26 Huddous Road, Nungambakkam Chennai 600006  
 फोन (Phone):- 28281023 | फैक्स (Fax):- 28284848  
 ई-मेल Email: jtecc@peso.gov.in



दिनांक (Date): 03/05/2021

संख्या (No.): E/SC/TN/22/655(E83542)

सेवा में | To,

M/s. BRI SELVA VIGNESH EXPLOSIVES,

99/9, Lakshmi Colony, Udayanadhipuram Road, Pattidalkuati Post, Town/Village - Pandalkudi  
 District-VIRUDHUNAGAR, State-Tamil Nadu, Pincode - 626113

8 MAY 2021

**विषय:** Survey No(s): 116/2A,B,C,116/3A,B,C. ग्राम Thirumal, Thirumangalam(T), जिला MADURAI, राज्य Tamil Nadu में विस्फोटक के मैगजीन में उपयोग के लिए कब्जा हेतु विस्फोटक नियम, 2008 के अंतर्गत LE-3 में जारी अनुज्ञप्ति सं E/SC/TN/22/655(E83542) के नवीनीकरण संदर्भ में।  
**Subject:** Possession for Use of Explosives from magazine situated at Survey No(s): 116/2A,B,C,116/3A,B,C, Thirumal, Thirumangalam(T), Dist. MADURAI, Tamil Nadu -Licence No: E/SC/TN/22/655(E83542) granted in Form LE-3 of Explosives Rules, 2008 - Renewal regarding  
**सहाय्य:** Sir,

आपका उपर्युक्त विषय पर पत्र संख्या 43502 दिनांक 30/03/2021 का संदर्भ ग्रहण करें। विस्फोटक नियम, 2008 के अंतर्गत प्ररूप LE-3 में जारी अनुज्ञप्ति दिनांक 31/3/2026 तक नवीनीकृत कर इस पत्र के साथ भेजी जा रही है।  
 Reference to your letter No: 43502 dated: 30/03/2021, the subject licence duly renewed upto 31/3/2026 and issued in Form LE-3 of Explosives Rules, 2008 is forwarded herewith.  
 अनुज्ञप्ति के आगामी नवीकरण हेतु कृपया निम्नलिखित दस्तावेज दिनांक 31/03/2026 से पहले उप मुख्य विस्फोटक नियंत्रक सिवाकासी को भेजे जाएं।  
 For further renewal of licence, please submit the following documents so as to reach The Dy. Chief Controller of Explosives, Sivakasi on or before 31/3/2026.

- प्ररूप आरई-1 में विधिवत पूर्ण एवं हस्ताक्षरित आवेदन।  
Application in Form RE-1 duly filled in and signed.
- एक से पाँच वर्ष के अनुज्ञप्ति शुरूको का, विस्फोटक नियम, 2008 के तहत ऑनलाइन आवेदन पोर्टल पर उपलब्ध ई-भुगतान सुविधा के माध्यम से लाइसेंस शुल्क ऑनलाइन जमा किया जाना है।  
Licence fees renewable for one to five years, to be submitted online through e-payment facility available on online application portal under the Explosives Rules, 2008.
- अनुमोदित प्लान के साथ मूल अनुज्ञप्ति।  
Original licence with approved plan.
- कृपया इस संबंध में विस्फोटक नियम, 2008 के नियम 112 का भी संदर्भ ग्रहण करें।  
In this connection, please also refer to Rule 112 of Explosives Rules, 2008.
- विस्फोटकों के क्रय हेतु आरई-11 में मांगपत्र (इंडेंट) आपूर्तिकर्ता को दिया जाए और उसी की एक प्रति इस कार्यालय को भेजी जाए (आतिशबाजी गोदाम के लिए लागू नहीं है)।  
Indent for purchase of explosives shall be placed in RE-11 with the supplier and copy of the same shall be sent to this office. (Not applicable for fireworks store house)
- कृपया विस्फोटकों की त्रैमासिक विवरणी हर तिमाही के अंत में आरई-7 में प्रस्तुत की जाए। विवरणी उप मुख्य विस्फोटक नियंत्रक सिवाकासी के कार्यालय में आगामी तिमाही के 10 तारीख से पहले पहुंच जानी चाहिए (आतिशबाजी गोदाम के लिए लागू नहीं है)। Please submit quarterly returns of explosives in RE-7 at the end of every quarter so as to reach The Dy. Chief Controller of Explosives, Sivakasi by 10th of the succeeding quarter. (Not applicable for fireworks store house)
- सभी ब्लास्टिंग ऑपरेशन एक सक्षम द्वारा की जाएगी जो उपरोक्त नियमों के तहत एक वैध शॉट फायर प्रमाणपत्र धारक हो। हालांकि, खान अधिनियम 1952 के अधीन आने वाले खानों में ब्लास्टिंग ऑपरेशन करने वाले ब्लास्टर की योग्यता उसी अधिनियम से निर्धारित हो।  
All blasting operations shall be carried out by a competent person holding a valid shot firer's permit granted under above rules. However, blasting operations in mines coming under the purview of the Mines Act 1952, the blaster shall have qualifications prescribed in the regulations framed under the said Act.

भवदीय | Your's faithfully

(अहिन नंदी) AHIN NANDI

उप विस्फोटक नियंत्रक | Dy. Controller of Explosives  
 कृते संयुक्त मुख्य विस्फोटक नियंत्रक | For Joint Chief Controller of Explosives  
 दक्षिणचल, चेन्नै | South Circle, Chennai

प्रातिलिपि प्रेषित | Copy Forwarded to:

1. जिला मजिस्ट्रेट (District Magistrate), MADURAI (Tamil Nadu)- सूचना के लिए (for information)

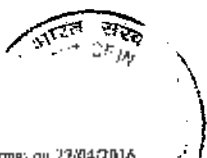
कृते संयुक्त मुख्य विस्फोटक नियंत्रक | For Joint Chief Controller of Explosives  
 दक्षिणचल, चेन्नै | South Circle, Chennai

(अधिक जानकारी जैसे आवेदन का स्थिति, शुल्क आदि के लिए हमारा वेबसाइट <http://peso.gov.in> देखें।)  
 (For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

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

*(Handwritten signature)*

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Per Rule 187(3) of Explosives Rules, 2008  
Sujata Yadav, Joint Chief Controller of Explosives, Chennai on 27/04/2016

**अनुज्ञापित प्रारूप फॉर्म ई-3 | LICENCE FORM LE-3**  
(विस्फोटक नियम, 2008 की अनुसूची 1 के भाग 1 के अनुच्छेद 3(क) से (ख) देखिए।)  
(See article 3(a) to (d) of Part 1 of Schedule I of Explosives Rules, 2008)

(ग) उपयोग के लिए एक समय पर वर्ग 1, 2, 3, 4, 5 या वर्ग 7 के विस्फोटक या किसी मिस्रीज में वर्ग 6 के विस्फोटक रखने के।  
Licence to possess (c) for use explosives of class 1, 2, 3, 4, 5, 6 or 7 in a magazine.

अनुज्ञापित सं. (Licence No.): E/SC/TN/22/655/E83542  
वार्षिक फीस रूपए (Annual Fee Rs): 8600/-



1. Licence is hereby granted to

M/s. SRI SELVA VIGNESH EXPLOSIVES (अधिभोगी) Occupier: V. Selva Vignesh, 9/90, Lakshmi Colony,  
Udyogambalam Road, Panchaikudi Post, Town Village - Chinnai, District-VARUDHANAGAR, State-Tamil Nadu, Pincode -  
626113

को अनुज्ञापित अनुवत्त की जाती है।

2. अनुज्ञापितारी की प्रास्थिति: Status of licensee: Partnership Firm

3. अनुज्ञापित निम्नलिखित प्रयोजनों के लिए विधितम्ब है।  
Licence is valid only for the following purpose.

possess for use of Nitrate Mixture, Safety Fuse, Detonating Fuse, Electric and/or Ordinary Detonators. के उपयोग के लिए

4. अनुज्ञापित विस्फोटकों के निम्नलिखित किस्मों, प्रकारों और मात्रा के लिए विधितम्ब है।  
Licence is valid for the following kinds and quantity of explosives: - (क) to

क्र. सं. (Sr. No.)	नाम और विवरण (Name and Description)	कक्षा और विभाग (Class & Division)	उप-प्रभाग (Sub-division)	मात्रा किसी एक समय में (Quantity at any one time)
1	Nitrate Mixture	3.0	0	4000 Kg.
2	Safety Fuse	6.1	0	10000 Mtrs
3	Detonating Fuse	6.2	0	15000 Mtrs.
4	Electric and/or Ordinary Detonators	6.3	0	44000 Nos.

(ख) किसी एक कलेंडर मंथ में खरीदे जाने वाले विस्फोटक की मात्रा (अनुच्छेद 3(ख) और (ग) के अधीन अनुज्ञापित के लिए)  
(b) Quantity of explosives to be purchased in a calendar month applicable for licence under article 3(b) and (g): 10 times as above.

5. निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञापित परिसर की पृष्टि होती है।  
The licensed premises shall conform to the following drawing(s).

रेखाचित्र क्र. (Drawing No.) E/SC/TN/22/655/E83542  
दिनांक (Dated) 27/04/2016

6. अनुज्ञापित परिसर निम्नलिखित पते पर स्थित है। The licensed premises are situated at following address:  
Survey No(s), 11/6/2A, B, C, 11/6/3A, B, C. ग्राम (Town/Village): Thirumani, Thiruvananthapuram(T)

पुलिस थाना (Police Station): Kondakkol  
पिनकोड (Pincode) 625022  
फैक्स (Fax)

जिला (District) MADURAI राज्य (State) Tamil Nadu  
दूरभाष (Phone) 8973735846 ई. मल्ल (E-Mail)

7. अनुज्ञापित परिसर में निम्नलिखित सुविधाएं अंतर्भूत हैं।  
The licensed premises consist of following facilities.

: One Detonator Room, One Labory and One Explosives Room

8. अनुज्ञापित समय - समय पर यथासंशोधित विस्फोटक अधिनियम, 1954 और उनके अधीन विरचित विस्फोटक नियम, 2008 के उपबंधों, शर्तों और अतिरिक्त प्रतियों और निम्नलिखित उपबंधों के अधीन रहते हुए अनुवत्त की जाती है।  
The licence is granted subject to the provision of Explosives Act 1954 as amended from time to time and the Explosives Rules, 2008 framed there under and the conditions, additional conditions and the following Annexures.

- उपरोक्त क्रम सं. 5 में यथा कथित रेखाचित्र (स्थान, रक्षिणीय संबंधी और अन्य विवरण दर्शित करते हुए):  
Drawings (showing site, constructional and other details) as stated in serial No. 5 above.
- अनुज्ञापित प्राधिकारी द्वारा हस्ताक्षरित इस अनुज्ञापित की शर्त और अतिरिचित शर्त।  
Conditions and Additional Conditions of this licence signed by the licensing authority.
- दूरी प्रारूप DE-3 (Distance Form DE-3).

9. यह अनुज्ञापित तारीख 31 मार्च 2021 तक विधितम्ब रहेगी। This licence shall remain valid till 31st day of March 2021.

यह अनुज्ञापित, अधिनियम या उसके अधीन विरचित नियमों या अनुसूची V के भाग 4 के प्रति निर्दिष्ट नोट-VII के अधीन तथा उपबंधित इस अनुज्ञापित की शर्तों का अधिकतम करने या यदि अनुज्ञापित परिसर योजना या उससे संलग्न उपबंध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर निलंबित या प्रतिसंहार की जा सकती है, जहां वह लागू हो।  
This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Ser VIII wherever applicable, referred to in Part 2 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached hereto.

तारीख: The Date - 27/04/2016

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

नवीनीकरण के पृष्ठान के लिए स्थान  
Space for Endorsement of Renewal

नवीनीकरण की तारीख (Date of Renewal)	समाप्ति की तारीख (Date of Expiry)	अनुज्ञापित प्राधिकारी के हस्ताक्षर और स्टांप (Signature of licensing authority and stamp)
03/05/2021	31/03/2026	J. Chief Controller of Explosives, South Circle, Chennai

कानूनी चेतावनी: विस्फोटकों का गलत ढंग से चलाना या उनका दुरुपयोग कानून के अधीन गंभीर दंडात्मक 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.

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अनुसूची प्रकरण एल ई. -10 [ Form LE-10 ]  
शॉट फायर कार्टा प्रमाण-पत्र | Shot Firing Certificate  
(अनुसूची IV के भाग I का अनुसूची 10 देखें) | See article 10 of Part I of Schedule IV  
(विस्फोटक विधम, 2008 का नियम 107(5) देखें) | see rule 107(5) of Explosives Rules, 2008

(खान अधिनियम, 1952 के अधीन न आने वाले क्षेत्र में विस्फोट करने के लिए सक्षमता प्रमाणपत्र )  
(Certificate of competency to carry out blasting of explosives in area not coming under



संख्या | No.: E/SS/TN/30/349(E77319)

प्रमाणित किया जाता है कि श्री V. Selva Vignesh S/o Vijay Sastr, जिनका जन्म 25/03/1993 को हुआ था, जो Sri Selvam explosives 6/76, east car street, Kuruvikulam Post, Tirunelveli, VIRUDHUNAGAR, Tamil Nadu - 627808 के निवासी है, जेने द्वारा तारीख को आयोजित शॉट फायर की परीक्षा तारीख को उत्तीर्ण कर ली है और वह विस्फोटक अधिनियम, 1884 और उसके अधीन विहित विधियों के अधीन रहते हुए खान अधिनियम, 1952 की प्राप्ति के अधीन आनेवाले खानों से अन्यथा क्षेत्र में नीचे यथा उल्लिखित विस्फोटकों का उपयोग करते हुए विस्फोट प्रचालन करने के लिए प्राधिकृत है।

This is to certify that *Shri V. Selva Vignesh S/o Vijay Sastr*, born on 25/03/1993, resident of Sri Selvam explosives 6/76, east car street, Kuruvikulam Post, Tirunelveli, VIRUDHUNAGAR, Tamil Nadu - 627808 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.

विस्फोट करने के प्राधिकृत वर्ग, प्रवर्ग और प्रकार :  
वर्ग (ग) , श्रेणी: भूमिगत सामान्यक, भूमिगत ब्ला स्टिंग लाइनेशन के सभी चरण

Authorised class, category and type of blasting :  
Class : (C), Category : General underground, All phases of underground blasting operation

[ नियम 107(5) का अन्वय (5) का अर्थकरण देखें ] See explanation of sub-rule (5) of rule 107

यह प्रमाणपत्र 15/10/2018 (आठ वर्षों की तारीख से पांच वर्षों) तक वैधमान्य होगा।  
This certificate shall remain valid till 15/10/2018 (five years from the date of issue)

यह प्रमाणपत्र, अधिनियम या उसके अधीन विहित विधियों प्रमाण प्रमाणपत्र की शर्तों का कोई अधिकांश भंग या यदि आवेदन द्वारा आवेदन प्रकरण में दई सूचना में भेदों करने या विचलन होता है तो निर्यात या अविधित नर दिया जाएगा।

This certificate is liable to be suspended or revoked for any violation of the Act or rules framed thereunder or the conditions of this certificate or if there is any discrepancy or deviation in the information or suppression of facts furnished by the applicant in his application form

स्थान | Place : सिवाकासी | Sivakasi  
दिनांक | Date: 15/10/2013

Sd/-  
उप मुख्य विस्फोटक नियंत्रक | Dy. Chief Controller of Explosives  
सिवाकासी | Sivakasi

- Amendments :  
• Change in Postal Address/Purpose/Attached to Magazine dated: 27/05/2016

पुनर्विधमान्यकरण के लिए प्रमाण  
Endorsement for Revalidation

पुनर्विधमान्यकरण की तारीख  
Date of Revalidation  
06/12/2018

समाप्ति की तिथि  
Date of Expiry  
15/10/2023

अनुमोद्यधिकारी के हस्ताक्षर  
Signature of Licensing Authority  
JL Chief Controller of Explosives, South Circle,  
Chennai

कानूनी चेतावनी : विस्फोटकों का गलत रूप से चलाना 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.

Handwritten signature



**NAME OF THE APPLICANT:**

S. RATHINAM, S/o. Sri. S. SINNA VEERAN,  
 No.10, NORTH STREET, CHINNA UDAIPPU,  
 PERUNGUDI POST, MADURAI SOUTH TALUK,  
 MADURAI DISTRICT - 625 022.

**PLATE NO. I**

**ROUGH STONE & GRAVEL QUARRY**  
**LOCATION PLAN**  
 SCALE:- 1CM = 12.5KMs

**INDEX:-**

MINING LEASE APPLIED AREA ●

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

**PREPARED BY:-**

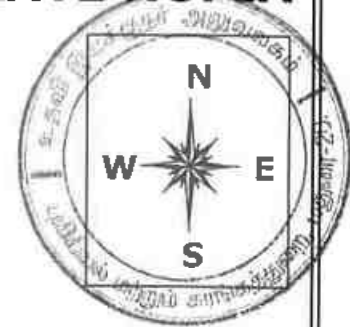
*G. Ravichandran*  
 G.RAVICHANDRAN, M.Sc., P.G.D.M.E.M.,  
 MINING GEOLOGIST  
 RQP / MAS / 197 / 2005 / A  
 VALID UPTO: 12.12.2025

*S. Rathinam*






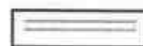

PLATE NO. IA




**NAME OF THE APPLICANT:**  
**S. RATHINAM, S/o.Sri. S. SINNA VEERAN,**  
 No.10, NORTH STREET, CHINNA UDAIPPU,  
 PERUNGUDI POST, MADURAI SOUTH TALUK,  
 MADURAI DISTRICT - 625 022.

**LOCATION FOR PROPOSED QUARRY**  
**DISTRICT : MADURAI**  
**TALUK : KALLIGUDI**  
**VILLAGE : KALLANAI**  
**S.F.Nos. : 84/2C1,2D1,2E1,2C2,2D2A,**  
**2E2,2J,2K,2L**  
**EXTENT : 1-62.17 HECTARE.**

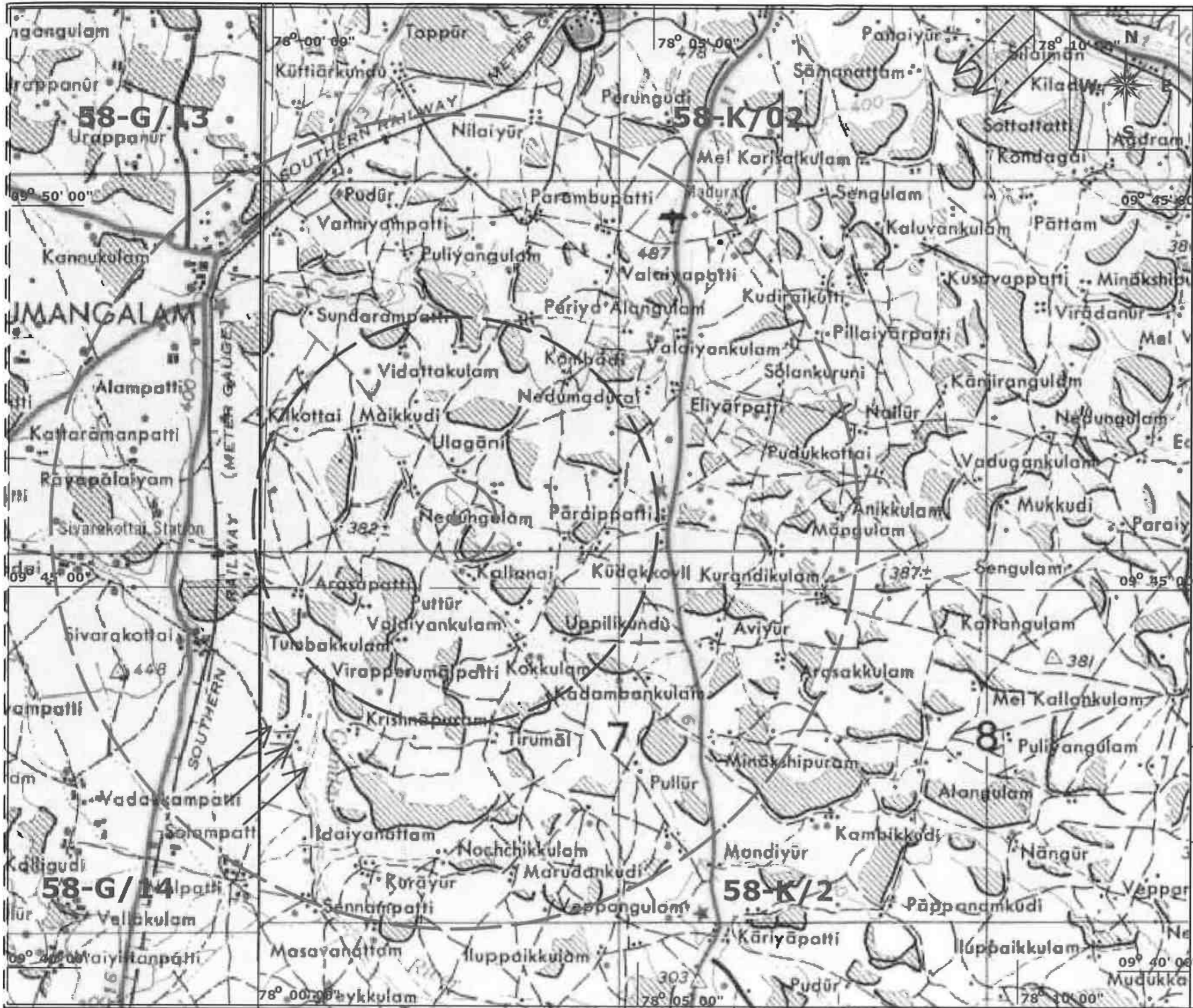
**INDEX:-**

- PROPOSED QUARRY LEASE AREA 
- APPROACH ROAD 
- VILLAGE 

**ROUGH STONE & GRAVEL QUARRY**  
**ROUTE MAP**  
**SCALE:- NOT TO SCALE**

**PREPARED BY:-**   
**G.RAVICHANDRAN, M.Sc., P.G.D.M.E.M.,**  
 MINING GEOLOGIST  
 RQP / MAS / 197 / 2005 / A  
 VALID UPTO: 12.12.2025

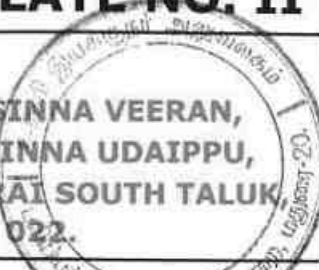
S. Rathinam



**PLATE NO. II**

**NAME OF THE APPLICANT:**

S. RATHINAM, S/o.Sri. S. SINNA VEERAN,  
No.10, NORTH STREET, CHINNA UDAIPPU,  
PERUNGUDI POST, MADURAI SOUTH TALUK,  
MADURAI DISTRICT - 625 022.



**TOPO SHEET No.58-K/1**

**LATITUDE** :09° 45' 54.5" To 09° 45' 57.3"  
**LONGITUDE** :78°02' 40.4" To 78°02' 46.3"

**INDEX:- MINING LEASE AREA**

WIND DIRECTION



1KM RADIUS



5KM RADIUS



10KM RADIUS



**CONVENTIONAL SYMBOLS**

Express highway with toll with hedge with distance stone				
Roads, metalled according to importance				
Roads, double carriageway according to importance				
Unmetalled road, Cart track, Pack track with goss, Foot path				
Streams with track in bed, unlined Canal				
Dams masonry or rock filled, earthwork Weir				
River dry with water channel, with island & rocks, tidal river				
Submerged rocks, Shoal, Swamps, Reeds				
Wells lined, unlined Tube-well, Spring Tanks perennial, dry				
Embankments road or rail, tank, Broken ground				
Railways, broad gauge double, single with station, under constr.				
Railways, other gauges double, single with distance stone do				
Mineral line or tramway Kin Cutting with tunnel				
Contours with sub-features Rocky slopes Cuts				
Sand features (fillat, 12sand hills(permanent), 13dunes, shifting)				
Towns or Villages inhabited, deserted Fort				

**ROUGH STONE & GRAVEL QUARRY**

**TOPO SKETCH - 10KM RADIUS**

SCALE:- 1: 1,00,000

**PREPARED BY:-**

*G. Ravichandran*

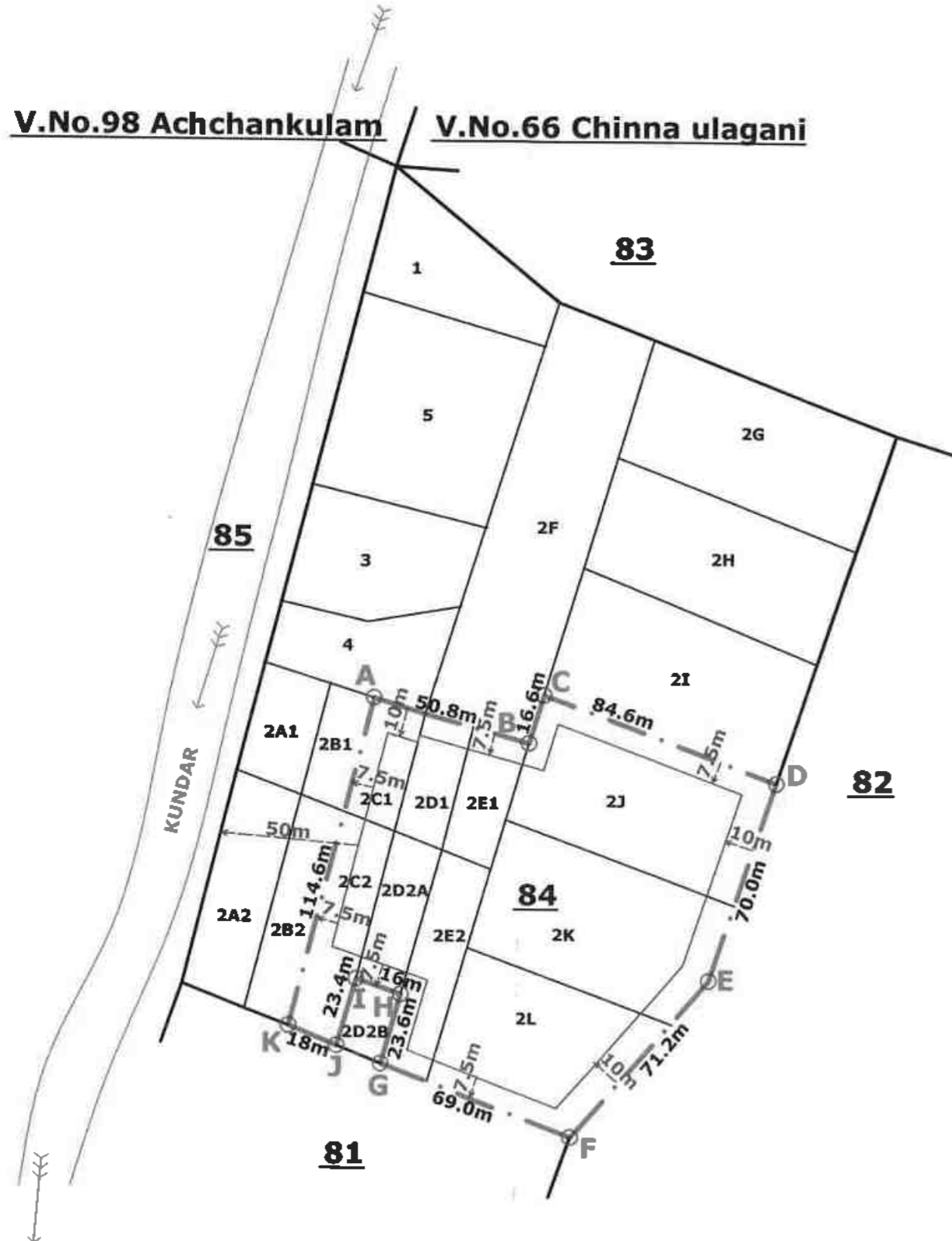
G.RAVICHANDRAN, M.Sc., P.G.D.M.E.M.,  
MINING GEOLOGIST  
RQP / MAS / 197 / 2005 / A  
VALID UPTO: 12.12.2025

*S. Rathinam*





V.No.98 Achchankulam / V.No.66 Chinna ulagani



GPS READINGS ON BOUNDARY PILLARS

PILLAR	LATITUDE	LONGITUDE
A	09° 45' 58.2"	78° 02' 41.9"
B	09° 45' 57.7"	78° 02' 43.5"
C	09° 45' 58.3"	78° 02' 43.6"
D	09° 45' 57.3"	78° 02' 46.3"
E	09° 45' 55.1"	78° 02' 45.6"
F	09° 45' 53.4"	78° 02' 44.0"
G	09° 45' 54.1"	78° 02' 41.8"
H	09° 45' 54.9"	78° 02' 42.1"
I	09° 45' 55.1"	78° 02' 41.5"
J	09° 45' 54.3"	78° 02' 41.4"
K	09° 45' 54.5"	78° 02' 40.4"

**NAME OF THE APPLICANT:**

S. RATHINAM, S/o.Sri. S. SINNA VEERAN,  
No.10, NORTH STREET, CHINNA UDAIPPU,  
PERUNGUDI POST, MADURAI SOUTH TALUK,  
MADURAI DISTRICT - 625 022.

**LOCATION FOR PROPOSED QUARRY**

DISTRICT : MADURAI  
TALUK : KALLIGUDI  
VILLAGE : KALLANAI  
S.F.Nos. : 84/2C1,2D1,2E1,2C2,2D2A,  
2E2,2J,2K,2L  
EXTENT : 1-62.17 HECTARE.

S.F.Nos.	EXTENT (Ha)
84/2C1	0-08.00
84/2D1	0-06.50
84/2E1	0-08.00
84/2C2	0-13.00
84/2D2A	0-08.67
84/2E2	0-14.50
84/2J	0-37.50
84/2K	0-36.00
84/2L	0-30.00
<b>TOTAL</b>	<b>1-62.17 Hect.</b>

**INDEX:-**

LEASE APPLIED BOUNDARY ———  
SAFETY DISTANCE - 7.5m  
(10m from poramboke & 50m from Kundar)  
APPROCH ROAD ———

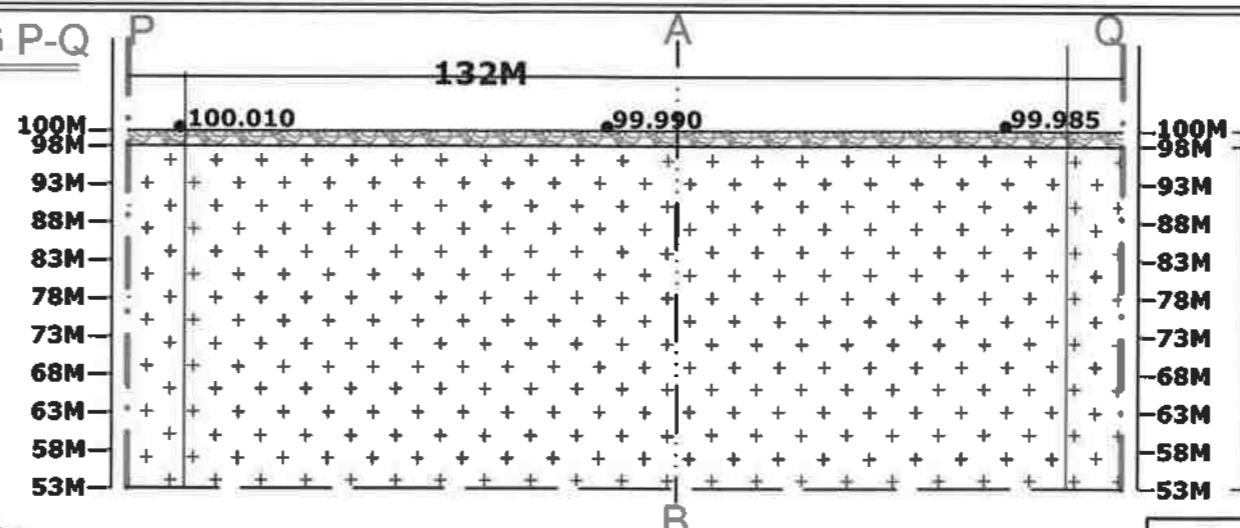
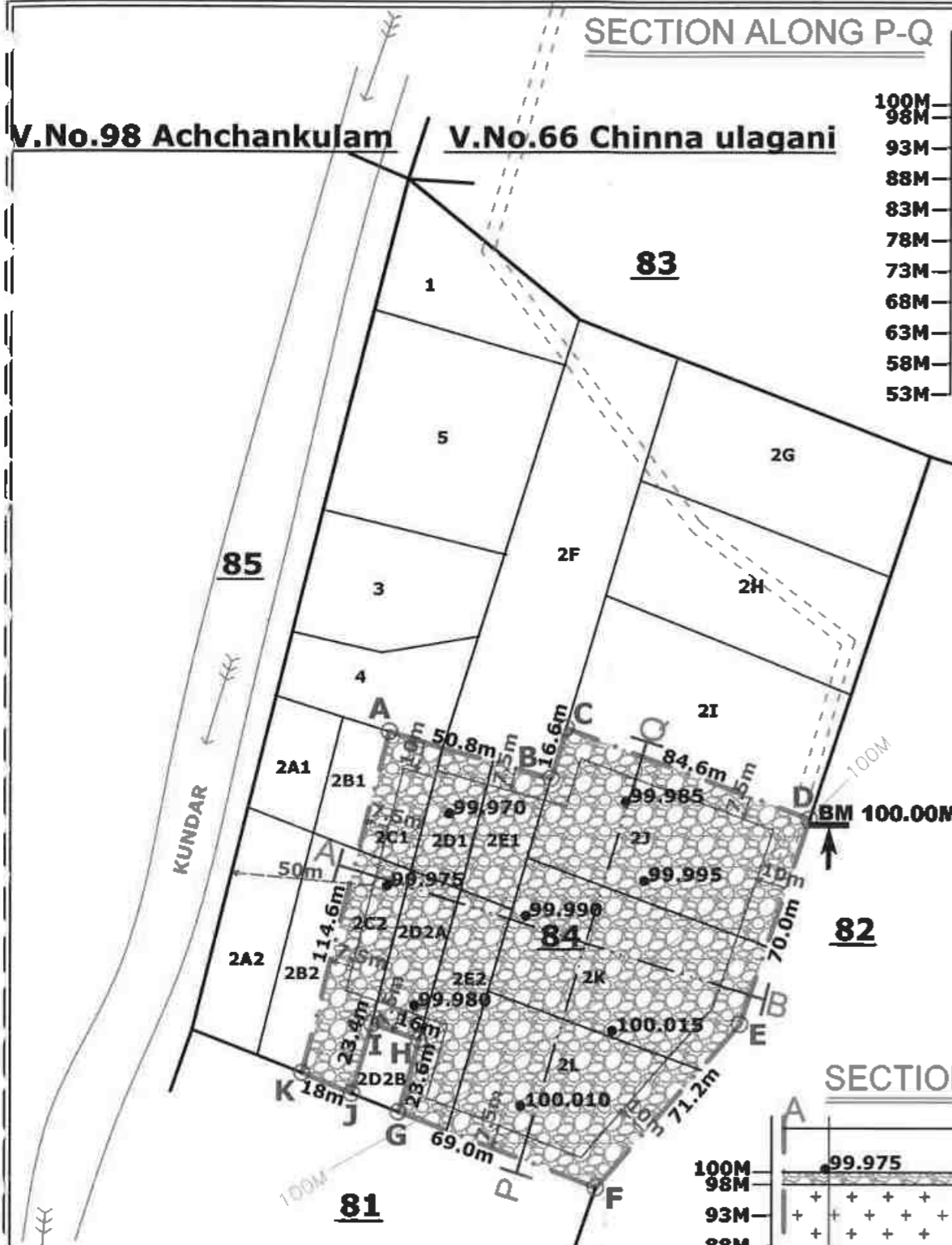
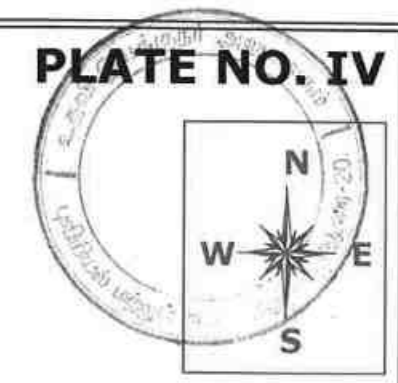
**ROUGH STONE & GRAVEL QUARRY**

**LEASE PLAN**

SCALE:- 1: 2000

**PREPARED BY:-**

*G. Ravichandran*  
G.RAVICHANDRAN, M.Sc., P.G.D.M.E.M.,  
MINING GEOLOGIST  
RQP / MAS / 197 / 2005 / A  
VALID UPTO: 12.12.2025



GEOLOGICAL RESERVES					
MINERAL	SECTION	Length [M]	Width [M]	Depth [M]	VOLUME IN CUM
GRAVEL (weathered rock)	PQ - AB	132	130	2.0	34320
ROUGH STONE	PQ - AB	132	130	45.0	772200
<b>TOTAL GEOLOGICAL RESERVES</b>					<b>8,06,520 Cu.m.</b>

**NAME OF THE APPLICANT:**  
**S. RATHINAM, S/o.Sri. S. SINNA VEERAN,**  
**No.10, NORTH STREET, CHINNA UDAIPPU,**  
**PERUNGUDI POST, MADURAI SOUTH TALUK,**  
**MADURAI DISTRICT - 625 022.**

- INDEX:-**
- LEASE APPLIED BOUNDARY
  - SAFETY DISTANCE 7.5M (10m from poramboke & 50m from Kundar)
  - BOUNDARY PILLARS
  - CONTOURS
  - BENCH MARK (M.S.L)
  - APPROACH ROAD
  - WEATHERED GNEISS (GRAVEL)
  - CHARNOKITE (ROUGHSTONE)

**ROUGH STONE & GRAVEL QUARRY**

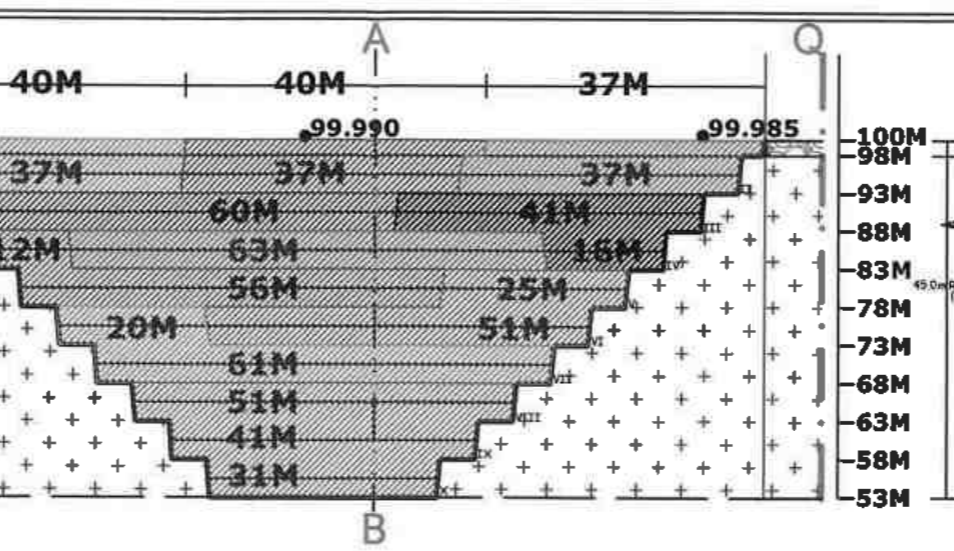
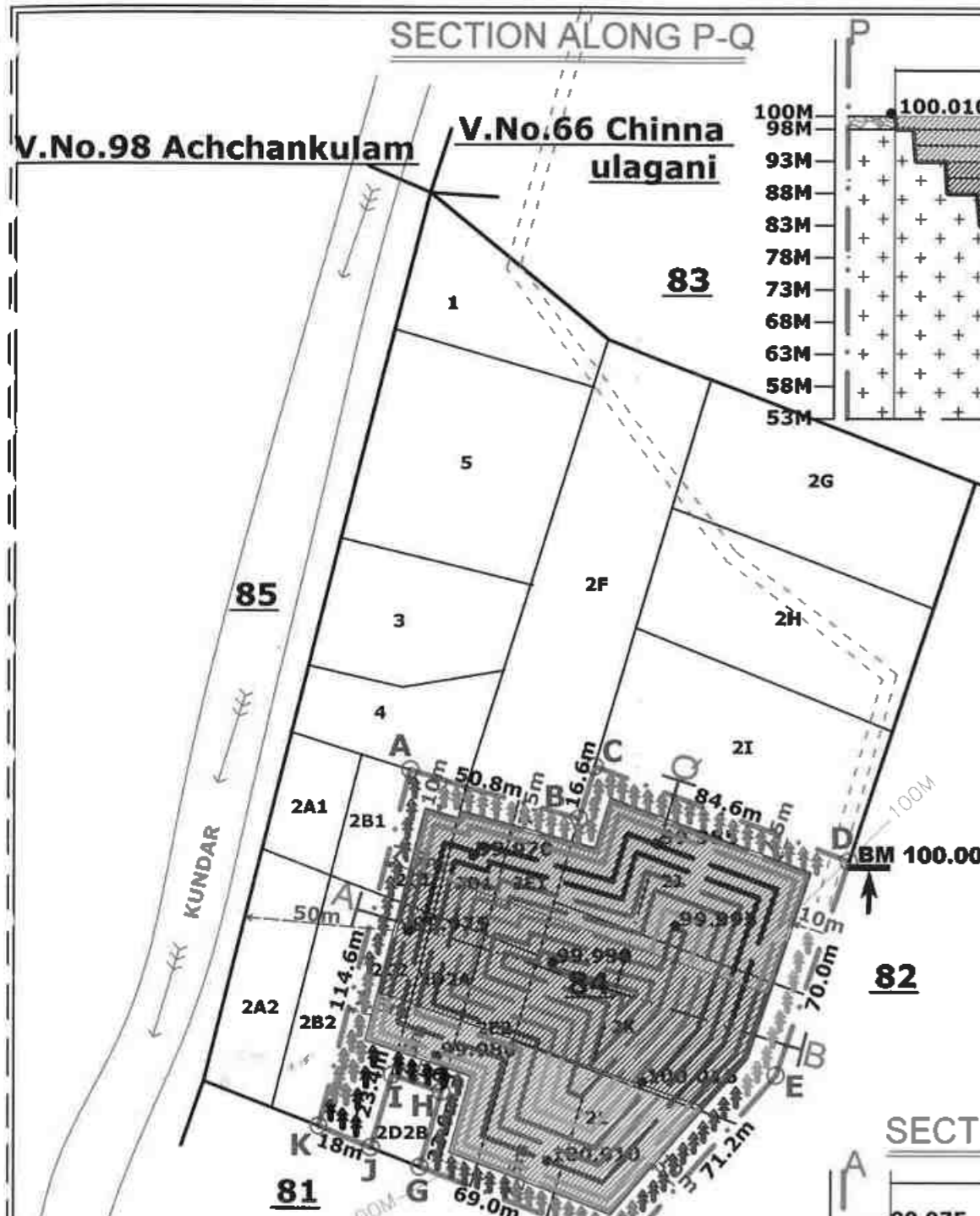
**SURFACE CUM GEOLOGICAL PLAN & SECTIONS**

**PLAN SCALE:- 1: 2000**  
**SECTION SCALE:- HOR- 1: 1000, VER- 1:1000**

**ALL PLANS AND SECTIONS ARE PREPARED BASED ON THE LEASE MAP AUTHENTICATED BY STATE GOVERNMENT.**

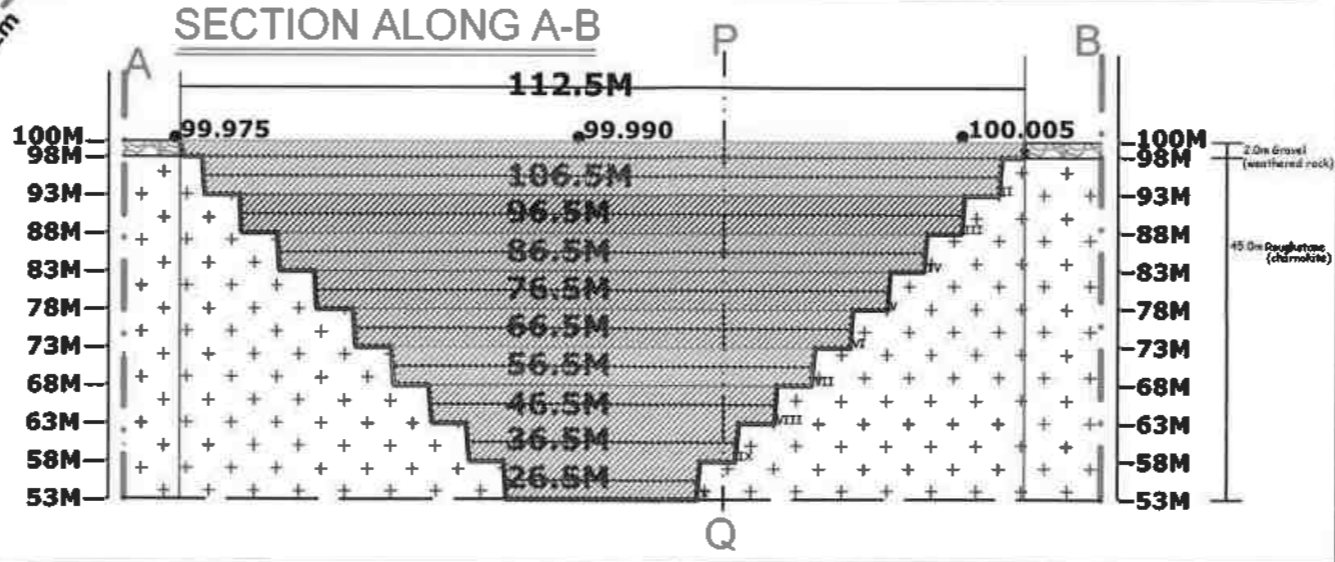
*G. Ravichandran*  
**G.RAVICHANDRAN, M.Sc.,P.G.D.M.E.M.,**  
**MINING GEOLOGIST**  
**RQP / MAS / 197 / 2005 / A**  
**VALID UPTO: 12.12.2025**

*S. Rathinam*



YEARWISE PRODUCTION						VOLUME IN CUM		TOTAL PRODUCTION IN CUM
YEAR	SECTION	BENCH	LENGTH [M]	WIDTH [M]	DEPTH [M]	GRAVEL	ROUGHSTONE	
I - YEAR	PQ - AB	I	40	112.5	2.0	9000	---	28,702.5
	PQ - AB	II	37	106.5	5.0	---	19702.5	
II - YEAR	PQ - AB	I	40	112.5	2.0	9000	---	28,702.2
	PQ - AB	II	37	106.5	5.0	---	19702.5	
III - YEAR	PQ - AB	I	37	112.5	2.0	8325	---	28,027.5
	PQ - AB	II	37	106.5	5.0	---	19702.5	
IV - YEAR	PQ - AB	III	60	96.5	5.0	---	28950	28,950
V - YEAR	PQ - AB	III	41	96.5	5.0	---	19782.5	26,702.5
	PQ - AB	IV	16	86.5	5.0	---	6920	
FIRST FIVE YEAR PRO. ( 1st YEAR to Vth YEAR)						26325	114760	1,41,085
VI - YEAR	PQ - AB	IV	63	86.5	5.0	---	27247.5	27,247.5
VII - YEAR	PQ - AB	IV	12	86.5	5.0	---	5190	26,610
	PQ - AB	V	56	76.5	5.0	---	21420	
VIII - YEAR	PQ - AB	V	25	76.5	5.0	---	9562.5	26,520
	PQ - AB	VI	51	66.5	5.0	---	16957.5	
IX - YEAR	PQ - AB	VI	20	66.5	5.0	---	6650	23,882.5
	PQ - AB	VII	61	56.5	5.0	---	17232.5	
X - YEAR	PQ - AB	VIII	51	46.5	5.0	---	11857.5	23,447.5
	PQ - AB	IX	41	36.5	5.0	---	7482.5	
	PQ - AB	X	31	26.5	5.0	---	4107.5	
NEXT FIVE YEAR PRO. ( VIth YEAR to Xth YEAR)						---	127707.5	1,27,707.5
<b>TOTAL PRODUCTION</b>						<b>26,325</b>	<b>2,42,467.5</b>	<b>2,68,792.5 CUM.</b>

AFFORESTATION PROGRAMME					
PLANTATION	TYPE	No of TREES	SPACING	AREA (Ha)	SURVIVAL
I - YEAR	NEEM	10	3m x 3m	0-00.9	80%
II - YEAR	NEEM	10	3m x 3m	0-00.9	80%
III - YEAR	NEEM	10	3m x 3m	0-00.9	80%
IV - YEAR	NEEM	10	3m x 3m	0-00.9	80%
V - YEAR	NEEM	10	3m x 3m	0-00.9	80%
VI - YEAR	NEEM	10	3m x 3m	0-00.9	80%
VII - YEAR	NEEM	10	3m x 3m	0-00.9	80%
VIII - YEAR	NEEM	10	3m x 3m	0-00.9	80%
IX - YEAR	NEEM	10	3m x 3m	0-00.9	80%
X - YEAR	NEEM	10	3m x 3m	0-00.9	80%
<b>TOTAL PLANTATION</b>		<b>100</b>		<b>0-09.0Ha</b>	



**NAME OF THE APPLICANT:**  
**S. RATHINAM, S/o.Sri. S. SINNA VEERAN,**  
**No.10, NORTH STREET, CHINNA UBAIPPU,**  
**PERUNGUDI POST, MADURAI SOUTH TALUK,**  
**MADURAI DISTRICT - 625 022.**

**INDEX:-**

- LEASE APPLIED BOUNDARY
- SAFETY DISTANCE 7.5M (10m from poramboke & 50m from Kundar)
- I - YEAR EXCAVATION
- II - YEAR EXCAVATION
- III - YEAR EXCAVATION
- IV - YEAR EXCAVATION
- V - YEAR EXCAVATION
- VI - YEAR EXCAVATION
- VII - YEAR EXCAVATION
- VIII - YEAR EXCAVATION
- IX - YEAR EXCAVATION
- X - YEAR EXCAVATION

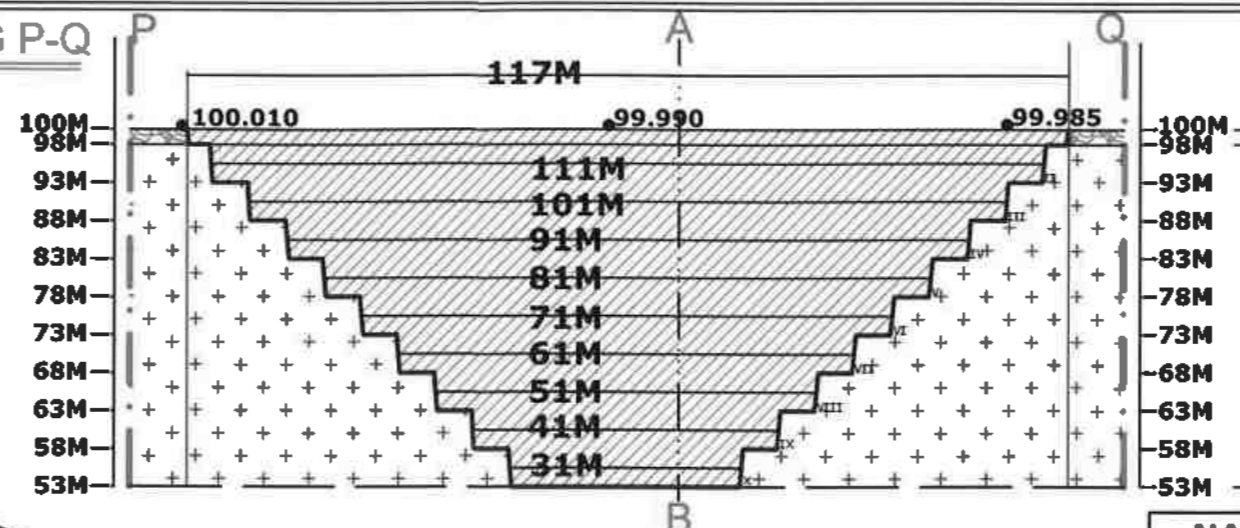
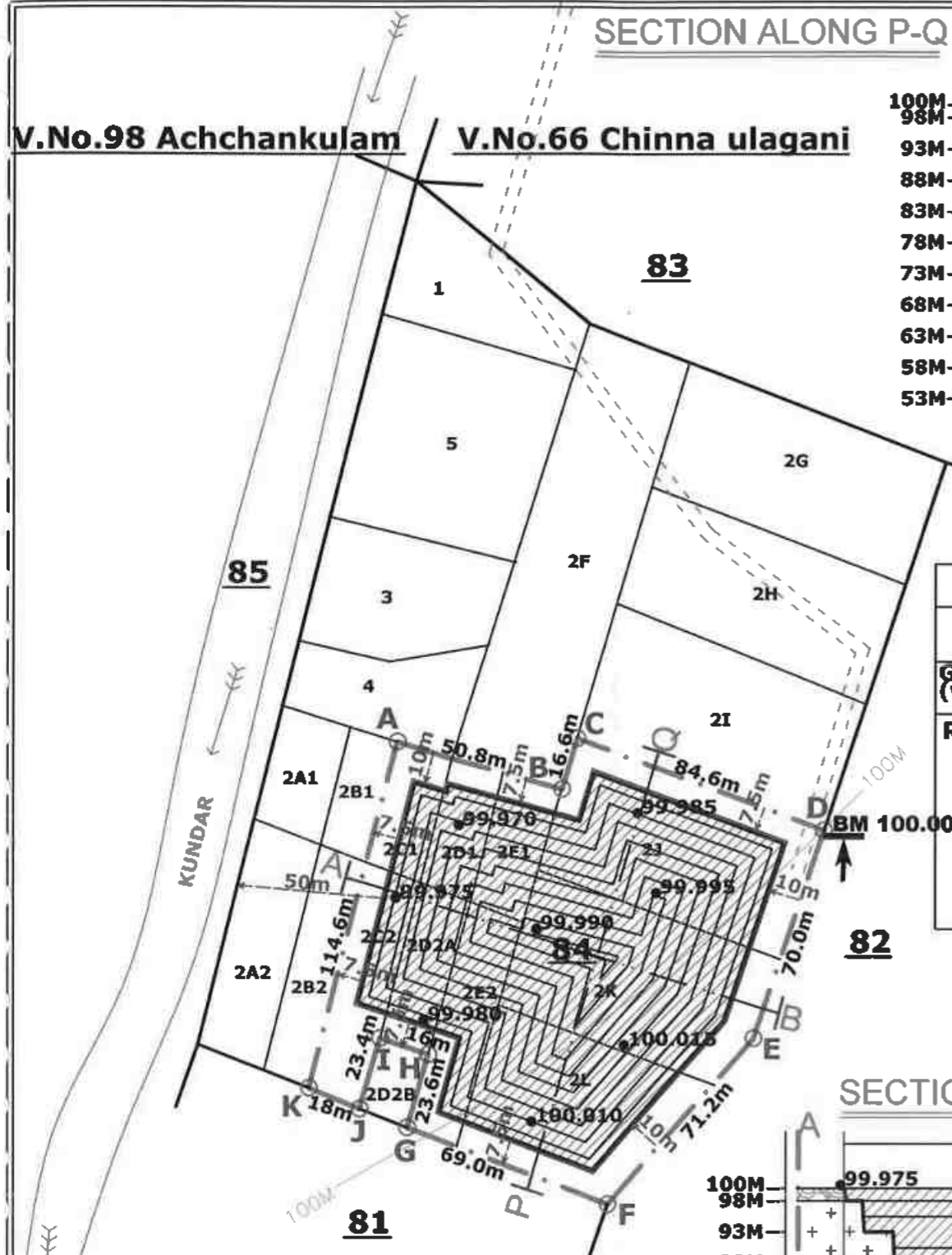
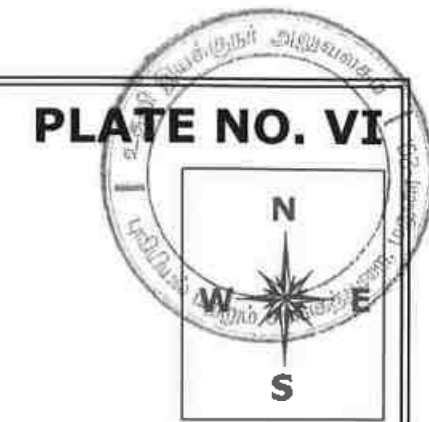
**ROUGHSTONE/JELLY/GRAVEL QUARRY**  
**LAND USE CUM YEARWISE**  
**PLAN & SECTIONS**  
**PLAN SCALE:- 1: 2000**  
**SECTION SCALE:- HOR- 1: 1000, VER- 1:1000**

**ALL PLANS AND SECTIONS ARE PREPARED**  
**BASED ON THE LEASE MAP AUTHENTICATED**  
**BY STATE GOVERNMENT.**

*G. Ravichandran*  
**G.RAVICHANDRAN, M.Sc., P.G.D.M.E.M.,**  
**MINING GEOLOGIST**  
**RQP / MAS / 197 / 2005 / A**  
**VALID UPTO: 12.12.2025**

*S. Sathish*





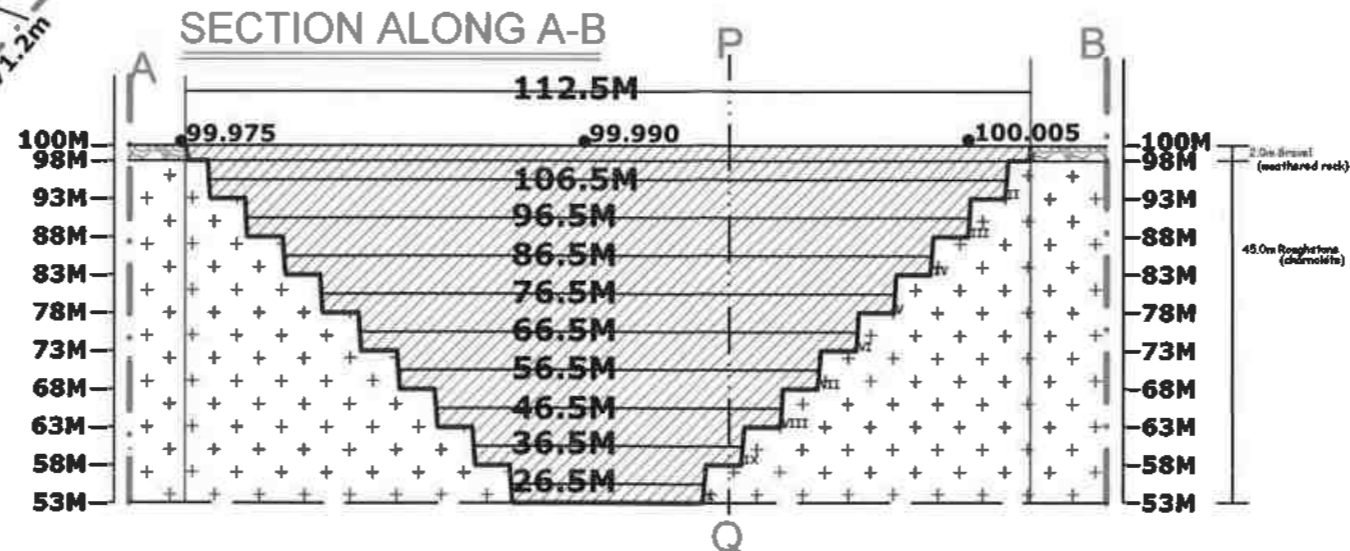
MINEABLE RESERVES						VOLUME IN CUM	TOTAL VOLUME IN CUM
Minerals	Section	Bench	Length [M]	Width [M]	Depth [M]		
Gravel (weathered rock)	PQ - AB	I	117	112.5	2.0	26325	26325
Roughstone	PQ - AB	II	111	106.5	5.0	59107.5	242467.5
	PQ - AB	III	101	96.5	5.0	48732.5	
	PQ - AB	IV	91	86.5	5.0	39357.5	
	PQ - AB	V	81	76.5	5.0	30982.5	
	PQ - AB	VI	71	66.5	5.0	23607.5	
	PQ - AB	VII	61	56.5	5.0	17232.5	
	PQ - AB	VIII	51	46.5	5.0	11857.5	
	PQ - AB	IX	41	36.5	5.0	7482.5	
	PQ - AB	X	31	26.5	5.0	4107.5	
	<b>TOTAL MINEABLE RESERVES</b>						

**NAME OF THE APPLICANT:**  
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**INDEX:-**

- LEASE APPLIED BOUNDARY
- SAFETY DISTANCE 7.5M (10m from poramboke & 50m from Kundar)
- BOUNDARY PILLARS
- CONTOURS
- BENCH MARK
- APPROACH ROAD
- LAYOUT OF MINE WORKING
- ULTIMATE PIT SLOPE

**ROUGH STONE & GRAVEL QUARRY**  
**CONCEPTUAL MINING PLAN**  
**SECTIONS** PLAN SCALE:- 1: 2000  
 SECTION SCALE:- HOR- 1: 1000, VER- 1:1000



**ALL PLANS AND SECTIONS ARE PREPARED BASED ON THE LEASE MAP AUTHENTICATED BY STATE GOVERNMENT.**

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*S. S. S.*

**PLATE NO. VII**

**Radius from the R. BOOPATHI proposed quarry**

Quarries details	S.No	Name of owner	Village name	Survey nos	Extent (Ha)	Distance (m)
a. Existing working	1.	Rathinam	Kallanai	84/2F,2G,2H,2I	1-61.00	15m
b. Abandoned pit	2.	Boopathirajan	Kallanai	39/2A,B,C,D,etc	prior-2022	250m
	3.	Pit	Achangulam	15,17,18	prior-2018	190m
c. present proposed	4.	K.Venkataraman	chinnaulagan	72/4	1-19.00	220m
	5.	S.Rathinam	Kallanai	84/2C1,C2,etc.,	1-62.17	applied
<b>TOTAL EXTENT (Ha)</b>					<b>4-42.17Ha.</b>	



**NAME OF THE APPLICANT:**  
**S. RATHINAM, S/o.Sri. S. SINNA VEERAN, No.10, NORTH STREET, CHINNA UDAIPPU, PERUNGUDI POST, MADURAI SOUTH TALUK, MADURAI DISTRICT - 625 022.**

**LOCATION FOR PROPOSED QUARRY**  
**DISTRICT : MADURAI**  
**TALUK : KALLIGUDI**  
**VILLAGE : KALLANAI**  
**S.F.Nos. : 84/2C1,2D1,2E1,2C2,2D2A, 2E2,2J,2K,2L**  
**EXTENT : 1-62.17 HECTARE.**

**INDEX:-**  
 LEASE APPLIED BOUNDARY ---  
 SAFETY DISTANCE - 7.5m (10m from poramboke & 50m from Kundar) ---  
 APPROACH ROAD ---  
 300M RADIUS LINE ---  
 500M RADIUS LINE ---

**ROUGH STONE & GRAVEL QUARRY**  
**SATILITE IMAGERY & EMP PLAN**

**SCALE:- 1: 5000**

**PREPARED BY:-** *G. Ravichandran*  
**G.RAVICHANDRAN, M.Sc.P.G.D.M.E.M.,**  
**MINING GEOLOGIST**  
**RQP / MAS / 197 / 2005 / A**  
**VALID UPTO: 12.12.2025**

*S. Rathinam*





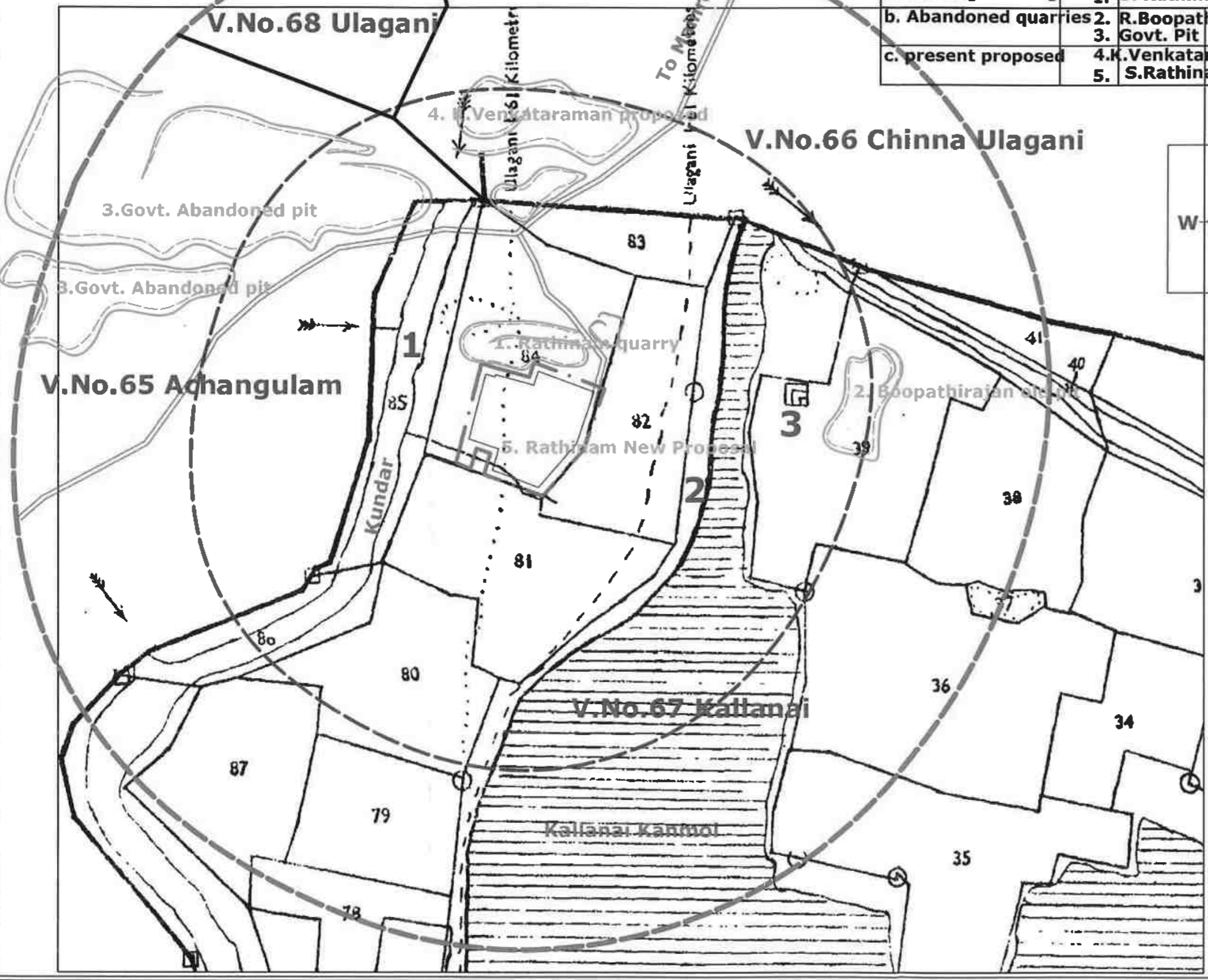
**PLATE NO. VIIA**

**500m Radius from the R. BOOPATHI proposed quarry**

**BASE LINE DATA FOR WATER BODIES**

SL.No	Details	Direction	Distance(M)	Depth(M)	Water level
1.	Kundar	west	50	1.5	dry
2.	Kanmoi	east	125	2.5	below 40m
3.	Well	east	195	15.0	dry

Quarries details	SL.No	Name of owner	Village name	Survey nos	Extent (Ha)	Distance (m)
a. Existing workings	1.	S. Rathinam	Kallanai	84/2F,2G,2H,2I	1-61.00	15m
b. Abandoned quarries	2.	R.Boopathirajan	Kallanai	39/2A,B,C,D,etc	prior-2022	250m
	3.	Govt. Pit	Achangulam	15,17,18	prior-2018	190m
c. present proposed	4.	K.Venkataraman	chinnaulagani	72/4	1-19.00	220m
	5.	S.Rathinam	Kallanai	84/2C1,C2,etc.,	1-62.17	applied
<b>TOTAL EXTENT (Ha)</b>					<b>4-42.17Ha.</b>	



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**LOCATION FOR PROPOSED QUARRY**  
**DISTRICT : MADURAI**  
**TALUK : KALLIGUDI**  
**VILLAGE : KALLANAI**  
**S.F.Nos. : 84/2C1,2D1,2E1,2C2,2D2A,**  
**2E2,2J,2K,2L**  
**EXTENT : 1-62.17 HECTARE.**

**INDEX:- Static water table in winter - 50M**  
**in summer - 55M**

- AREA APPLIED FOR QUARRY LEASE
- APPROACH ROAD
- 300M RADIUS LINE  
(No well, No historical monuments)
- 500M RADIUS LINE  
(No quarries, No habitations, No temples, No school with in 500m & No other structures like culverts, head works, bridges etc..)

**ROUGHSTONE/JELLY/GRAVEL QUARRY**  
**VILLAGE MAP**  
**showing environmental features**  
**SCALE:- 1: 5000**

**ALL PLANS AND SECTIONS ARE PREPARED**  
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