

November
2024

Application Form For Environmental Clearance (Public Hearing)

Draft Environmental Impact Assessment Report

For

Thiru V Nagaraja Rough Stone Quarry-
2.16.0 Ha

at

SS.F.No. 287/1 of Venkateshapuram Village, Shoolagiri
Taluk, Krishnagiri District of Tamil Nadu State

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

Category of the Project: B1

*Environmental Consultant
& Laboratory details:*
Ecotech Labs Pvt Ltd,



No 48, 2nd Main road,
South extension Ram nagar,
Pallikaranai, Chennai -
600100.

Proponent details:

Thiru V Nagaraja,
Owner

S/o. Venkatappa Reddy,

Koppa Village,

Hulimangala Post,

Anekal Taluk,

Bangalore District-560 105

ETL/EAQM/2/December/1(a)/Thiru V Nagaraja

Thiru V Nagaraja,
S/o. Venkatappa Reddy,
Koppa Village,
Hulimangala Post,
Anekal Taluk,
Bangalore District-560 105

UNDERTAKING

I, Thiru. V Nagaraja, undertaking that the Final Environmental Impact Assessment (EIA) Report for Rough Stone Quarry over an extent of 2.16.0 Ha at S.F.No. 276/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu State under project category B1 and Schedule S.No.1(a)

TOR issued by the State Expert Appraisal Committee, TN vide Letter No. SEIAA-TN/F. No. 10425/SEAC/1(a)ToR.6406/2024 Dated: 24.09.2024.

I, hereby assure that all the information and data provided in the EIA report is accurate, true and correct and owns responsibility for the same.



Place: Krishnagiri

Yours faithfully

Date:

Plot No.48A, 2nd Main Road,
Ram Nagar, South Extension,
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CIN : U74900TN2014PTC094895

UNDERTAKING

I, Dr. A. Dhamodharan, Managing Director confirms that this Draft EIA Report of Rough Stone Quarry over an extent of 2.16.0 Ha at S.F.No. 276/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu State has been prepared at M/s. Ecotech Labs Pvt. Ltd., Chennai.

I also confirm that I shall be fully accountable for any misleading information mentioned in this Report.

Signature:

Name: Dr. A. Dhamodharan

Designation: Managing Director

Name of the EIA Consultant Organization: M/s. Ecotech Labs Pvt Ltd., Chennai.

NABET Certificate No: NABET/EIA/22-25/SA 0222

Date:

Place: Chennai

Declaration by Experts contributing to the EIA of Existing Rough Stone Quarry- 2.16.0 Ha by Thiru. V Nagaraja at S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu State I, hereby, certify that I was a part of the EIA team in the following capacity that developed the above EIA.


EIA Coordinator: Dr. A. Dhamodharan











Signature:




Period of involvement: November 2023 to Till now

Contact information: M/s. Eco tech Labs Pvt Ltd,
No. 48, 2nd Main road, Ram Nagar South Extension,
Pallikaranai

S. No.	Functional areas	Name of the experts	Involvement (period and task)	Signature and date
1	AP	Mrs. K. Vijayalakshmi	1. Selection of Baseline Monitoring stations based on the wind direction 2. Interpretation of Baseline data by comparing it with standards prescribed by CPCB against the type of area 3. Identification of sources of air pollution and suggesting mitigation measures to minimize impact Period: November 2023 - Till now	

2	WP	Dr. A. Dhamodharan	<p>1. Selection of baseline Monitoring Locations for Ground water analysis and also identifying nearest surface water to be studied.</p> <p>2. Interpretation of baseline data collected</p> <p>3. Identification of impacts based on the baseline study conducted and also to the ground water and nearby surface water due to the proposed project</p> <p>4. Preparation of suitable and appropriate mitigation plan.</p> <p>Period: November 2023 – Till now</p>	
3	SHW	Dr. A. Dhamodharan	<p>1. Identification of nature of solid waste generated</p> <p>2. Categorization of the generated waste and estimating the quantity of waste to be generated based on the per capita basis. Identification of impacts of SHW on Environment</p> <p>3. Suggesting suitable mitigation measures by recommending appropriate disposal method for each category of waste generated</p> <p>4. Top soil and refuse management</p> <p>Period: November 2023 – Till now</p>	
4	SE	Mr. S. Pandian	<p>1. Primary data collection through the census questionnaire</p> <p>2. Obtaining Secondary data from authenticated sources and incorporating the same in EIA report.</p> <p>3. Impact assessment & proposing suitable mitigation plan</p> <p>4. CSR budget allocation by discussing with the local body and allotting the same for need based activity.</p> <p>Period: November 2023 – Till now</p> <p>*Involves Public Hearing</p>	
5	EB	Dr. A. Dhamodharan	<p>1. Primary data collection through field survey and sheet observation for ecology and biodiversity</p>	

			<p>2.Secondary Collection through various authenticated sources</p> <p>3.Prediction of anticipated impacts and suggesting appropriate mitigation measures.</p> <p>Period: November 2023 - Till now</p>	
6	HG	Dr. T. P. Natesan	<p>1. Study of existing surface drainage arrangements in the core and buffer zone, impact due to mining on these drainage courses and suggestion of mitigative measures</p> <p>2. Determination of groundwater use pattern, development of rainwater harvesting program. Storm water management through garland drainage system.</p> <p>Period: November 2023 - Till now</p>	
7	GEO	Dr. T. P. Natesan	<p>1. Field survey for assessing regional and local geology, aquifer distribution, Determination of groundwater use pattern, development of rainwater harvesting program.</p> <p>Period: November 2023 - Till now</p>	
8	SC	Dr. A. Dhamodharan	<p>1. Interpretation of baseline report</p> <p>2. Identification of possible impacts on soil, prediction of soil conservation and suggesting suitable mitigation measures.</p> <p>Period: November 2023 - Till now</p>	
9	AQ	Mrs. K. Vijayalakshmi	<p>1. Collection of Meteorological data for the baseline study period</p> <p>2. Plotting wind rose plot and thereby selecting the monitoring locations based on the wind pattern</p> <p>3. Estimation of sources of air emissions and air quality modeling is done</p> <p>4. Interpretation of the results obtained</p> <p>5. Identification of the impacts and suggesting suitable mitigation measures.</p> <p>Period: November 2023 - Till now</p>	

10	NV	Mrs. K. Vijayalakshmi	<ol style="list-style-type: none"> 1. Selection of monitoring locations 2. Interpretation of baseline data 3. Prediction of impacts due to noise pollution and suggestion of appropriate mitigation measures <p>Period: November 2023 - Till now</p>	
11	LU	Dr. T. P. Natesan	<ol style="list-style-type: none"> 1. Collection of Remote sensing satellite data to study the land use pattern. 2. Primary field survey and limited field verification for land categorization in the study area 3. Preparation of Land use map using Satellite data for 10km radius around the project site. <p>Period: November 2023 - Till now</p>	
12	RH	Mrs. K. Vijayalakshmi	<ol style="list-style-type: none"> 1. Identification of the risk 2. Interpreting consequence contours 3. Suggesting risk mitigation measures <p>Period: November 2023 - Till now</p>	

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

I, Dr. A. Dhamodharan, hereby, confirm that the above-mentioned experts prepared the EIA report of mining project at S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu State. I also confirm that the consultant organization shall be fully accountable for any misleading information mentioned in this statement.

Signature:




Name: Dr. A. Dhamodharan

Designation: Managing Director

Name of the EIA consultant organization: M/s. Eco Tech Labs Private Limited

NABET Certificate No. & Issue Date: NABET/EIA/22-25/SA 0222

Project	Rough Stone Quarry- 2.16.0 Ha	Draft EIA Report
Project Proponent	Thiru. V.Nagaraja	
Project Location	Venkatesapuram Village, Shoologiri Taluk, Krishnagiri District	

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ABBREVIATION

LU –Land use

AP – Air Pollution monitoring, prevention and control

AQ- Meteorology, Air quality modeling and prediction

WP – Water pollution monitoring, prevention and control

EB- Ecology and Biodiversity

NV- Noise & Vibration

SE- Socio-economics

HG- Hydrology, ground water and water conservation

GEO –Geology

RH – Risk assessment and hazards management

SHW –Solid and Hazardous waste management

SC- Soil conservation

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

EXECUTIVE SUMMARY

1. Project Background:

The existing Rough Stone Quarry is over an extent of 2.16.0 Ha. It is a Patta land in S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District. The project comes under Category B1. The area is situated on hilly terrain sloping towards North Eastern side. The quarry operation is proposed to carry out with conventional open cast semi-mechanized mining with 5.0 meter vertical bench and with a bench width of 5.0 meter. The Quarry operation involves shallow jack hammer drilling, slurry blasting, loading and transportation.

The quarry operation is proposed up to depth of 47 m (12 m topsoil and 35 m rough stone) (including the existing depth) for a period of 3 years. The total Geological Resources is about 696340 m³ of Rough stone and 144937 m³ of Topsoil. The Mineable Reserves is estimated at 253495 m³ of Rough Stone and 107722 m³ of Topsoil to be mined for (Sixty months) Five years only. The Precise Area Communication Letter received from The District Collector, Department of Geology and Mining, Krishnagiri District vide Rc. No.478/2018/Mines 2 dated 26.07.2018. The Modified Mining Plan was approved by The Deputy Director, Department of Geology & Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 24.01.2024.

The project area does not fall in Hill Area Conservation Authority region. There is no interstate boundary, CRZ zone, Western Ghats, notified Bird sanctuaries, within the radius of 15Km.

2. NATURE & SIZE OF THE PROJECT

The existing Rough Stone Quarry over an extent of 2.16.0 Hectares land is located at Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District.

Mineral intends to quarry	: Rough stone Quarry
District	: Krishnagiri
Taluk	: Shoolagiri
Village	: Venkatesapuram
S. F. Nos.	: 287/1
Extent	: 2.16.0 Hectares

Project	Rough Stone Quarry- 2.16.0 Ha	Draft EIA Report
Project Proponent	Thiru. V.Nagaraja	
Project Location	Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District	

Table 1: Brief Description of the Project

S. No	Particulars	Details
1.	Latitude	12° 45'13.88" N To 12° 45'22.70" N
2.	Longitude	77° 57' 34.81" E To 77° 57' 39.68" E
3.	Site Elevation above MSL	847 m from MSL
4.	Topography	Hilly terrain topography
5.	Land use of the site	Patta land
6.	Extent of lease area	2.16.0 Ha
7.	Nearest highway	SH 422 – Berigai – Shoolagiri Road -1.73 km - E
8.	Nearest railway station	Hosur Railway Station – 15.46 Km –W
9.	Nearest airport	Hosur Airport – 23.52 Km - W
10.	Nearest town / city	Town – Hosur – 14.74 Km – W City - Hosur – 14.74 Km – W District - Krishnagiri –37.45 Km - SE
11.	Rivers / Canal	❖ Ponnaiyar river – 6.67 km, W
12.	Lake	❖ Muthali lake – 5.9 km NNW ❖ Pedakulla Lake – 4.9 km, NW ❖ Kasavugattu Lake – 11.63 km, W ❖ Tippalam Lake – 11.41 km, W ❖ Kamandoddi Lake – 7.56 km, S ❖ Old Lake – 8.42 km, S ❖ Konerapalli lake – 8.3 km, SSE ❖ Chapadi lake – 8.83 km, SSE ❖ Kalavarapalli Reservoir – 9.75km, SW ❖ Bukkasagaram Lake – 3.8km, S ❖ Doripalli Lake – 5 km, S ❖ Gobasandram River – 8.86 km, S ❖ Kumudapalli Lake – 9.85 km, SW ❖ Moranapalli Lake – 10.82 km, W ❖ Bathlapalli Lake – 11.74 km, W ❖ Chennathur lake – 12 km, SW ❖ Therpet Lake – 14 km, W ❖ Alasanatham lake – 14 km, W
13.	Dam	❖ Shoolagiri dam – 12.59 km, SE
14.	Hills / valleys	❖ Nil in 15 km radius
15.	Archaeologically places	❖ Nil in 15 km radius
16.	National parks / Wildlife Sanctuaries	❖ Cauvery North Wildlife Sanctaury – 25 km, S ❖ Cauvery South Wildlife Sanctaury – 50 km, S

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17.	Reserved / Protected Forests	<ul style="list-style-type: none"> ❖ Punnagaram R.F. – 0.28km, S ❖ Berigai Extension R.F. – 1.1km, N ❖ Perandapalli R.F – 6.65 km, SW ❖ Sanamavu R.F. – 13.72 km, SW
18.	Seismicity	Mine Lease area comes under Seismic zone-III

2. NEED FOR THE PROJECT

- ❖ Rough stone is quarried for producing crusher aggregates to the nearby building contractors, road contractors and nearby villagers.
- ❖ After the entire reserves mined out, the area will be used as water reservoir to have an artificial recharge to the nearby wells.
- ❖ The rough stone is hard and compact in nature. It can be crushed only in crushers for producing aggregates.
- ❖ As the mining continues, no reclamation or back filling is required.

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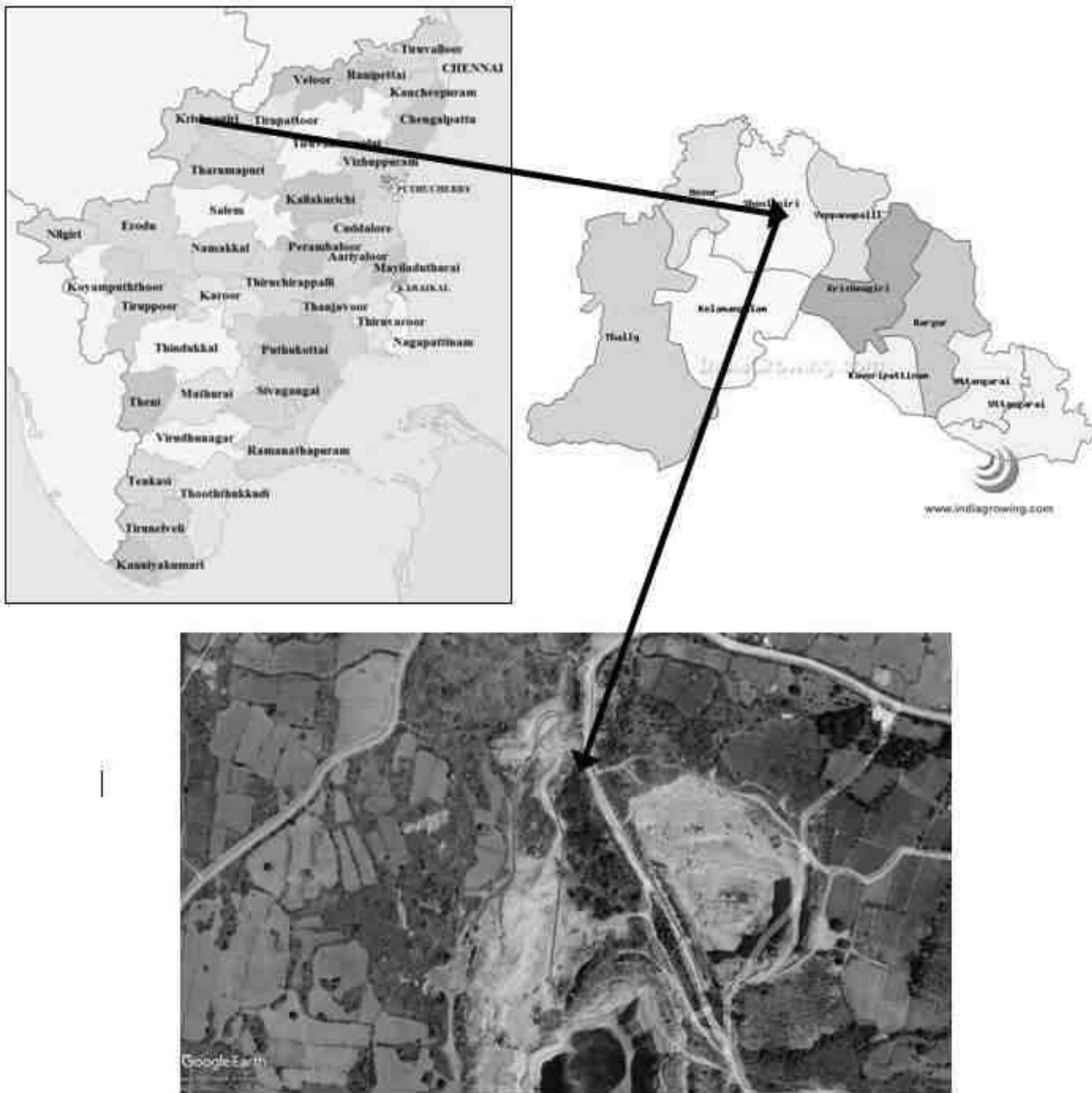


Figure 1: Location Map of the Project Site

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Figure 2: Google Image of the Project Site

4. CHARNOCKITE

Generally, the Charnockite is grey to greenish colored, coarse to medium grained, greasy nature with or without garnet. Because of the limited outcrops, the quarry sections are studied to infer the various interrelationships between the litho units. Charnockite is interbanded nature with crystalline carbonate rocks are observed in most of the quarry in Pandalgudi, Lakshmpuram, Gopalapuram, Sundakottai chinnakamanpatti, Weathering of the Charnockite on the surface gives a deceptive look of gneiss and in the quarry sections at depth the fresh charnockite is exposed, which are well exemplified in almost all the Charnockite quarry sections.

5. GEOLOGICAL RESOURCES

Table 2. Geological resources

GEOLOGICAL RESERVES							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Geological Reserve in Cbm (100%)	Topsoil in Cbm
XY-AB	I	140	80	2			22400
	II	140	80	5			56000

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	III	140	80	5			56000
	IV	140	80	5	56000	56000	
	V	140	80	5	56000	56000	
	VI	140	80	5	56000	56000	
	VII	140	97	5	67900	67900	
	VIII	140	97	5	67900	67900	
	IX	140	97	5	67900	67900	
	X	140	97	5	67900	67900	
Total=					439600	439600	134400
XY-CD	I	41	36	2			2952
	II	41	1	5			205
	III	41	36	5			7380
	IV	41	36	5	7380	7380	
	V	41	36	5	7380	7380	
	VI	41	36	5	7380	7380	
	VII	85	138	5	58650	58650	
	VIII	85	138	5	58650	58650	
	IX	85	138	5	58650	58650	
	X	85	138	5	58650	58650	
Total=					256740	256740	10537
Grand Total=					696340	696340	144937

Table 3. Mineable Resources

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Minable Reserve in Cum(100%)	Topsoil in Cum
XY-AB	I	130	70	2			18200
	II	128	68	5			43520
	III	123	63	5			38745
	IV	118	58	5	34220	34220	
	V	113	53	5	29945	29945	
	VI	108	48	5	25920	25920	
	VII	103	45	5	23175	23175	
	VIII	98	35	5	17150	17150	
	IX	93	25	5	11625	11625	
	X	88	15	5	6600	6600	
Total=					148635	148635	100465
XY-CD	I	41	26	2			2132

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	II	41	1	5			205
	III	41	24	5			4920
	IV	41	19	5	3895	3895	
	V	41	14	5	2870	2870	
	VI	41	9	5	1845	1845	
	VII	70	91	5	31850	31850	
	VIII	65	81	5	26325	26325	
	IX	60	71	5	21300	21300	
	X	55	61	5	16775	16775	
Total=					104860	104860	7257
Grand Total=					253495	253495	107722

Table 4. Year wise Production Plan

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Reserves in Cum(100%)	Topsoil in Cum
2023-2024	XY-AB	I	130	70	2			18200
		II	128	68	5			43520
		III	123	63	5			38745
		IV	118	58	5	34220	34220	
		V	113	53	5	29945	29945	
	XY-CD	I	41	26	2			2132
		II	41	1	5			205
		III	41	24	5			4920
		IV	41	19	5	3895	3895	
		V	41	14	5	2870	2870	
Total=						70930	70930	107722
2024-2025	XY-AB	VI	108	48	5	25920	25920	
		VII	103	45	5	23175	23175	
	XY-CD	VI	41	9	5	1845	1845	
		VII	70	91	5	31850	31850	
Total=						82790	82790	
2025-2026	XY-AB	VIII	98	35	5	17150	17150	
		IX	93	25	5	11625	11625	
		X	88	15	5	6600	6600	
	XY-CD	VIII	65	81	5	26325	26325	
		IX	60	71	5	21300	21300	
		X	55	61	5	16775	16775	

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Total=	99775	99775	
Grand Total=	253495	253495	107722

The proposed rate of production of Rough stone is estimated as 253495 m³ for three years.

6. MINING

Opencast mining

The quarry operation is proposed to carry out with conventional open cast semi-mechanized mining with 5.0 meter vertical bench with a bench width of 5.0 meter. The Quarry operation involves shallow jack hammer drilling, slurry blasting, loading and transportation.

Process Description

- The reserves and resource are arrived based upon the Geological investigation
- Removal of Rough Stone by Excavators by Drilling and Blasting.
- Shallow Drilling With Jackhammer 25.5 mm Dia.
- Minimum Blasting With Class 3 Explosives.

7. Water Requirement

This Rough stone quarry project does not require huge water and electricity for the project.

Table 5. Water Balance

Purpose	Quantity	Sources
Drinking Water	0.9 KLD	Packaged Drinking water vendors available in Athimugam Village which is about \approx 1.5 Km –
Green belt	0.5KLD	Other domestic activities through road tankers supply
Dust suppression	0.5KLD	From road tankers supply
Total	1.9 KLD	

8.

Manpower

The nearby villagers will be getting employment benefits in the proposed working quarry.

Table 6. Man Power

1.	Skilled	Operator	2 No.
		Mechanic	1 No.
		Blaster/Mat	1 No.
2.	Semi – skilled	Driver	2 Nos
3.	Unskilled	Musdoor / Labours	5 Nos
		Cleaners	3Nos
		Office Boy	1No

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4.	Management & Supervisory staff	3No.
	Total =	18 Nos

9. Solid Waste Management

Table 7 Solid Waste Management

S. No	Type	Quantity	Disposal Method
1	Organic	3.24 kg/day	Municipal bin including food waste
2	Inorganic	4.86 kg/day	TNPCB authorized recyclers

As per CPCB guidelines: MSW per capita/day =0.45 kg/day

Table 8. 500m Radius Cluster Mine

1) Details of Existing Quarries:

S. No.	Name of the Lessee	Village & Taluk	S.F.Nos.	Extent in Hect.	ROC. No. dated	Lease Period
1.	Thiru. V Nagaraja S/o Venkatappa Reddy	Venkatesapuram Village Shoolagiri Taluk	287/1	2.16.0	Rc. No. 478/2018/Mines dated 28.05.2018	19.02.2021 To 18.02.2031
2.	M/s Sumuka Blue Metals & M Sand Prop. Thiru V Nagaraj	Venkatesapuram Village Shoolagiri Taluk	294 (Part -2)	3.75.0	Rc. No. 216/2018/Mines dated 09.03.2018	30.04.2021 to 29.04.2031

2) Details of Abandoned /Old Quarries

S. No.	Name of the Lessee	Village & Taluk	S.F.Nos.	Extent in Hect.	ROC. No. dated	Lease Period
1.	Thiru. S. Rajendiran S/o Sengodan	Venkatesapuram Village Shoolagiri Taluk	288	5.00.0	Rc. No. 214/2008/Mines-2 dated 30.07.2008	30.07.2008 to 29.07.2018
2.	Thiru N Muniraj	Venkatesapuram Village Shoolagiri Taluk	285 Part	5.00.0	Rc. No. 123/2008/Mines-2 dated 19.05.2008	04.07.2018 to 03.07.2023

3) Details of Other Proposed /Applied Quarries

S. No.	Name of the Lessee	ROC. No. dated	Village & Taluk	S.F.Nos.	Extent in Hect.	Lease Period
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1.	-----Nil-----
----	---------------

10. Land Requirement

The total extent area of the project is 2.16.0 Ha, Patta land in Venkatesapuram Village, Shoolagiri Taluk, and Krishnagiri District.

Table 9 Land Use Breakup

Sl. No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1.	Quarrying Pit	NIL	1.96.0
2.	Infrastructure	NIL	0.01.0
3.	Roads	NIL	0.01.0
4.	Green Belt & dump	NIL	0.15.0
5.	Unutilized	2.16.0	0.03.0
	Total =	2.16.0Ha	2.16.0Ha

11. Human Settlement

There are no habitations within 300m radius. There are villages located in this area within 15 km radius of the quarry.

Table 10 Habitation

Direction	Village	Distance in Kms	Population
North	Mensandoddi	0.5Kms	220
East	Athimugam	2.0Kms	300
South	Bukkasagaram	4.0kms	290
West	Venkateshapuram	2.5Kms	280

12. Power Requirement

The Electricity for Mines office and Lights only at nights (working is restricted on day time only between 9 Am to 5 Pm). Diesel (HSD) will be used for quarrying machineries around **1143514 litres of HSD** will be used for the entire project life. Diesel will be brought from nearby diesel pumps. No power is required for the project. Lightings on the Night time the power will be taken from nearby electric poles after obtaining permission from concerned authorities.

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13. Scope of the Baseline Study

This chapter contains information on existing environmental scenario on the following parameters.

1. Micro – Meteorology
2. Water Environment
3. Air Environment
4. Noise Environment
5. Soil / Land Environment
6. Biological Environment
7. Socio-economic Environment

13.1 Micro – Meteorology

Meteorology plays a vital role in affecting the dispersion of pollutants, once discharged into the atmosphere. Since meteorological factors show wide fluctuations with time, meaningful interpretation can be drawn only from long-term reliable data.

- i) Average Minimum Temperature : 18° C
- ii) Average Maximum Temperature. : 38° Celsius
- iii) Average Annual Rainfall of the area: 800 mm-900 mm

13.2 Air Environment

Ambient air monitoring was carried out on monthly basis in the surrounding areas of the Mine Lease area to assess the ambient air quality at the source. To know the ambient air quality at a larger distance i.e. in the study area of 10 km. radius, air quality survey has been conducted at 7 locations. Major air pollutants like Particulate Matter (PM₁₀), Sulphur Dioxide (SO₂), and Nitrogen Dioxide (NO₂) were monitored and the results are summarized below.

The baseline levels of PM₁₀ (33-63 µg/m³), PM_{2.5} (13-33 µg/m³), SO₂ (5-21 µg/m³), NO₂ (12-41 µg/m³), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from November 2023 to January 2024.

13.3 Noise Environment

The maximum Day noise and Night noise were found to be 55 dB(A) and 45 dB(A) in project site respectively. The minimum Day Noise and Night noise were 37 dB (A) and 30 dB(A) respectively which was observed in Sree Vanamuneshwara Swamy Temple, Nerigam. The observed values are all well within the Standards prescribed by CPCB.

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13.4 Water Environment

- The average pH ranges from 7.16 and 8.13
- TDS value varied from 495 mg/l to 1025 mg/l
- Hardness varied from 339 to 634 mg/l
- Chloride varied from 50.8 to 288 mg/l

13.5 Land Environment

The analysis results shows that the majority of soil in the project and surrounding area is slightly alkaline in nature and pH value ranges from 6.98 to 8.01 with organic matter 0.41 to 0.71%. The concentration of Nitrogen, Phosphorus & Potassium has been found to be in good amount in the soil samples.

13.6 Biological Environment

The existing Mining lease area is mostly dry barren ground with small shrubs and bushes. No specific endangered flora & fauna exist within the mining lease area.

14. Rehabilitation/ Resettlement

The overall land of the mine is a Patta land. There is no hutment in the lease area. No human being will be displaced from the project area so no person will be affected contrary local people will get job opportunities and better facilities. There is no rehabilitation & resettlement of people is required.

15. Greenbelt Development

1. The development of greenbelt in the peripheral buffer zone of the mine area.
2. Green belt has been recommended as one of the major component of Environmental Management Plan, which will improve ecology, environment and quality of the surrounding area.
3. Local trees like Neem, Vilvam, Panai, etc will be planted along the lease boundary and avenues as well as over Non-active dumps at a rate of 2500 trees with interval 5m.
4. The rate of survival expected to be 80% in this area.

Table.11. Plantation/ Afforestation Program

Name of species proposed	Survival	No of species
Neem, Vilvam, Vaagai, Eachai, Naval, Mantharai, Magizha Maram, Vila Maram, Poo Marudhu, Panai, Marudha maram, Thandri, Sengondrai, Poovarasu, Thethankottai Maram, Pungam	80%	1080
Total		1080

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16. Anticipated Environmental Impacts

16.1 Air Environment and Mitigation Measures

1. Water sprinkling will be done on the roads & unpaved roads.
2. Proper mitigation measures like water sprinkling will be adopted to control dust emissions.
3. Plantation will be carried out on approach roads, solid waste site & nearby mine premises.
4. To control the emissions regular preventive maintenance of equipments will be carried out.

16.2 Noise Environment and Mitigation Measures

1. Periodical monitoring of ambient noise will be done as per CPCB guidelines.
2. No other equipment except the transportation vehicles and excavator for loading will be allowed.
3. Noise generated by these equipment shall be intermittent and does not cause much adverse impact

17. Responsibilities for Environmental Management Cell (EMC)

The responsibilities of the EMC include the following:

- I. Environmental Monitoring of the surrounding area
- II. Developing the green belt/Plantation
- III. Ensuring minimal use of water
- IV. Proper implementation of pollution control measures

18. Environmental Monitoring Program

A monitoring schedule with respect to Ambient Air Quality, Water & Wastewater Quality, Noise Quality as per Tamil Nadu State Pollution Control Board (TNPCB), shall be maintained.

19. Project Cost

The total project cost is **Rs 65,90,000/-** for deployment of machinery and creation of infrastructural facilities like approach road, mine office / Workers Shed, First Aid Room etc., including electrifications and water supply.

Table .12 Project Cost details

S. No.	Description	Cost (Rs.)
1	Fixed cost	25,90,000
2	Operational cost	40,00,000
	Total Cost	65,90,000

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Table .13 EMP Cost

	Mitigation Measure	Provision for Implementation	Capital	Recurring
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	Rental Dozer & drainage construction on haul road @ Rs. 10,000/- per hectare; and yearly maintenance @ Rs. 10,000/- per hectare	21600	21600
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	Fixed Sprinkler Installation and New Water Tanker Cost for Capital; and Water Sprinkling (thrice a day) Cost for recurring	30000 0	20000
	Air Quality will be regularly monitored as per norms within ML area & near Reserve forest with necessary permission	Yearly Compliance as per CPCB norms	0	20000
	Muffle blasting - To control fly rocks during blasting	Blasting face will be covered with sand bags / steel mesh / old tyres / used conveyor belts	0	0
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	Dust extractor @ Rs. 25,000/- per unit deployed as capital & @ Rs. 2500 per unit recurring cost for maintenance	25000	2500
	No overloading of trucks/tippers/tractors	Manual Monitoring through Security guard	0	5000
	Stone carrying trucks will be covered by tarpaulin	Monitoring if trucks will be covered by tarpaulin	0	10000
	Enforcing speed limits of 20 km/hr within ML area	Installation of Speed Governors @ Rs. 5000/- per Tipper/Dumper deployed	5000	0
	Regular monitoring of exhaust fumes as per RTO norms	Monitoring of Exhaust Fumes by Manual Labour	0	5000

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	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	Provision for 2 labours @ Rs.10,000/labour (Contractual) per Hectare	0	43200
	Installing wheel wash system near gate of quarry	Installation + Maintenance + Supervision	40000	10000
Noise Environment	Source of noise will be during operation of transportation vehicles, HEMM for this proper maintenance will be done at regular intervals.	Provision made in Operating Cost	0	0
	Oiling & greasing of Transport vehicles and HEMM at regular interval will be done	Provision made in Operating Cost	0	0
	Adequate silencers will be provided in all the diesel engines of vehicles.	Provision made in Operating Cost	0	0
	It will be ensured that all transportation vehicles carry a fitness certificate.	Provision made in Operating Cost	0	0
	Safety tools and implements that are required will be kept adequately near blasting site at the time of charging.	Provision made in OHS part	0	0
	Ambient Noise will be regularly monitored as per norms within ML area & near Reserve forest with necessary permission	Yearly Compliance as per CPCB norms	0	0
	Line Drilling all along the boundary to reduce the PPV from blasting activity and implementing controlled blasting.	Provision made in Operating Cost	0	0
	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	0	0
	Provision for Portable blaster shed	Installation of Portable blasting shelter	50000	2000
	NONEL Blasting will be practiced to control Ground vibration and fly rocks	Rs. 30/- per 6 Tonnes of Blasted Material	0	12674 75
Water Environment	Water management	Provision for garland drain @ Rs. 10,000/- per Hectare with maintenance of Rs. 5,000/- per annum	21600	5000
	Waste management (Spent Oil, Grease etc.,)	Provision for domestic waste	1000	5000

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Waste Management		collection and disposal through authorized agency		
		Installation of dust bins	5000	2000
	Bio toilets will be made available outside mine lease on the land of owner itself	Provision made in Operating Cost	0	0
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	Fixed Display Board at the Quarry Entrance as permanent structure mentioning Environmental Conditions	7000	1000
	Workers will be provided with Personal Protective Equipment's	Provision of PPE @ Rs. 4000/- per employee with recurring based on wear and tear (say, @ Rs. 1000/- per employee)	72000	18000
	Health check up for workers will be provisioned	IME & PME Health check up @ Rs. 1000/- per employee	0	18000
	First aid facility will be provided	Provision of 2 Kits per Hectare @ Rs. 2000/-	0	4320
	Mine will have safety precaution signages, boards.	Provision for signages and boards made	10000	2000
	Barbed Wire Fencing to quarry area will be provisioned.	Per Hectare fencing Cost @ Rs. 2,00,000/- with Maintenance of Rs 10,000/- per annum	43200 0	10000
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles /HEMMs. Flaggers will be deployed for traffic management	Parking area with shelter and flags @ Rs. 50,000/- per hectare project and Rs. 10,000/- as maintenance cost	10800 0	10000
	Installation of CCTV cameras in the mines and mine entrance	Camera 4 Nos, DVR, Monitor with internet facility	2000	5000

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	Implementation as per Mining Plan and ensure safe quarry working	Mines Manager (1 st Class / 2 nd Class / Mine Foreman) under regulation 34 / 34 (6) of MMR, 1961 and Mining Mate under regulation 116 of MMR,1961 @ 40,000/- for Manager & @ 25,000/- for Foreman / Mate	0	78000 0
Green Belt Development	Green belt development - 500 trees per one hectare (200 Inside Lease Area & 300 Outside Lease Area)	Site clearance, preparation of land, digging of pits / trenches, soil amendments, transplantation of saplings @ 200 per plant (capital) for plantation inside the lease area and @ 30 per plant maintenance (recurring)	86400	12960
		Avenue Plantation @ 300 per plant (capital) for plantation outside the lease area and @ 30 per plant maintenance (recurring)	19440 0	19440
			1381 000	22994 95

Year 1	Year 2	Year 3	Year 4	Year 5
3680495	2414470	2535193	2661953	2795051

Year 6	Year 7	Year 8	Year 9	Year 10
3625303	3081543	3235620	3397401	3567271

Total EMP Cost for 10 Years - Rs. 3,09,94,301/-

20. Corporate Environmental Responsibility

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The Corporate Environment Responsibility (CER) fund will be provided to the below activity.

Table 14 CER Cost

S.No.	CER Activity	Cost (Rs)
1.	➤ Provision of basic amenities such as safe drinking water, Hygienic toilet facilities, furniture's, Greenbelt development and Environmental awareness books in library, Solar lights to Govt High School, Athimugam – 2.03 km, SE	5,00,000/-
Total		5,00,000

21. Benefits of the Project

- There is positive impact on socio-economics of people living in the villages. Mining operations in the subject area has positive impact by providing direct and indirect jobs opportunities
- The project is environmentally compatible, financially viable and would be in the interest of construction industry thereby indirectly benefiting the masses.
- Quarrying in this area is not going to have any negative impact on the social or cultural life of the villagers in the near vicinity.

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<i>Project Proponent</i>	<i>Thiru. V.Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

1 INTRODUCTION

1.1 PREAMBLE

Environment Impact Assessment (EIA) is a process used to identify the environmental, social & economic impacts of a project prior to decision making. It aims to predict environmental impacts at an early stage of project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the prediction options to the proponent. By using EIA, both environmental & economic benefits can be achieved. By considering environmental effects - prediction & mitigation, early benefits in project planning, protection of the environment, optimum utilization of resources, thus saving overall time & cost of the project.

1.2 GENERAL INFORMATION ON MINING OF MINERALS

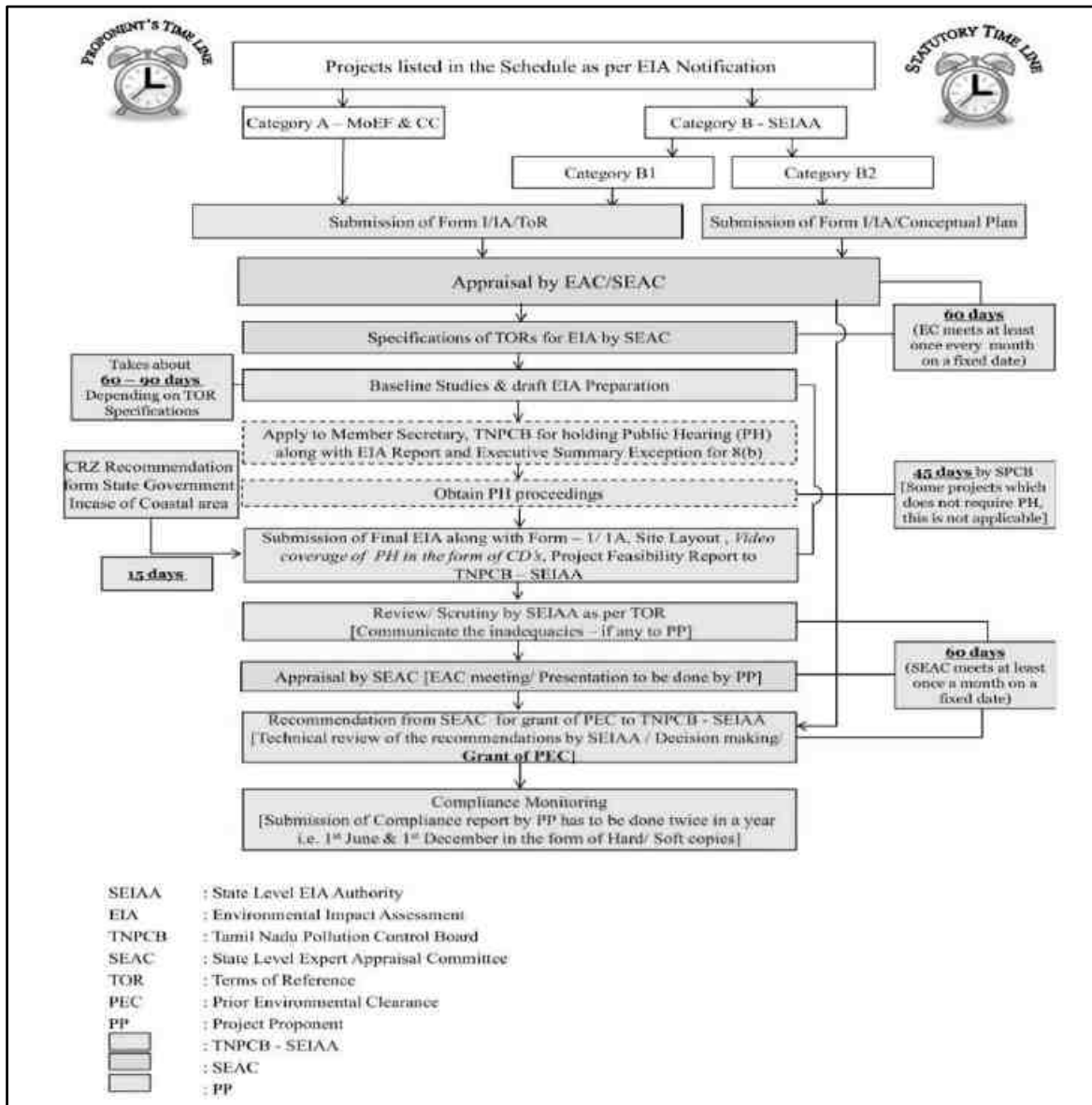
Krishnagiri District is covered with wide range of metamorphic rocks of peninsular gneissic complex. These rock formations occur as massive hillocks all over the district in Patta lands and patta lands, and extensively weathered formations are overlined by soil / alluvium deposits with an average thickness of 1 to 5mts. Granite deposits suitable for the production of Jelly, cut stones and Pillar Stones are available throughout the Krishnagiri District. Granites are widely used in this district as building stones, boulders, cut stones and for the production of Jelly, M. Sand, Crusher Dust. The rock products which are produced are not only used in the Krishnagiri District alone but also transported to the neighboring districts. These products enter into the market in different parts of the country.

1.3 ENVIRONMENTAL CLEARANCE

As per EIA Notification, 2006 and its subsequent amendments (O.M vide No.F.No.L-11011/175/2018-IA-II(M) Govt of India MOEF&CC on December 12th 2018) project comes under category B1 cluster & schedule 1(a) under item 1.

The project is categorized under Category "B1" 1(a) (Cluster) - {Mining of Minerals} as the 500 m radius area is more than 5 Ha including the mine lease area. Hence, the project will be considered at SEAC, Tamil Nadu.

Project	Rough Stone Quarry- 2.16.0 Ha	Draft EIA Report
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Project Location	Venkatesapuram Village, Shoologiri Taluk, Krishnagiri District	



1.4 TERMS OF REFERENCE (TOR)

The Terms of Reference have been issued by SEAC TN vide Letter No. SEIAA-TN/F. No. 10425/SEAC/1(a)ToR.6046/2024 Dated: 24.09.2024. The additional ToR points were recommended by SEAC TN in addition to the Standard ToR Points. The replies for the same were addressed in this report as Annexure 1.

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<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

1.5 POST ENVIRONMENTAL CLEARANCE MONITORING

1.5.1 Methodology adopted

Post project monitoring will be carried out as per conditions stipulated in environmental clearance letter issued by SEIAA, consent issued by SPCB as well as according to CPCB guidelines. The lease area is considered as core zone and the area lying within 10 km radius from the lease boundary is considered as buffer zone, where some impacts may be observed on physical and biological environment. In the buffer zone slight impact may be observed and that too is occasional.

Table 1-1: Post Environmental Clearance Monitoring

S. No.	Description	Frequency of Monitoring
1.	Ambient Air Quality Monitoring	Quarterly/ Half Yearly
2.	Water level & Quality Monitoring	Quarterly/ Half Yearly
3.	Noise Level Monitoring	Quarterly/ Half Yearly
4.	Soil Quality Monitoring	Yearly
5.	Medical Check-up	Yearly

1.6 GENERIC STRUCTURE OF THE EIA DOCUMENT

Chapter 1: Introduction. This chapter contains the general information on the mining of minerals, major sources of environmental impacts in respect of mining projects and details of environmental clearance process.

Chapter 2: Project Description. In this chapter the proponent should also furnish detailed description of the project, such as the type of the project, need for the project, project location, layout, project activities during construction and operational phases, capacity of the project, project operation i.e., land availability, utilities (power and water supply) and infrastructure facilities such as roads, railways, housing and other requirements. If the project site is near a sensitive area it is to be mentioned clearly why an alternative site could not be considered. The project implementation schedule, estimated cost of development as well as operation etc. should also be included.

Chapter 3: Analysis of Alternatives (Technology and Site). This chapter gives details of various alternatives both in respect of location of site and technologies to be deployed in case the initial scoping exercise considers such a need.

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<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

Chapter 4: Description of Environment. This chapter should cover baseline data in the project area and study area.

Chapter 5: Impact Analysis and mitigation measures. This chapter describes the anticipated impacts on the environment and mitigation measures. The method of assessment of impacts including studies carried out, modelling techniques adopted to assess the impacts where pertinent should be elaborated in this chapter. It should give the details of the impacts on the baseline parameters, both during the construction and operational phases and suggests the mitigation measures to be implemented by the proponent.

Chapter 6: Environmental Monitoring Program. This chapter should cover the planned environmental monitoring program. It should also include the technical aspects of monitoring the effectiveness of mitigation measures.

Chapter 7: Additional Studies. This chapter should cover the details of the additional studies required in addition to those specified in the ToR and which are necessary to cater to more specific issues applicable to the particular project.

Chapter 8: Project Benefits. This chapter should cover the benefits accruing to the locality, neighborhood, region and nation as a whole. It should bring out details of benefits by way of improvements in the physical infrastructure, social infrastructure, employment potential and other tangible benefits.

Chapter 9: Environmental Cost Benefit Analysis. This chapter should cover the Environmental Cost Benefit Analysis of the project.

Chapter 10: Environmental Management Plan. This chapter should comprehensively present the Environmental Management Plan (EMP), which includes the administrative and technical setup, summary matrix of EMP, the cost involved to implement the EMP, both during the construction and operational phase and provisions made towards the same in the cost estimates of project construction and operation. This chapter should also describe the proposed post-monitoring scheme as well as inter-organizational arrangements for effective implementation of the mitigation measures.

Chapter 11: Summary and Conclusions. This chapter gives the summary of the full EIA report condensed to ten A-4 size pages at the maximum. It should provide the overall justification for implementation of the project and should explain how the adverse effects have been mitigated.

Chapter 12: Disclosure of Consultants. This chapter should include the names of the consultants engaged with their brief resume and nature of consultancy rendered.

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V.Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

1.7 DETAILS OF PROJECT PROPONENT

Project Proponent : Thiru. G. Perumal,
Status of the Proponent : Proprietor
Proponent's name & address : Thiru V Nagaraja,
S/o. Venkatappa Reddy,
Koppa Village,
Hulimangala Post,
Anekal Taluk,
Bangalore District-560 105

1.8 BRIEF DESCRIPTION OF THE PROJECT

1.8.1 *Project Nature, Size & Location*

As per EIA Notification, 2006 and its subsequent amendments (O.M vide No.F.No.L-11011/175/2018-IA-II (M) Government of India MoEF & CC on December 12th, 2018) project comes under category B1 cluster & schedule 1(a) under item 1.

The project pertains to Rough stone mining project by opencast semi-mechanized method on allotted mine lease area at Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu. It is a hilly terrain area sloping towards North Eastern side. The total allotted mine lease for the project is 2.16.0 Ha with their maximum production capacity i.e., 253495 m³ of Rough stone for the period of Three years only.

Project	Rough Stone Quarry- 2.16.0 Ha	Draft EIA Report
Project Proponent	Thiru. V.Nagaraja	
Project Location	Venkatesapuram Village, Shoologiri Taluk, Krishnagiri District	

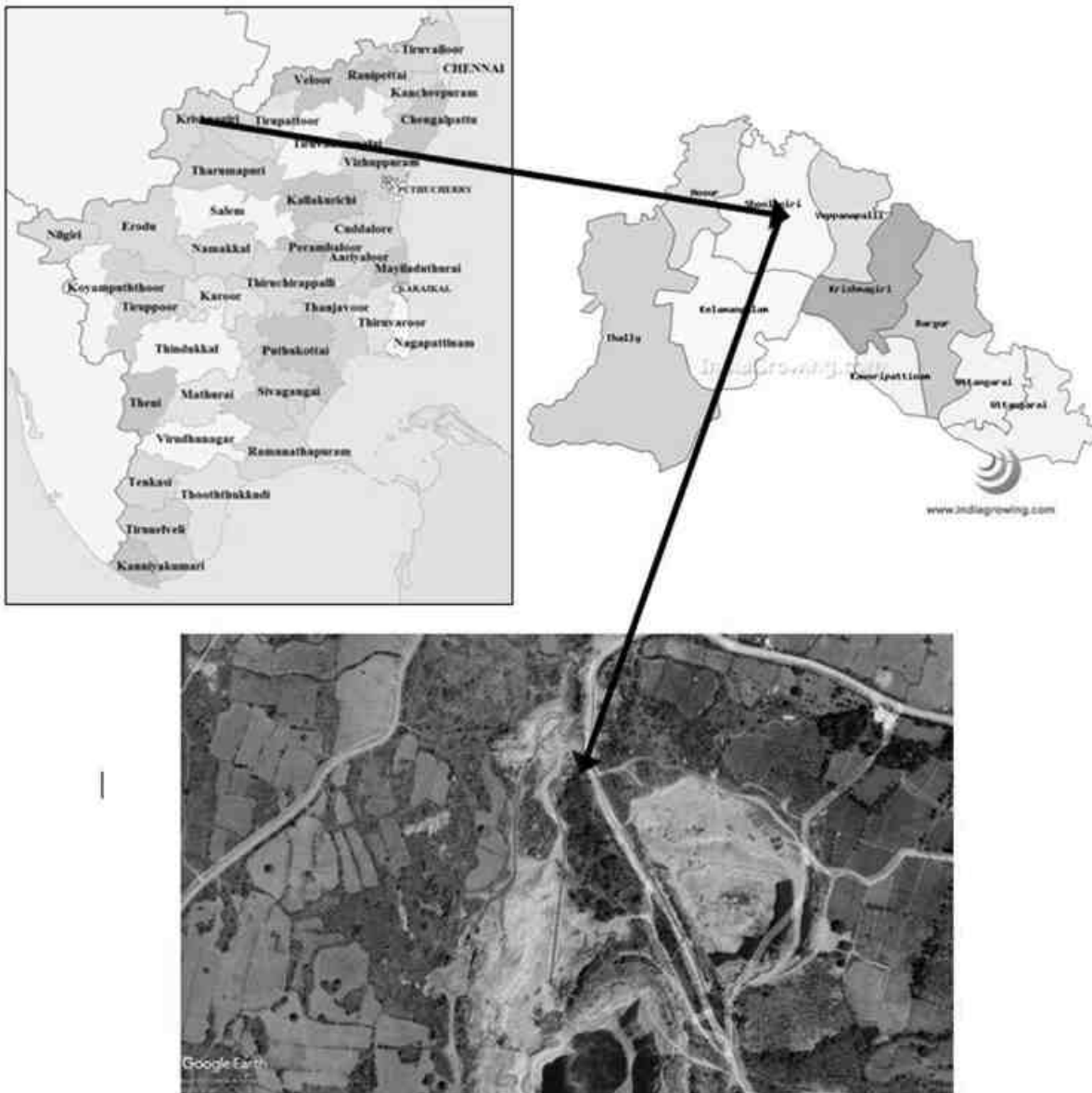


Figure 1.1: Location Map of the Project site

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

2 PROJECT DESCRIPTION

This chapter furnishes detailed description of the project, such as the type of the project, need for the project, project location, layout, project activities during mining, capacity of the project, project operation i.e., land availability, utilities (power and water supply) and infrastructure facilities such as roads, railways, housing and other requirements. The project implementation schedule estimated cost for carrying out entire mining activity is included.

2.1 GENERAL

The project pertains to Rough stone mining project by open cast semi-mechanized method on allotted mine lease area at Venkatesapuram Village, Shoolagiri Taluk of Krishnagiri District, Tamil Nadu. It is a hilly terrain area sloping towards North Eastern side. We have obtained the approved Modified mining plan on 24.01.2024 from Deputy Director, Department of Geology and Mining, Krishnagiri District for 2.16.0 Ha land area in the S.F.No. 287/1. The proposed depth of mining is 47 m (12 m topsoil and 35 m rough stone) (including the existing depth) and Three years production of 253495 m³ of Rough stone.

Type of the project:

As per EIA Notification, 2006 and its subsequent amendments (O.M vide No.F.No.L-11011/175/2018-IA-II (M) Government of India MoEF & CC on December 12th 2018) project comes under category B1 cluster & schedule 1(a) under item 1. The project required to be appraised at state level by State Environment Impact Assessment Authority, Tamil Nadu. Environment Clearance study will involve preparation of EIA report on the basis of baseline & impact assessment study is carried out. Also, before appraisal, under 7(III) of EIA notification 2006, the project involves the Public Consultation and the same will be conducted under SPCB (TN) in Krishnagiri District. The proceedings of the same will be incorporated in the Final EIA Report. The mines within 500m radius from the project site are listed below.

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

Table 2-1: Quarry within 500m Radius

1) Details of Existing Quarries:

S. No.	Name of the Lessee	Village & Taluk	S.F.Nos.	Extent in Hect.	ROC. No. dated	Lease Period
1.	Thiru. V Nagaraja S/o Venkatappa Reddy	Venkatesapuram Village Shoolagiri Taluk	287/1	2.16.0	Rc. No. 478/2018/Mines dated 28.05.2018	19.02.2021 To 18.02.2031
2.	M/s Sumuka Blue Metals & M Sand Prop. Thiru V Nagaraj	Venkatesapuram Village Shoolagiri Taluk	294 (Part -2)	3.75.0	Rc. No. 216/2018/Mines dated 09.03.2018	30.04.2021 to 29.04.2031

2) Details of Abandoned /Old Quarries

S. No.	Name of the Lessee	Village & Taluk	S.F.Nos.	Extent in Hect.	ROC. No. dated	Lease Period
3.	Thiru. S. Rajendiran S/o Sengodan	Venkatesapuram Village Shoolagiri Taluk	288	5.00.0	Rc. No. 214/2008/Mines-2 dated 30.07.2008	30.07.2008 to 29.07.2018
4.	Thiru N Muniraj	Venkatesapuram Village Shoolagiri Taluk	285 Part	5.00.0	Rc. No. 123/2008/Mines-2 dated 19.05.2008	04.07.2018 to 03.07.2023

3) Details of Other Proposed /Applied Quarries

S. No.	Name of the Lessee	ROC. No. dated	Village & Taluk	S.F.Nos.	Extent in Hect.	Lease Period
1.	-----Nil-----					

2.1.1 Need for the project:

The said project plays a significant role in the domestic as well as infrastructural market. To achieve a huge infrastructure being envisaged by Government of India, particularly in road and housing sector, there is a need for basic building materials, the rough stone form the primary building material.

Rough stone is one of the most valuable natural building materials. Aggregates are mostly used for building roads and footpaths. Aggregates – stone used for its strong physical properties – crushed

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<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

and sorted into various sizes for use in concrete, coated with bitumen to make asphalt or used 'dry' as bulk fill in construction.

Mostly used in roads, concrete and building products. Aggregates represent about 98% of quarry output, most of which is used in road construction, maintenance and repair. Much of this goes to the production of asphalt; the remainder is used 'dry' without the addition of other materials to provide a sturdy base for roads.

Rocks and minerals of economic importance found to occur in Krishnagiri District are Rough stone deposits suitable for the production of Jelly, Cut stones and Pillar Stones.

As a result of developmental activities and market demand for minor minerals, mining of minor mineral is vital. In addition to that, geological reserves of rough stone are abundant in the project area which is evident from the mine activities carried out in the nearby sites.

2.2 BRIEF DESCRIPTION OF THE PROJECT

Table 2-2 Salient Features of the Project

S. No.	Description	Details
1	Project Name	Thiru. V Nagaraja, Rough Stone Quarry
2	Proponent	Thiru. V Nagaraja
3	Mining Lease Area Extent	2.16.0 Ha (Patta land)
4	Location	S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu State
5	Latitude	12° 45'13.88" N To 12° 45'22.70" N
6	Longitude	77° 57' 34.81" E To 77° 57' 39.68" E
7	Topography	Hilly terrain topography
8	Site Elevation above MSL	847m from MSL
9	Topo sheet No.	57-H/14
10	Minerals of Mine	Rough Stone Quarry
11	Proposed production of Mine	Proposed Capacity of reserves for 3 Years ➤ Rough stone : 253495 m ³
12	Ultimate depth of Mining	47 m (12 m topsoil and 35 m rough stone) (including existing depth)
13	Method of Mining	Open Cast Semi-mechanized mining
14	Water demand	1.9 KLD
15	Source of water	Water will be supplied through tankers supply
16	Manpower	18 Nos.

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17	Mining Plan Approval	Modified Mining Plan was approved by The Deputy Director, Department of Geology & Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 24.01.2024.
18	Precise area communication letter	The Precise Area Communication Letter received from The District Collector, Department of Geology and Mining, Krishnagiri District vide Rc. No.478/2018/Mines 2 dated 26.07.2018.
19	Production details	Geological reserves: 696340 m ³ of Rough stone Proposed year wise reserves (3 years): 253495 m ³ of Rough stone
20	Boundary Fencing	10 m safety distance all along the boundary for Govt. Lands. Fencing will be provided.
21	Disposal of overburden	The topsoil generation from the lease area is estimated to be 107722 m ³ for 3 years. The topsoil formation will be removed and dumped in in Western Side boundary barrier of the lease area. This will be utilized for road low laying area and plantation purposes.
22	Ground water	The ground water table is reported as 90 m BGL in nearby open wells and bore wells of this area. Mining depth taken as 47 m (12m topsoil and 35 m rough stone) (including existing depth). Now, proposed quarry depth is above the water table. Hence, quarrying may not affect the ground water.
23	Habitations within 300m radius of the Project Site	There is no habitation within 300 m radius of the project site.
24	Drinking water	Water will be supplied through tankers from Athimugam Village which is about ≈ 1.5 Km – East

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<i>Project Location</i>	<i>Venkatesapuram Village, Shoologiri Taluk, Krishnagiri District</i>	

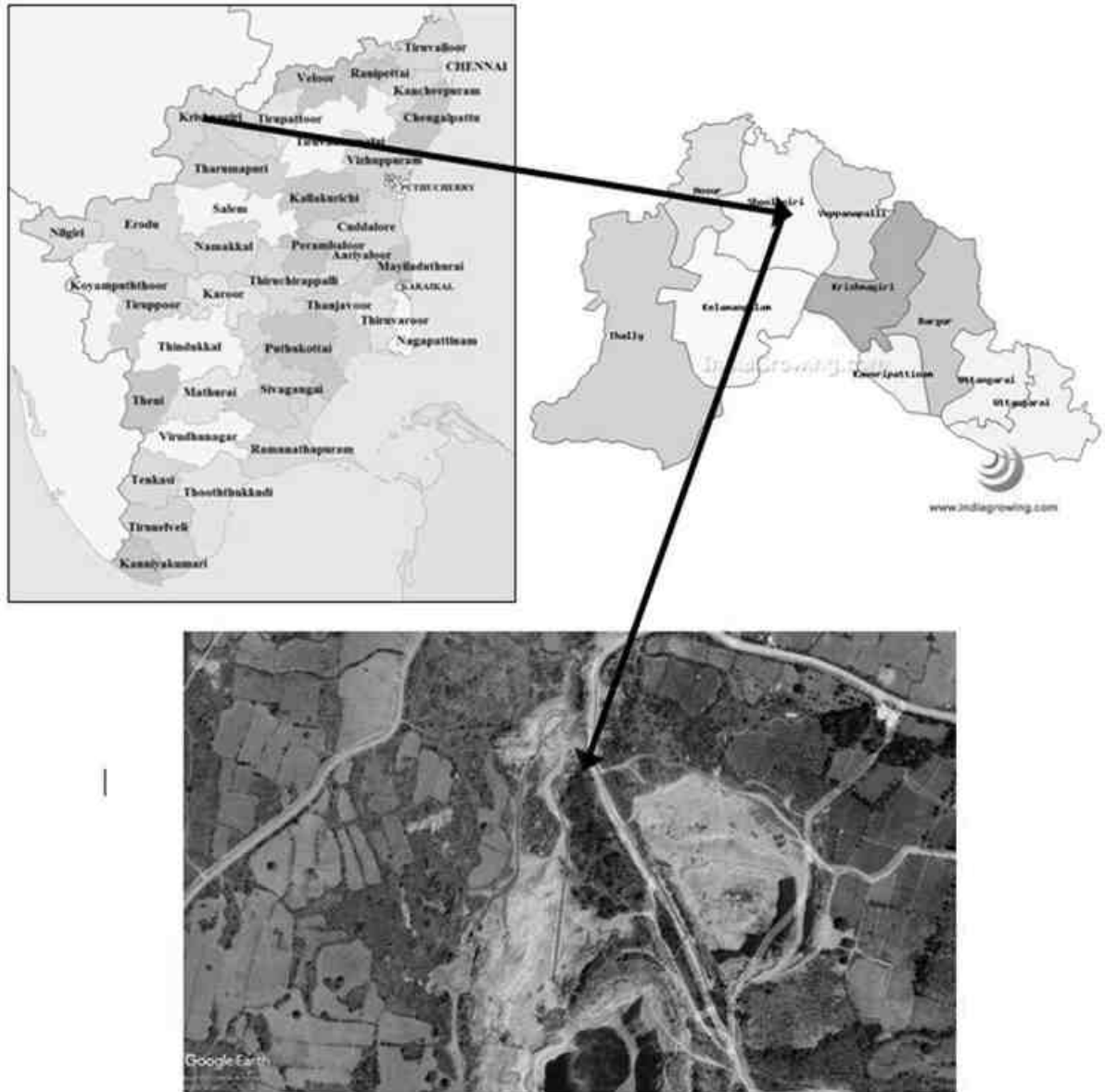


Figure 2.1: Location Map of the Project Site

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Figure 2.2: Google Earth Image and Coordinates of the Project Site

2.2.1 Site Connectivity:

The site is connected to the roadways as follows.

SH 422 (Berigai – Shoolagiri Road -1.73 km - E

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Figure 2.3: Site Connectivity

2.3 LOCATION DETAILS:

Table 2-3: Location Details

S. No	Particulars	Details
1.	Latitude	12° 45'13.88" N To 12° 45'22.70" N
2.	Longitude	77° 57' 34.81" E To 77° 57' 39.68" E
3.	Site Elevation above MSL	847 m from MSL
4.	Topography	Hilly terrain topography
5.	Land use of the site	Patta land
6.	Extent of lease area	2.16.0 Ha

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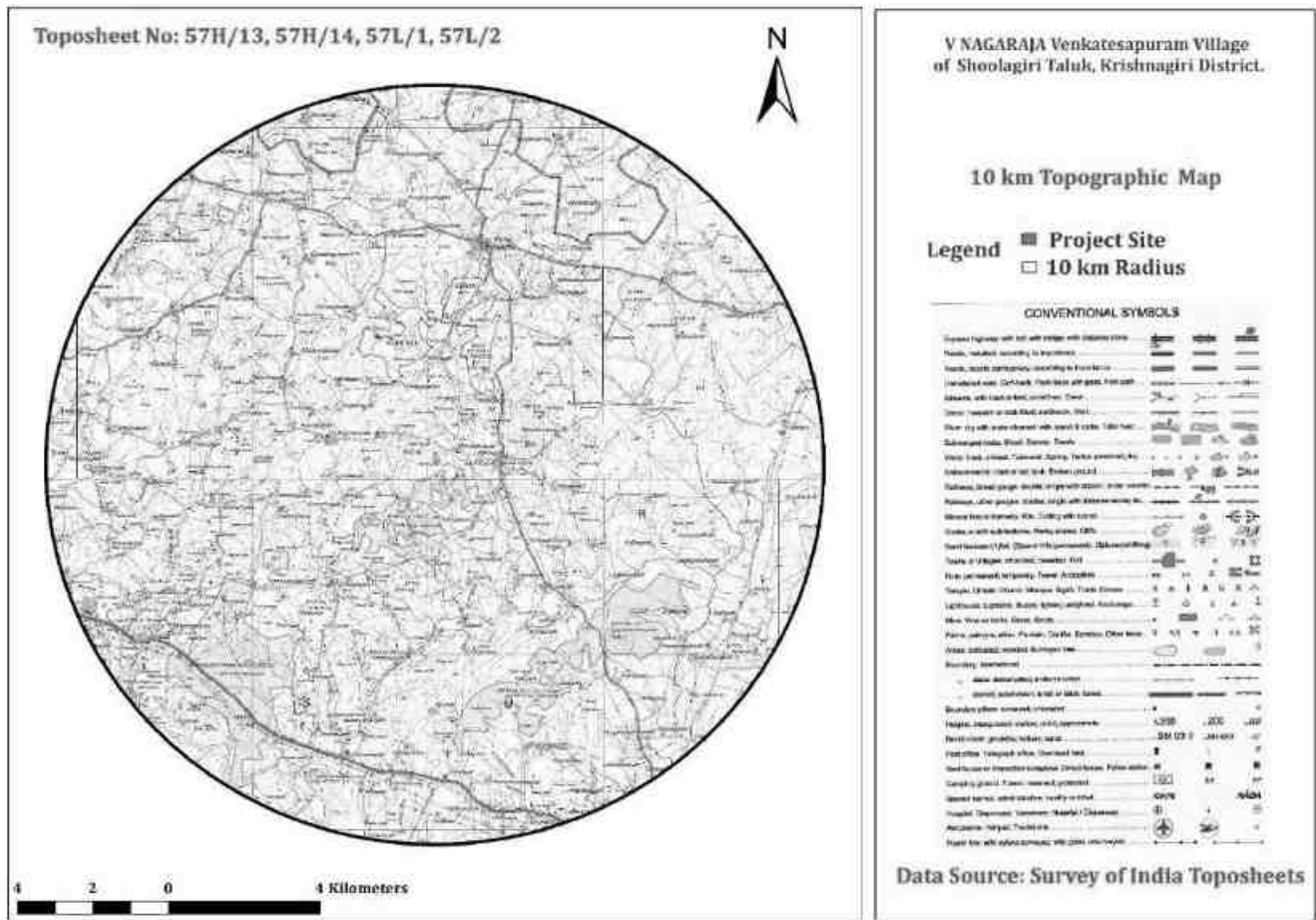


Figure 2.4: Topo Map of 10 km from the Project Site

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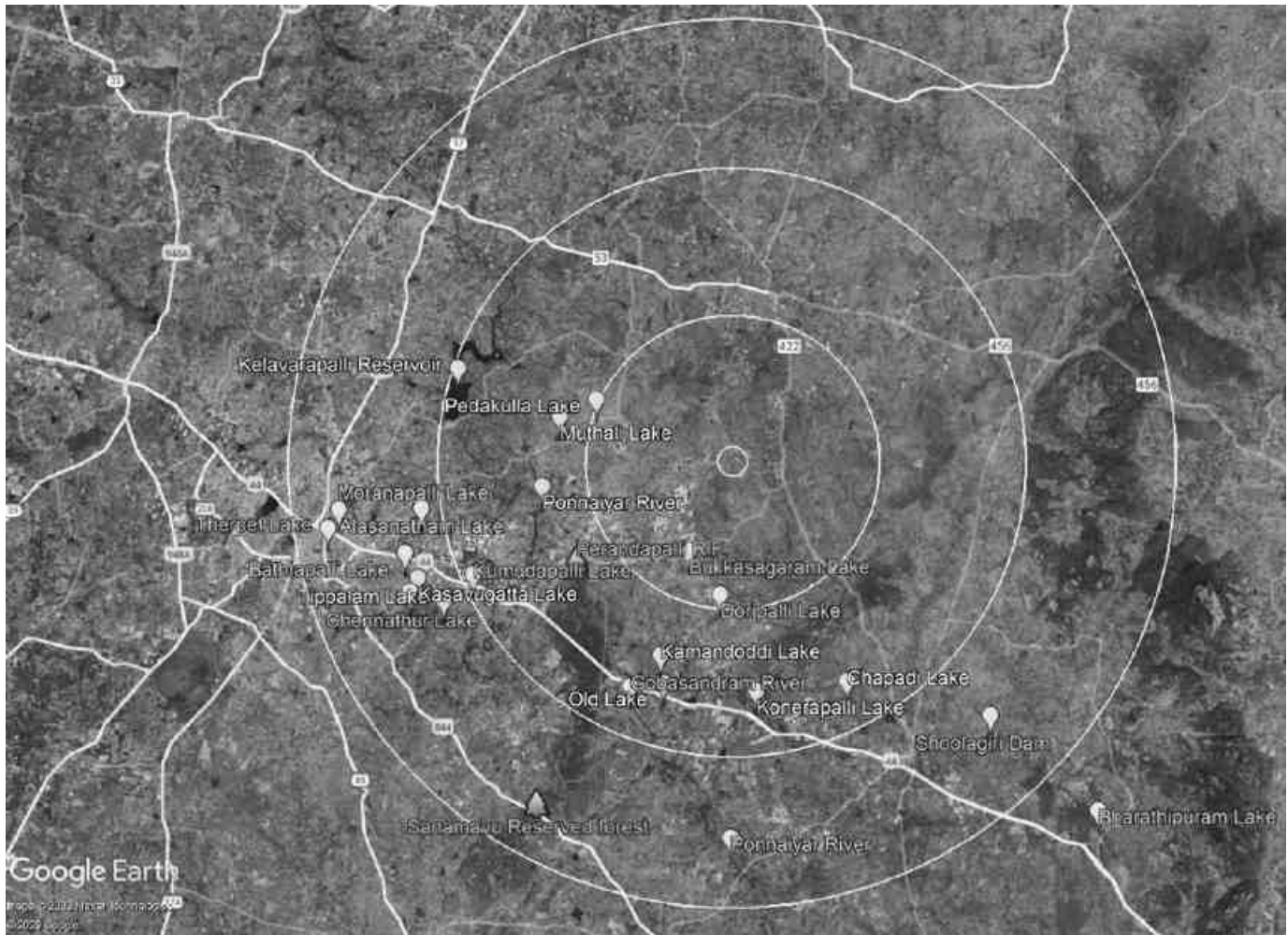


Figure 2.5: Environmental Sensitivity within 15km radius

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2.3.1 Site Photographs

The site photographs of the project site are as follows:



Figure 2.6: Site Photographs

2.3.2 Land Use Breakup of the Mine Lease Area

The Mine Lease area is hilly terrain sloping towards North Eastern side. The land use pattern of the mine lease area is as follows.

Table 2-4: Land Use Pattern

Sl. No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1.	Quarrying Pit	NIL	1.96.0
2.	Infrastructure	NIL	0.01.0
3.	Roads	NIL	0.01.0
4.	Green Belt & dump	NIL	0.15.0
5.	Unutilized	2.16.0	0.03.0
	Total =	2.16.0Ha	2.16.0Ha

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2.3.3 Human Settlement

There are no habitations within the radius of 300 m. The nearby habitations are as follows.

Table 2-5: Habitation

Direction	Village	Distance in Kms	Population
North	Mensandoddi	0.5Kms	220
East	Athimugam	2.0Kms	300
South	Bukkasagaram	4.0kms	290
West	Venkateshapuram	2.5Kms	280

2.4 LEASEHOLD AREA

The Rough Stone Quarry of 2.16.0 Ha is a Patta land . The lease area falls in S.F No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District. There is no reserve forest or protected forest land within the lease area. There is neither human settlement within 300m radius from the lease area.

2.5 GEOLOGY

The geological formations of the district belong mainly to Archaean age along with rock of Proterozoic age. The former is represented by Khondalite Group of rocks, Charnockite Group of rocks, Migmatites Complex, Sathyamangalam Group of rocks, while the latter is represented by Alkaline rocks. The Khondalite Group includes garnet sillimanite gneiss and quartzite which occur as small patches. The migmatite complex includes garnet ferrous quartzofeldspathic gneiss and horn blends biotite gneiss, the former exposed on the western part of the district. The Sathyamangalam Group includes fuchsite quartzite, sillimanite mica schist and amphibolites. The Bhavani Group in this area includes fissile hornblende-biotite gneiss, granitoid gneiss and pink migmatite. Amphibolites with barbed ferruginous quartzite and associated quartzo-feldspathic rocks (Champion Gneiss) represent the Kolar group and are found west and southwest of Veppanapalli. Following this there are basic intrusions occurring as dykes.

The Charnockite Group occupies a major part of the south-west portion of this district with small bands of garnetiferous quartzo-feldspathicgneiss, Granite gneiss and dolerite dykes. The North-East and Northern part of the District mainly consist of granite gneiss with small patches of Pink Migmatite,

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hornblende-biotite gneiss and dolerite dykes. The Eastern part of the district consists of Epidote-Hornblende Gneiss, Ultra Mafics, Syenite and Carbonatite.

The Alkaline Complex is represented by epidote-horn blende gneiss, ultramafics, syenite and carbonatite and these are distributed in the eastern part of the district. Innumerable basic dykes and felsites, quartz, barites and pegmatite veins form part of the Alkali Complex.

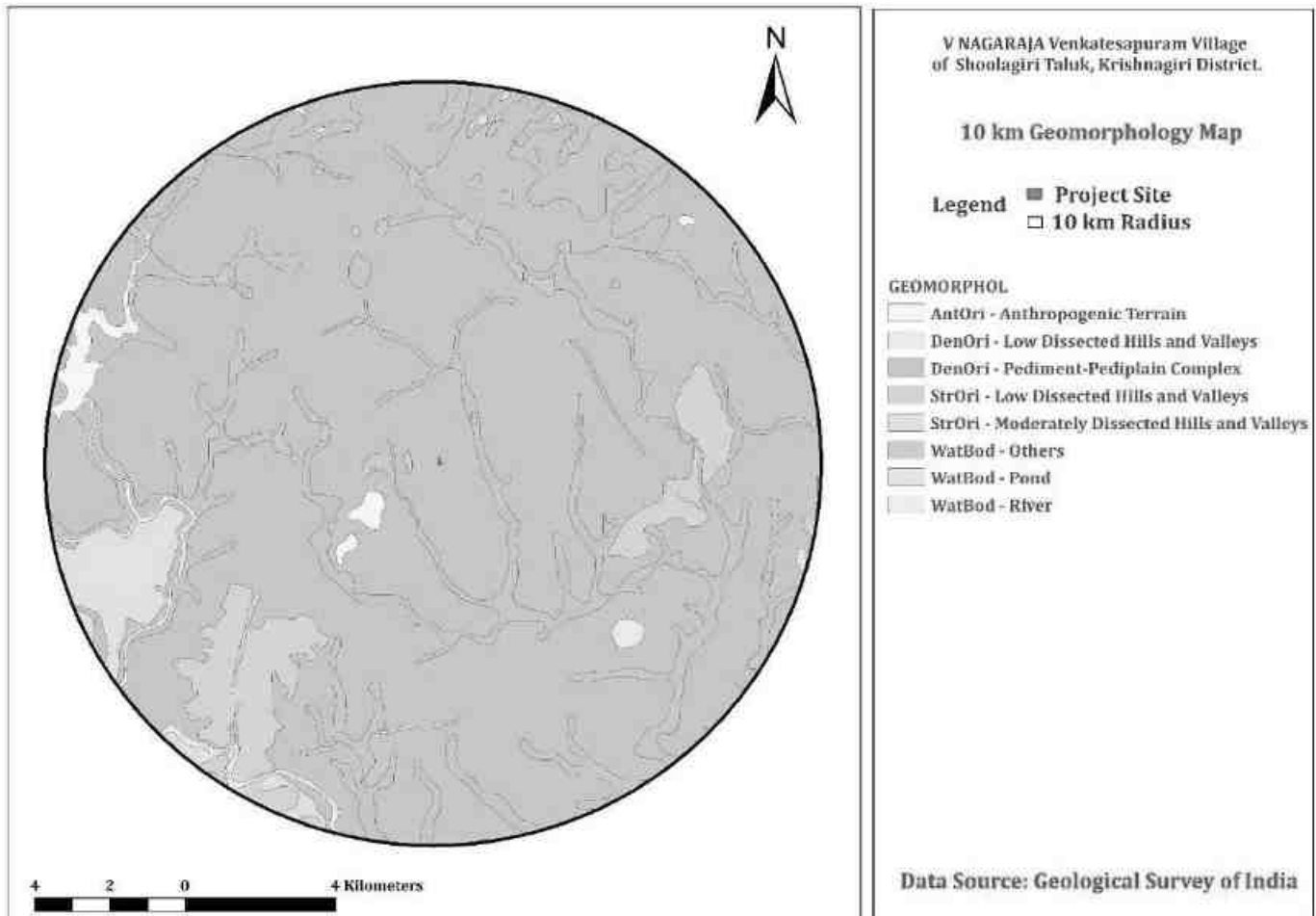


Figure 2.7: Geomorphology Map of 10 km from the Project Site

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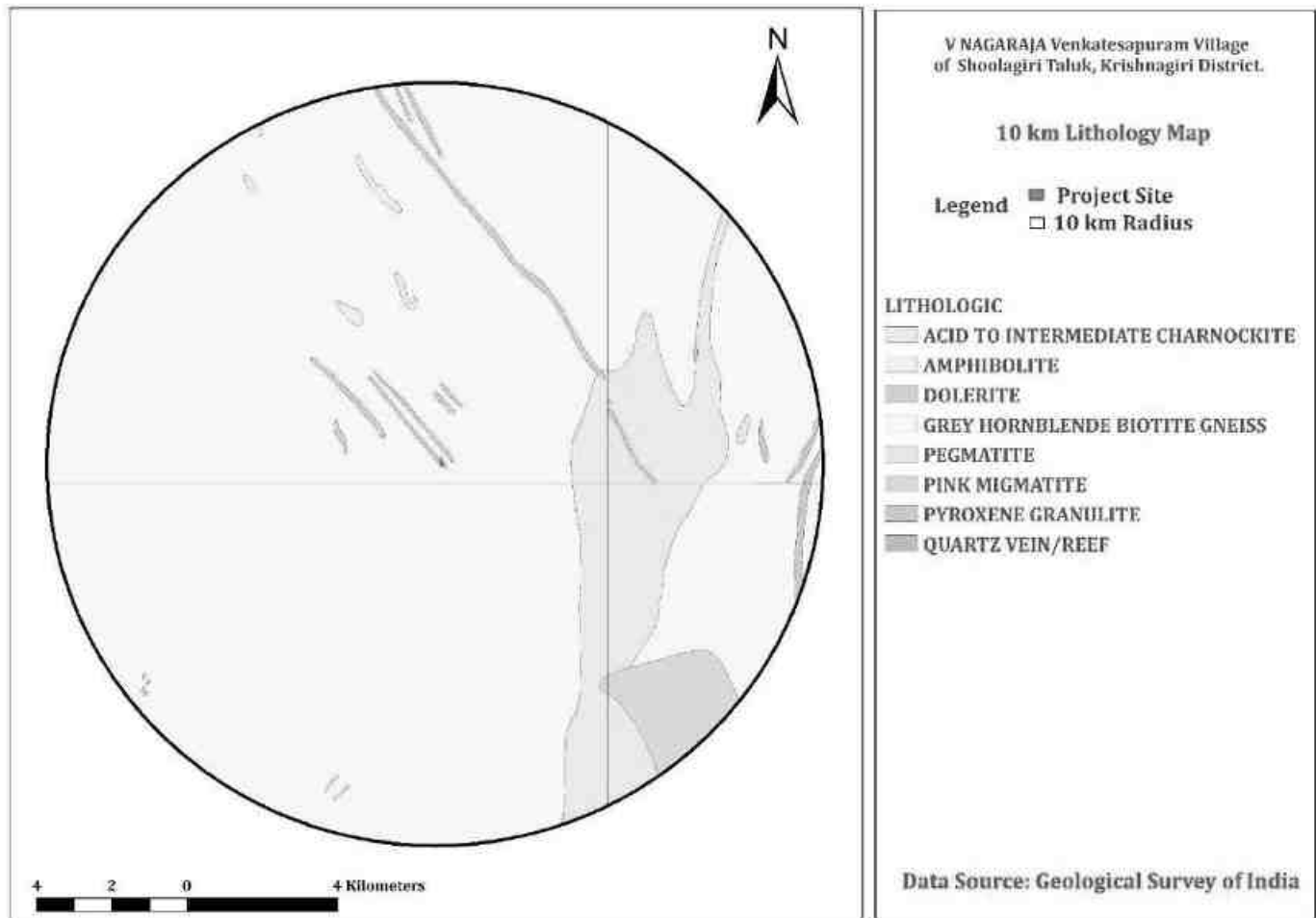


Figure 2.8 Lithology Map of 10 km from the Project Site

2.6 QUALITY OF RESERVES:

The mining lease area is of 2.16.0 Ha, with production capacity of 253495 m³ of Rough Stone. Due to significant role in the domestic as well as infrastructural market, making the mining of Stone and gravel along with associated minor minerals is economically viable.

Table 2-6: Details of Mining

S. No	Particulars	Details
1	Method of Mining	Open cast mechanized
2	Geological Reserves	696340 m ³ of Rough stone
3	Mineable Reserves	253495 m ³ of Rough stone
4	Proposed Production for 3 years	253495 m ³ of Rough stone
5	Elevation Range of the Mine Site	847 m AMSL

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2.6.1 Geological Reserves

Table 2-7: Geological Reserves

GEOLOGICAL RESERVES							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Geological Reserve in Cbm (100%)	Topsoil in Cbm
XY-AB	I	140	80	2			22400
	II	140	80	5			56000
	III	140	80	5			56000
	IV	140	80	5	56000	56000	
	V	140	80	5	56000	56000	
	VI	140	80	5	56000	56000	
	VII	140	97	5	67900	67900	
	VIII	140	97	5	67900	67900	
	IX	140	97	5	67900	67900	
	X	140	97	5	67900	67900	
Total=					439600	439600	134400
XY-CD	I	41	36	2			2952
	II	41	1	5			205
	III	41	36	5			7380
	IV	41	36	5	7380	7380	
	V	41	36	5	7380	7380	
	VI	41	36	5	7380	7380	
	VII	85	138	5	58650	58650	
	VIII	85	138	5	58650	58650	
	IX	85	138	5	58650	58650	
	X	85	138	5	58650	58650	
Total=					256740	256740	10537
Grand Total=					696340	696340	144937

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

2.6.2 Mineable Reserves

Table 2-8: Mineable Reserves

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Minable Reserve in Cum(100%)	Topsoil in Cum
XY-AB	I	130	70	2			18200
	II	128	68	5			43520
	III	123	63	5			38745
	IV	118	58	5	34220	34220	
	V	113	53	5	29945	29945	
	VI	108	48	5	25920	25920	
	VII	103	45	5	23175	23175	
	VIII	98	35	5	17150	17150	
	IX	93	25	5	11625	11625	
	X	88	15	5	6600	6600	
Total=					148635	148635	100465
XY-CD	I	41	26	2			2132
	II	41	1	5			205
	III	41	24	5			4920
	IV	41	19	5	3895	3895	
	V	41	14	5	2870	2870	
	VI	41	9	5	1845	1845	
	VII	70	91	5	31850	31850	
	VIII	65	81	5	26325	26325	
	IX	60	71	5	21300	21300	
	X	55	61	5	16775	16775	
Total=					104860	104860	7257
Grand Total=					253495	253495	107722

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

2.6.3 Year wise Production Plan

Table 2-9: Year wise Production Plan

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Reserves in Cum(100%)	Topsoil in Cum
2023-2024	XY-AB	I	130	70	2			18200
		II	128	68	5			43520
		III	123	63	5			38745
		IV	118	58	5	34220	34220	
		V	113	53	5	29945	29945	
	XY-CD	I	41	26	2			2132
		II	41	1	5			205
		III	41	24	5			4920
		IV	41	19	5	3895	3895	
		V	41	14	5	2870	2870	
Total=						70930	70930	107722
2024-2025	XY-AB	VI	108	48	5	25920	25920	
		VII	103	45	5	23175	23175	
	XY-CD	VI	41	9	5	1845	1845	
		VII	70	91	5	31850	31850	
Total=						82790	82790	
2025-2026	XY-AB	VIII	98	35	5	17150	17150	
		IX	93	25	5	11625	11625	
		X	88	15	5	6600	6600	
	XY-CD	VIII	65	81	5	26325	26325	
		IX	60	71	5	21300	21300	
		X	55	61	5	16775	16775	
Total=						99775	99775	
Grand Total=						253495	253495	107722

Project	Rough stone Quarry- 2.16.0 Ha	Draft EIA Report
Project Proponent	Thiru. G. Perumal	
Project Location	Venkatesapuram Village, Shoologiri Taluk, Krishnagiri District	

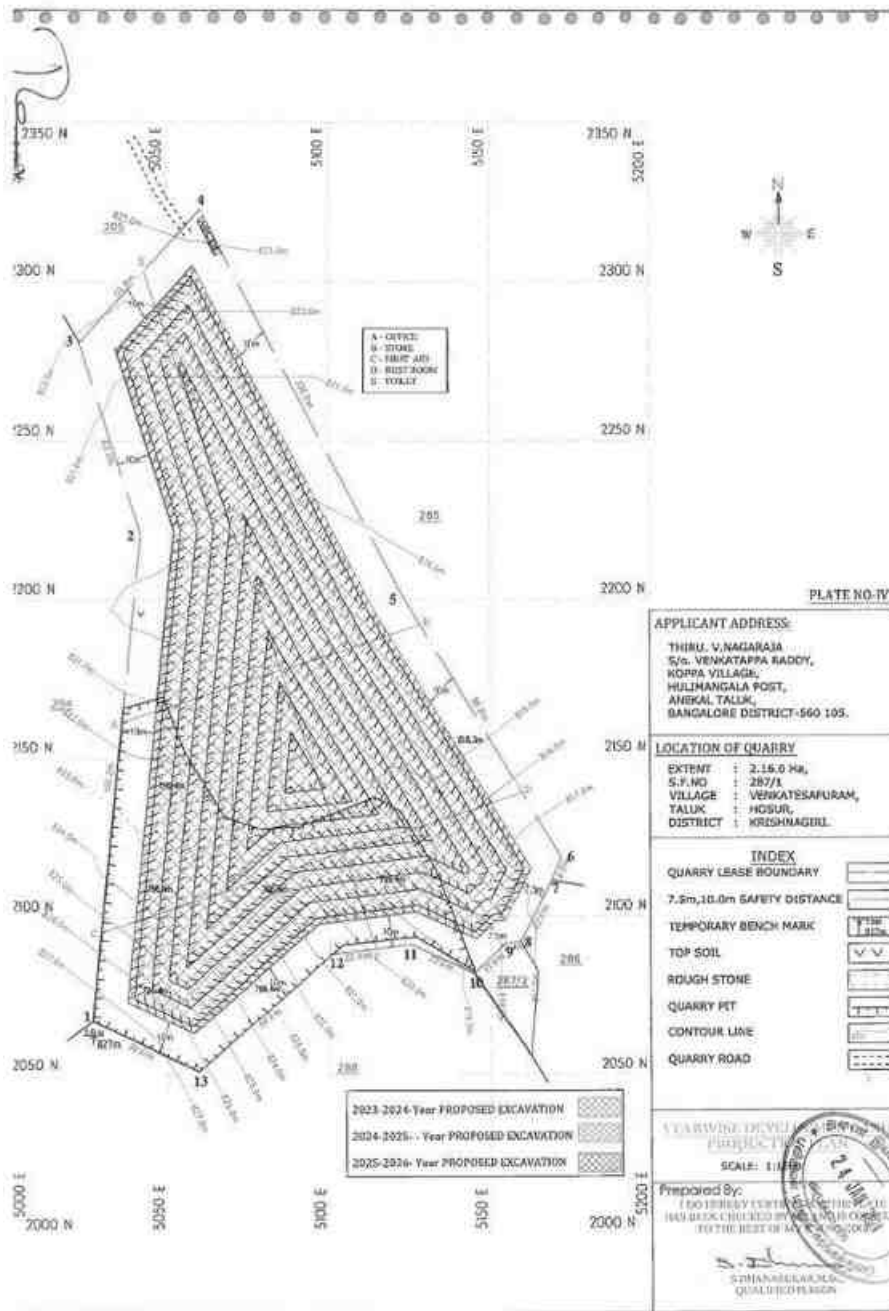


Figure 2.9 Year Wise Production Plan

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoologiri Taluk, Krishnagiri District</i>	

2.7 TYPE OF MINING

The method of mining is proposed to be an open cast semi-mechanized mining with one with 5.0 meter vertical bench with a bench width of 5.0 meter. However, as far as the quarrying of Rough Stone is concerned, observance of the provisions of regulations 106(2) (b) as above is seldom possible due to various inherent petro genetic factors coupled with mining difficulties. Hence, it is proposed to obtain relaxation to the provisions of the above regulation from the Director of Mines Safety for which necessary provision is available with the Regulation 106(2) (b) of MMR-1961, under Mines Act- 1952.

2.7.1 Method of Working:

The Rough stone is proposed to quarry at 5 m bench height & 5m width with conventional Open cast semi-mechanized method. The quarrying operation will be carried out in conjunction with conventional method of mining using Jack hammer drilling and blasting for shattering effect and loosen the Rough stone.

2.7.2 Overburden

The topsoil generation from the lease area is estimated to be 107722 m³ for 3 years. The topsoil formation will be removed and dumped in Western Side boundary barrier of the lease area. This will be utilized for road low laying area and plantation purposes.

2.7.3 Machineries to be used

Type of machineries proposed for quarrying operation for the entire project is listed below.

Table 2-10: List of Machineries used

For Mining operation	Excavator of 1.2 Cu.m bucket capacity Jack Hammer (25.5 mm dia) Tractor mounted compressor
Loading Equipment	Excavator of 1.2 Cu.m bucket capacity
Transportation	Tipper 4 Nos of 10 M.T capacity

Blasting:

2.7.3.1 Blasting Pattern:

The quarrying operation will be carried out in conjunction with conventional method of mining using Jack hammer drilling and blasting for shattering effect and loosen the Rough stone.

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<i>Project Location</i>	<i>Venkatesapuram Village, Shoologiri Taluk, Krishnagiri District</i>	

2.7.3.2 Drilling & Blasting:

Drilling and Blasting Parameters are as follows

Table 2-11: Drilling and Blasting Parameters

1	Diameter of the hole	32-36 mm
2	Spacing	60 Cms
3	Depth	1 to 1.5 m
4	Charge / Hole	D.Cord with water or 70gms of gun powder or Gelatine.
5	Pattern of hole	Zig Zag
6	Inclination of hole	70 ⁰ from the horizontal.
7	Quantity of rock broken	0.45 MT x 2.6 = 1.17 MT
8	Control Blasting efficiency @90%	1.17 x 90% = 1.05MT / hole
9	Charge per hole	140 gms of 25mm dia cartridge
10	Quantity of rock broken per day	281.66 m ³

2.7.3.3 Types of Explosives to be used:

Slurry Class 3 explosives, type of nitro compound are proposed to be used for shattering and heaving effect for removal and winning of Rough Stone. No deep hole drilling or primary blasting is proposed. Detonators of Class 3 and Safety fuse of Class 6 are used.

2.7.3.4 Measures to minimize ground vibration due to blasting:

The quarry is situated more than 1 km from the nearby villages. Controlled blasting measures will be adopted for minimizing the ground vibration and fly of rocks. Shallow depths jackhammer drilling & blasting is proposed to be carried out with minimum use of explosive mainly to give shattering effect in rough stone for easy excavation and to control fly of rock.

Table 2-12: Blasting Details

1	Diameter of the hole	32-36 mm
2	Spacing	60 Cms
3	Depth	1 to 1.5 m
4	Charge / Hole	D.Cord with water or 70gms of gun powder or Gelatine.
5	Pattern of hole	Zig Zag
6	Inclination of hole	70 ⁰ from the horizontal.
7	Quantity of rock broken	0.45 MT x 2.6 = 1.17 MT
8	Control Blasting efficiency @90%	1.17 x 90% = 1.05MT / hole
9	Charge per hole	140 gms of 25mm dia cartridge

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

2.7.3.5 Storage & Safety measures taken during blasting:

The project proponent “Thiru. V Nagaraja” will engage an authorized explosive agency to carry out the small amount of blasting and it will be supervised by Permit Mines Manager. The copy of the explosive certificate is attached as Annexure.

2.8 MAN POWER REQUIREMENTS

The manpower requirement to meet out the production Schedule and the machinery strength envisaged in the mining plan and to comply with the statutory provisions of the Mines Safety Regulations is as follows.

Table 2-13: Man Power Requirements

1.	Skilled	Operator	2 No.
		Mechanic	1 No.
		Blaster/Mat	1 No.
2.	Semi – skilled	Driver	2 Nos
3.	Unskilled	Musdoor / Labours	5 Nos
		Cleaners	3Nos
		Office Boy	1No
4.	Management & Supervisory staff		3No.
	Total =		18Nos

No child less than 18 years will be entertained during quarrying operations.

2.8.1 *Water Requirement*

Total water requirement for the mining project is 1.9 KLD. Domestic water will be sourced from nearby Athimugam village and other water will be source from nearby road tankers supply.

Table 2-14: Water Requirement

Purpose	Quantity	Sources
Drinking Water	0.9 KLD	Packaged Drinking water vendors available in Athimugam Village which is about \approx 1.5 Km – East
Green belt	0.5KLD	Other domestic activities through road tankers supply
Dust suppression	0.5KLD	From road tankers supply
Total	1.9 KLD	

2.9 PROJECT IMPLEMENTATION SCHEDULE

The implementation schedule of the Mine Lease of Thiru. V Nagaraja (2.16.0 Ha) is as follows.

Project	Rough Stone Quarry- 2.16.0 Ha	<i>Draft EIA Report</i>
Project Proponent	Thiru. V Nagaraja	
Project Location	Venkatesapuram Village, Shoologiri Taluk, Krishnagiri District	

Table 2-15: Mining Schedule

Activity	March -25	March -26	March -27
Site Clearance			
Excavation – Rough stone/Overburden			
I Year Production			
II Year Production			
III Year Production			

2.10 SOLID WASTE MANAGEMENT

Table 2-15: Solid Waste Management

S. No	Type	Quantity	Disposal Method
1	Organic	3.24 kg/day	Municipal bin including food waste
2	Inorganic	4.86 kg/day	TNPSB authorized recyclers

As per CPCB guidelines: MSW per capita/day =0.45 kg/day

2.11 MINE DRAINAGE

The quarry operation is proposed up to a depth of 47 m (12 m topsoil and 35 m rough stone) (including the existing depth). The water table is below 90 m from the ground level which is observed from the nearby bore wells and bore wells of this area. Hence the ground water will not be affected in any manner due to the quarrying operation during the entire lease period.

2.12 POWER REQUIREMENT

This Rough stone quarry project does not require huge water and electricity for the project.

16 Litre diesel per hour for excavator for mining and loading for Rough Stone needed and **10 Litre** diesel per hour for excavation of Topsoil needed.

2.13 PROJECT COST

Project Cost

S. No.	Description	Cost (Rs.)
1	Fixed cost	25,90,000
2	Operational cost	40,00,000
	Total Cost	65,90,000

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EMP Cost

	Mitigation Measure	Provision for Implementation	Capital	Recurring
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	Rental Dozer & drainage construction on haul road @ Rs. 10,000/- per hectare; and yearly maintenance @ Rs. 10,000/- per hectare	21600	21600
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	Fixed Sprinkler Installation and New Water Tanker Cost for Capital; and Water Sprinkling (thrice a day) Cost for recurring	30000 0	20000
	Air Quality will be regularly monitored as per norms within ML area & near Reserve forest with necessary permission	Yearly Compliance as per CPCB norms	0	20000
	Muffle blasting – To control fly rocks during blasting	Blasting face will be covered with sand bags / steel mesh / old tyres / used conveyor belts	0	0
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	Dust extractor @ Rs. 25,000/- per unit deployed as capital & @ Rs. 2500 per unit recurring cost for maintenance	25000	2500
	No overloading of trucks/tippers/tractors	Manual Monitoring through Security guard	0	5000
	Stone carrying trucks will be covered by tarpaulin	Monitoring if trucks will be covered by tarpaulin	0	10000
	Enforcing speed limits of 20 km/hr within ML area	Installation of Speed Governors @ Rs. 5000/- per Tipper/Dumper deployed	5000	0
	Regular monitoring of exhaust fumes as per RTO norms	Monitoring of Exhaust Fumes by Manual Labour	0	5000

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	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	Provision for 2 labours @ Rs.10,000/labour (Contractual) per Hectare	0	43200
	Installing wheel wash system near gate of quarry	Installation + Maintenance + Supervision	40000	10000
Noise Environment	Source of noise will be during operation of transportation vehicles, HEMM for this proper maintenance will be done at regular intervals.	Provision made in Operating Cost	0	0
	Oiling & greasing of Transport vehicles and HEMM at regular interval will be done	Provision made in Operating Cost	0	0
	Adequate silencers will be provided in all the diesel engines of vehicles.	Provision made in Operating Cost	0	0
	It will be ensured that all transportation vehicles carry a fitness certificate.	Provision made in Operating Cost	0	0
	Safety tools and implements that are required will be kept adequately near blasting site at the time of charging.	Provision made in OHS part	0	0
	Ambient Noise will be regularly monitored as per norms within ML area & near Reserve forest with necessary permission	Yearly Compliance as per CPCB norms	0	0
	Line Drilling all along the boundary to reduce the PPV from blasting activity and implementing controlled blasting.	Provision made in Operating Cost	0	0
	Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.	Blowing Whistle by Mining Mate / Blaster / Competent Person	0	0
	Provision for Portable blaster shed	Installation of Portable blasting shelter	50000	2000
	NONEL Blasting will be practiced to control Ground vibration and fly rocks	Rs. 30/- per 6 Tonnes of Blasted Material	0	1267475
Water Environment	Water management	Provision for garland drain @ Rs. 10,000/- per Hectare with maintenance of Rs. 5,000/- per annum	21600	5000
Waste Management	Waste management (Spent Oil, Grease etc.,)	Provision for domestic waste collection and disposal through authorized agency	1000	5000

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		Installation of dust bins	5000	2000
	Bio toilets will be made available outside mine lease on the land of owner itself	Provision made in Operating Cost	0	0
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	Fixed Display Board at the Quarry Entrance as permanent structure mentioning Environmental Conditions	7000	1000
	Workers will be provided with Personal Protective Equipment's	Provision of PPE @ Rs. 4000/- per employee with recurring based on wear and tear (say, @ Rs. 1000/- per employee)	72000	18000
	Health check up for workers will be provisioned	IME & PME Health check up @ Rs. 1000/- per employee	0	18000
	First aid facility will be provided	Provision of 2 Kits per Hectare @ Rs. 2000/-	0	4320
	Mine will have safety precaution signages, boards.	Provision for signages and boards made	10000	2000
	Barbed Wire Fencing to quarry area will be provisioned.	Per Hectare fencing Cost @ Rs. 2,00,000/- with Maintenance of Rs 10,000/- per annum	43200 0	10000
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles /HEMMs. Flaggers will be deployed for traffic management	Parking area with shelter and flags @ Rs. 50,000/- per hectare project and Rs. 10,000/- as maintenance cost	10800 0	10000
	Installation of CCTV cameras in the mines and mine entrance	Camera 4 Nos, DVR, Monitor with internet facility	2000	5000
	Implementation as per Mining Plan and ensure safe quarry working	Mines Manager (1 st Class / 2 nd Class / Mine Foreman) under regulation 34 / 34 (6) of MMR, 1961 and Mining Mate under regulation 116 of MMR,1961 @ 40,000/- for Manager & @	0	78000 0

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		25,000/- for Foreman / Mate		
Green Belt Development	Green belt development - 500 trees per one hectare (200 Inside Lease Area & 300 Outside Lease Area)	Site clearance, preparation of land, digging of pits / trenches, soil amendments, transplantation of saplings @ 200 per plant (capital) for plantation inside the lease area and @ 30 per plant maintenance (recurring)	86400	12960
		Avenue Plantation @ 300 per plant (capital) for plantation outside the lease area and @ 30 per plant maintenance (recurring)	194400	19440
			1381000	2299495

Year 1	Year 2	Year 3	Year 4	Year 5
3680495	2414470	2535193	2661953	2795051

Year 6	Year 7	Year 8	Year 9	Year 10
3625303	3081543	3235620	3397401	3567271

Total EMP Cost for 10 Years - Rs. 3,09,94,301/-

2.14 GREENBELT

1. The development of greenbelt in the peripheral buffer zone of the mine area.
2. Green belt has been recommended as one of the major components of Environmental Management plan, which will improve ecology, environment and quality of the surrounding area.
3. Local trees like Neem, Vilvam Vaagai, Naval etc will be planted along the lease boundary and avenues as well as over non-active dumps at a rate of 1080 trees with interval 5 m.
4. The rate of survival expected to be 80% in this area.

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<i>Project Location</i>	<i>Venkatesapuram Village, Shoologiri Taluk, Krishnagiri District</i>	

Table. 2-17 Plantation/ Afforestation Program

Name of species proposed	Survival	No of species
Neem, Vilvam Vaagai, Eachai, Naval, Mantharai, Magizha Maram, Vila maram, Poo Marudhu, Panai Maram, Marudha Maram, Thandri, Sengondrai, Poovarasu, Therthag kottai , Pungam	80%	1080
Total		1080

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<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

3 DESCRIPTION OF THE ENVIRONMENT

3.1 **GENERAL:**

The method of mining for extracting rough stone quarry and gravel is required to be selected in such a manner to ensure sustainable development. Mining activities invariably affect the existing environmental status of the site. It has both adverse and beneficial effects. In order to maintain the environmental commensuration with the mining operation, it is essential to undertake studies on the existing environmental scenario and assess the impact on different environmental components. This would help in formulating suitable management plans and sustainable resource extraction.

To understand the existing environmental scenario, Baseline data helps in identification, prediction and evaluation of impacts in Environmental Impact assessment. Through field study, baseline data are collected considering various factors of the project. This includes-

- Physical- the area, the soil properties, the geological characteristics, the topography, etc
- Chemical- water, air, noise and soil pollution levels, etc.
- Biological- the biodiversity of the area, types of flora and fauna, species richness, species distribution, types of ecosystems, presence or absence of endangered species and/or sensitive ecosystems etc.
- Socioeconomic- demography, social structure, economic conditions, developmental capabilities, displacement of locals, etc.

3.1.1 *Study Area:*

The study area for the mining projects is as follows:

- Mine lease area as the “core zone”
- A study area of 10 km radius from the project boundary is designated as buffer Zone and for the study of Socio-economic status, 10 km radius from the boundary limits of the mine lease area has been selected.

We have obtained Terms of Reference from SEIAA vide Letter No. SEIAA-TN/F. No. 10425/SEAC/1(a)ToR-6406/2024 Dated: 24.09.2024. The baseline monitoring is carried out in

<i>20Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
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November 2023 to January 2024 and the analysis is briefed in the EIA report. The proponent has engaged M/s. Ecotech labs Pvt. Ltd for carrying out the existing baseline study.

3.1.2 Instruments Used

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

1. Respirable Dust Sampler with attachment for gaseous Pollutants, Envirotech APM 460, APM411.
2. Fine Particulate Matter (FPM) Sampler, APM 550
4. Sound Level Meter Model SL-4010
5. 2000 series watchdog automatic weathering monitoring station

3.1.3 Baseline Data Collection Period:

The baseline data is collected in accordance with the CPCB Guidelines. The Baseline study is carried out from November 2023 to January 2024.

3.1.4 Frequency of Monitoring

Table 3-1: Frequency of Sampling and Analysis

Attributes	Sampling	Frequency
Air environment – Meteorological (wind speed, wind direction, rainfall, humidity, temperature)	Project site	1 hourly continuous
Air environment – Pollutants PM 10 PM 2.5 SO ₂ NO _x Lead in PM	7 locations	24 hourly twice a week 4 hourly. Twice a week, One non-monsoon season 8 hourly, twice a week 24 hourly, twice a week
Noise	7 locations	24 hourly Once in 7 locations
Water (Ground water) pH, Temperature, Turbidity, Magnesium Hardness, Total Alkalinity, Chloride, Sulphate, Fluoride, Nitrate, Sodium, Potassium, Salinity, Total nitrogen, Total Coliforms, Fecal Coliforms	7 locations	Once in 7 locations

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Water (surface water) pH, Temperature, Turbidity, Magnesium Hardness, Total Alkalinity, Chloride, Sulphate, Fluoride, Nitrate, Sodium, Potassium, Salinity, Total nitrogen, Total Coliforms, Fecal Coliforms	Sample from nearby lakes/river	One-time Sampling
Soil (Organic matter, Texture, pH, Electrical Conductivity, Permeability, Water holding capacity, Porosity)	7 locations	Once in 7 locations
Ecology and biodiversity Study	Study area covering 10 km radius	One-time Sampling
Socio- Economic study (Population, Literacy Level, employment, Infrastructure like school, hospitals & commercial establishments)	Villages around 10 km radius	One-time Sampling

3.1.5 Secondary data Collection

Apart from the primary data, Secondary data is also used for the collection; collation; synthesis and interpretation

- Flora & Faunal Study
- Land use study
- Demography and socio-economic analysis
- Meteorological data, from Indian Meteorological Department (IMD)

3.1.6 Study area details

Table 3-2 Study area details

S. No	Description	Details	Source
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20Project	Rough Stone Quarry- 2.16.0 Ha	Draft EIA Report
Project Proponent	Thiru. V Nagaraja	
Project Location	Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District	

1.	Project Location	S.F.No. 287/1- 2.16.0 Ha, Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu State	Field Study
2.	Latitude & Longitude	Latitude : 12° 45'13.88" N To 12° 45'22.70" N Longitude : 77° 57' 34.81" E To 77° 57' 39.68" E	Topo Sheet
3.	Topo Sheet No.	57-H/14	Survey of India Toposheet
4.	Mine Lease Area	2.16.0 Ha	--
Demography in the study area (as per Census 2011)			
5.	Total Population	2873	Census Survey of India
6.	Total Number of Households	650	
7.	Maximum Temperature (°C)	36	IMD
8.	Minimum Temperature (°C)	21	
9.	Ecological Sensitive Areas - Wetlands, watercourses or other waterbodies, coastal zone, biospheres, mountains, forests	<ul style="list-style-type: none"> ❖ Muthali lake – 5.9 km NNW ❖ Pedakulla Lake – 4.9 km, NW ❖ Kasavugattu Lake – 11.63 km, W ❖ Tippalam Lake – 11.41 km, W ❖ Kamandoddi Lake – 7.56 km, S ❖ Old Lake – 8.42 km, S ❖ Konerapalli lake – 8.3 km, SSE ❖ Chapadi lake – 8.83 km, SSE ❖ Kalavarapalli Reservoir – 9.75km, SW ❖ Bukkasagaram Lake – 3.8km, S ❖ Doripalli Lake – 5 km, S ❖ Gobasandram River – 8.86 km, S ❖ Kumudapalli Lake – 9.85 km, SW ❖ Moranapalli Lake – 10.82 km, W ❖ Bathlapalli Lake – 11.74 km, W ❖ Chennathur lake – 12 km, SW ❖ Therpet Lake – 14 km, W ❖ Alasanatham lake – 14 km, W 	Google Earth/Field Study
10.	Densely Populated area	Hosur – 14.74 Km – W	

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Project Location	Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District	

11.	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	S. No.	Places	Dist. From Project Site	Google Earth/ Field Study
		Schools & Colleges			
		1	Government School, Naraseipuram	3.3 km - NE	
		2	Govt High school, Athimugam	2.18 km -NE	
		Hospitals			
		1	Govt Hospital, Athimugam	2.34 Km- E	
		2	Govt Hospital Berigai	5.45 Km - N	

3.1.7 Site Connectivity:

The site is connected to SH 222 (Berigai - Shoolagiri Road) – 1.74 km, E

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Figure 3.1: Site Connectivity

3.2 LAND USE ANALYSIS

3.2.1 *Land Use Classification*

Land Use / Land Cover - Land Use refers to man's activity and the various uses, which are carried on land. Land Cover refers to natural vegetation, water bodies, rock/soil, artificial cover and others, resulting due to land transformation. The present Land Use/Land Classification map is developed with following objectives. The main objective of the study is to classify the different land use within 10 km from the project boundary.

3.2.2 *Methodology*

Information of land use and land cover is important for many planning and management activities concerning the surface of the earth (Agarwal and Garg, 2000). Land use refers to man's activities on land, which are directly related to land (Anderson et al., 1976). The land use and the land cover determine the infiltration capacity. Barren surfaces are poor retainers of water as compared to

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grasslands and forests, which not only hold water for longer periods on the surface, but at the same time allow it to percolate down.

The terms 'land use' and 'land cover' (LULC) are often used to describe maps that provide information about the types of features found on the earth's surface (land cover) and the human activity that is associated with them (land use). Satellite remote sensing is being used for determining different types of land use classes as it provides a means of assessing a large area with limited time and resources. However, satellite images do not record land cover details directly and they are measured based on the solar energy reflected from each area on the land. The amount of multi spectral energy in multi wavelengths depends on the type of material at the earth's surface and the objective is to associate particular land cover with each of these reflected energies, which is achieved using either visual or digital interpretation. In the present study the task is to study in detail the land use and land cover in and around the project site. The study envisages different LULC around the project area and the procedure adopted is as below.

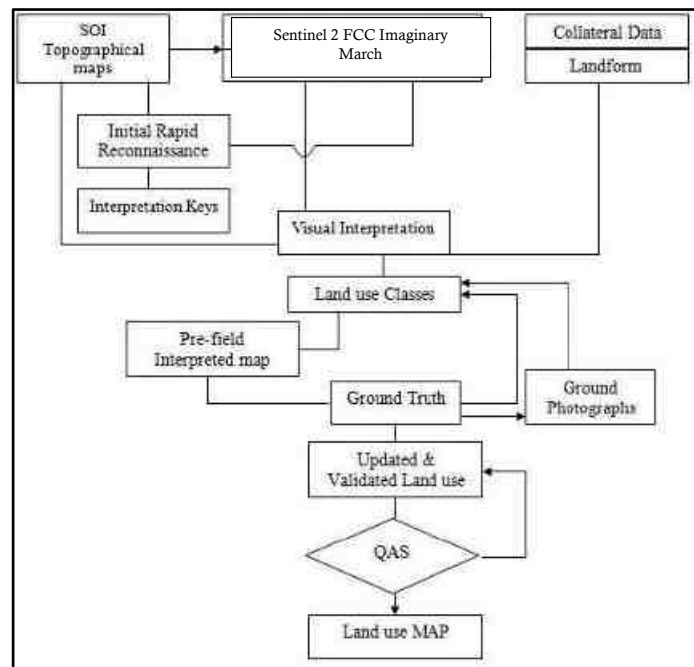


Figure 3.2 Flow Chart showing Methodology of Land use Mapping

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3.2.3 Satellite Data

Sentinal 2 multispectral satellite data of 2020 was utilized for the present study. Details of satellite data is given below. The rectification of imagery was carried out on to bring the digital data on the earth coordinate system by means of ground control point (GCP) assignments/SOI topo sheets.

3.2.4 Scale of mapping

Considering the user defined scale of mapping, 1:50000 Sentinal 2 data was used for Land use / Land cover mapping of 10 km radius for the site. The description of the land use categories for 10 km radius and the statistics are given for 10 km radius.

3.2.5 Interpretation Technique

Standard on screen visual interpretation procedure was followed. The various Land use / Land cover classes interpreted along with the SOI topographical maps during the initial rapid reconnaissance of the study area. The physiognomic expressions conceived by image elements of color, tone, texture, size, shape, pattern, shadow, location and associated features are used to interpret the FCC imagery. Image interpretation keys were developed for each of the LU/LC classes in terms of image elements.

June 2016 FCC imagery (Digital data) of the study area was interpreted for the relevant land use classes. On screen visual interpretation coupled with supervised image classification techniques are used to prepare the land use classification.

1. Digitization of the study area (10 km radius from the site) from the topo maps
2. In the present study the sentinal satellite image and SOI topo sheets of 58J/10, 58J/11, 58J/14, 58J/15 have been procured and interpreted using the ERDAS imaging and ARC-GIS software adopting the necessary interpretation techniques.
3. Satellite data interpretation and vectorization of the resulting units
4. Adopting the available guidelines from manual of LULC mapping using Satellite imagery (NRSA, 1989)
5. Field checking and ground truth validation
6. Composition of final LULC map

The LULC Classification has been done at three levels where level -1 being the broad classification about the land covers that is Built-up land, agriculture land, waste land, wet lands, and water bodies.

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These are followed by level –II where built-up land is divided into towns/cities as well villages. The Agriculture land is divided into different classes such as cropland, Fallow, Plantation, while wastelands are broadly divided into, Land with scrub and without Scrub and Mining and Industrial wasteland. The wetlands are classified into inland wetlands, coastal wetlands and islands. The water bodies are classified further into River/stream, Canal, Tanks and bay. In the present study level II classification has been undertaken. The SOI Topo map is presented in Annexure and Satellite imagery of 10 km radius from the project site is presented Annexure

3.2.6 Field Verification

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

3.2.7 Description of the Land Use / land cover classes

3.2.7.1 Water

Areas where water was predominantly present throughout the year; may not cover areas with sporadic or ephemeral water; contains little to no sparse vegetation, no rock outcrop nor built up features like docks; examples: rivers, ponds, lakes, oceans, flooded salt plains.

3.2.7.2 Trees

Any significant clustering of tall (~15-m or higher) dense vegetation, typically with a closed or dense canopy; examples: wooded vegetation, clusters of dense tall vegetation within savannas, plantations,

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swamp or mangroves (dense/tall vegetation with ephemeral water or canopy too thick to detect water underneath).

3.2.7.3 Grass

Open areas covered in homogenous grasses with little to no taller vegetation; wild cereals and grasses with no obvious human plotting (i.e., not a plotted field); examples: natural meadows and fields with sparse to no tree cover, open savanna with few to no trees, parks/golf courses/lawns, pastures.

3.2.7.4 Flooded vegetation

Mix of small clusters of plants or single plants dispersed on a landscape that shows exposed soil or rock; scrub-filled clearings within dense forests that are clearly not taller than trees; examples: moderate to sparse cover of bushes, shrubs and tufts of grass, savannas with very sparse grasses, trees or other plants.

3.2.7.5 Crops

Human planted/plotted cereals, grasses, and crops not at tree height; examples: corn, wheat, soy, fallow plots of structured land.

3.2.7.6 Scrub/Shrub

Mix of small clusters of plants or single plants dispersed on a landscape that shows exposed soil or rock; scrub-filled clearings within dense forests that are clearly not taller than trees; examples: moderate to sparse cover of bushes, shrubs and tufts of grass, savannas with very sparse grasses, trees or other plants

3.2.7.7 Built Area

Human made structures; major road and rail networks; large homogenous impervious surfaces including parking structures, office buildings and residential housing; examples: houses, dense villages / towns / cities, paved roads, asphalt.

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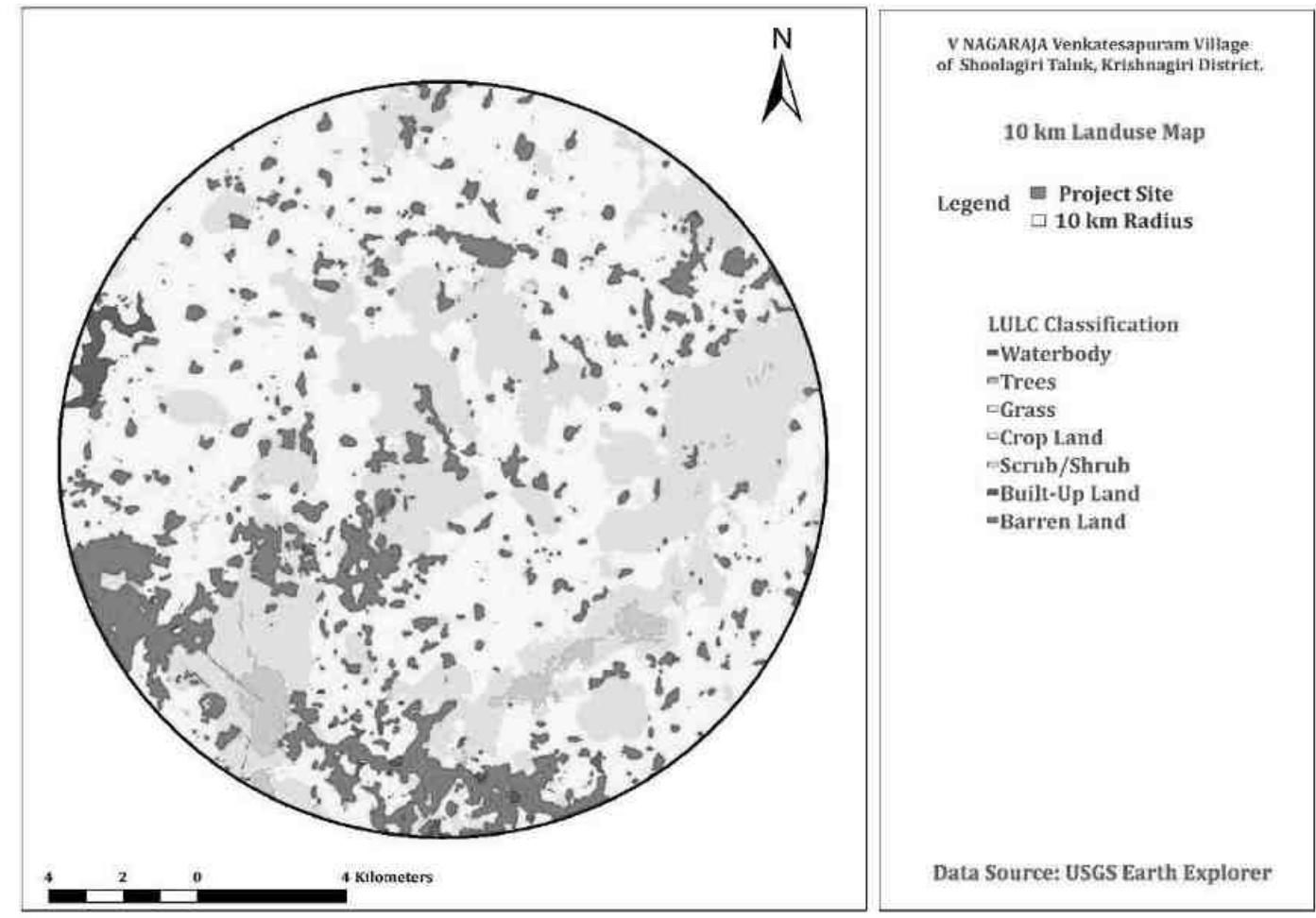


Figure 3.3 Land use classes around 10 km radius from the project site

3.2.7.8 Different Land use classes around 10 km radius from the project site

Table 3-3 Land use pattern

Sl.No	Categories	Area in Sq.m
1.	Water Body	3.25
2.	Trees	6.56
3.	Grass	0.08
4.	Flooded Vegetation	177.97
5.	Crops	85.24
6.	Scrub/Shrub	47.3
7.	Built-up Area	0.52
8.	Barren Land	3.25

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3.3 WATER ENVIRONMENT

3.3.1 Contour & Drainage

The project site is 847 m AMSL.

3.3.2 Geomorphology

The prominent geomorphic units identified in the district through interpretation of satellite imagery are structural hills in the southwestern part of the district, denudational land forms like buried pediments in the plains and inselbergs and plateaus represented by conical hills aligned with major lineaments. Krishnagiri district forms part of the upland plateau region with many hill ranges and undulating plains. The western part of the district has hill ranges of Mysore plateau with a chain of undulating hills and deep valleys extending in NNE-SSW direction. The plains of the district have an average elevation of 488 m amsl. The plateau region along the western boundary and the northwestern part of the district has an average elevation of 914 m amsl. The Guthrayan Durg with an elevation of 1395 m amsl is the highest peak in the district.

Soils

Soils have been classified into Black soil, mixed soil, red loamy soil, gravelly and sandy soils. Red loamy and sandy soils are predominant in Hosur taluk. Vast stretches of loam soils and black soils occur in Krishnagiri district.

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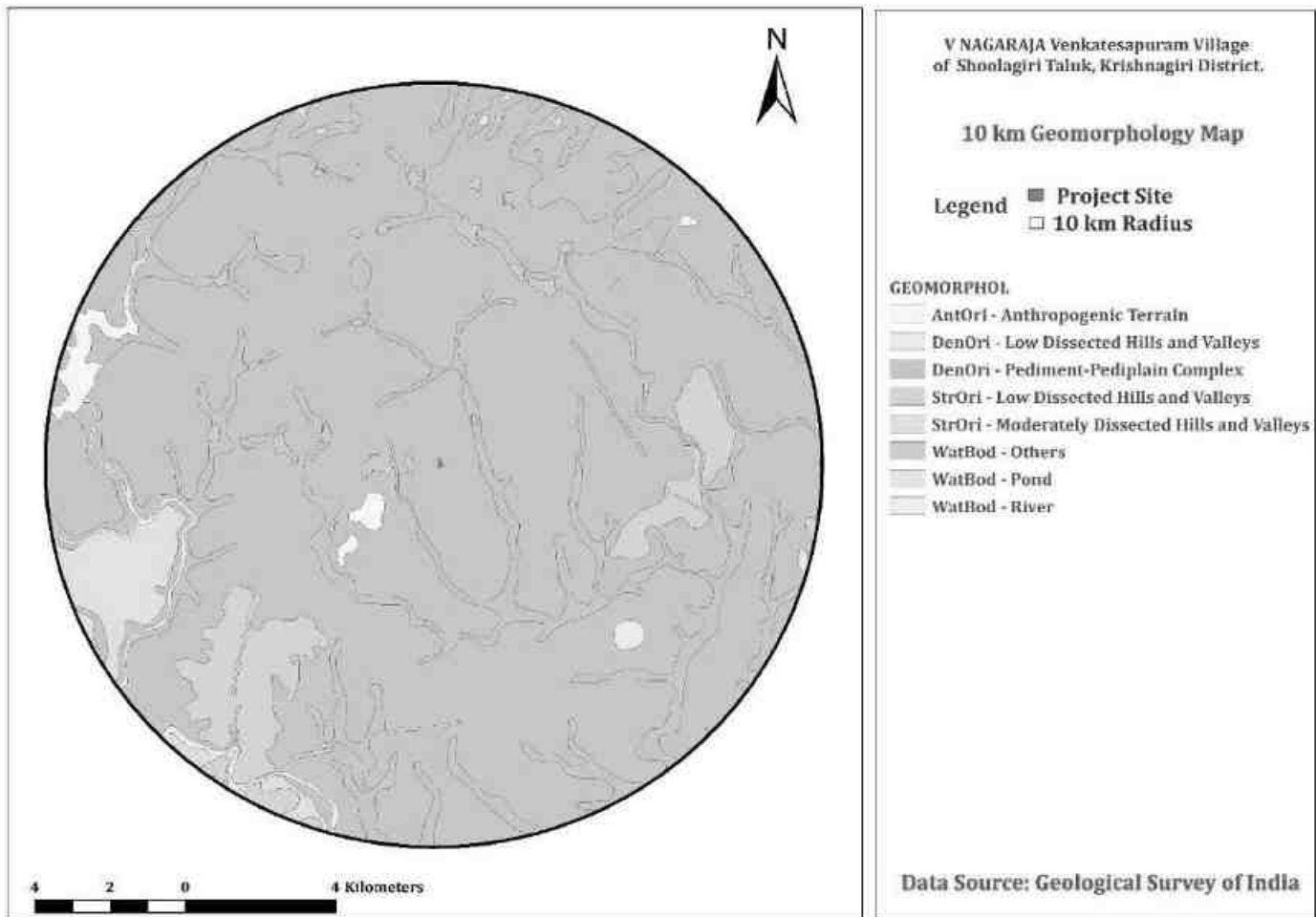


Figure 3.4 Geomorphology Map of 10km from the project site

3.3.3 Geology:

The geological formations of the district belong mainly to Archaean age along with rock of Proterozoic age. The former is represented by Khondalite Group of rocks, Charnockite Group of rocks, Migmatites Complex, Sathyamangalam Group of rocks, while the latter is represented by Alkaline rocks. The Khondalite Group includes garnet sillimanite gneiss and quartzite which occur as small patches. The migmatite complex includes garnet ferrous quartzofeldspathic gneiss and horn blends biotite gneiss, the former exposed on the western part of the district. The Sathyamangalam Group includes fuchsite quartzite, sillimanite mica schist and amphibolites. The Bhavani Group in this area includes fissile hornblende-biotite gneiss, granitoid gneiss and pink migmatite. Amphibolites with barbed ferruginous

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quartzite and associated quartzo-feldspathic rocks (Champion Gneiss) represent the Kolar group and are found west and southwest of Veppanapalli. Following this there are basic intrusions occurring as dykes.

The Charnockite Group occupies a major part of the south-west portion of this district with small bands of garnetiferous quartzo-feldspathicgneiss, Granite gneiss and dolerite dykes. The North-East andNorthernpartof the District mainly consist of granite gneiss with small patches of Pink Migmatite, hornblende-biotite gneiss and dolerite dykes. The Eastern part of the district consists of Epidote-Hornblende Gneiss, Ultra Mafics, Syenite and Carbonatite.

The Alkaline Complex is represented by epidote-horn blende gneiss, ultramafics, syenite and carbonatite and these are distributed in the eastern part of the district. Innumerable basic dykes and felsites, quartz, barites and pegmatite veins form part of the Alkali Complex.

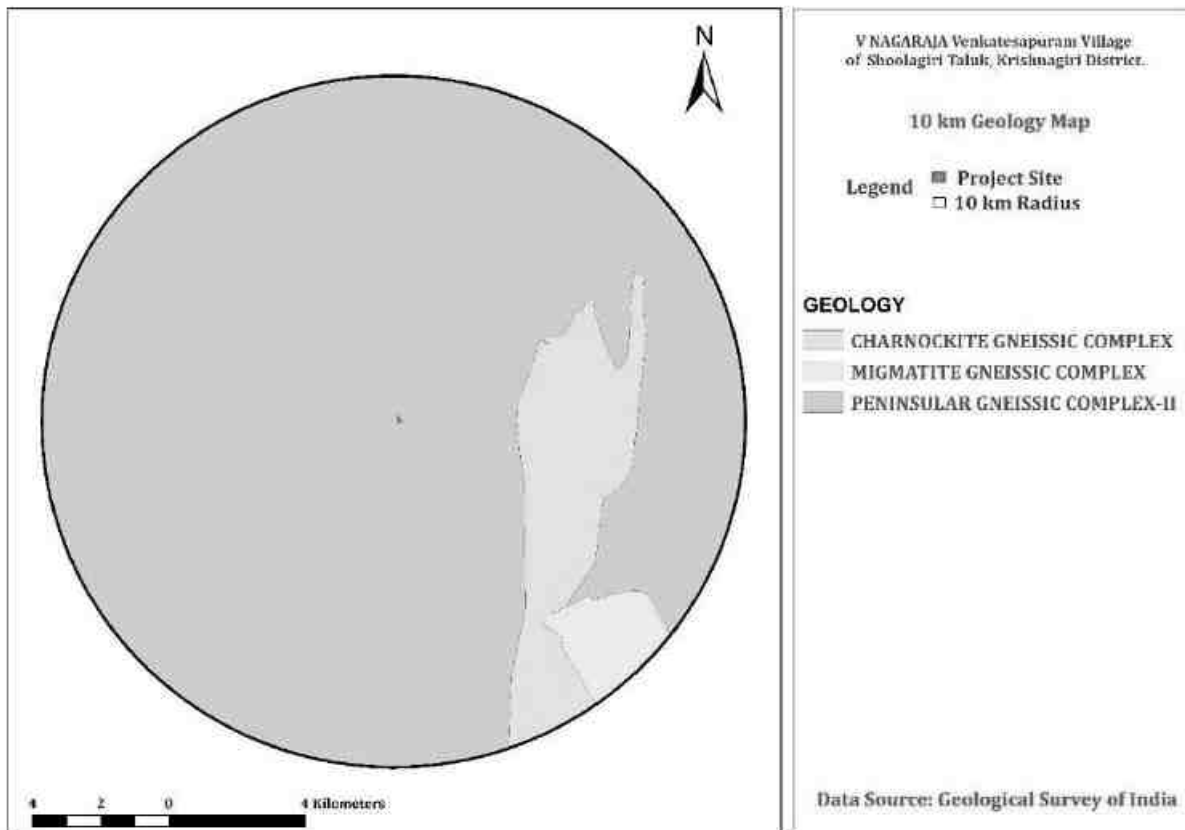


Figure 3.5 Geology Map of 10km from the project site

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3.3.4 Hydrogeology

Krishnagiri district is underlain by Archaean crystalline formations with Recent alluvial deposits of limited areal extent and thickness along the courses of major rivers (Plate-II). The occurrence and movement of ground water are controlled by various factors such as physiography, climate, geology and structural features. Weathered, and fractured crystalline rocks constitute the important aquifer systems in the district.

Ground water generally occurs under phreatic conditions in the weathered mantle and under semi-confined conditions in the fractured zones at deeper levels. The thickness of weathered zones in the district ranges from less than a meter to more than 15 m. The yield of large diameter dug wells in the district, tapping the weathered mantle of crystalline rocks ranges from 100 to 500 lpm. These wells normally sustain in pumping for 2 to 6 hours per day, depending upon the local topography and characteristics of the weathered mantle.

The depth to water level (DTW) during pre monsoon (May 2006) ranged between 0.5 and 9.9 m bgl (Plate-III) in the district. In major part of the district the DTW is more than 5mbgl. Whereas it ranged between 2 and 9.9 m bgl (Plate-IV) during post monsoon, in the district and the DTW is in the range of 5 – 10 m bgl in the entire district except a few isolated pockets.

The yield of successful exploratory wells drilled in the district ranged from 0.78 lps to 26 lps. As per the studies the wells drilled in granitic gneiss have higher yields than the wells drilled in charnockites. The specific capacity of the wells ranged from 1.2 to 118.0 lpm/m/dd. The piezometric head of fracture zones varied between 0.50 and 18.45 m bgl.

Aquifer Parameters:

The transmissivity values of fracture zones ranged from 1 to 188 m² /day with low to very low permeability values.

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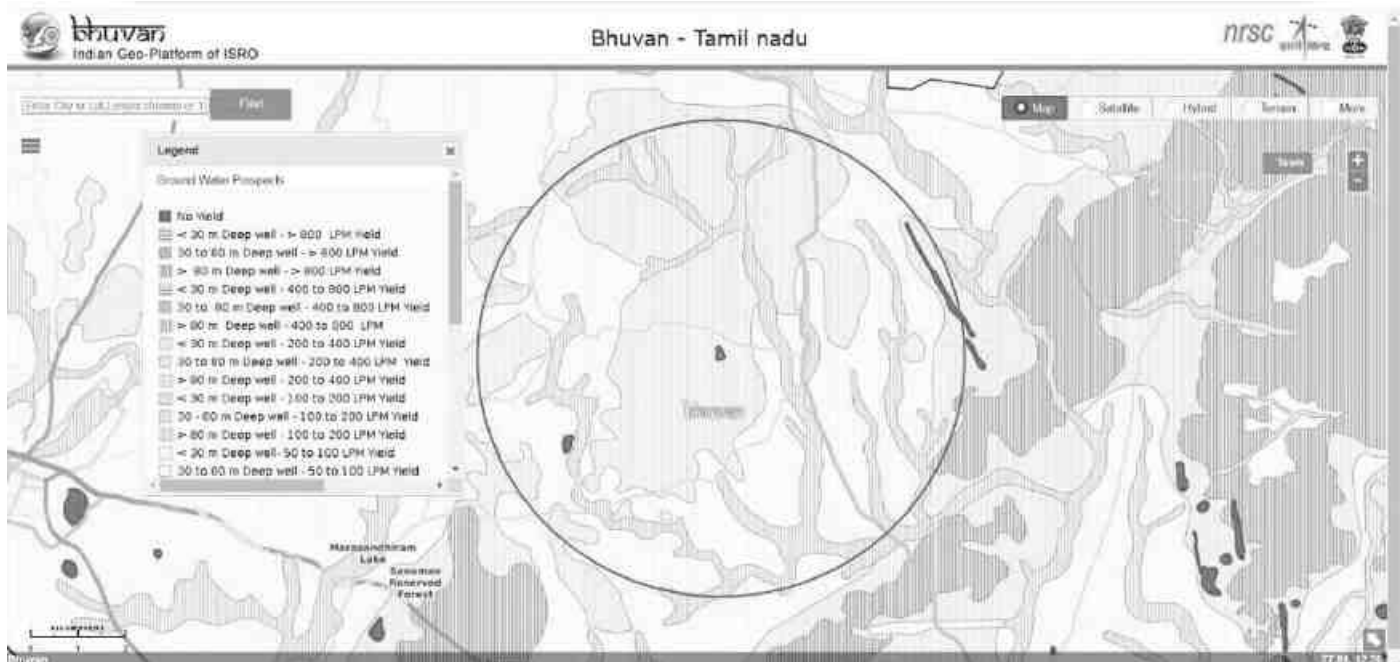


Figure 3.6 Ground water prospects within 5 km radius of the project site

3.3.5 Ground water quality monitoring

Ground water quality monitoring is done in the following locations and analysis will be done for physical, chemical & Biological parameters.

Table 3-4 Ground water Quality Analysis

Environmental Parameters: Ground water Quality Analysis		
Monitoring Period	November 2023 to January 2024	
Design Criteria	Based on the Environmental settings in the study area	
Monitoring Locations	Project site	-
	GH, Shoologiri	7.83 km
	Primary Health Centre, Payarkuttalai	6.51 km
	Garagamma Temple, Vanamangalam	7.88 km
	GHS UANGATTI – School, Punnagaram	2.64 km
	Sree Vanamuneshwara Swamy Temple, Nerigam	9.58 km
	Muniswaran Temple, Mensandoddi	1.00 km

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Methodology	Water Samples were collected in 5 Litre fresh cans as per IS 3025 Part I and transported to the laboratory in Iceboxes
Frequency of Monitoring	Once in a season

3.3.5.1 Sampling Procedure

Quality of ground water was compared with IS: 10500: 1991 (Reaffirmed 1993 With Amendment NO -3 July 2010) for drinking purposes. Water samples were collected as Grab sample from seven sampling locations in a 5-liter plastic jerry can and 250 ml sterilized clean glass/pet bottle for complete physico-chemical and bacteriological tests respectively. The samples were analyzed as per standard procedure / method given in IS: 3025 (Revised Part) and standard method for examination of water and wastewater Ed. 21st, published jointly by APHA.

Table 3-5: Standard Procedure

S. No	Parameters	Test Method
1	pH (at 25°C)	IS:3025(P -11)1983 RA: 2012
2	Electrical Conductivity	IS:3025(P -14) 2013
3	Colour	IS:3025 (P -4)1983 RA: 2012
4	Turbidity	IS:3025(P -10)1984 RA: 2012
5	Total Dissolved Solids	APHA 22 nd Edn.2012-2540-C
6	Total Suspended Solids	IS:3025(P-17)-1984 RA:2012
7	Total Hardness as CaCO ₃	APHA 22 nd Edn.2012-2340-C
8	Calcium as Ca	APHA 22 nd Edn2012.3500 Ca-B
9	Magnesium as Mg	APHA 22 nd Edn.2012-3500 Mg-B
10	Chloride as Cl	IS:3025(P -32)-1988 RA: 2014
11	Sulphate as SO ₄	APHA 22 nd Edn.2012-4500 SO ₄ -E
12	Total Alkalinity as CaCO ₃	APHA 22 nd Edn.2012-2320-B
13	Iron as Fe	IS:3025(P -53):2003 RA: 2014
14	Silica as SiO ₂	IS:3025(P -35)1988 RA: 2014
15	Fluoride as F	APHA 22 nd Edn.2012-4500-F-D
16	Nitrate as NO ₃	IS:3025(P -34):1988 RA: 2014
17	Sodium as Na	IS:3025(P -45):1993 RA: 2014
18	Potassium as K	IS:3025(P -45):1993 RA: 2014
19	Coliform	IS:1622:1981:RA:2014
20	E.coli	IS:1622:1981:RA:2014

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Table 3-6 Ground water sampling results

S. no	Parameters	Test Method	Units	GW 1	GW 2	GW 3	GW 4	GW5	GW6	GW 7
1	pH (at 25°C)	IS:3025(P -11)1983 RA: 2012	-	7.73	7.27	7.16	7.76	7.79	7.21	8.13
2	Electrical Conductivity	IS:3025(P -14) 2013	µS/cm	910	1790	1100	940	1090	990	1060
3	Colour	IS:3025 (P -4)1983 RA: 2012	Hazen Unit	BQL(LO Q:5)	BQL(LO Q:5)	BQL(LO Q:5)	BQL(LO Q:5)	BQL(LO Q:5)	BQL(LO Q:5)	BQL(LO Q:5)
4	Turbidity	IS:3025(P -10)1984 RA: 2012	NTU	BQL(LO Q:1)	BQL(LO Q:1)	BQL(LO Q:1)	BQL(LO Q:1)	BQL(LO Q:1)	BQL(LO Q:1)	BQL(LO Q:1)
5	Total Dissolved Solids	APHA 23 rd Edn.2017-2540-C	mg/L	503	1025	625	495	599	545	583
6	Total Suspended Solids	IS:3025(P-17)-1984 RA:2012	mg/L	BQL(LO Q:2)	BQL(LO Q:2)	BQL(LO Q:2)	BQL(LO Q:2)	BQL(LO Q:2)	BQL(LO Q:2)	BQL(LO Q:2)
7	Total Hardness as CaCO ₃	APHA 23 rd Edn.2017-2340-C	mg/L	380	634	513	347	339	384	384
8	Calcium Hardness as CaCO ₃	APHA 23 rd Edn2017.3500 Ca-B	mg/L	230	345	327	198	174	222	242
9	Magnesium Hardness as CaCO ₃	APHA 23 rd Edn.2017-3500 Mg-B	mg/L	150	291	186	149	166	162	141
10	Calcium as Ca	APHA 23 rd Edn2017.3500 Ca-B	mg/L	92.2	138	131	79.3	69.6	89.1	97.1
11	Magnesium as Mg	APHA 23 rd Edn.2017-3500 Mg-B	mg/L	36.3	70.7	45.1	36.3	40.2	39.3	34.3
12	Chloride as Cl	IS:3025(P -32)-1988 RA: 2014	mg/L	50.8	288	193	129	106	93.9	90.6
13	Sulphate as SO ₄	APHA 23 rd Edn.2017-4500 SO ₄ -E	mg/L	27.6	238	47.3	55.8	127	109	91
14	Total Alkalinity as CaCO ₃	APHA 23 nd Edn.2017-2320-B	mg/L	357	367	111	162	288	182	248

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15	Iron as Fe	IS:3025(P - 53):2003 RA: 2014	mg/L	BQL(LO Q:0.1)	BQL(LO Q:0.1)	BQL(LO Q:0.1)	BQL(LO Q:0.1)	BQL(LO Q:0.1)	BQL(LO Q:0.1)	BQL(LO Q:0.1)
16	Silica as SiO ₂	IS:3025(P -35)1988 RA: 2014	mg/L	21.9	30.4	32.4	18.5	21.5	16.2	18.4
17	Fluoride as F	APHA 23 rd Edn.2012-4500-F-D	mg/L	0.32	0.23	0.26	0.33	0.31	0.22	0.18
18	Nitrate as NO ₃	IS:3025(P - 34):1988 RA: 2014	mg/L	17.514	40.1	47.5	41.573	42.4	49.7	13.2
19	Sodium as Na	IS:3025(P - 45):1993 RA: 2014	mg/L	5.2	12.2	15.5	12.2	10.2	11.1	6.6
20	Potassium	IS:3025(P - 45):1993 RA: 2014	mg/L	43.1	139	96.6	115	55.5	80.2	85.5

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3.3.6 Interpretation of results:

3.3.6.1 Physical parameters of water:

The basic physical parameters of water include

Colour:

Value observed in Project Site (True/Apparent Color): < 5 Hazen unit.

Acceptable and permissible limits: 5 Hazen units and 15 Hazen units respectively. The value in the project site is as same as the acceptable limits prescribed by IS 10500: 2012 (referred as “Standards” from herein).

pH:

Value observed in the Project Site: 7.73

Acceptable and permissible limits: 6.5-8.5. The pH value is the measure of acid – base equilibrium. The value of pH in the project site clearly indicates that water is slightly neutral in nature.

Turbidity:

Value observed in the Project Site: <1

Acceptable and permissible limits: 1 NTU & 5 NTU respectively. The value of turbidity generally indicates the presence of phytoplanktons and other sediments. The value in the project site indicates the water is slightly turbid.

Total Dissolved Solids:

Value observed in the Project Site:503 mg/L.

Acceptable and permissible limits: 500 mg/L and 2000 mg/L respectively.

The TDS is the presence of the inorganic salts and small amounts of organic matter present in the water. This is mainly due to the result of surface runoff as the cations and anions in the top soil is carried away by the water. The value in the project site indicates the water is less turbid.

Chemical parameters of water:

The chemical parameters of the drinking water include,

Calcium:

Value observed in the Project Site: 92.2 mg/L.

Acceptable and permissible limits: 75mg/L and 200 mg/L respectively.

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Calcium is the essential macronutrient. The value of the calcium is within the prescribed permissible standards. The higher level of calcium may cause hardening in domestic equipment and will also reduce the detergent efficiency. Higher levels of calcium will lead to constipation, gas, and bloating. Apart from that, extra calcium may also increase the risk of kidney stones. If the calcium deposit in blood is high, it may lead to hypercalcemia.

Magnesium:

Value observed in the Project Site: 36.3 mg/L.

Acceptable and permissible limits: 30 mg/L and 100 mg/L respectively.

The value of Magnesium in the project site is higher than acceptable limit and less than the permissible limit. The increase in the level of magnesium will cause diarrhea and vomiting in children.

Chloride

Value observed in the project site: 50.8 mg/L.

Acceptable and permissible limits: 250 mg/L and 1000 mg/L respectively.

The chloride level in the project site is within the acceptable and permissible limit. If the level of chloride is more, it may cause galvanic and pitting corrosion, increases level of metals. It imparts bitter taste to the water.

Total Alkalinity as CaCO₃:

Value observed in the project site: 357 mg/L.

Acceptable and permissible limits: 200 mg/L and 600 mg/L respectively.

Total Alkalinity is the measure of the concentration of all alkaline substances dissolved in the water which includes carbonates, bicarbonates and hydroxides. The value of the total alkalinity is slightly greater in the project site, which will impart soda taste to the water.

Hardness:

Value observed in the Project Site: 380 mg/L.

Acceptable and permissible limits: 200 mg/L and 600 mg/L respectively.

The value of Hardness in the project site is higher than acceptable limit but within the permissible limit. The increase in the level of hardness may cause corrosion and scaling problems, increased soap consumption and it also contributes to the salty taste of water.

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3.3.7 Surface Water Analysis

Surface water samples were taken from Obeapalayam Lake and Ponnaiyar River. The results are summarized below.

Table 3-7 Surface Water Sample Results

S.no	Parameters	Test Method	Units	Thummanapalli Lake – 6.17 km, SW	Berigai Lake – 6.28 km, N
1	pH (at 25°C)	IS:3025(P -11)1983 RA: 2012	-	7.55	7.92
2	Electrical Conductivity	IS:3025(P -14) 2013	µS/cm	350	280
3	Colour	IS:3025 (P -4)1983 RA: 2012	Hazen Unit	15	25
4	Turbidity	IS:3025(P -10)1984 RA: 2012	NTU	12	6.3
5	Total Dissolved Solids	APHA 23 rd Edn.2017-2540-C	mg/L	192	154
6	Total Suspended Solids	IS:3025(P-17)-1984 RA:2012	mg/L	17.5	10.4
7	Total Hardness as CaCO ₃	APHA 23 rd Edn.2017-2340-C	mg/L	90.9	84.8
8	Calcium Hardness as CaCO ₃	APHA 23 rd Edn2017.3500 Ca-B	mg/L	54.5	42.4
9	Magnesium Hardness as CaCO ₃	APHA 23 rd Edn.2017-3500 Mg-B	mg/L	36.4	42.4
10	Calcium as Ca	APHA 23 rd Edn2017.3500 Ca-B	mg/L	21.8	17
11	Magnesium as Mg	APHA 23 rd Edn.2017-3500 Mg-B	mg/L	8.84	10.3
12	Chloride as Cl	IS:3025(P -32)-1988 RA: 2014	mg/L	38.1	34.2
13	Sulphate as SO ₄	APHA 23 rd Edn.2017-4500 SO ₄ -E	mg/L	23.1	24.2
14	Total Alkalinity as CaCO ₃	APHA 23 nd Edn.2017-2320-B	mg/L	62.6	72.7
15	Iron as Fe	IS:3025(P -53):2003 RA: 2014	mg/L	0.134	0.168
16	Silica as SiO ₂	IS:3025(P -35)1988 RA: 2014	mg/L	10.4	12.7
17	Fluoride as F	APHA 23 rd Edn.2012-4500-F-D	mg/L	0.299	0.195
18	Nitrate as NO ₃	IS:3025(P -34):1988 RA: 2014	mg/L	17.2	19.7
19	Sodium as Na	IS:3025(P -45):1993 RA: 2014	mg/L	12.2	6.6

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20	Potassium	IS:3025(P -45):1993 RA: 2014	mg/L	30.3	21.8
21	Total Kjeldahl Nitrogen as N	APHA 23 rd Edn.2012-4500	mg/L	15.2	14.1
22	Biochemical oxygen Demand @ 27c	IS:3025(P -45):1993 RA: 2014	mg/L	42	29
23	Chemical Oxygen Demand	IS:3025(P -45):1993 RA: 2014	mg/L	154	120
24	Dissolved Oxygen	IS:3025(P -45):1993 RA: 2014	mg/L	4.3	4.6

Inference: The surface water quality is compared with the CPCB Water Quality Criteria against A, B, C, D & E class of water. From the test result, it is found that the water does not fit Class A (Drinking Water Source without conventional treatment but after disinfection). But they can be used for outdoor bathing as it meets the requirements shown for class B water.

3.3.7.1 Climatology & Meteorology:

Climate and meteorology of a place can play an important role in the implementation of any developmental project. Meteorology is also the key to understand local air quality as there is an essential relationship between meteorology and atmospheric dispersion involving wind in the broadest sense of the term.

The year may broadly be divided into four seasons:

Winter season	:	December to February
Pre-monsoon season	:	March to May
Monsoon season	:	June to September
Post-monsoon season	:	October to November

i) Climate

Eastern part of the district experiences hot climate and Western part has a contrasting pleasant cold climate. The district is hot and dry in summer i.e., from March to June. From July to November is rainy season and between December to February winter prevails with very cold and misty.

ii) Temperature

The maximum temperature is around 36°C and minimum temperature is 28°C.

iii) Rainfall

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<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

Krishnagiri receives rainfall from both the northeast and the southwest monsoons. Monsoon season is from the months of July to November. During this time, temperature is mild and pleasant. Heavy rainfall is expected in short intervals during this period. December to February are winter months.

This district gets maximum rainfall in November (274.7mm).

KRISHNAGIRI DISTRICT -NORMAL AND ACTUAL RAINFALL

Unit in mm.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	R/F	R/F	R/F	R/F	R/F	R/F	R/F	R/F	R/F	R/F	R/F	R/F
2017	5.7	0	48.7	37.9	198.6	19.1	24.6	189.7	291.7	219	54.5	56.2
2018	0	1.3	34.9	14.4	114.5	41.1	10.5	18.5	152.1	85.2	33.2	4.8
2019	13.2	1.2	4.5	47.2	96.5	33.6	34.6	94.7	138.6	177.7	48.7	39.5
2020	0.3	0	6.9	61.7	57.9	59	147.2	66.8	142.1	142	77	42.6
2021	40.1	5.8	0	46.6	75.7	32.4	137.7	70.2	134.9	140.4	282.6	19.1

Source: District survey report

Meteorological Data

The meteorological data – Temperature, rainfall, Wind Speed, Wind direction are recorded through AWS by setting it up in the site.

vi) Wind Rose Diagram

The wind rose denotes a class of diagrams designed to display the distribution of wind direction at a given location over a period of time. Wind roses are also useful as they project a large quantity of data in a simple graphical plot.

The wind speed & wind direction data are taken, and wind rose is plotted for November 2023 to January 2024.

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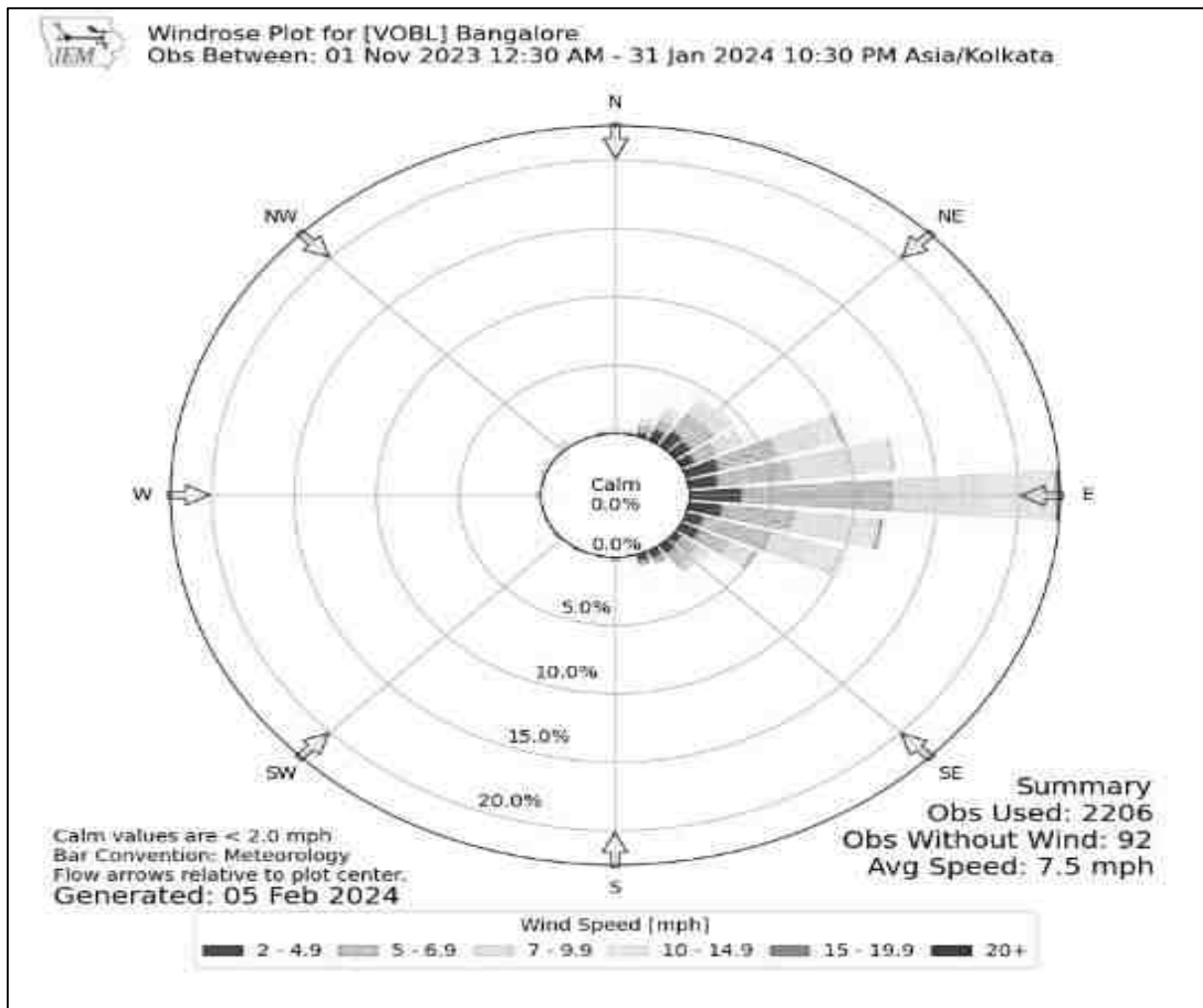


Figure 3.7 Wind Rose Diagram

3.3.8 Selection of Sampling Locations:

Six Monitoring locations along with the project site is selected based on Wind Direction & Wind Speed. All the monitoring locations are chosen in the downwind direction.

3.4 AMBIENT AIR QUALITY

Table 3-8: Selection of Sampling Location

Environmental Parameters: <i>Ambient Air</i>	
Monitoring Period	November 2023 to January 2024

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Project Location	Venkatesapuram Village, Shoologiri Taluk, Krishnagiri District	

Design Criteria	The monitoring stations are selected based on factors like topography/terrain, prevailing meteorological conditions like predominant wind direction (November 2023 to January 2024), etc, play a vital role in the selection of air sampling stations. Based on these criteria, 5 air sampling station were selected in the area as shown below.		
Monitoring Locations	Location & Code	Distance (km)	Direction
	Project site	-	-
	GH, Shoologiri	7.83 km	Upwind E
	Primary Health Centre, Payarkuttalai	6.51 km	Downwind W
	Garamma Temple, Vanamangalam	7.88 km	Crosswind N
	GHS UANGATTI – School, Punnagaram	2.64 km	Crosswind S
	Sree Vanamuneshwara Swamy Temple, Nerigam	9.58 km	Crosswind NE
	Muniswaran Temple, Mensandoddi	1.00 km	Crosswind SW
Methodology	Respirable Particulate Matter (PM10) - Gravimetric (IS 5182: Part 23:2006) Particulate Matter PM2.5 - Gravimetric (Fine particulate matter) Sulphur Dioxide - Calorimetric (West & Gaeke Method) (IS 5182: Part 02: 2001) Nitrogen Dioxide - Calorimetric (Modified Jacob & Hocheiser Method) (IS 5182: Part 06:2006)		
Frequency of Monitoring	2 days in a week, 4 weeks in a month for 3 months in a season.		

3.4.1 Ambient Air Quality: Results & Discussion

The test results of the ambient air quality monitored in project site and other six locations is summarized below.

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. G. Perumal</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

Table 3-9 Ambient Air Quality

Code	Location	PM 10 ($\mu\text{g}/\text{m}^3$)			PM 2.5 ($\mu\text{g}/\text{m}^3$)			SO ₂ ($\mu\text{g}/\text{m}^3$)			NO _x ($\mu\text{g}/\text{m}^3$)		
		Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg
AAQ 1	Project site	54	63	58.5	24	33	28.3	15	21	17.5	28	41	32.8
AAQ 2	GH, Shoolagiri	41	55	47.8	16	23	19.8	5	8	6.5	12	18	13.1
AAQ 3	Primary Health Centre, Payarkuttalai	46	55	51.2	19	26	22.7	6	13	8.7	15	25	16.8
AAQ 4	Garagamma Temple, Vanamangalam	48	57	52.8	21	27	23.9	8	14	10.5	15	25	18.5
AAQ 5	GHS UANGATTI - School, Punnagaram	33	47	40.5	13	20	16.8	5	10	7.8	10	21	15.8
AAQ 6	Sree Vanamuneshwara Swamy Temple, Nerigam	40	50	45.8	16	23	20.0	7	15	10	12	29	19.4
AAQ 7	Muniswaran Temple, Mensandoddi	48	59	53.5	21	31	25.6	12	18	14.2	20	31	24.2
NAAQ Standards - Residential Area		100 ($\mu\text{g}/\text{m}^3$)			60($\mu\text{g}/\text{m}^3$)			80 ($\mu\text{g}/\text{m}^3$)			80 ($\mu\text{g}/\text{m}^3$)		

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

3.4.2 Interpretation of ambient air quality:

To assess the impact, AAQ were monitored in project site and six locations.

Observation:

The Maximum value of PM10 (63($\mu\text{g}/\text{m}^3$), PM 2.5 (33 ($\mu\text{g}/\text{m}^3$), SO₂ (21($\mu\text{g}/\text{m}^3$), NO_x (41($\mu\text{g}/\text{m}^3$) is observed in different places.

Inference:

The monitoring results for PM10, PM2.5, SO₂, NO_x was found to be high in Project site which is due to the quarry operation & movement of vehicles.

The observed values are all well within the Standards prescribed by NAAQ.

3.5 NOISE ENVIRONMENT:

Table 3-10 Noise Analysis

Environmental Parameters: <i>Noise Analysis</i>								
Monitoring Period	November 2023 to January 2024							
Design Criteria	Based on the Sensitivity of the area							
Monitoring Locations	<table border="1"> <tr><td>Project site</td></tr> <tr><td>GH, Shoolagiri</td></tr> <tr><td>Primary Health Centre, Payarkuttalai</td></tr> <tr><td>Garagamma Temple, Vanamangalam</td></tr> <tr><td>GHS UANGATTI – School, Punnagaram</td></tr> <tr><td>Sree Vanamuneshwara Swamy Temple, Nerigam</td></tr> <tr><td>Muniswaran Temple, Mensandoddi</td></tr> </table>	Project site	GH, Shoolagiri	Primary Health Centre, Payarkuttalai	Garagamma Temple, Vanamangalam	GHS UANGATTI – School, Punnagaram	Sree Vanamuneshwara Swamy Temple, Nerigam	Muniswaran Temple, Mensandoddi
Project site								
GH, Shoolagiri								
Primary Health Centre, Payarkuttalai								
Garagamma Temple, Vanamangalam								
GHS UANGATTI – School, Punnagaram								
Sree Vanamuneshwara Swamy Temple, Nerigam								
Muniswaran Temple, Mensandoddi								
Methodology	Noise level measurements were taken at the selected locations using noise level meter both during day and night time. Noise level measurements were taken continuously for 24 hours at hourly intervals							
Frequency of Monitoring	Noise samples were collected from 7 locations - Once in a season							

Ambient Noise Levels are monitored in the chosen 7 Locations including the project Site and the monitoring results are summarized below

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

3.5.1 Day Noise Level (Leq day)

Table 3-11 Day Noise Level (Leq day)

Location	Leq day in dB(A)		
	Min	Max	Average
Project site – N1	46	55	51
GH, Shoolagiri – N2	39	48	44
Primary Health Centre, Payarkuttalai – N3	44	53	49
Garagamma Temple, Vanamangalam – N4	42	52	48
GHS UANGATTI – School, Punnagaram – N5	46	55	51
Sree Vanamuneshwara Swamy Temple, Nerigam – N6	37	47	43
Muniswaran Temple, Mensandoddi – N7	42	52	48

3.5.2 Night Noise Level (Leq Night)

Table 3-12 Night Noise Level (Leq Night)

Location	Leq Night in dB(A)		
	Min	Max	Average
Project site – N1	38	45	41
GH, Shoolagiri – N2	32	38	35
Primary Health Centre, Payarkuttalai – N3	32	42	37
Garagamma Temple, Vanamangalam – N4	35	43	39
GHS UANGATTI – School, Punnagaram – N5	38	43	40
Sree Vanamuneshwara Swamy Temple, Nerigam – N6	30	37	33
Muniswaran Temple, Mensandoddi – N7	32	40	36

Observation:

The maximum Day noise and Night noise were found to be 55 dB(A) and 45 dB(A) in Project site respectively. The minimum Day Noise and Night noise were 37 dB (A) and 30 dB(A) respectively which

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was observed in Sree Vanamuneshwara Swamy Temple, Nerigam. The observed values are all well within the Standards prescribed by CPCB.

3.6 SOIL ENVIRONMENT

Soil environment is studied for 10 km radius from the project site. The 5 km radius image shows that the soil is not affected by any kind of erosion.

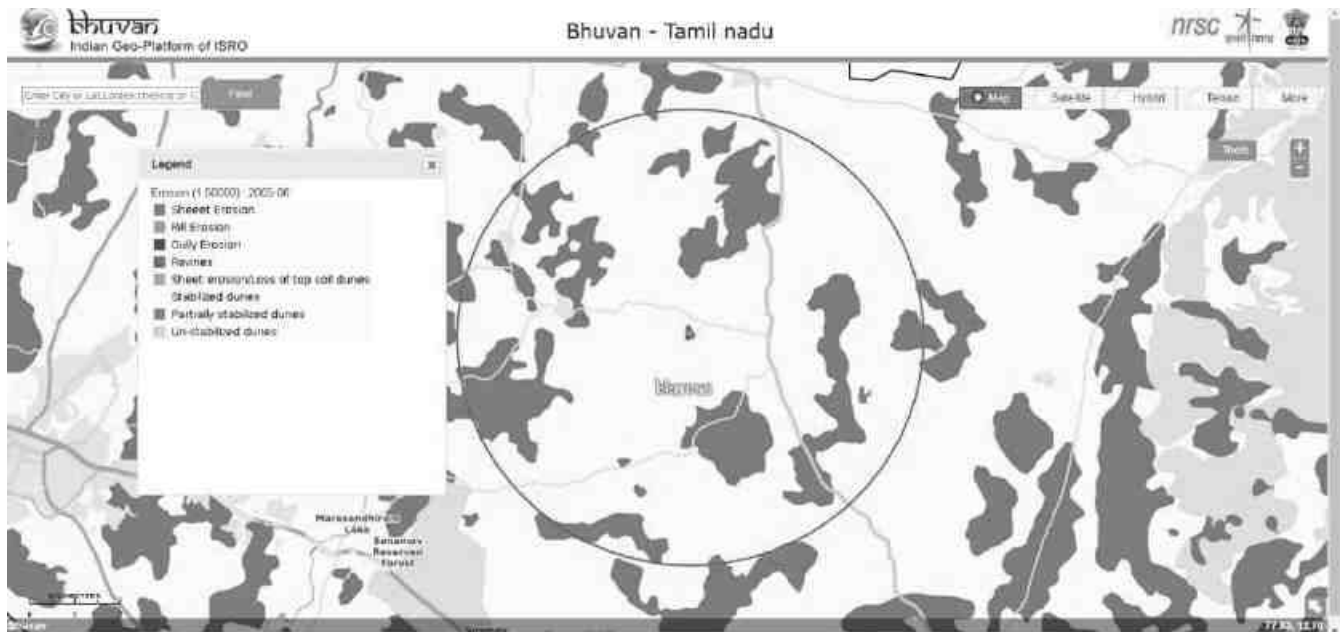


Figure 3.8 Soil Erosion pattern within 5 km radius of the project site

3.6.1 Baseline Data:

The present study of the soil quality establishes the baseline characteristics which will help in future in identifying the incremental concentrations if any, due to the operation Phase of the project. The sampling locations have been identified with the following objectives:

- To determine the impact of project on soil characteristics and
- To determine the impact on soils more importantly from agricultural productivity point of view.

Table 3-13 Soil Quality Analysis

Environmental Parameters: Soil Quality Analysis	
Monitoring Period	November 2023 to January 2024

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

Design Criteria	Based on the environmental settings of the study area
Monitoring Locations	Project site – SQ 1
	GH, Shoolagiri – SQ 2
	Primary Health Centre, Payarkuttalai – SQ 3
	Garagamma Temple, Vanamangalam – SQ 4
	GHS UANGATTI – School, Punnagaram – SQ 5
	Sree Vanamuneshwara Swamy Temple, Nerigam – SQ 6
	Muniswaran Temple, Mensandoddi – SQ 7
Methodology	Composite soil samples using sampling augers and field capacity apparatus
Frequency of Monitoring	Soil samples were collected from 7 locations Once in a season

To assess the soil quality of the study area, 7 monitoring stations were selected and the results are summarized below.

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Project Location	Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District	

Table 3-14 Soil Quality Analysis

S.No	Parameters	Test Method	Units	SQ 1	SQ 2	SQ 3	SQ 4	SQ5	SQ6	SQ7
1	pH	IS:2720(P-26)1987	-	7.0	6.98	8.01	7.98	7.21	7.11	6.98
2	Electrical Conductivity	IS:14767: 2016	ms/cm	0.99	0.56	0.32	0.319	0.325	0.195	0.186
3	Water holding Capacity	ICARDA Page No:28	ml/L	6.6	4.5	5.2	6.3	7.6	5.6	4.2
4	Chloride	FAO 2007 Page No:48	mg/Kg	98.8	61.1	50.7	55.2	92.2	77.5	61.1
5	Calcium	FAO 2007 Page No:44	mg/Kg	85.1	35	44.8	33.4	45.2	44.5	50.3
6	Sodium	FAO 2007 Page No:44	mg/Kg	291	250	262	251	305	320	331
7	Potassium	FAO 2007 Page No:44	mg/Kg	242	230	221	235	295	345	308
8	Organic matter	IS:2720 (P-22) 1972, RA:2010	%	0.5	0.61	0.41	0.38	0.68	0.59	0.71
9	Magnesium	FAO 2007 - 44	mg/Kg	27.2	11.3	16.2	17.3	15.1	26.3	26.6
10	Sulphate	IS 2720 (part 27): 1977	mg/Kg	24.3	44.4	48.5	38.6	61.5	71.1	46.3
11	Cation Exchange Capacity	IS:2720(P-24):1976 RA: 2010	meq/100g	11.1	12.3	13.1	10.8	16.6	13.3	10.2
12	Carbonate	FAO 2007 - 46	mg/Kg	NIL	NIL	NIL	Nil	NIL	NIL	NIL
13	Bicarbonate	FAO 2007 - 46	mg/Kg	84.4	96.3	115	142	121	105	99.7
14	TKN	IS : 14684 -1999	%	0.19	0.22	0.16	0.21	0.14	0.12	0.17
15	Bulk density	FAO 2007 Page No:35	g/cm3	1.36	1.21	1.32	1.24	1.09	1.23	0.99
16	Phosphorous	FAO 2007 Page No:73	mg/Kg	56.2	17.1	30.5	40.2	20.2	12.6	22.2
17	Sand	FAO 2007 Page No:25	%	60.2	50	53.3	60	67.7	57.9	51
18	Clay	FAO 2007 Page No:25	%	16.8	18.6	17.1	10	7.18	13.3	16
19	Silt	FAO 2007 Page No:25	%	23	31.4	29.6	30	25.12	32.2	33

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
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20	SAR	ETL/CHL/SOP/004	meq/K g	7.03	9.40	8.53	8.78	10.03	9.40	9.397
21	Silicon	ICARDA Page No:160	%	9.1	10.3	13.3	11.6	10.1	12.6	13.8

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3.6.1.1 Physical Properties:

Regular cultivation practices increase the bulk density of soils thus inducing compaction. This results in reduction in water percolation rate and penetration of roots through soils. The soils with low bulk density have favorable physical conditions whereas those with high bulk density exhibit poor physical conditions for agriculture crops. The bulk density of the soil in the study area ranged between 0.99 to 1.36 meq/100g which indicates favorable physical condition for plant growth. The water holding capacity was found in the range of 4.2 ml/l to 7.6 ml/l.

3.6.1.2 Chemical Properties:

Chemical characteristics of soils include pH, exchangeable cations and fertility status in the form of NPK values and organic matter. The value of the pH ranges from 6.98 to 7.98, which it indicates majority of pH of the soil is slightly alkaline. The soil in the project site is sodic in nature, which challenges because they tend to have very poor structure which limits or prevents water infiltration and drainage. The organic matter varies from 0.38 to 0.71%, which indicates the soil is slightly unfertile.

3.7 ECOLOGY AND BIODIVERSITY

Ecology and Biodiversity is studied for 10 km radius around the project site. Project site and 2 km around the project site is considered as core zone and from 2 km to 10 km radius, it is considered as buffer zone.

- Primary field survey is carried out for the assessment of flora and fauna in the core zone
- Secondary data from Journals/Literature were studied and compiled to understand the species present in the buffer zone.

3.7.1 *Methods available for floral analysis:*

3.7.1.1 Plot Sampling Methods

- Quadrat – 2D shape (e.g. square or rectangle, or other shape) used as a sampling unit
- Transect
 - Line transects feature only a length dimension, usually defined by a tape stretched across the area to be sampled.
 - Belt transects have a width as well as length.

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- Pace-transects are established when the observer strides along an imaginary line across the sample site and uses their foot placement to determine specific sampling points.

3.7.1.2 Plot less Sampling Methods

- Closest individual method - Distance is measured from each random point to the nearest individual.
- Nearest neighbour method - Distance is measured from an individual to its nearest neighbour.
- Random pairs method - Distance is measured from one individual to another on the opposite side of the sample point.
- Point-centered quarter (PCQ) method - Distance is measured from the sampling point to the nearest individual in each quadrat.

3.7.2 *Field study & Methodology adopted:*

To assess the suitability of the methodology, random field survey was done. Field survey was conducted around 2 km radius from the project site and seven locations were chosen based on the species density. Quadrat method is chosen for the proposed study as compared to other sampling methods, because they are relatively simple to use. Quadrat plots are uniform in size and shape and distributed randomly throughout the sample area, which makes the study design straightforward. They are also one of the most affordable techniques because they require very few materials.

3.7.3 *Study outcome:*

Phyto-sociological parameters, such as ***Density, Frequency, Basal Area, Abundance and Importance Value Index*** of individual species (Trees) were determined in randomly placed quadrates of different sizes in the study area. Relative frequency, relative basal area and relative density were calculated and the sum of these three represented Importance Value Index (IVI) for various species. For shrubs, herbs and grasses, ***Density, Frequency, Relative Density & Relative Frequency were found.***

Sample plots were selected in such a way to get maximum representation of different types of vegetation and plots were laid out in different part of the study area of 2 km radius. Analysis of the vegetation will help in determining the relative importance of each species in the study area and to reveal if any economically valuable species is threatened in the process.

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Table 3-15 Calculation of Density, Frequency (%), Dominance, Relative Density, Relative Frequency, Relative Dominance & Important Value Index

Parameters	Formula
Density	Total No. of individuals of species/ Total No. of Quadrats used in sampling
Frequency (%)	(Total No. of Quadrats in which species occur/ Total No. of Quadrats studied) * 100
Dominance	Total Basal Area /Total area sampled
Abundance	Total No. of individuals of species/ No. of Quadrats in which they occur
Relative Density	(Total No. of individuals of species/Sum of all individuals of all species) * 100
Relative Frequency	(Total No. of Quadrats in which species occur/ Total No. of Quadrats occupied by all species) * 100
Relative Dominance	Dominance of a given species/Total Dominance of all species
Important Value Index	Relative Density + Relative Frequency + Relative Dominance

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Table 3-16 Tree Species in the core Zone

S. No.	Scientific Name	Local Name	Total No. of species	Total of Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Dominance	Relative Density	Relative Frequency	Relative Dominance	IVI	IUCN Conservation Status
1	Ficus Carica	Athi Maram	2	2	6	0.33	33.33	1	0.28	1.68	2.17	4.45	8.31	Least Concern
2	Cocos nucifera	Thennai	10	6	6	1.67	100.0	1.67	0.15	8.40	6.52	2.39	17.32	Not assessed
3	Azadirachta indica	Veppam	17	6	6	2.83	100.0	2.83	0.13	14.29	6.52	1.98	22.79	Not assessed
4	Tamarindus indica	Puli	10	6	6	1.67	100.0	1.66	0.20	8.40	6.52	3.09	18.02	Not assessed
5	Mangifera indica	Mamaram	7	6	6	1.17	100.0	1.16	0.07	5.88	6.52	1.11	13.52	Data insufficient
6	Morinda pubescens	Nuna	6	6	6	1.00	100.0	1	0.24	5.04	6.52	3.74	15.31	Not assessed
7	Couroupita guianensis	Nagalingam	5	3	6	0.83	50.00	1.67	0.14	4.20	3.26	2.18	9.64	Not assessed
8	Bombax ceiba	Sittan	4	4	6	0.67	66.67	1	0.08	3.36	4.35	1.27	8.98	Not assessed
9	Acacia nilotica	Karuvelai	4	4	6	0.67	66.67	1	0.28	3.36	4.35	4.45	12.16	Least Concern
10	Bambusa vulgaris	Moongil	4	4	6	0.67	66.67	1	0.50	3.36	4.35	7.92	15.63	Not assessed
11	Syzygium cumini	naval	5	1	6	0.83	16.67	5	0.11	4.20	1.09	1.79	7.07	Not assessed
12	Carica papaya	Papaya	3	3	6	0.50	50.00	1	0.09	2.52	3.26	1.43	7.21	Not assessed
13	Psidium guajava	Guava	3	3	6	0.50	50.00	1	0.23	2.52	3.26	3.61	9.39	Not assessed
14	Cassia siamea	ManjalKonrai	3	2	6	0.50	33.33	1.5	0.07	2.52	2.17	1.11	5.81	Least Concern

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15	Ficus religiosa	Arasa maram	3	3	6	0.50	50.00	1	0.09	2.52	3.26	1.35	7.13	Not assessed
16	Musa paradise	Vaazhai	3	3	6	0.50	50.00	1	0.08	2.52	3.26	1.19	6.97	Not assessed
17	Prosopis juliflora	Vaelikaruvai	3	3	6	0.50	50.00	1	0.21	2.52	3.26	3.34	9.13	Not assessed
18	Tectona grandis	Thekku	3	3	6	0.50	50.00	1	0.12	2.52	3.26	1.88	7.66	Not assessed
19	Thespesia populnea	Poovarasam	3	3	6	0.50	50.00	1	0.15	2.52	3.26	2.39	8.18	Not assessed
20	Causuarina equisetifolia	Savukku	2	2	6	0.33	33.33	1	0.21	1.68	2.17	3.34	7.20	Not assessed
21	Alstonia scholaris	Elilaipalai	2	2	6	0.33	33.33	1	0.27	1.68	2.17	4.31	8.16	Least Concern
22	Anacardium occidentale	Cashew	1	1	6	0.17	16.67	1	0.44	0.84	1.09	6.96	8.88	Not assessed
23	Artocarpus heterophyllus	Palaa	2	2	6	0.33	33.33	1	0.18	1.68	2.17	2.85	6.70	Not assessed
24	Aegle marmelos	Vilvam	1	1	6	0.17	16.67	1	0.16	0.84	1.09	2.50	4.43	Not assessed
25	Delonix elata	Perungondrai	1	1	6	0.17	16.67	1	0.17	0.84	1.09	2.62	4.54	Least Concern
26	Pithecellobium dulce	Kodukapuli	1	1	6	0.17	16.67	1	0.14	0.84	1.09	2.18	4.11	Not assessed
27	Citrus medica	Elumichai	2	2	6	0.33	33.33	1	0.23	1.68	2.17	3.61	7.46	Not assessed
Total			110	83					5.02					

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Table 3-17 Shrubs in the Core Zone

S. No.	Scientific Name	Local Name	Total No. of species	Total of Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Relative Density	Relative Frequency	IUCN Conservation Status
1	Jatropagossypifolia	Kaatamanaku	32	17	24	1.17	0.71	1.65	14.43	17.17	Not Assessed
2	Calotropis gigantea	Erukam	16	12	24	0.58	0.50	1.17	7.22	12.12	Not Assessed
3	Tabernaemontanadivaricata	Crepe Jasmine	4	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
4	Catharanthus roseus	Nithyakalyani	4	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
5	Datura metal	Ummattangani	7	4	24	0.21	0.17	1.25	2.58	4.04	Not Assessed
6	Robiniapseudoacacia	Black locust	15	5	24	0.71	0.21	3.4	8.76	5.05	Least Concern
7	Acalypha indica	Kuppaimeni	18	8	24	0.83	0.33	2.5	10.31	8.08	Not Assessed
8	Stachytarpheaurticifolia	Rat tail	13	9	24	0.63	0.38	1.67	7.73	9.09	Not Assessed
9	Woodfordiafruiticosa	Velakkai	4	3	24	0.13	0.13	1	1.55	3.03	Least Concern
10	Hibiscus rosa sinensis	Sembaruthi	3	2	24	0.13	0.08	1.5	1.55	2.02	Not Assessed
11	Lantana camara	Unnichi	8	6	24	0.38	0.25	1.5	4.64	6.06	Not Assessed
12	Parthenium hysterophorus	Vishapoond	45	13	24	2.08	0.54	3.85	25.77	13.13	Not Assessed
13	Euphorbia geniculata	Amman Pacharisi	5	3	24	0.13	0.13	1	1.55	3.03	Not Assessed

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Table 3-18 Herbs & Grasses in the core zone

S. No.	Scientific Name	Local Name	Total No. of species	Total of Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Relative Density	Relative Frequency	IUCN Conservation status
1	Helicteresisora	Valampuri	4	2	30	0.07	0.07	1	0.79	2.15	Not assessed
2	Tridax procumbens	Vettukaayathalai	7	4	30	0.17	0.13	1.25	1.98	4.30	Not assessed
3	Heraculem spondylium	Hog Weed	19	10	30	0.67	0.33	2	7.94	10.75	Not assessed
4	Tridax procumbens	Cuminipachai	18	4	30	0.50	0.13	3.75	5.95	4.30	Not assessed
5	Senna occidentalis	Nattamsakarai	30	4	30	0.83	0.13	6.25	9.92	4.30	Not assessed
6	Plumbago zeylanica	Chittiramoolam	12	3	30	0.10	0.10	1	1.19	3.23	Not assessed
7	Scrophularia nodosa	Sarakkothini	18	7	30	0.50	0.23	2.14	5.95	7.53	Not assessed
8	Viburnum dentatum	Viburnum	7	5	30	0.17	0.17	1	1.98	5.38	Least concern
9	Cynodondactylon	Arugu	15	6	30	0.40	0.20	2	4.76	6.45	Not assessed
10	Euphorbia hirta	Amman Pacharisi	7	4	30	0.17	0.13	1.25	1.98	4.30	Not assessed
11	Sida cordifolia	Maanikham	50	4	30	1.50	0.13	11.25	17.86	4.30	Not assessed
12	Sida acuta	Malaidangi	12	3	30	0.33	0.10	3.33	3.97	3.23	Not assessed
13	Laportea canadensis	Peruganchori	28	20	30	1.00	0.67	1.5	11.90	21.51	Not assessed
14	Sporobolus fertilis	Giant Parramatta Grass	10	4	30	0.30	0.13	2.25	3.57	4.30	Not assessed
15	Tephrosia purpurea	Kavali	23	4	30	0.67	0.13	5	7.94	4.30	Not assessed

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3.7.4 Calculation of species diversity by Shannon - wiener Index, Evenness and richness by Margalef:

Biodiversity index is a quantitative measure that reflects how many different type of species, there are in a dataset, and simultaneously takes into account how evenly the basic entities (such as individuals) are distributed among those types of species. The value of biodiversity index increases both when the number of types increases and when evenness increases. For a given number of type of species, the value of a biodiversity index is maximized when all type of species are equally abundant. Interpretation of Vegetation results in the study area is given below.

Table 3-19 Calculation of species diversity

Description	Formula
Species diversity - Shannon - Wiener Index	$H = \sum [(p_i) * \ln(p_i)]$ Where p_i : Proportion of total sample represented by species i : number of individuals of species i / total number of samples
Evenness	H/H_{max} $H_{max} = \ln(s) =$ maximum diversity possible $S =$ No. of species
Species Richness by Margalef	$RI = S - 1 / \ln N$ Where $S =$ Total Number of species in the community $N =$ Total Number of individuals of all species in the community

3.7.5 Calculation of species diversity by Shannon - wiener Index, Evenness and richness by Margalef for trees

i. Species Diversity

Scientific Name	Common Name	No. of Species	Pi	ln (Pi)	Pi x ln (Pi)
Ficus Carica	Athi Maram	2	0.018182	- 4.00733	-0.07286
Cocos nucifera	Thennai	10	0.090909	-2.3979	-0.21799
Azadirachta indica	Veppam	17	0.154545	- 1.86727	-0.28858
Tamarindus indica	Puli	10	0.090909	-2.3979	-0.21799
Mangifera indica	Mamaram	7	0.063636	- 2.75457	-0.17529

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Morinda pubescens	Nuna	6	0.054545	- 2.90872	-0.15866
Couroupita guianensis	Nagalingam	5	0.045455	- 3.09104	-0.1405
Bombax ceiba	Sittan	4	0.036364	- 3.31419	-0.12052
Acacia nilotica	Karuvelai	4	0.036364	- 3.31419	-0.12052
Bambusa vulgaris	Moongil	4	0.036364	- 3.31419	-0.12052
Syzygium cumini	naval	5	0.045455	- 3.09104	-0.1405
Carica papaya	Papaya	3	0.027273	- 3.60187	-0.09823
Psidium guajava	Guava	3	0.027273	- 3.60187	-0.09823
Cassia siamea	ManjalKonrai	3	0.027273	- 3.60187	-0.09823
Ficus religiosa	Arasa maram	3	0.027273	- 3.60187	-0.09823
Musa paradise	Vaazhai	3	0.027273	- 3.60187	-0.09823
Prosopis juliflora	Vaelikaruvai	3	0.027273	- 3.60187	-0.09823
Tectona grandis	Thekku	3	0.027273	- 3.60187	-0.09823
Thespesia populnea	Poovarasam	3	0.027273	- 3.60187	-0.09823
Causuarina equisetifolia	Savukku	2	0.018182	- 4.00733	-0.07286
Alstonia scholaris	Elilaipalai	2	0.018182	- 4.00733	-0.07286
Anacardium occidentale	Cashew	1	0.009091	- 4.70048	-0.04273
Artocarpus heterophyllus	Palaa	2	0.018182	- 4.00733	-0.07286
Aegle marmelos	Vilvam	1	0.009091	- 4.70048	-0.04273
Delonix elata	Perungondrai	1	0.009091	- 4.70048	-0.04273
Pithecellobium dulce	Kodukapuli	1	0.009091	- 4.70048	-0.04273
Citrus medica	Elumichai	2	0.018182	- 4.00733	-0.07286

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Total		110			-3.02215005
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H (Shannon Diversity Index) =3.02

Shrubs

Scientific Name	Common Name	No. of Species	Pi	ln (Pi)	Pi x ln (Pi)
Jatropagossypifolia	Kaatamanaku	32	0.183908	-1.69332	-0.31142
Calotropis gigantea	Erukam	16	0.091954	-2.38647	-0.21945
Tabernaemontanadivaricata	Crepe Jasmine	4	0.022989	-3.77276	-0.08673
Catharanthus roseus	Nithyakalyani	4	0.022989	-3.77276	-0.08673
Datura metal	Ummattangani	7	0.04023	-3.21315	-0.12926
Robiniapseudoacacia	Black locust	15	0.086207	-2.45101	-0.21129
Acalypha indica	Kuppaimeni	18	0.103448	-2.26868	-0.23469
Stachytarphaurticifolia	Rat tail	13	0.074713	-2.59411	-0.19381
Woodfordiafruticosa	Velakkai	4	0.022989	-3.77276	-0.08673
Hibiscus rosa sinensis	Sembaruthi	3	0.017241	-4.06044	-0.07001
Lantana camara	Unnichi	8	0.045977	-3.07961	-0.14159
Parthenium hysterophorous	Vishapoond	45	0.258621	-1.35239	-0.34976
Euphorbia geniculata	Amman Pacharisi	5	0.028736	-3.54962	-0.102
Total		174			-2.2234

H (Shannon Diversity Index) =2.22

Herbs

Scientific Name	Common Name	No. of Species	Pi	ln (Pi)	Pi x ln (Pi)
Helicteresisora	Valampuri	4	0.015385	-4.17439	-0.06422
Tridax procumbens	Vettukaayathalai	7	0.026923	-3.61477	-0.09732
Heraculem spondylium	Hog Weed	19	0.073077	-2.61624	-0.19119
Tridax procumbens	Cuminipachai	18	0.069231	-2.67031	-0.18487
Senna occidentalis	Nattamsakarai	30	0.115385	-2.15948	-0.24917
Plumbago zeylanica	Chittiramoolam	12	0.046154	-3.07577	-0.14196
Scrophularia nodosa	Sarakkothini	18	0.069231	-2.67031	-0.18487

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Viburnum dentatum	Viburnum	7	0.026923	-3.61477	-0.09732
Cynodondactylon	Arugu	15	0.057692	-2.85263	-0.16457
Euphorbia hirta	Amman Pacharisi	7	0.026923	-3.61477	-0.09732
Sida cordifolia	Maanikham	50	0.192308	-1.64866	-0.31705
Sida acuta	Malaidangi	12	0.046154	-3.07577	-0.14196
Laportea canadensis	Peruganchori	28	0.107692	-2.22848	-0.23999
Sporobolus fertilis	Giant Parramatta Grass	10	0.038462	-3.2581	-0.12531
Tephrosia purpurea	Kavali	23	0.088462	-2.42519	-0.21454
Total		260			-2.51

H (Shannon Diversity Index) =2.51

i. Species diversity calculation

Details	H	Hmax	Evenness	Species Richness (Margalef)
Trees	3.02	3.36	0.89	5.95
Shrubs	2.22	2.56	0.86	2.32
Herbs	2.51	2.70	0.92	2.51

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

3.7.6 Floral study in the Buffer Zone:

Economically important Flora of the study area

Agricultural crops: The important crops of this district are Paddy, Maize, Ragi, Banana, Sugarcane, Cotton, Tamarind, Coconut, Mango, Groundnut, Vegetables and Flowers also grown by the local people.

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Medicinal species: The nearby area is also endowed with the several medicinal species which are commonly available in the shrub forest and waste lands. The common medicinal species of the region are *Asparagus racemosus* (satamulli), *Azadirachta indica* (Neem) etc.

Rare and endangered floral species: There are no rare or endangered or threatened (RET) species of in the study area. During the vegetation survey, there are no any species which are endangered or threatened under IUCN (International Union for Conservation of Nature and Natural resources) guidelines.

3.7.7 Faunal Communities

Both direct and indirect observation methods were used to survey the fauna.

- **Point Survey Method:** Observations were made in each site for 15 minutes duration.

Roadside Counts: The observer traveled by motor vehicles from site to site, all sightings were recorded (this was done both in the day and night time). An index of abundance of each species was also established.

Pellet and Track Counts: All possible animal tracks and pellets were identified and recorded (South Wood, 1978).

Additionally, survey of relevant literature was also done to consolidate the list of fauna distributed in the buffer zone.

Based on the Wildlife Protection Act, 1972 (WPA 1972, Anonymous. 1991, Upadhyay 1995, Chaturvedi and Chaturvedi 1996) species were short-listed as Schedule II or I and considered herein as endangered species. Species listed in Ghosh (1994) are considered as Indian Red List species.

Methodology Adopted:

Point Survey method was adopted for this development project where observations were made in each site for 15 minutes duration (10 times).

Study in the core zone:

Point Survey method was adopted for the study within 2 km radius and the following species were observed.

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Mammals: No wild mammalian species was directly sighted during the field survey. Discussion with local villagers located around the study area also could not confirm presence of any wild animal in that area. Three striped Palm Squirrel, Common Indian Hare, Common mongoose, Common Mouse etc were observed during primary survey.

Avifauna: Since birds are considered to be the indicators for monitoring and understanding human impacts on ecological systems (Lawton, 1996) attempt was made to gather quantitative data on the avifauna by walk through survey within the entire study area and surrounding areas. From the primary survey, a total of 26 species of avifauna were identified and recorded in the study area. The diversity of avifauna from this region was found to be quite high and encouraging.

The list of fauna species found in the study area is mentioned in Table below.

Table 3-20 List of fauna species

Scientific Name	Common Name	Schedule of wild life protection act	IUCN conservation status
Mammals			
Funambulus pennanti	Palm Squirrel	IV	Least Concern
Mus rattus	Indian rat	IV	Not listed
Bandicota bengalensis	Indian mole rat	IV	Least Concern
Funambulus palmarum	Three striped palm squirrel	IV	Least Concern
Herestes edwardsii	Common Mongoose	IV	Not listed
Mus musculus	Common Mouse	IV	Least Concern
Bandicota indica	Rat	IV	Least Concern
Lepus nigricollis	Indian Hare	IV	Least Concern
Felis catus	Cat	Not listed	Not listed
Canis lupus familiaris	Indian dog	Not listed	Not listed
Bos Indicus	Indian Cow	Not listed	Not listed
Bubalus bubalis	Buffalo	I	Not listed
Sus scrofa domesticus	Domestic pig	Not listed	Not listed
Birds			
Milvus migrans	Black kite	IV	Least concern
Saxicoloides fulicatus	Indian Robin	IV	Least concern
Pycnonotus cafer	Red vented Bulbul	IV	Least concern
Phragamaticola aedon	Thick billed warbler	IV	Least concern
Pericrocotus cinnamomeus	Small Minivet	IV	Least concern
Eudynamys scolopaceus	Koel	IV	Least concern

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Psittacula krameni	Rose ringed parakeet	IV	Least concern
Dicrurus marcocercus	Black drongo	IV	Least concern
Columba livia	Rock pigeon	IV	Least concern
Corvus splendens	House crow	IV	Least concern
Alcedo atthis	Small blue kingfisher	IV	Least concern
Cuculus canorus	Common Cuckoo	IV	Least concern
Reptiles & Amphibians			
Chameleon zeylanicum	Chameleon	IV	Not listed
Calotes versicolor	Common garden lizard	II	Not listed
Bungarus caeruleus	Common krait	IV	Not listed
Ophisops leschenaultia	Snake eyed lizard	--	Not listed
Bufo melanostictus	Toad	IV	Least concern
Ptyas mucosa	Rat snakes	IV	Least concern
Hemidactylus sp.	House lizard	--	Not listed
Butterflies			
Danaus chrysippus	Plain Tiger	--	Not listed
Papilio demoleus	Common lime	--	Not listed
Euploea core	Common crow	--	Least concern
Danaus genutia	Common tiger	--	Not listed
Eurema brigitta	Small grass yellow	--	Least concern

3.8 DEMOGRAPHY AND SOCIO ECONOMICS

The demography survey study is done within 10km radius from the project site.

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Subbagiri	258	1096	540	556	349	288	370	0
Jakkeri	852	3681	1898	1783	1165	848	596	0
Pachapanetti	205	967	499	468	275	198	392	0
Kammandoddi	2174	9160	4855	4305	3403	2439	1503	13
Sanamavu	1093	4816	2532	2284	1547	1054	422	0
Ullagam	2101	9530	4788	4742	3480	2923	1487	0
Ullati	1607	6656	3411	3245	2475	1968	1360	0
Moranapalli	925	4248	2182	2066	1487	1062	659	183
Marandapalli	605	2764	1428	1336	960	635	509	11
Shoolagiri	2174	9160	4855	4305	3403	2439	1503	13
Samanapalli	1093	4816	2532	2284	1547	1054	422	0

3.9 TRAFFIC IMPACT ASSESSMENT

Traffic data collected continuously for 24 hours by visual observation and counting of vehicles under three categories, viz., heavy motor vehicles, light motor vehicles and two/three wheelers. As traffic densities on the roads are high, two skilled persons were deployed simultaneously at each station during each shift- one person on each of the two directions for counting the traffic. At the end of each hour, fresh counting and recording was undertaken. Total numbers of vehicles per hour under the three categories were determined.

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Figure 3.10: Site Connectivity

Table 3-22: No. of Vehicles per Day

S. No	Vehicles Distribution	Number of Vehicles Distribution/Day	Passenger Car Unit (PCU)	Total Number of Vehicle in PCU
		SH 422	-	SH 422
1	Cars	840	1	840
2	Buses	303	3	909
3	Trucks	365	3	1095
4	Two wheelers	985	0.5	492.5
5	Three wheelers	385	1.5	577.5
	Total	2878	-	3914

Table 3-23: Existing Traffic Scenario and LOS

Road	V (Volume in PCU/hr)	C (Capacity in PCU/hr)	Existing V/C Ratio	LOS
SH 17	3914/24=163	413	0.4	B

Note: The existing level may be "Very Good" for SH 422.

V/C	LOS	Performance
0.0-0.2	A	Excellent

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0.2-0.4	B	Very Good
0.4-0.6	C	Good/ Average/ Fair
0.6-0.8	D	Poor
0.8-1.0	E	Very Poor

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4 ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

This chapter describes the anticipated impacts on the environment and mitigation measures. The method of assessment of impacts including studies carried out, modeling techniques adopted to assess the impacts where pertinent should be elaborated in this chapter. It should give the details of the impacts on the baseline parameters, both during the construction and operational phases and suggests the mitigation measures to be implemented by the proponent.

4.1 INTRODUCTION

An environmental impact is defined as any change to the environment, whether adverse or beneficial, resulting from a facility's activities, products, or services. The anticipation of the possible & potential Environmental impact due to the project is a key step in EIA. Based on the impacts assessed, appropriate mitigation measures should be adopted to maintain the environment with less or no damage.

Environmental Impacts can be group into Primary impacts & Secondary Impacts

Primary Impacts: These impacts are directly attributed by the project

Secondary Impacts: These are those which are induced by primary impacts and include the associated investments and changed patterns of the social and economic activities by the action.

Assessment of impacts is done for the following Environmental Parameters:

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

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4.2 LAND ENVIRONMENT:

Aspect	Impact	Mitigation Measures
<i>Mining of rough stone and Gravel</i>	<p>The 2.16.0 Ha mine is located in Venkatesapuram Village having 253495 m³ of Rough stone. The quarry operation is proposed to carry out with conventional open cast semi-mechanized mining with 5.0 meter vertical bench and bench width of 5.0 meter. At the end of 5 years, mining lease area will be converted into ultimate pit.</p> <p>The main impact of open cast mining on land-use is land degradation. The land is bound to be excavated for mining of Rough Stone Quarry.</p> <p>Impact on soil of the study area will be minimal as there are no wastewater generated, heavy metal infusion, stack emissions.</p> <p>Impact due to transformation of terrain characteristics over the large area results in soil degradation.</p> <p>Solid waste will be generated from the mining activity as there will be refuse also generation of domestic waste. If it is not properly managed, may cause odor and health problem to the workers.</p>	<p>The project site is not prone to any kind of soil erosion (Source: Bhuvan).</p> <p>In addition, garland drainage of 1m x 1m will be provided to avoid storm water run-off.</p> <p>It is proposed to plant 1080 No's of local tree species (Neem, Vilvam Vaagai, Pungam, Magizha maram, Eachai, etc.,) along the roads, outer periphery of the mining area which enhances the binding property of the soil.</p> <p>It is proposed to improve the affected land wherever possible for better land use, so as to support vegetation and creation of water reservoir in the ultimate pit after quarrying.</p> <p>The source of dust generation is majorly due to drilling, blasting, loading & unloading of the mined-out mineral, the impact will be mitigated by water sprinkling regularly once in 3hrs.</p> <p>The mining activity is proposed to be carried out in hilly terrain.</p>

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		<p>After removal of minerals, undulating portion will be created. Excavated area or ultimate pit at the end of the mine period will be converted into water reservoir. Two tier tree belts will be planted along the safety distance.</p> <p>The 100 % recovery is achieved by extracting the entire mineable reserve. Hence there will be no refuse generation due to the mining activity. Apart from that, a very meagre quantity of domestic waste will be generated in the project, which will be handed over to the local body on daily basis.</p>
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4.3 WATER ENVIRONMENT:

Aspect	Impact	Mitigation Measures
<i>Drilling, Blasting, Loading and unloading, Transportation of the excavated mineral.</i>	<p>The mining in the area may cause ground water contamination due to intersection of the water table and mine runoff.</p> <p>The ground water depletion may occur due to mining activity</p>	<p>The water table will not be intersected during mining, as the ultimate depth is limited upto 47 m (12 m topsoil and 35 m rough stone) (including the existing depth) whereas the ground water table is at 90 m below the ground level. The municipal wastewater will be disposed into septic tanks of 5 cum and soak pit. No chemicals consisting of toxic elements will be used for carrying out mining activity.</p> <p>The ground water table is at a depth of 90 m BGL, the mining operation will not affect the aquifer. The ultimate pit at the end of the mining operation will be used for rainwater storage, the stored water will be used for green belt development and further the stored water will</p>

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	<p>Chemicals consisting of nitrate used for blasting may pollute the surface run off.</p> <p>Improper management of Domestic wastewater in the Mine lease may create unhygienic conditions in the site thereby causing health impacts to the labours.</p>	<p>be used for domestic purposes (other than drinking) after proper treatment. Further, the run-off water will be stored in sumps and after proper treatment; water will be used in the mining operation for dust suppression.</p> <p>Provision of urinals/Latrines along with septic tank followed by soak pit arrangement will be provided in the Mine Lease area for the proper management of wastewater.</p>
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4.4 AIR ENVIRONMENT:

Aspect	Impact	Mitigation Measures
<p><i>Drilling, Blasting, Loading and unloading, Transportation of the excavated mineral.</i></p>	<p><i>Impacts during Operation Phase</i> During mining operation, fugitive dust and other air pollutants like particulate matter (PM10 & PM 2.5) will be generated.</p> <p>The main source of pollutants arises due to drilling and blasting. 4 Nos of Tipper will be used for loading and unloading, 3 Nos of Excavator (1.2 m³ bucket capacity, and 5 Nos Jack Hammer will be used for excavation of the mineral which contributes to the generation of fugitive dust. In addition, blasting will be done using explosives leading to the generation of dust.</p>	<p><i>Mitigation Measures during Operation Phase</i> It is proposed to plant 1080 Nos of local species along the haul roads, outer periphery within the lease area to prevent the impact of dust in consultation with Forest department for the plantation of trees (Neem, Magizham, Tamarind, Elandhai and Vilvam) in two tier to combat air pollution and with herbs (Nerium) in between the tree species.</p> <p>Planning transportation routes of the mined out mineral, so as to reach the nearest paved roads (an approach road) by shortest route connecting to SH 422.</p> <p>Alternatively, gravelled road may be constructed between mine lease area and nearest paved road connectivity. The speed of trucks plying on the haul road will be limited to</p>

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	<p><u><i>Effect on Human</i></u></p> <ul style="list-style-type: none"> • Adverse effect on human health of working labourers and neighbouring villagers like effect on breathing and respiratory system, damage to lung tissue, influenza or asthma. • Dust generation due to loading and unloading of mineral and due to transportation can also affect the workers as well as nearby villagers. <p><u><i>Effect on Plants</i></u></p> <ul style="list-style-type: none"> • Stomatal index may be minimized due to dust deposit on leaf. 	<p>20km/hr to avoid generation of dust. The trucks will be covered by tarpaulin. Overloading will be avoided.</p> <p>Personal Protective Equipments (PPEs) like eye goggles, dust mask, leather gloves, safety shoes & boots will be provided to the workers engaged at dust generation points like excavation and loading points.</p> <p>0.5 KLD of water will be proposed for sprinkling on unpaved roads to avoid dust generation during transportation.</p>
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Air Quality Modeling:

The AERMOD is actually a modeling system with three separate components:

- AERMOD (AERMIC Dispersion Model),
- AERMAP (AERMOD Terrain Preprocessor)
- AERMET (AERMOD Meteorological Preprocessor)

4.4.1 Source Characterization

A detailed listing of all emission sources and their corresponding modelling input release parameters and emission rates is listed this report. A general description of how each source type was treated is presented below.

The emission Sources from the proposed operation are

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Point Sources:

Point sources for mining operations are typically include dust collectors, hot water heaters, and emergency generator(s). Since at the present project the following sources are anticipated.

1. Hydraulic excavator – 0.90 Cum Bucket Capacity (with Rock Breaker Attachment)
2. Jack Hammer 32 mm Dia
3. Tipper
4. Tractor Mounted - Compressor
5. Drilling and excavation with Accessories

Road Sources:

A road network was developed to depict the anticipated haul truck routes and truck discharge locations during the mine operations. The anticipated emissions from the road sources and corresponding anticipated impact during the monitoring period of November 2023 to January 2024 emissions were estimated. Emissions due to haul road and general plant traffic on the unpaved road network were modelled as volume sources. The model volume source parameter for the haul roads initially utilized USEPA developed emission factors for hauling trucking. The haul road sources utilized source to source spacing of 6 meters along the simulated haul roads. The initial lateral dimension of the sources were set to 3 m were used as an input to replicated a 2 truck travel adjacent for a typical mining scenario.

The parameters considered for the hauling operation include the following,

- size of haul trucks commonly used
- degree of dust control/compaction of permanent haul roads

Other fugitive particulate emission sources:

Other fugitive particulate emission sources that were modelled as volume sources include the following:

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- Fugitive emissions from trucks unloading at the primary crusher were represented by a single volume source. The release height was set to 0 meters (dump pocket is at grade level).
- Fugitive emissions due to wind erosion is not considered as the mining area is predominately rocky surface with minimal wind erosion. If an wind erosion is anticipated to occur, it would be localized.
- Fugitive emissions from transfer points were represented by single volume sources. The release heights for these sources were set to the actual height of the truck transfer process.

Post Project Scenario

Emissions from operations will result from process equipment and mining operations. Process equipment was modeled at maximum capacity. Emissions from mining were based upon the mining rate and haul truck travel necessary to transport the stones and waste from the pit to the storage area.

Predicted maximum ground level concentrations considering micro meteorological data of November 2023 to January 2024 are superimposed on the maximum baseline concentrations obtained during the study period to estimate the post project scenario, which would prevail at the post operational phase. The overall scenario with predicted concentrations over the maximum baseline concentrations is shown in the following table along with isopleths.

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Table 4-1 Emission Factors for uncontrolled mining

Activity	Emission Factor		References	
Topsoil handling	Scraper	0.029 Kg TSPM/ average time between spray application	USEPA (2008)	
	Bulldozing	15.048 kg PM10/ Hr excavation	USEPA (2008)	
	Loading	2.3237E-04 kg PM10/ average time between spray application	USEPA (2006a)	
	Haulage	0.69718 kg PM10/VKT	USEPA (2006a) Cowherd (1988)	
Rough stone mining	Wet drilling	8.00E-5 lbs PM10/ Ton produce	EPA. August, 2004. Section 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing. In: Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, Fifth Edition, AP-42. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. Research Triangle Park, North Carolina.	
	Loading	1.00E-4 lbs PM10/ Ton produce		

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4.5 **NOISE ENVIRONMENT:**

Aspect	Impact	Mitigation Measures
<i>Drilling, Blasting, Loading and unloading, Transportation of the excavated mineral.</i>	<p>Usage of Equipments (Excavator, Tipper, Jack Hammer), Machinery and trucks used for transportation will generate noise.</p> <p>Noise from the machinery can cause hypertension, high stress level, hearing loss, sleep disturbance etc due to prolonged exposure.</p> <p>Number of vehicles will be increased due to the proposed mining activity hence vehicle may collate which may result in unwanted sound and can also cause impact on human health like breathing and respiratory system, damage to lung tissue, influenza or asthma.</p>	<ul style="list-style-type: none"> • The machinery will be maintained in good running condition so that noise will be reduced to minimum possible level. • Awareness will be imparted to the workers once in six months about the permissible noise level and effect of maximum exposure to those levels. Adequate silencers will be provided in all the diesel engines of vehicles. • It will be ensured that all transportation vehicles carry a valid PUC Certificates. • Speed of trucks entering or leaving the mine will be limited to moderate speed (20km/hr) to prevent undue noise from empty vehicles. <p>The noise generated by the machinery will be reduced by proper lubrication of the machinery and other equipments.</p> <ul style="list-style-type: none"> • It is proposed to plant 1080 Nos. of local species (Neem, Mandharai, Athi, Tamarind, Ashoka, Casuarinas and Villam) to reduce the impact of noise in the study area. The development of green belts around the periphery of the mine will be implemented to attenuate noise. • The trucks will be diverted on two roads viz. SH 422 to avoid traffic congestion. • Health check-up camps will be organized once in six month.

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		<ul style="list-style-type: none"> • Use of personal protective devices i.e., earmuffs and earplugs by workers, who are working in high noise generating areas. • Provision of quiet areas, where employees can get relief from workplace noise.
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4.6 BIOLOGICAL ENVIRONMENT:

Aspect	Impacts	Mitigation Measures
Site Clearance	Loss of habitat due to site clearance which may lead to ecological disturbance.	The mining lease is already a dry land hence no site clearance is required. Only few shrubs and herbs like parthenium sp., prosopis juliflora were present.
Planting of trees	Development of afforestation in the mine lease area will have a positive impact as the land was initially a barren.	safety distance will be provided all along the boundary of the mine lease area and safety. Around 0.15.0 Ha of land is utilized for greenbelt development (1080 Nos -3 years). This will attract avifauna thus enhancing the existing ecological environment.

4.7 SOCIO ECONOMIC ENVIRONMENT:

Aspect	Impact	Mitigation Measures
Proposed implementation of Mining activity	Land acquisition for the implementation of the project may result in loss of assets, which in return will make the PAP to shift, losing their normal routine and livelihood	The project is a Patta land and the land is vacant where there are no human settlement within 300m radius. Hence the project does not involve Rehabilitation and resettlement
Drilling, Blasting, Loading and Transportation of the mined out mineral	The mining activities may cause dust emission, noise pollution thereby causing disturbance to the local habitat	No human activity is envisaged near the project site. The nearest human settlement is observed in Athimugam village which is 1.5 km E of the project site
Grazing and Rearing activities in the nearby villages	The Grazing and rearing of local animals like Sheep, Goat and cows is observed in the nearby villages, which may be affected due to the project as the	It is proposed to use gravelled road and nearest paved road and preferred not to use unpaved roads. In addition to that, the speed of trucks

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	movement of the vehicles may affect/injure the animals	will be limited to 20km/hr to avoid any accidents.
Employment opportunity	The project will improve the livelihood of the local people	After the development of the proposed mine, it will improve the livelihood of local people and also provide the direct and indirect employment opportunities. The rough stone for the infrastructural development in the area will be made available from the local markets at reasonably lower price.
Corporate Environmental Responsibility	The project will help in natural resource augmentation & Community resource development.	As a part of CER i.e, 5 Lakhs will be allocated for: Provision of basic amenities such as safe drinking water, Hygienic toilet facilities, furniture's, Greenbelt development and Environmental awareness books in library, Solar lights to Govt High School, Athimugam – 2.03 km, SE

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4.8 OTHER IMPACTS:

S. No	Aspect	Impact	Mitigation measure
1.	Risk due to the proposed mining	Accidents may occur in the mine area	Proper PPE kit (Safety jacket, Helmet, Safety Shoes, Gloves) etc will be provided to each and every employee in the mine lease concerning the safety of each labour
2.	Blasting	Injury to the labours due to the blasting activity	Alarm system in the form of Siren will be engaged in the project site to caution the blasting activity. In addition to that, the blasting activity will be scheduled at particular time – 5 P.M to 6 P.M (or whenever required) so that the employees will be aware of the activity. Smoking will be banned in the site and sign boards will be displayed in various places at site.
3.	Screening of Labors	Labors will be checked for health condition before employing them in mining activity	All the labors will be checked and screened for health before employing them. After employing them, periodical medical checkups will be held once in every six months.

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5 ANALYSIS OF ALTERNATIVES

5.1 GENERAL

Analysis of alternative is a significant aspect in planning and designing any project. Cost benefit analysis should be work out along with other parameters while choosing an alternative in such a way that the production is maximum and the mining operation is environment friendly and cost effective. The mine plan and mine closure plan Mining Plan was approved by The Assistant Director , Geology & Mining, Krishnagiri District prior to submission of the Form-1 and PFR.

ToR issued by the SEIAA-TN vide Letter No. SEIAA-TN/F. No. 10425/SEAC/1(a)ToR-6406/2024 Dated: 24.09.2024. The study for alternative analysis involves in-depth examination of site and technology.

5.1.1 Analysis for Alternative Sites and Mining Technology

5.1.1.1 Alternative Site

The project is the mining of Rough Stone Quarry and is proposed after prospecting the area. In other words, these can be implemented in the mineral available zone. Since the mining block has been allotted in principal by the State Government, there is no case for studying and exploring any other site as an alternative.

5.1.1.2 Alternative Technology

The open cast mining could be manual/mechanized depending upon the geological and topographical setup of the mineral (ROM) to be won and the daily/annual targeted production.

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Table 5-1: Alternative for Technology and other Parameters

S. No.	Particular	Alternative Option 1	Alternative Option 2	Remarks
1.	Technology	Opencast semi mechanized mining	Opencast mechanized mining	Opencast semi mechanized Involving drilling and blasting are preferred. Benefits: Material is hard so to make it loose and to bring it to appropriate size.
2.	Employment	Local employment.	Outsource employment	Local employment is preferred Benefits: Provides employment to local people along with financial benefits No residential building/housing is required.
3.	Labour transportation	Public transport	Private transport	Local labours will be deployed from nearby village so they will either reach mine site by bicycle or by foot. Benefits: Cost of transportation of labors will be negligible
4.	Material transportation	Public transport	Private transport	Material will be transported through trucks/trolleys on the contract basis Benefits: It will give indirect employment.
5.	Water	Tanker supplier	Ground water/	Tanker supply will be preferred. Water will be sourced from Athimugam Village which is about \approx 1.5 Km - East side of the

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6 ENVIRONMENTAL MONITORING PROGRAM

6.1 GENERAL:

This chapter covers the planned environmental monitoring program. It also includes the technical aspects of monitoring the effectiveness of mitigation measures.

Monitoring is important to measure the efficiency of control measures. Post project monitoring of environmental parameters is of key importance to assess the status of environment. The monitoring program will serve as an indicator for identifying environmental degradation due to operation of the project and help in selection of appropriate mitigation measures to safeguard the environment.

Regular monitoring is as important as control of pollution since the efficacy of control measures can only be determined by monitoring. The project proponent has awarded **M/s. Ecotech Labs Pvt Ltd** for carrying out the post project environmental monitoring (PPM) and timely compliance report submission to various regulatory authorities.

Therefore, regular monitoring programme of the environmental parameters is essential to take into account the changes in the environmental quality. The objectives of monitoring are to:-

- Verify effectiveness of planning decisions;
- Measure effectiveness of operational procedures;
- Confirm statutory and corporate compliance; and
- Identify unexpected changes.

Table 6-1: Environmental Monitoring Programme

Parameters	Sampling	Frequency	Location
Air environment – Pollutants PM 10 PM 2.5 SO ₂ NO _x	7 locations	24 hourly twice a week 4 hourly. Twice a week, One non monsoon season 8 hourly, twice a week 24 hourly, twice a week	Project Site, Government High School, Devasanapalli, Government Polytechnic College, Kelamangalam, St. Anthony's Church Nagamangalam, Ayaranapalli, Jama Masjid, Mosque, Thirumalaigowni kotta,

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			Sri Nagamuneswara Temple, Onnagurukki, Thimmarayaswamy Temple, Gudisaganapalli
Noise	7 locations	24 hourly Once in 7 locations	Project Site, Government High School, Devasanapalli, Government Polytechnic College, Kelamangalam, St. Anthony's Church Nagamangalam, Ayaranapalli, Jama Masjid, Mosque, Thirumalaigowni kotta, Sri Nagamuneswara Temple, Onnagurukki, Thimmarayaswamy Temple, Gudisaganapalli
Water (Ground water) <ul style="list-style-type: none"> • pH • Temperature • Turbidity • Magnesium • Hardness • Total Alkalinity • Chloride • Sulphate • Fluoride • Nitrate • Sodium • Potassium • Salinity • Total nitrogen • Total Coliforms • Fecal Coliforms 	7 locations	Once in 7 locations	Project Site, Government High School, Devasanapalli, Government Polytechnic College, Kelamangalam, St. Anthony's Church Nagamangalam, Ayaranapalli, Jama Masjid, Mosque, Thirumalaigowni kotta, Sri Nagamuneswara Temple, Onnagurukki, Thimmarayaswamy Temple, Gudisaganapalli

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Water (surface water) <ul style="list-style-type: none"> • pH • Temperature • Turbidity • Magnesium Hardness • Total Alkalinity • Chloride • Sulphate • Fluoride • Nitrate • Sodium • Potassium • Salinity • Total nitrogen • Total Coliforms • Fecal Coliforms 	Sample from nearby lakes/river	One time Sampling	Obeapalayam Lake and Ponnaiyar River
Soil (Organic matter, Texture, pH, Electrical Conductivity, Permeability, Water holding capacity, Porosity)	7 locations	Once in 7 locations	Project site GH, Shoolagiri Primary Health Centre, Payarkuttalai Garagamma Temple, Vanamangalam GHS UANGATTI - School, Punnagaram Sree Vanamuneshwara Swamy Temple, Nerigam Muniswaran Temple, Mensandoddi
Ecology and biodiversity Study	Study area covering 5 km radius	One time Sampling	

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Socio- Economic study (Population, Literacy Level, employment, Infrastructure like school, hospitals & commercial establishments)	Villages around 5 km radius	One time Sampling	
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Table 6-2: Monitoring Schedule during Mining

S. No.	Attributes	Parameters	Frequency	Location
1.	Ambient Air Quality at Mine Site & Fugitive Dust Sampling	PM 10 PM 2.5 SO ₂ NO _x	Once in a Month	Project Site
2.	Ground water Quality	Drinking Water Parameters, As per IS - 10500: 2012	Half yearly	Project Site
3.	Surface Water Quality	Class will be assessed as per the CPCB Guidelines	Half yearly	Project Site
4.	Soil Quality	(Organic matter, Texture, pH, Electrical Conductivity, Permeability, Water holding capacity, Porosity)	Half yearly	Project Site
5.	Noise Level Monitoring	Noise level in dB(A) Quarterly/half yearly	Half yearly	Project Site

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7 ADDITIONAL STUDIES

7.1 **GENERAL**

This chapter covers the details of the additional studies viz. Risk assessment, Disaster Management, Public Hearing, Rehabilitation and Resettlement.

7.1.1 *Public Hearing:*

As the mining project falls under 1(a), Category B1 – Cluster Mining includes
Existing Quarries- Thiru. V Nagaraja - 2.16.0 Ha and Sumukha Blue metals 3.75.0 Ha
Abandoned /Old Quarries – Thiru. S Rajendiran & N Muniraj - 5.00.0 Ha & 5.00.0 Ha
Proposed Quarries – Nil

Hence under 7(III) of EIA notification 2006 and its subsequent amendments, the project involves the Public Consultation and the same will be conducted under SPCB (TN) in Krishnagiri District. The proceedings of the same will be incorporated in the Final EIA Report.

7.1.2 *Risk assessment:*

For mining projects to be successful, it should meet not only the production requirements, but also maintain the highest safety standards for all the workers. The industry has to identify the hazards, assess the associated risks and bring the risks to tolerable level regularly. Mining has considerable safety risk to miners. Unsafe conditions and practices in mines lead to a number of accidents and causes loss and injury to human lives, damages the property, interrupt production etc. Risk assessment is a systematic method of identifying and analyzing the hazards associated with an activity and establishing a level of risk. The hazards cannot be completely eliminated, and thus there is a need to define and estimate an accident risk level possible to be presented either in quantitative or qualitative way.

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7.1.3 Identification of Hazard

7.1.3.1 Blasting Pattern:

The quarrying operation will be carried out in conjunction with conventional method of mining using Jack hammer drilling and blasting for shattering effect and loosen the Rough stone.

7.1.3.2 Drilling and Blasting:

Drilling and Blasting parameters are as follows:

1	Diameter of the hole	32-36 mm
2	Spacing	60 Cms
3	Depth	1 to 1.5 m
4	Charge / Hole	D.Cord with water or 70gms of gun powder or Gelatine.
5	Pattern of hole	Zig Zag
6	Inclination of hole	70° from the horizontal.
7	Quantity of rock broken	0.45 MT x 2.6 = 1.17 MT
8	Control Blasting efficiency @90%	1.17 x 90% = 1.05MT / hole
9	Charge per hole	140 gms of 25mm dia cartridge
10	Quantity of rock broken per day	281.66 m ³

a. Types of explosives to be used:

Slurry Class 3 explosives, type of nitro compound are proposed to be used for shattering and heaving effect for removal and winning of Rough Stone. No deep hole drilling or Primary blasting is proposed. Detonators of Class 3 and Safety fuse of Class 6 are used.

b. Measures proposed to minimize ground vibration due to Blasting:

The quarry is situated more than 1.0 km from the nearby villages. Controlled blasting measures will be adopted for minimizing ground vibration and fly of rock. Shallow depths jackhammer drilling & blasting is proposed to be carried out with minimum use of explosive mainly to give the shattering effect in rough stone for easy excavation and to control fly of rocks.

Diameter of Holes = 30-32mm
 Depth = 1.2 to 1.5 m

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Storage and safety measures to be taken while blasting: The proponent will engage an authorized explosive agency to carry out the small amount of blasting and it will be supervised by competent and statutory Foreman/Permit Mines Manager.

Heavy Machineries: The following heavy machineries will be used in the proposed area:

- For Mining – Excavator of 1.2 Cum Bucket capacity , Jack Hammers (32-36 mm Dia) of 5 No. Loading Equipment – Excavator of 1.2 Cum Bucket Capacity
- Transportation (includes within the mine and mine to destination) – Tipper 3 No of 10 M.T capacity (from quarry to needy peoples and local crushers)

a. Risk:

Most of the accidents during transport of mined out mineral using other heavy vehicles are often attributed to mechanical failures and human errors.

b. Mitigation measures to minimize the risk

- At the time of loading no person will be allowed within the swing radius of the excavation.
- The dumpers/ trucks will stand near the loading equipment and fully braked when the muck is filled in it.
- The truck would be brought to a lower level so that the loading operation suits to the ergonomic condition of the workers.
- The workers will be provided with helmets, gloves and safety boots; loading and unloading operations will be carried out only during daylight
- All the mining machineries will be regularly maintained and checked such as brakes, lights and horns to keep in the efficient working order.

7.1.4 General Precautionary measures for the Risk involved in the mine:

- In order to take care of above hazard/disaster, the following control measures will be adopted:
- All safety precautions and provisions of Mine Act,1952, Metalliferous Mines Regulation, 1961 and Mines Rules, 1955 will be strictly followed during all mining operations;

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- Entry of unauthorized persons will be prohibited;
- Firefighting and first-aid provisions in the ECC and mining area;
- Provisions of all the safety appliances such as safety boot, helmets, goggles etc. will be made available to the workers (22 Nos.) and regular inspection for their use;
- In case of eventuality, first aid will be given by the senior safety office in the mine area initially to the injured person. The safety officer will give notice of accident as per Rule-23 of Mines Act-1952;
- The safety officer (common for 3 mines within 500m radius) will be responsible for coordination between management district authorities/DGMS etc. Regarding general safety as per Rule-181 of MMR 1961, "No person shall negligently or will fully do anything likely to endanger life or limb in the mine, or negligible or will fully omit to do anything necessary for the safety of the mine or of the persons employed there in". The workers will be provided with protective foot wear and safety helmets;
- Cleaning of mine faces will be regularly done;
- Handling of explosives, charging and blasting will be carried out by highly skilled labors only;
- Regular maintenance and testing of all mining equipment as per manufacturer's guidelines;
- Suppression of dust by sprinkling water on the haulage roads;

7.1.5 Safety Team:

The effective implementation of compliance of Safety Rules/ Statutory Provisions will be ensured. The safety officer will be engaged, meeting the requirement of Mines Act and their duties and responsibilities. The safety officer will be responsible for identification of the hazardous conditions and unsafe acts of workers and advice on corrective actions, conduct safety audit, organize training programs and provide professional expert advice on various issues related to occupational safety and health. Organizing safety training will be conducted to employees and contractor labors periodically.

7.1.6 Emergency Control Centre

The emergency control center will be provided to handle the emergency. The site main controller, key personnel and the senior officers of the fire and police services will attend it.

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The center will be equipped to receive and transmit information and directions from and to the incident controller and other areas of the works, as well as outside. The emergency control center will be sited in an area of minimum risk. This common Emergency control centre will be used for the mines around the 500m radius.

7.2 DISASTER MANAGEMENT

The possible risks in the case of stone along with associated minor minerals mining projects are fly rock, vibration failure of pit, slope and waste dump, accidents due to transportation. Mining and allied activities are associated with several potential hazards to both the employees and the public at large. Safety of the mine and the employees is taken care of by the mining rules & regulations, which are well defined with laid down procedure for safety, which when scrupulously followed, safety is ensured not only to manpower but also to machines & working environment.

7.2.1 Emergency Management Plan For Mines On Site- Offsite Emergency Preparedness Plan:

The emergency plan delineates the procedures for dealing with accidents or unexpected events and natural calamities arising from mining activity. An experience of any accidents that have occurred in other manufacturing/mining projects is considered to prepare this plan. This Emergency plan should be periodically reviewed and modified. It should also be changed based on the observations of emergency mock drills and experience of handling actual emergencies.

Major objectives of this onsite – offsite emergency plan are:

- To take necessary proactive and preventive actions to avoid the emergency.

The main aim of any emergency plan should be to prevent emergency situations.

To train the manpower to handle the emergencies of the following nature:

- Onsite (Within ML boundary)
- Offsite (Outside ML boundary)

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7.2.1 Onsite off-site emergency Plan:

1- Emergency on account of:

- Fire
- Explosion
- Major accidents involving man-made collapse of the mining edges.
- Snake bites, attack by honey bees or attack by wild animals.

2- Disaster due to natural calamities like:

- Flood/ heavy rains which can involve natural landslides.
- Earth quake
- Cyclone
- Lightening

7.2.2 Emergency Plan:

- The mining operations should be immediately stopped in case of any emergency. A siren will be sounded during emergency time.
- An emergency assembly point will be created and all the workers will guide visitors or contractors to approach assembly point.
- Emergency vehicle (Ambulance) will be available in the nearby place, in proximity to the three mines and will rush to the emergency control centre at the blowing of emergency siren. The driver of emergency vehicle will follow the instructions of Incident Controller/Site Main Controller.
- Workers will be trained for the precautions to be taken during natural disasters like heavy rain, floods, earthquake and cyclone.
- All escape routes from mines to the assembly point or any other safe location will be made and the escape plan will be displayed in many places in the mine area

7.2.3 Emergency Control:

- Shut down of mining operations: Raising the alarm or siren followed by immediate safe shut down of the power supply, and isolation of affected areas.
- Treatment of injured: First aid and hospitalization of injured persons

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- Protection of environment and property: During mitigation, efforts will be made to prevent impacts on environment and property to the extent possible.
- Preserving all evidences and records: This will be done to enable a thorough investigation of the true causes of the emergency.
- Ensuring safety of personnel prior to restarting of operations: Efforts required will be made to ensure that work environment is safe prior to restarting the work.

7.3 NATURAL RESOURCE CONSERVATION

There are no natural resources within the premises. The conservation strategies for energy will be followed in the mine lease area. The pollutants of the mine will be minimized by adopting appropriate mitigation measures as mentioned Chapter 5 to prevent the effects on nearest water bodies. No surface runoff from the project site will be let into the nearest water bodies.

7.4 RESETTLEMENT AND REHABILITATION

The Mine lease area is a Patta land. There is no displacement of the population within the project area and adjacent nearby area and hence Rehabilitation & Resettlement is not applicable.

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8 PROJECT BENEFITS

8.1 GENERAL

This chapter covers the benefits accruing to the locality, neighborhood, region and nation as a whole. It brings out the details of benefits by way of improvements in the physical infrastructure, social infrastructure, employment potential and other tangible benefits.

8.1.1 Physical Benefits

The opening of the project will enhance the following physical infrastructure facilities in the adjoining areas:

Market: Generating useful economical resource for construction. Due to demand supply chain, excavated mineral (Rough stone) will sold in the market in the affordable price.

Infrastructure: The excavated rough stone will be used for **Laying Roads, Building & Construction Projects, Bridges.**

Enhancement of Green Cover & Green Belt Development: As a part of reclamation plan, native tree species will be planted along the safety boundary of the mine lease area. A suitable combination of trees that can grow fast and also have good leaf cover will be adopted to develop the green belt. It is proposed to plant 1080 numbers of native species along with some fruit bearing and medicinal trees during the mining plan period.

8.2 SOCIAL BENEFITS

The mining in the area will create rural employment. During site visit, it has been observed that the economic conditions of the villages in the study area is quite normal. After the development of the mine, it will improve the livelihood of local people and also provide the indirect employment opportunities. The rough stone for the infrastructural development in the area will be made available from the local markets at reasonably lower price.

As a part of CER, i.e., 5 Lakhs will be allocated. The detailed agenda, which is to be executed has been framed. The salient features of the programmes are as follow:

Provision of basic amenities such as safe drinking water, Hygienic toilet facilities, furniture's, Greenbelt development and Environmental awareness books in library, Solar lights to Govt High School, Athimugam – 2.03 km, SE

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8.3 PROJECT COST / INVESTMENT DETAILS

S. No.	Description	Cost (Rs.)
1	Fixed cost	25,90,000
2	Operational cost	40,00,000
	Total Cost	65,90,000

EMP Costing:

	Mitigation Measure	Provision for Implementation	Capital	Recurring
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	Rental Dozer & drainage construction on haul road @ Rs. 10,000/- per hectare; and yearly maintenance @ Rs. 10,000/- per hectare	21600	21600
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	Fixed Sprinkler Installation and New Water Tanker Cost for Capital; and Water Sprinkling (thrice a day) Cost for recurring	30000 0	20000
	Air Quality will be regularly monitored as per norms within ML area & near Reserve forest with necessary permission	Yearly Compliance as per CPCB norms	0	20000
	Muffle blasting – To control fly rocks during blasting	Blasting face will be covered with sand bags / steel mesh / old tyres / used conveyor belts	0	0
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	Dust extractor @ Rs. 25,000/- per unit deployed as capital & @ Rs. 2500 per unit recurring cost for maintenance	25000	2500

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	No overloading of trucks/tippers/tractors	Manual Monitoring through Security guard	0	5000
	Stone carrying trucks will be covered by tarpaulin	Monitoring if trucks will be covered by tarpaulin	0	10000
	Enforcing speed limits of 20 km/hr within ML area	Installation of Speed Governors @ Rs. 5000/- per Tipper/Dumper deployed	5000	0
	Regular monitoring of exhaust fumes as per RTO norms	Monitoring of Exhaust Fumes by Manual Labour	0	5000
	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	Provision for 2 labours @ Rs.10,000/labour (Contractual) per Hectare	0	43200
	Installing wheel wash system near gate of quarry	Installation + Maintenance + Supervision	40000	10000
Noise Environment	Source of noise will be during operation of transportation vehicles, HEMM for this proper maintenance will be done at regular intervals.	Provision made in Operating Cost	0	0
	Oiling & greasing of Transport vehicles and HEMM at regular interval will be done	Provision made in Operating Cost	0	0
	Adequate silencers will be provided in all the diesel engines of vehicles.	Provision made in Operating Cost	0	0
	It will be ensured that all transportation vehicles carry a fitness certificate.	Provision made in Operating Cost	0	0
	Safety tools and implements that are required will be kept adequately near blasting site at the time of charging.	Provision made in OHS part	0	0
	Ambient Noise will be regularly monitored as per norms within ML area & near Reserve forest with necessary permission	Yearly Compliance as per CPCB norms	0	0

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	Line Drilling all along the boundary to reduce the PPV from blasting activity and implementing controlled blasting.	Provision made in Operating Cost	0	0
	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	0	0
	Provision for Portable blaster shed	Installation of Portable blasting shelter	50000	2000
	NONEL Blasting will be practiced to control Ground vibration and fly rocks	Rs. 30/- per 6 Tonnes of Blasted Material	0	12674 75
Water Environment	Water management	Provision for garland drain @ Rs. 10,000/- per Hectare with maintenance of Rs. 5,000/- per annum	21600	5000
Waste Management	Waste management (Spent Oil, Grease etc.,)	Provision for domestic waste collection and disposal through authorized agency	1000	5000
		Installation of dust bins	5000	2000
	Bio toilets will be made available outside mine lease on the land of owner itself	Provision made in Operating Cost	0	0
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	Fixed Display Board at the Quarry Entrance as permanent structure mentioning Environmental Conditions	7000	1000
	Workers will be provided with Personal Protective Equipment's	Provision of PPE @ Rs. 4000/- per employee with recurring based on wear and tear (say, @ Rs. 1000/- per employee)	72000	18000

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	Health check up for workers will be provisioned	IME & PME Health check up @ Rs. 1000/- per employee	0	18000
	First aid facility will be provided	Provision of 2 Kits per Hectare @ Rs. 2000/-	0	4320
	Mine will have safety precaution signages, boards.	Provision for signages and boards made	10000	2000
	Barbed Wire Fencing to quarry area will be provisioned.	Per Hectare fencing Cost @ Rs. 2,00,000/- with Maintenance of Rs 10,000/- per annum	43200 0	10000
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles /HEMMs. Flaggers will be deployed for traffic management	Parking area with shelter and flags @ Rs. 50,000/- per hectare project and Rs. 10,000/- as maintenance cost	10800 0	10000
	Installation of CCTV cameras in the mines and mine entrance	Camera 4 Nos, DVR, Monitor with internet facility	2000	5000
	Implementation as per Mining Plan and ensure safe quarry working	Mines Manager (1 st Class / 2 nd Class / Mine Foreman) under regulation 34 / 34 (6) of MMR, 1961 and Mining Mate under regulation 116 of MMR,1961 @ 40,000/- for Manager & @ 25,000/- for Foreman / Mate	0	78000 0
Green Belt Development	Green belt development - 500 trees per one hectare (200 Inside Lease Area & 300 Outside Lease Area)	Site clearance, preparation of land, digging of pits / trenches, soil amendments, transplantation of saplings @ 200 per plant (capital) for plantation inside the lease area and @ 30	86400	12960

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		per plant maintenance (recurring)		
		Avenue Plantation @ 300 per plant (capital) for plantation outside the lease area and @ 30 per plant maintenance (recurring)	19440 0	19440
			1381 000	22994 95

Year 1	Year 2	Year 3	Year 4	Year 5
3680495	2414470	2535193	2661953	2795051

Year 6	Year 7	Year 8	Year 9	Year 10
3625303	3081543	3235620	3397401	3567271

Total EMP Cost for 10 Years - Rs. 3,09,94,301/-

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9 ENVIRONMENTAL COST ANALYSIS

Not Applicable, Since Environmental Cost Benefit Analysis not recommended at the Scoping stage.

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10 ENVIRONMENTAL MANAGEMENT PLAN

10.1 INTRODUCTION

This chapter comprehensively presents the Environmental Management Plan (EMP), which includes the administrative and technical setup, summary matrix of EMP, the cost involved to implement the EMP, during various Mining activities and provisions made towards the same in the cost estimates of project. This chapter describes the proposed monitoring scheme as well as inter-organizational arrangements for effective implementation of the mitigation measures.

10.2 SUBSIDENCE

Mining will be carried out by opencast semi-mechanized mining method with drilling & blasting as per mining plan approved by Department of Mining and Geology, Krishnagiri. Subsidence/slope failures are not envisaged because there are no loose strata overlying the deposit (mineral to be excavated). The bench height will be 5 m. The individual bench slope has been proposed to be kept at 60° from horizontal. Moreover, all safety standards/ safeguards will be implemented as per guidelines prescribed by Director General of Mines Safety.

10.3 MINE DRAINAGE

10.3.1 *Storm water Management*

The following measures will be taken with respect to the prevailing site conditions.

- Storm water drains with silt traps of size 1m x 1m will be suitably constructed all along the periphery of the pit area to collect the run-off from the mine area and divert into the pit.
- All measures will be taken not to disturb the existing drainage pattern adjacent to the mine lease area.
- The storm water collected from the mine area will be utilized for dust suppression on haul roads, plantation within the premises, etc.,

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10.3.2 Drainage

Local workers will be deployed for the project. But, urinals and Latrines will be provided and the same will be connected to septic tank followed by soak pit arrangement. No domestic waste will be deposited into the nearby area. Regular checking will be carried out to find any blockage due to silting or accumulation of loose materials. The drains will also be checked for any damage in lining / stone pitching, etc.

10.3.3 Administrative and Technical Setup

The Environment Management Plan (EMP) will consist of all mitigation measures for each component of the environment due to the activities increased during mining operation to minimize adverse environmental impacts resulting from the activities of the project.

To carry out the above activities, Thiru. G. Perumal will work in association with M/s. Ecotech Labs Pvt Ltd.

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Table 10-1: Impacts and mitigation measures

S. No	Impacts on Environment	Activity /Aspect	Anticipated impacts	Mitigation measures
1.	Air	Fugitive Emission	During mining operation, fugitive dust and other air pollutants like particulate matter (PM10 & PM 2.5) will be generated.	Planting of trees along the safety distance of the Mine Lease Area Water will be sprinkled in the site as dust suppression measure.
2.	Water	Wastewater Generation	Improper management of Domestic wastewater in the Mine lease may create unhygienic conditions in the site thereby causing health impacts to the labors	Provision of urinals/Latrines along with septic tank followed by soak pit arrangement will be provided in the Mine Lease area for the proper management of wastewater.
3.	Noise	Mining activities like drilling, blasting, loading and transportation	Noise from the machinery can cause hypertension, high stress level, hearing loss, sleep disturbance etc due to prolonged exposure. Apart from Mining activities like drilling, blasting may generate noise	Use of personal protective devices i.e., earmuffs and earplugs by workers, who are working in high noise generating areas.
4.	Land	Improper management of Storm water Runoff	Storm water Runoff may result in Soil Erosion	Garland drainage of 1m x 1m will be provided to avoid storm water runoff.
5.	Social Responsibility	Mining workers	Unhygienic site sanitation facilities may cause health damage to workers.	The objective is to ensure health and safety of the workers with effective provisions for the basic facilities of sanitation, drinking water, safety of equipments or machinery etc. The following will be done in the site ✓ By complying with the safety procedures,

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				<p>norms and guidelines (as applicable) as outlined in the National Building Code of India, Bureau of Indian Standards.</p> <ul style="list-style-type: none"> ✓ Provide adequate number of decentralized latrines and urinals ✓ Providing Septic tank along with Soak pit arrangement ✓ Providing First Aid room, conducting frequent health checkups to labor and conducting free medical camps ✓ Providing safety helmet, Gloves, Jacket & Boots ✓ Providing measures to prevent fires. Fire fighting extinguishers and buckets of sand will be provided in the construction site
6.	Building materials resource conservation	Building Material consumption	Use of farfetched construction materials than the locally available construction materials may lead to over exploitation of natural resources & increase in carbon footprint.	<ul style="list-style-type: none"> • Use of locally available construction materials.

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11 SUMMARY & CONCLUSION

This chapter summarizes the overall justification for implementation of the project and explains how the potential impacts are mitigated.

11.1 INTRODUCTION

The Rough Stone Quarry site is a cluster of three mining projects. The individual mine lease area is 2.16.0 Ha of Rough Stone Quarry located at S S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District.

11.2 PROJECT OVERVIEW

Table 11-1: Project Overview

S. No.	Description	Details
1	Project Name	Thiru. V Nagaraja, Rough Stone Quarry
2	Proponent	Thiru. V Nagaraja
3	Mining Lease Area Extent	2.16.0 Ha (Patta land)
4	Location	S.F. S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu
5	Latitude	12° 45'13.88" N To 12° 45'22.70" N
6	Longitude	77° 57' 34.81" E To 77° 57' 39.68" E
7	Topography	Hilly terrain topography
8	Site Elevation above MSL	847 m from MSL
9	Topo sheet No.	57-H/14
10	Minerals of Mine	Rough Stone Quarry
11	Proposed production of Mine	Proposed Capacity of reserves for 5 Years ➤ Rough stone : 253495 m ³
12	Ultimate depth of Mining	47 m (12 m topsoil and 35 m rough stone) (including the existing depth)
13	Method of Mining	Open cast semi-mechanized mining
14	Water demand	1.9 KLD
15	Source of water	Water will be supplied through tankers supply
16	Man power	18 Nos.

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoologiri Taluk, Krishnagiri District</i>	

17	Mining Plan Approval	Scheme of Mining Plan was approved by The Deputy Director, Department of Geology & Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 24.01.2024.
18	Precise area communication letter	Precise Area Communication Letter received from The District Collector, Department of Geology and Mining, Krishnagiri District vide Rc. No.478/2018/Mines 2 dated 26.07.2018
19	Production details	Geological reserves: 696340 m ³ of Rough stone Proposed year wise reserves (3 years): 253495 m ³ of Rough stone
20	Boundary Fencing	10 m safety distance all along the boundary for Govt. Lands. Fencing will be provided.
21	Disposal of overburden	The top soil generation from the lease area is estimated to be 107722 m ³ for 3 years. The top soil formation will be removed and dumped in in Western Side boundary barrier of the lease area. This will be utilized for road low laying area and plantation purposes.
22	Ground water	The ground water table is reported as 90 m BGL in nearby open wells and bore wells of this area. Mining depth taken as 47 m (12 m topsoil and 35m rough stone) (including the existing depth). Now, proposed quarry depth is above the water table. Hence, quarrying may not affect the ground water.
23	Habitations within 300m radius of the Project Site	There is no Habitation within 300m radius of the project site.
24	Drinking water	Water will be supplied through tankers from Athimugam village which is 1.5 km East of the project site.

11.3 JUSTIFICATION OF THE PROPOSED PROJECT

The said project plays a significant role in the domestic as well as infrastructural market. To achieve a huge infrastructure being envisaged by Government of India, particularly in road and housing sector, there is a need for basic building materials. The rough stone form the primary building material.

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

Rough stone is one of the most valuable natural building materials. Aggregates are mostly used for building roads and footpaths. Aggregates – stone used for its strong physical properties – crushed and sorted into various sizes for use in concrete, coated with bitumen to make asphalt or used 'dry' as bulk fill in construction. Mostly used in roads, concrete and building products. Aggregates represent about 98% of quarry output, most of which is used in road construction, maintenance and repair. Much of this goes to the production of asphalt; the remainder is used 'dry' without the addition of other materials to provide a sturdy base for roads.

Krishnagiri District is covered with wide range of metamorphic rocks of peninsular gneissic complex. These rock formations occur as massive hillocks all over the district in Patta lands and patta lands, and extensively weathered formations are overlain by soil / alluvium deposits with an average thickness of 1 to 5mts. Rough stone deposits suitable for the production of Jelly, Cut stones and Pillar Stones are available throughout the Krishnagiri District. Rough stones are widely used in this district as building stones, boulders, cut stones and for the production of Jelly, M.Sand, Crusher Dust. The rock products which are produced not only used in the Krishnagiri District alone but also transported to the neighboring districts. These products enter into the market in different parts of the country.

Table 11-2: Anticipate Impacts & Appropriate Mitigation Measures

S. No.	Potential Impact	Mitigation Measure
1	The main impact in the air environment is dust emission during various mining activities such drilling, blasting, excavation, loading and transportation. The dust emission may affect the quality of ambient air in the and around the mine area. The increased emission may cause respiratory & Cardiovascular problems in human health	Proper mitigation measures like water sprinkling on haul roads will be adopted to control dust emissions. To control the emissions regular preventive maintenance of equipments will be carried out on contractual basis. Plantation will be carried out along approach roads & mine premises.
2	Waste water will be generated due to mining activity and from other domestic activities. These may contaminate the ground water leading to ground water. The mining activity may affect the ground water table	No waste water will be generated from the mining activity of minor minerals as the project only involves lifting of over burden from mine site. The wastewater generated from the domestic activity will be disposed off safely through the proposed septic tank.

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

		Mining will not intersect ground water table. Hence the water table will not be impacted due to the project
3	Noise will be generated in the mine area during various mining activities such as blasting, drilling, excavation. During transportation of the mined out mineral, there may be noise generation due to the movement of vehicles. This may impact the health condition of the workers by creating headache	<p>Periodical monitoring of noise will be done.</p> <p>No other equipments except the transportation vehicles and Excavator (as & when required) for loading will be allowed at site.</p> <p>Noise generated by these equipments shall be intermittent and does not cause much adverse impact.</p> <p>Plantation will be carried out along approach roads. The plantation minimizes propagation of noise and also arrest dust.</p>
4	Solid waste will be generated from the mining activity as there will be refuse after 95% recovery and also generation of domestic waste	The 95 % recovery is achieved by extracting the entire mineable reserve. Hence there will be no refuse generation due to the mining activity. Apart from that, a very meagre quantity of domestic waste will be generated in the project, which will be handed over to the local body on daily basis.
5	During mining activities, there are chances of workers getting health issues or may be prone to accidents	<p>Dust masks will be provided as additional personal protection equipment to the workers working in the dust prone area.</p> <p>Periodical trainings will be conducted to create awareness about the occupational health hazards due to activities like blasting, drilling, excavation</p> <p>Workers health related problem if any, will be properly addressed.</p>

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

12 DISCLOSURE OF CONSULTANT

12.1 INTRODUCTION

This chapter presents the details of the environmental consultants engaged, their background and the brief description of the key personnel involved in the project. Specific studies on the mining project have been carried out by engaging engineers/experts of Ecotech Labs Pvt. Ltd, Chennai. Ecotech Labs Pvt. Ltd (ETL), Chennai is NABET accredited consultancy organization. ETL is equipped with in-house, spacious laboratory, accredited by NABL (National Accreditation Board for Testing & Calibration Laboratories), Department of Science & Technology, Government of India and MoEF & CC.

12.2 ECO TECH LABS PVT. LTD - ENVIRONMENT CONSULTANT

Eco Tech Labs Pvt. Ltd is a multi-disciplinary testing and research laboratory in India. Eco Tech labs provides high quality services in environmental consultancy, engineering solution, chemical and microbiological laboratory analysis of food, water and environment (Air, Water, Soil) with highest accuracy.

The Quality policy

- We at Eco Tech Labs Pvt. Ltd. engaged in providing Environmental consulting services and we are committed to strengthen our capabilities in all areas of our operations in line with customer requirements & expectations, applicable legal requirements & stakeholders expectations.
- We are committed to establish and maintain Quality Management System (QMS) for continual improvement in processes and Services
- We are committed to provide customized solutions in realistic, time bound and cost effective to achieve highest degree of customer satisfaction and Environmental improvement.
- We shall establish, maintain & periodically review our documented management systems, objectives and performance in consultation with our employees and prevailing best practices.

<i>Project</i>	<i>Rough Stone Quarry- 2.16.0 Ha</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru. V Nagaraja</i>	
<i>Project Location</i>	<i>Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District</i>	

- Effective communication of organization's policy and objectives to employees and seeking feedbacks from all our employees and concerned stakeholders for continual improvement.

ANNEXURE I
TOR & TOR COMPLIANCE



THIRU. A.R.RAHUL NADH, I.A.S.,
MEMBER SECRETARY

STATE LEVEL ENVIRONMENT IMPACT
ASSESSMENT AUTHORITY-TAMILNADU

3rd 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/E.No.10425/SEAC/I(a)ToR.6406/2024 Dated:24.09.2024.

To

Thiru. V. Nagaraja,
S/o. Venkatappa Reddy,
Koppa Village,
Hulimangala Post,
Anekal Taluk,
Bangalore District – 560 105.

Sir / Madam,

Sub: SEIAA, Tamil Nadu – Proposed Rough Stone Quarry lease over an extent of 2.16.0 Ha (Patta Land) at S.F.Nos. 287/1 of Venkateshapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu by Thiru V. Nagaraja - under project category – “B1” and Schedule S.No.1(a) “Mining of Minerals Projects” of EIA Notification, 2006, as amended – **ToR issued along with Public Hearing** - preparation of EIA report – Regarding.

Ref:

1. Online proposal No. SIA/TN/MIN/430837/2023 dt.26.05.2023.
2. Your application submitted for Terms of Reference dated:26.09.2023.
3. Minutes of the 417th SEAC meeting held on 18.10.2023.
4. Minutes of the 494th SEAC meeting held on 05.09.2024.
5. Minutes of the 757th SEIAA meeting held on 24.09.2024.

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

The proponent, Thiru V. Nagaraja has submitted an application for Terms of Reference (ToR) on: 26.09.2023, for the Proposed Rough Stone Quarry lease over an extent of 2.16.0 Ha (Patta Land) at S.F.Nos. 287/1 of Venkateshapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu.

Discussion by SEAC and the Remarks:-

The proposal was placed in the 494th meeting of SEAC held on 05.09.2024. The details of the project furnished by the proponent are given in the website (parivesh.nic.in).

The SEAC noted the following:

1. The project proponent, **Thiru V. Nagaraja** has applied for Terms of Reference for the Proposed Rough Stone Quarry lease over an extent of 2.16.0 Ha (Patta Land) at S.F.Nos. 287/1 of Venkateshapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu.
2. The project/activity is covered under Category "B1" of Item 1(a) "Mining of Minerals Projects" of the Schedule to the EIA Notification, 2006.
3. Earlier, EC was accorded to the project proponent by DEIAA vide Lr.No.03/DEIAA-KGI/EC.No.98/2018 dated.27.08.2018 for a period of 5 years from the date of execution of mining lease. EC was accorded for the quantity of 14,25,102m³ of rough stone up to a depth of 148m.
4. Now, based on MoEF&CC O.M dated.24.04.2023, the proponent has submitted the application at SEIAA-TN for re-appraisal of EC granted by DEIAA.
5. The revised production for the period 2023-24 to 2025-26 is 2,53,495m³ of rough stone up to the depth of 47m (28m above ground level + 19m below ground level).
6. Previously, the proposal was placed in the 417th SEAC meeting held on 18.10.2023. Based on the details furnished by the Project Proponent, the SEAC directed the PP to submit the following details:
 - a) Last Permit issued for carrying out the mining & transportation of minerals (Rough stone) by the concerned AD (Mines), Department of Geology & Mining.
 - b) Modified Mining Plan for accommodating the bench geometry of not more than 6 m bench height and bench width of not less than the bench height, approved duly by the concerned AD (Mines), Department of Geology & Mining.
 - c) Certified Compliance Report for the previous EC issued by the DEIAA obtained from the IRO, MoEF & CC, Chennai and action plan for the remedial measures.



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7. Subsequently, the proponent submitted a reply to the queries raised in the 417th SEAC meeting.
8. In view of the above, the proposal is again placed in this 494th SEAC meeting. The reply furnished by the proponent is as follows:

S.NO	QUERY	REPLY
1	Last Permit issued for carrying out the mining & transportation of minerals (Rough stone) by the concerned AD (Mines), Department of Geology & Mining.	The last permit issued by the Deputy Director vide letter dated.16.10.2023 is submitted.
2	Modified Mining Plan for accommodating the bench geometry of not more than 6 m bench height and bench width of not less than the bench height, approved duly by the concerned AD (Mines), Department of Geology & Mining.	The Modified Mining Plan obtained from the Deputy Director (Mines), Department of Geology & Mining vide Letter No. 478/2018/Mines dated:24.01.2024 is submitted.
3	Certified Compliance Report for the previous EC issued by the DEIAA obtained from the IRO, MoEF & CC, Chennai and action plan for the remedial measures.	Certified Compliance Report EP/12.1/2024-25/SEIAA/21/TN/956 dated. 28.06.2024 obtained from IRO of MoEF&CC for the previous EC issued by the DEIAA is submitted.

Based on the presentation made by the proponent, **SEAC decided to recommend the proposal for Terms of Reference (TOR) with Public Hearing subject to the following additional TORs & ToRs in Annexure of this minutes**, in addition to the standard terms of reference for EIA study for non-coal mining projects and details issued by the MOEF & CC to be included in EIA/EMP Report:

1. The proponent shall furnish details on the Kalam situated near the project site including its distance from the lease area, season of operation, workers involved, etc.
2. From the KML file uploaded, it was ascertained that structures are situated within 300m radius from the lease area. The details of the structures located within the radius of (i) 50 m, (ii) 100


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m, (iii) 200 m, (iv) 300 m & upto 1km shall be enumerated with photographs. The details such as the number & purpose of the building, number dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc. shall be furnished. The PP shall spell out the mitigation measures proposed for the protection of those structures during quarrying operations shall also be included in the EIA report.

3. A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of statutory personnel, appropriate environmental monitoring, good maintenance of haul roads and village/panchayat roads, authorized blasting operation etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal:

- (i) Copy of the agreement forming CMC.
 - (ii) The Organisation chart of the Committee with defining the role of the members
 - (iii) The 'Standard Operating Procedures' (SoP) executing the planned activities.
2. Since water bodies are situated nearby, the PP shall carry out the scientific studies to assess the hydrogeological condition of the quarry to determine impacts of the mining operation on the ground water conditions in the waterbodies.
3. The proponent shall furnish photographs of adequate fencing, garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.
4. The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report.
5. The PP shall prepare the EMP for the entire project life of mine, i.e, 10 years and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.
6. The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding village and structures.

ANNEXURE – SEAC STANDARD TOR

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



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- (ii) Quantity achieved Vs EC Approved Quantity
 - (iii) Balance Quantity as per Mineable Reserve calculated.
 - (iv) Mined out Depth as on date Vs EC Permitted depth
 - (v) Details of illegal/illicit mining
 - (vi) Violation in the quarry during the past working.
 - (vii) Quantity of material mined out outside the mine lease area
 - (viii) Condition of Safety zone/benches
 - (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.
2. Details of habitations around the proposed mining area and latest VAO certificate regarding the location of habitations within 300m radius from the periphery of the site.
 3. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc.
 4. The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within 1 km of the proposed quarry.
 5. The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report.
 6. The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.
 7. In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of



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- the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.
8. However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.
 9. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.
 10. The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.
 11. The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.
 12. If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,
 13. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?
 14. Quantity of minerals mined out.
 - Highest production achieved in any one year
 - Detail of approved depth of mining.
 - Actual depth of the mining achieved earlier.
 - Name of the person already mined in that leases area.
 - If EC and CTO already obtained, the copy of the same shall be submitted.
 - Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.
 15. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
 16. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,



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17. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.
18. The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same.
19. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.
20. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.
21. The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.
22. The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.
23. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.
24. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be



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- prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
25. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.
 26. Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.
 27. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
 28. Impact on local transport infrastructure due to the Project should be indicated.
 29. A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity.
 30. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.
 31. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.
 32. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix-I in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.
 33. Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner



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34. A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.
35. A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.
36. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
37. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
38. The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
39. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
40. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
41. If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.
42. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.

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.



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Appendix -I
List of Native Trees Suggested for Planting

No	Scientific Name	Tamil Name	Tamil Name
1	<i>Aegle marmelos</i>	Vilvam	வீலவம்
2	<i>Adenaanthera pavonina</i>	Manjadi	மஞ்சாடி, ஆனைக்குன்றிமணி
3	<i>Albizia lebbek</i>	Vaagai	வாகை
4	<i>Albizia amara</i>	Usil	உசில்
5	<i>Bauhinia purpurea</i>	Mantharai	மந்தாரை
6	<i>Bauhinia racemosa</i>	Aathu	ஆத்தி
7	<i>Bauhinia tomentos</i>	Iruvathu	இருவாத்தி
8	<i>Buchanania axillaris</i>	Kattuma	காட்டுமர
9	<i>Borassus flabellifer</i>	Panai	பனை
10	<i>Butea monosperma</i>	Murukkamaram	முருக்கமரம்
11	<i>Borax coiba</i>	Ilavu, Sevilavu	இலவு
12	<i>Calophyllum inophyllum</i>	Punnai	புள்ளை
13	<i>Cassia fistula</i>	Sarakondrai	சரக்கொன்றை
14	<i>Cassia roxburghii</i>	Sengondrai	செங்கொன்றை
15	<i>Chloroxylon swietenia</i>	Purasamaram	புரசு மரம்
16	<i>Cochlospermum religiosum</i>	Kongu, Manjallavu	கோங்கு, மஞ்சள் இலவு
17	<i>Cordia dichotoma</i>	Naruvuli	நருவூளி
18	<i>Cretova adansonii</i>	Mavalingum	மாவிளங்கம்
19	<i>Dillenia indica</i>	Uva, Uzha	உசா
20	<i>Dillenia pentagyna</i>	SiruUva, Sitruzha	சிறு உசா
21	<i>Diospyro sebenum</i>	Karungali	கருங்காலி
22	<i>Diospyro schloroxylon</i>	Vaganai	வாகளை
23	<i>Ficus amplissima</i>	Kalltchi	கல் இச்சி
24	<i>Hibiscus tiliaceou</i>	Aatrupoovarasu	ஆறுறுப்புலக
25	<i>Hardwickia binata</i>	Aacha	ஆச்சா
26	<i>Holoptilia integrifolia</i>	Aayili	ஆயா மரம், ஆயிலி
27	<i>Lannca coronandolica</i>	Odhiam	ஒதியம்
28	<i>Lagerstroemia speciosa</i>	Poo Marudhu	பூ மருது
29	<i>Lepisanthus tetraphylla</i>	Neikottaimaram	நெய் கொட்டை மரம்
30	<i>Limonia acidissima</i>	Vila maram	விலா மரம்
31	<i>Litsea glutinos</i>	Pisinpattai	அரம்பா, பிச்சிப்பட்டை
32	<i>Madhuca longifolia</i>	Iluppai	இறுப்பை
33	<i>Manilkara hexandra</i>	UlakkaiPaalai	உலக்கை பாலை
34	<i>Mimusops elengi</i>	Magizhamaram	மகிழ்மரம்
35	<i>Mitragyna parvifolia</i>	Kadambu	கடம்பு
36	<i>Morinda pubescens</i>	Nuna	நுணா
37	<i>Morinda citrifolia</i>	Vellai Nuna	வெள்ளை நுணா
38	<i>Phoenix sylvestre</i>	Eachai	ஈச்சமரம்
39	<i>Pongamia pinnat</i>	Pungam	புங்கம்



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40	<i>Premna mollissima</i>	Muttai	முனை
41	<i>Premna serratifolia</i>	Narumunai	நறு முனை
42	<i>Premna tomentosa</i>	Malaipoovarasu	மலை புவரக
43	<i>Prosopis cinerea</i>	Varu maram	வன்னி மரம்
44	<i>Pterocarpus marsupium</i>	Vengai	வேங்கை
45	<i>Pterospermum canescens</i>	Vennangu, Tada	வெண்ணாங்கு
46	<i>Pterospermum xylocarpum</i>	Polavu	புலவு
47	<i>Pulthranjiva roxburghii</i>	Karipala	கறிபாலா
48	<i>Salvadora persica</i>	Ugaa Maram	ஊகா மரம்
49	<i>Sapindus emarginatus</i>	Manupungan, Soapukai	மணிப்புகள் சோப்புக்காய்
50	<i>Saraca asoca</i>	Asoca	அசோகா
51	<i>Strobilus asper</i>	Piray maram	பிராய் மரம்
52	<i>Strychnos nuxvomica</i>	Yetti	எட்டி
53	<i>Strychnos potatorum</i>	Therthang Kottai	தேத்தான கொட்டை
54	<i>Syzygium cumini</i>	Navai	நாவல்
55	<i>Terminalia bellaric</i>	Thandri	தான்றி
56	<i>Terminalia arjuna</i>	Ven marudhu	வெண் மருது
57	<i>Toona ciliata</i>	Sandhana vembu	சந்தன வேம்பு
58	<i>Thespesia populnea</i>	Pirvarasu	புவரக
59	<i>Walsuratrifoliata</i>	valsura	வால்கரா
60	<i>Wrightia tinctoria</i>	Veppalai	வெப்பாலை
61	<i>Pithocellotium dulce</i>	Kodakkapuli	கொடுக்காப்பளி

Discussion by SEIAA and the Remarks:-

The subject was placed in the 757th authority meeting held on 24.09.2024. The Authority noted that the subject was appraised in the 494th SEAC meeting held on 05.09.2024. 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, standard conditions stipulated by MoEF&CC & the following conditions and the conditions mentioned in 'Annexure B' of this minutes.

- i) Public Hearing should be conducted strictly as per the procedures laid down in the EIA Notification, 2006 & it's subsequent amendments, by submitting all the necessary documents.
- ii) EIA & EMP should address all the concerns raised during Public Hearing.
- iii) All the siting criteria should be meticulously addressed along with the KML file and with supporting documents.



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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 & emergency management plan, fire safety & evacuation plan and sustainable development goals pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.
6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail in the EIA Report.
7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.
8. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public in the vicinity.

Agriculture & Agro-Biodiversity

9. Impact on surrounding agricultural fields around the proposed mining Area.
10. Impact on soil flora & vegetation around the project site.
11. Details of type of vegetation including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetation all along the boundary of the proposed mining area shall committed mentioned in EMP.


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12. The Environmental Impact Assessment should study the agro-biodiversity, agro-forestry, horti-cultural plantations, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.
13. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.
14. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.

Forests

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

Water Environment

19. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.
20. Erosion Control measures.
21. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas.
22. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.
23. The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities.



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24. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.
25. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.
26. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.
27. The EIA shall include the impact of mining activity on the following:
 - a) Hydrothermal/Geothermal effect due to destruction in the Environment.
 - b) Bio-geochemical processes and its foot prints including environmental stress.
 - c) Sediment geochemistry in the surface streams.

Energy

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

Climate Change

29. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.
30. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and physical, chemical & biological soil features.
31. Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood.

Mine Closure Plan

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



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EMP

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

Risk Assessment

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

Disaster Management Plan

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

Others


37. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.
38. As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.
39. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

A. STANDARD TERMS OF REFERENCE

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


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- been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
- 2) A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
 - 3) All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
 - 4) All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
 - 5) Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
 - 6) Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
 - 7) It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.
 - 8) Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
 - 9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
 - 10) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife


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

- 11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
- 12) Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- 13) Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
- 14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- 16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
- 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished



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based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.

- 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
- 20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
- 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
- 22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.


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- 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 predominant wind direction may also be indicated on the map.
- 24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
- 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
- 28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 29) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
- 30) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
- 31) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater



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- ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
- 32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
 - 33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
 - 34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
 - 35) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
 - 36) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
 - 37) Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
 - 38) Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
 - 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
 - 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
 - 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.


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



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

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

1. Project name and location (Village, District, State, Industrial Estate (if applicable)).
2. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes.
3. Measures for mitigating the impact on the environment and mode of discharge or disposal.
4. Capital cost of the project, estimated time of completion.
5. The proponent shall furnish the contour map of the water table detailing the number of wells located around the site and impacts on the wells due to mining activity.
6. A detailed study of the lithology of the mining lease area shall be furnished.
7. Details of village map, "A" register and FMB sketch shall be furnished.
8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be submitted along with EIA report.
9. Obtain a letter /certificate from the Assistant Director of Geology and Mining standing that there is no other Minerals/resources like sand in the quarrying area within the approved depth of mining and below depth of mining and the same shall be furnished in the EIA report.
10. EIA report should strictly follow the Environmental Impact Assessment Guidance Manual for Mining of Minerals published February 2010.
11. Detail plan on rehabilitation and reclamation carried out for the stabilization and restoration of the mined areas.
12. The EIA study report shall include the surrounding mining activity, if any.
13. Modeling study for Air, Water and noise shall be carried out in this field and incremental increase in the above study shall be substantiated with mitigation measures.
14. A study on the geological resources available shall be carried out and reported.
15. A specific study on agriculture & livelihood shall be carried out and reported.
16. Impact of soil erosion, soil physical chemical and biological property changes may be assumed.
17. Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./ private land, status of its acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest , eco-sensitive zones, accessibility, (note - in case of industrial estate this information may not be necessary)
18. Baseline environmental data - air quality, surface and ground water quality, soil characteristic,


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- flora and fauna, socio-economic condition of the nearby population
19. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
 20. Likely impact of the project on air, water, land, flora-fauna and nearby population
 21. Emergency preparedness plan in case of natural or in plant emergencies
 22. Issues raised during public hearing (if applicable) and response given
 23. CER plan with proposed expenditure.
 24. Occupational Health Measures
 25. Post project monitoring plan
 26. The project proponent shall carry out detailed hydro geological study through intuitions/NABET Accredited agencies.
 27. A detailed report on the green belt development already undertaken is to be furnished and also submit the proposal for green belt activities.
 28. The proponent shall propose the suitable control measure to control the fugitive emissions during the operations of the mines.
 29. A specific study should include impact on flora & fauna, disturbance to migratory pattern of animals.
 30. Reserve funds should be earmarked for proper closure plan.
 31. A detailed plan on plastic waste management shall be furnished. Further, the proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throw away plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986. In this connection, the project proponent has to furnish the action plan.

Besides the above, the below mentioned general points should also be followed:-

- a. A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b. All documents may be properly referenced with index, page numbers and continuous page numbering.
- c. Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.



MEMBER SECRETARY
SEIAA-TN



- d. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF& CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- e. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no F. No.J -11013/77/2004-IA-II(I) dated 2nd December, 2009, 18th March 2010, 28th May 2010, 28th June 2010, 31st December 2010 & 30th September 2011 posted on the Ministry's website <http://www.moef.nic.in/> may be referred.
- After preparing the EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above mentioned points, the proponent will take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.
 - The final EIA report shall be submitted to the SEIAA, Tamil Nadu for obtaining Environmental Clearance.
 - The TORs with public hearing prescribed shall be **valid for a period of three years** from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.



MEMBER SECRETARY
SEIAA-TN

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. Monitoring Cell, IA Division, Ministry of Environment, Forests &CC, Paryavaran Bhavan, CGO Complex, New Delhi 110003
5. The District Collector, Krishnagiri District.
6. Stock File.

COMPLIANCE OF TOR CONDITIONS

Point wise compliance of ToR points issued by SEIAA, TN vide letter No. SEIAA-TN/F. No. 10425/SEAC/1(a)ToR.6406/2024 Dated: 24.09.2024 for Mining of Minor Minerals in the Mine of 'Rough stone Quarry Over an Extent of 2.16 Ha at S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamilnadu State'.

ToR Ref.	Description	Response	Page Ref. in EIA Report
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.	<p>Precise Area Communication Letter received from The District Collector, Department of Geology and Mining, Krishnagiri District vide Rc. No.478/2018/Mines 2 dated 26.07.2018.</p> <p>The Modified Mining Plan was approved by The Deputy Director, Department of Geology & Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 24.01.2024.</p> <p>The Production of Rough Stone & Gravel for five years is proposed in the EIA/EMP in chapter no-2.</p>	<p>Chapter-2</p> <p>Table No.2.2</p> <p>Page No.33</p>
2.	A copy of document in support of the fact that the Proponent is the rightful lessee of the mine should be given.	<p>The mine lease area of 2.16.0 hectare in Venkatesapuram Village for Rough stone. Modified Mining Plan was approved by The Deputy Director, Department of Geology & Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 24.01.2024</p>	<p>Annexure-IV</p>

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 and mining technology and should be in the name of the lessee.	All the documents i.e., Mining Plan, EIA and public hearing are compatible with each other in terms of ML area production levels, waste generation and its management and mining technology are compatible with one another. The Modified Mining Plan was approved by The Deputy Director, Department of Geology & Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 24.01.2024	Annexure-IV
4	All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/toposheet 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).	Details of coordinates of all corners of proposed mining lease area have been incorporated in mining plan and Chapter 2 of EIA/ EMP Report.	Chapter-2, Figure no. 2.2 Page. no. 35
5	Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, important water bodies, streams and rivers and soil characteristics	Topo map as attached in Chapter-2	Chapter-2, Figure no. 2.4 Page. no. 37
6.	Details about the land proposed for mining activities should be given with information as to whether	Details about the land proposed for mining activities should be given Chapter 2.	Chapter-2 Page 31

	<p>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</p>		
7	<p>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?</p> <p>The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or</p>	Noted.	

	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.	It is an open cast mining project. Blasting details are incorporated in Chapter 2.	Chapter-2, Page no. 31
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.	Study area comprises of 10 km radius from the mine lease boundary. Key Plan showing core zone (ML area).	Chapter-2 Figure no. 2.5 Page no. 38
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	Land Use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, National park, migratory routes of fauna, water bodies, human settlements and other ecological features has been prepared and incorporated in Chapter-3 of EIA/ EMP Report. Cauvery North Wildlife Sanctuary- 25 km S of the project site. There is no national park, migratory routes	Chapter 3 Chapter 2, Table no. 2.4 Page no. 39

	to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	of fauna in the study area.	
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.	The top soil generation from the lease area is estimated to be 107722 m ³ for 3 years. The topsoil formation will be removed and dumped in in Western Side boundary barrier of the lease area. This will be utilized for road low laying area and plantation purposes.	Chapter-2, Page no. 31
12	A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it	Complied. The mine lease area is not falling under forest land.	

	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.	The mine lease area is not falling under forest land.	
14	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006	Not Applicable. There is no involvement of forest land in the project area.	
15	The vegetation in the RF / PF areas in the study area, with necessary details, should be	Details of flora have been discussed in Chapter-3 of the EIA/EMP Report.	Chapter-3 Page No. 53

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.	There is a relatively poor sighting of animals in the core and buffer areas of the mining lease. No significant impact is anticipated	
17	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves/ (existing as well as proposed), if any, within 10km 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 State Wildlife Department/Chief	There is no National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger / Elephant Reserves / Critically Polluted areas within 10 km radius of the mining lease area.	Chapter 2, Table no. 2.4 Page no. 39

18	<p>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, 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 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.</p>	<p>Details biological study (flora & fauna) within 10 km radius of the project site have been incorporated in Chapter-3 of EIA/EMP Report.</p> <p>No flora & fauna listed in scheduled I have been found in study area so there is no need of conservation plan. However, all care will be taken for protection of flora & fauna, if any in the lease hold area.</p>	<p>Chapter – 3 Page No. 53</p>
19	<p>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</p>	<p>The proposed mining lease area is not falling under critically polluted area.</p>	

	<p>indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered.</p>		
20	<p>Similarly, for coastal projects, A CRZ map duly authenticated by one of the authorized agencies Similarly, for coastal projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority)</p>	<p>There is no Coastal Zone within 15km radius of the project site.</p>	
21	<p>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</p>	<p>There is no Rehabilitation and resettlement is involved. Land classified as Government land</p>	

	<p>& 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 located in the mine lease area will be shifted or not. The issues relating to shifting of Village including their R&R and socio-economic aspects should be discussed in the report.</p>		
22	<p>One season (non-monsoon) and (Summer Season), (Post monsoon) primary baseline data on ambient air quality CPCB Notification of 2009 water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled</p>	<p>Baseline data collected from November 2023 to January 2024) has been incorporated in EIA/EMP report.</p> <p>The key plan of monitoring station has been discussed in Chapter-4. Locations of the monitoring stations have been selected keeping in view the pre-dominant downwind direction and</p>	Chapter 3

	<p>presented date-wise in the EIA and EMP Report.</p> <p>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 500m of the mine lease in the pre- dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.</p>	<p>location of the sensitive receptors and also that they represent whole of the study area.</p>	
23	<p>Air quality modelling 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 modelling should be</p>	<p>Air quality modelling & Impact of Air quality will be furnished during SEAC meeting.</p> <p>Transportation of mineral during operation of mines will be done by road & SH 17 through dumpers and the impact of movement of vehicles are incorporated in EIA/EMP report.</p>	<p>Chapter-4</p> <p>Chapter 3</p> <p>Page No.103</p>

	<p>provided.</p> <p>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 predominant wind direction may also be indicated on the map.</p>		
24	<p>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.</p>	<p>Total water requirement: 1.9 KLD Dust Suppression: 0.5 KLD Domestic Purpose: 0.9 KLD Plantation :0.5 KLD Domestic Water will be sourced from nearby Athimugam Village (1.5 km E of the project site)</p>	<p>Chapter-2 Table 2.14 Page no.50</p>
25	<p>Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.</p>	<p>Not Applicable Water will be taken from nearby villages</p>	
26	<p>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.</p>	<p>At the last stage of mining operation, almost complete area will be worked to restore the land to its optimum reclamation for future use as water reservoir.</p>	

27	Impact of the project on the water quality, both surface and groundwater should be assessed and necessary safeguard measures, if any required, should be provided.	Impact of the project on the water quality & its mitigation measures has been incorporated in Chapter-4 of EIA/EMP report.	Chapter-4 Page No.106
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. 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.	Maximum working depth: 47 m (12 m topsoil and 35 m rough stone) (including existing depth). The ground water table is reported as 90 m below surface ground level in nearby wells of this area. Now, the present quarry shall be proposed above the water table and hence, quarrying may not affect the ground water So mine working will not be intersecting the ground water table.	Chapter-2 Table 2.2 Page no. 33
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	There is no any stream crossing in the proposed quarry	Executive Summary

	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.	Highest elevation: 847 AMSL Depth: 47m (12 m topsoil and 35 m rough stone) (including existing depth).	Chapter-2 Table no. 2.2 Page no. 33
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 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	Green Belt Development plan is proved given in Chapter 2.	Chapter-2

	the species which are tolerant 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	Impact on local transport infrastructure due to the project has been assessed. There shall not be much impact on local transport. Traffic density from the mining activity has been incorporated in EIA/EMP report.	Chapter-3 Page No.109
33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA report.	Adequate infrastructure & other facilities shall be provided to the mine workers. Details are given in chapter-2 of EIA/EMP	Chapter-2

34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.	Conceptual post mining land use and Reclamation and restoration sectional plates are given in Mining Plan followed by Scheme of mining.	Mining Plan and Plates as Annexure IV
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 in the mining area may be detailed.	Suitable measure will be adopted to minimize occupational health impacts of the project. The project shall have positive impact on local environment. Details are given in chapter-10 of EIA/EMP.	Chapter-10 Page No. 140
36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	Suitable measure will be adopted to minimize occupational health impacts of the project.	Chapter-10 Page No. 140
37	Measures of socio-economic significance and influence to the local community proposed to be provided by the Project	Suitable measures has been discussed in Chapter 4	Chapter-4 Page No. 106

	Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.		
38	Detailed environmental management plan 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.	Environment Management Plan has been described in detail in Chapter-10 of the EIA/EMP Report.	Chapter-10 Page No. 140
39	Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and incorporated in the final EIA/EMP Report of the Project.	Public Hearing proceedings will be given in Final EIA report.	
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.	Not applicable No. litigation is pending against the project in any court.	

41	The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.	<table border="1"> <thead> <tr> <th>S. No</th> <th>Description</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Fixed Asset Cost</td> <td>25,90,000</td> </tr> <tr> <td>2</td> <td>Operational Cost</td> <td>40,00,000</td> </tr> <tr> <td></td> <td>Total</td> <td>65,90,000</td> </tr> </tbody> </table> <p>EMP Cost: 3,09,94,301/- for 10 Years</p>	S. No	Description	Cost	1	Fixed Asset Cost	25,90,000	2	Operational Cost	40,00,000		Total	65,90,000	Chapter-8 Page No. 135
S. No	Description	Cost													
1	Fixed Asset Cost	25,90,000													
2	Operational Cost	40,00,000													
	Total	65,90,000													
42	Disaster Management Plan shall be prepared and included in the EIA/EMP Report.	Disaster Management and Risk Assessment has been incorporated in Chapter-7	Chapter-7 Page No. 131												
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.	Benefits of the project has incorporated	Chapter-8 Page No. 134												
44	Besides the above, the below mentioned general points are also to be followed:														
(a)	Executive Summary of the EIA/EMP report	Executive Summary of EIA Report is given from page No.10-24													
(b)	All documents to be properly referenced with index and continuous page numbering.	Complied													
(c)	Where data are presented in the report especially in tables, the period in which the data were collected and the sources	Complied													

	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.	Complied	
(e)	Where the documents provided are in a language other than English, an English translation should be provided.	Complied	
(f)	The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.	The complete questionnaire has been prepared	
(g)	While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J- 11013/41/2006-IA. II(I) dated 4th August 2009, which are available on the website of this Ministry, should also be followed.	The EIA report has been prepared and complying with the circular issued by MoEF vide O.M. No. J-11013/41/2006-IA. II(I) dated 4th August 2009.	
(h)	Changes, if any made in the	There are no changes in prepared EIA as	

<p>)</p>	<p>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 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</p>	<p>per submitted Form-1 & PFR</p>	
<p>(i)</p>	<p>As per the circular no. J- 11011/618/2010-IA. II(I) dated 30.5.2012, report on the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project by the Regional Office of Ministry of Environment & Forests, if applicable.</p>	<p>Will be complied after grant environment clearance from SEIAA, Tamilnadu</p>	
<p>(j)</p>	<p>The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii)</p>	<p>All Sectional Plates of Quarry is enclosed in Mining Plan.</p>	

	geological maps and sections (iii) sections of mine pit and external dumps, if any clearly showing the features of the adjoining area.		
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Additional TOR by SEAC

S.No.	Condition	Compliance
1.	The proponent shall furnish details on the Kalam situated near the project site including its distance from the lease area, season of operation, workers involved, etc.	There is no Kalam situated near the project site.
2.	From the KML file uploaded, it was ascertained that structures are situated within 300m radius from the lease area. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m. (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship. industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building. number of residents, their profession and income, etc.	Athimugam Village is at a distance of 1.5 km E of the project site. About 6 structures are within the 500m radius of the project site.
3.	A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of statutory personnel, appropriate environmental monitoring, good maintenance of haul roads and village/panchayat roads, authorized blasting operation etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal:	Cluster Management Committee (CMC) will be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of statutory personnel, appropriate environmental monitoring, good maintenance of haul roads and village/panchayat roads, authorized

	<p>(i) Copy of the agreement forming CMC.</p> <p>(ii) The Organisation chart of the Committee with defining the role of the members</p> <p>(iii) The 'Standard Operating Procedures' (SoP) executing the planned activities.</p>	<p>blasting operation etc and the affidavit will be submitted in Final EIA report.</p>
4.	<p>Since water bodies are situated nearby, the PP shall carry out the scientific studies to assess the hydrogeological condition of the quarry to determine impacts of the mining operation on the ground water conditions in the waterbodies.</p>	<p>Hydrogeology study will be conducted and will be submitted during Final EIA report.</p>
5.	<p>The proponent shall furnish photographs of adequate fencing, garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.</p>	<p>The photographs of fencing and greenbelt is enclosed as Annexure VIII .</p>
6.	<p>The Proponent shall carry out Biodiversity study as a part of EIA study and the same shall be included in the Report.</p>	<p>Biodiversity study was conducted by NABET Accredited EIA consultant and the same is included in Chapter 3 of EIA Report.</p>
7.	<p>The PP shall prepare the EMP for the entire project life of mine, i.e., 10 years and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.</p>	<p>EMP for the entire life of project is given in Chapter 9 of EIA Report.</p>
8.	<p>The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the</p>	<p>The details of Blasting pattern is given in Chapter 2 and Cumulative impact is given in Chapter 4 of EIA report.</p>

surrounding village and structures.

ANNEXURE 1

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">(i) Original Pit Dimension(ii) Quantity achieved vs EC Approved Quantity(iii) Balance Quantity as per Mineable Reserve calculated(iv) Mines 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 mines 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 50 m.	<p>The proponent had obtained Environmental Clearance from DEIAA vide Lr. No. 03/DEIAA-KGI/EC No.98/2018 dated 27.08.2018 for a period of 5 Years.</p> <p>The Quarry Pit Dimension details obtained from The Deputy Director, Dept. of Geology and Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 16.10.2023.</p> <p>The details of the approved and permit issued quantity obtained from The Deputy Director, Dept. of Geology and Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 16.10.2023.</p> <p>The proposed bench height is 5.0 m and bench width is 5.0 m</p>
2.	<p>Details of habitations around the proposed mining area and latest VAO certificate regarding the locations of habitations within 300 m radius from the periphery of the site.</p>	<p>The VAO certificate regarding the locations of habitations within 500 m radius from the periphery of the site has been obtained.</p>
3.	<p>The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m. (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with</p>	<p>Athimugam Village is at a distance of 1.5 km E of the project site.</p> <p>About 06 structures are within the 500 m radius of the project site.</p>

	<p>details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship. industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building. number of residents, their profession and income, etc.</p>	
4.	<p>The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within I km of the proposed quarry.</p>	<p>The hydro-geological study will be conducted and the report of the same will be submitted during SEAC Meeting.</p>
5.	<p>The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report</p>	<p>The biodiversity has been studied and discussed in chapter 3 of the Draft EIA Report.</p>
6.	<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>	<p>The letter from DFO stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the project site will be furnished.</p>
7.	<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 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, NIRIW Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg,</p>	<p>The detailed vibration study will be conducted by the reputed reputed scientific / academic institution and the same is included in EMP.</p>

	Surathkal, and Anna University Chennai-CEG Campus. The Pp shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.	
8.	However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.	The Proposed project is an existing quarry which was operational after receiving Environmental Clearance from DEIAA vide Lr. No. 03/DEIAA-KGI/EC No.98/2018 dated 27.08.2018 for a period of 5 Years.
9.	The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, IVI class mines manager appointed by the proponent.	The PP will 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 and the same will be submitted.
10.	The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.	The blasting will be carrying out only by controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.
11.	The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location	The proponent had obtained Environmental Clearance from DEIAA vide Lr. No. 03/DEIAA-KGI/EC

	or elsewhere in the State with video and photographic evidences.	No.98/2018 dated 27.08.2018 for a period of 5 Years. The Quarry Pit Dimension details obtained from The Deputy Director, Dept. of Geology and Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 16.10.2023. The details of the approved and permit issued quantity obtained from The Deputy Director, Dept. of Geology and Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 16.10.2023.
12.	If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines	The proponent had obtained Environmental Clearance from DEIAA vide Lr. No. 03/DEIAA-KGI/EC No.98/2018 dated 27.08.2018 for a period of 5 Years. The Quarry Pit Dimension details obtained from The Deputy Director, Dept. of Geology and Mining, Krishnagiri vide Roc. No.478/2018/Mines dated 16.10.2023. The details of the approved and permit issued quantity obtained from The Deputy Director, Dept. of Geology and Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 16.10.2023.
13.	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines	The proponent had obtained Environmental Clearance from DEIAA vide Lr. No. 03/DEIAA-KGI/EC

		<p>No.98/2018 dated 27.08.2018 for a period of 5 Years (2018-2023).</p> <p>As per OM (F.No. IA3-22/11/2023-IA.III (E-208230)) of MoEF&CC dated 28.04.2023, the PP have suspended all the quarrying activities including excavation, transportation and dispatch of mineral/waste.</p>
14.	<p>Quantity of minerals mined out.</p> <ul style="list-style-type: none"> • Highest production achieved in any one year • Detail of approved depth of mining. • Actual depth of the mining achieved earlier. • Name of the person already mined in that leases area. • If EC and CTO already obtained, the copy of the same shall be submitted. • Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches. 	<p>The proponent had obtained Environmental Clearance from DEIAA vide Lr. No. 03/DEIAA-KGI/EC No.98/2018 dated 27.08.2018 for a period of 5 Years.</p> <p>The Quarry Pit Dimension details obtained from The Deputy Director, Dept. of Geology and Mining, Krishnagiri vide Roc. No.478 2018/Mines dated 16.10.2023.</p> <p>The details of the approved and permit issued quantity obtained from The Deputy Director, Dept. of Geology and Mining, Krishnagiri vide Roc. No. 478/2018/Mines dated 16.10.2023.</p>
15.	<p>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</p>	<p>Toposheet and geology of mining lease area is given in sections 2.3 & 2.5 of chapter 2 of EIA report.</p>

	buffer zone).	
16.	The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,	The Drone Video Survey covering the cluster area, greenbelt and fencing photos will be incorporated and submitted during SEAC meeting.
17.	The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan	The photographs incorporated in the EIA report.
18.	The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same	Details are provided in section 2.6 of chapter 2 of the Draft EIA report
19.	The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.	The Organization chart has been discussed in of Chapter 2 of the Draft EIA Report.
20.	The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of	The hydro-geological study will be conducted and the report of the same will be submitted.

	groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided	
21.	The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.	Baseline data is presented in Chapter 3 of the Draft EIA Report.
22.	The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.	Impact assessment study is conducted and provided in Chapter 4 of the Draft EIA Report.
23.	Rainwater harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted	At the last stage of mining operation, almost complete area will be worked to restore the land to its optimum reclamation for future use as water reservoir.
24.	Land use of the study area delineating forest area,	Details are given in Chapter 3 of the

	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.	Draft EIA Report
25.	Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided	Details are provided in section 2.7.2 of Chapter 2 of the Draft EIA report
26.	Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.	None
27.	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided	At the last stage of mining operation, almost complete area will be worked to restore the land to its optimum reclamation for future use as water reservoir.
28.	Impact on local transport infrastructure due to the Project should be indicated.	Traffic Impact Assessment is provided in section 3.9 of Chapter 3 of the Draft EIA Report.

29.	A tree survey study shall be carried out (nos., name of the species, age, diameter etc.) both within the mining lease applied area & 300m buffer zone and its management during mining activity.	Detail of trees in core and buffer zones is provided in section 3.7 of Chapter 3 of the Draft EIA Report.
30.	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.	Approved mining plan including mine closure plan as Plate No. VIII.
31.	As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible	Detail of flora & fauna in core and buffer zones is provided in section 3.7 of Chapter 3 of Draft EIA Report.
32.	The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix-I in consultation with the DFO, State Agriculture University. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.	Green belt plantation plan is provided in section 2.14 of Chapter 2 of Draft EIA Report. Approved mining plan including green belt development plan as Plate No. V.
33.	Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard	Green belt plantation plan is provided in section 2.14 of Chapter 2 of Draft EIA Report. Approved mining plan including

	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	green belt development plan as Plate No. V.
34.	A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period	Disaster management Plan is provided as section 7.2 of Chapter 7 of Draft EIA Report.
35.	A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.	Risk Assessment and management Plan is provided as section 7.2 of Chapter 7 of Draft EIA Report.
36.	Occupational Health impacts of the Project should be anticipated, and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Occupational Health impacts are discussed in section 4.8 of Chapter 4 of Draft EIA Report.
37.	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	Impact on socio-economic environment is discussed in section 4.7 of Chapter 4 of Draft EIA Report.
38.	The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance	Socio-economic study has been conducted and is provided in section 3.8 of Chapter 3 of Draft EIA Report.

	and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	
39.	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.	No litigation is pending against the project
40.	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.	Project benefits are detailed in Chapter 8 of Draft EIA Report.
41.	If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB. 47. 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.	As per OM (F.No. IA3-22/11/2023-IA.III (E-208230)) of MoEF&CC dated 28.04.2023, the PP have suspended all the quarrying activities including excavation, transportation and dispatch of mineral/waste.
42.	The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	Noted and Agreed to comply.
43.	Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the	Noted

Environment (Protection) Act, 1986.	
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Additional TOR by SEIAA

1.	Cluster Management Committee, which must include all the proponents in the cluster as members including the existing as well as proposed quarry.	Agreed to comply. Cluster Management Committee, will 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.,	Agreed to comply.
3.	The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.	Agreed to comply.
4.	Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.	Agreed to comply.
5.	The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan	Risk management plan is discussed in Chapter-7 of the Draft EIA Report.

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.	Agreed to comply.
7.	The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.	Agreed to comply.
8.	The committee shall furnish the Emergency Management plan within the cluster.	Emergency management plan is discussed in Chapter-7 of the Draft EIA Report.
9.	The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.	Health of workers and staff is discussed in Chapter-9 of the Draft EIA Report.
10.	The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & safety	Agreed to comply.
11.	The committee shall furnish the fire safety- and evacuation plan in the case of fire accidents.	Agreed to comply.

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 & bio-diversity	The biodiversity has been studied and discussed in chapter 3 of the Draft EIA Report. The soil erosion map 5km surrounding the project site has been given in chapter 3 of the Draft EIA Report. The detailed study carried out and
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	<ul style="list-style-type: none"> b) Climate change leading to Droughts, Floods etc., c) Pollution leading to release Greenhouse gases (GHG), rise in Temperature & Livelihood of the local people. d) Possibilities of water containment and impact on aquatic ecosystem health. e) Agriculture, Forestry & Traditional practices. f) Hydrothermal/Geothermal effects due to destruction in the Environment. g) Bio-geochemical processes and its foot prints including environmental stress h) Sediment geochemistry in the surface streams 	<p>incorporated in the EIA Report.</p>
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Agriculture & Agro- Biodiversity

13.	Impact on surrounding agricultural fields around the proposed mining Area.	Impact on surrounding agricultural fields around the proposed mining Area is discussed in Chapter 4 of the Draft EIA Report.
14.	Impact on soil flora & vegetation around the project site	Impact on soil flora & vegetation around the project site discussed in Chapter-4 of the Draft EIA Report.
15.	Details of type of vegetation 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.	Type of vegetation no.of trees & shrubs is discussed in Chapter-3 of the Draft EIA Report.
16.	The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the	The biodiversity has been studied and discussed in chapter 3 of the Draft EIA

	soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.	Report.
17.	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	Noted. Agree to comply.
18.	The PP shall study and furnish the impact on plantations in adjoining Patta lands, Horticulture, Agriculture and livestock.	There is no plantation surrounding 500m from project site. Hence there won't be any impact in adjoining patta lands, Horticulture, Agriculture and livestock.

Forests

19.	The PP shall detailed study on impact of mining on Reserve forests free ranging wildlife.	There is no Reserve Forest within 1 km radius of the Project Site. Hence our project will not cause any damage to reserve forest. Also, the DFO indicating the nearest reserve forest will be obtained from the concerned authority and the same will be submitted.
20.	The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna.	The biological environment impacts, and its mitigation measures has been given in Chapter 4 of the Draft EIA Report.
21.	The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.	There is no existing trees in the project site and surrounding the project site. Only thorny shrubs were present.
22.	The EIA should study impact on protected areas, Reserve forests, National parks, Corridors and	There is no Reserve Forest within 1 km radius of the Project Site. Hence

	Wildlife pathways, near project site.	<p>our project will not cause any damage to reserve forest. Also, the DFO indicating the nearest reserve forest will be obtained from the concerned authority and the same will be submitted.</p> <p>There is no protected areas, National Parks, Corridors and Wildlife pathways near project site.</p>
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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 and documentation in this regard may be provided, covering the entire mine lease period.	The hydro-geological study will be conducted and submitted.
24.	Erosion Control measures	Agreed to comply.
25.	Detailed study shall be carried out regard to impact of mining around the proposed mine lease area on the nearby villages, Water-bodies/Rivers, & any ecological fragile areas.	The detailed study carried out and furnished in the EIA Report.
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 water bodies within 1km radius. Hence there won't be much impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.
27.	The PP shall study and furnish the details on	Noted and agreed to comply.

	potential fragmentation impact of natural environment, by the activities.	
28.	The PP 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 landform changes visual and aesthetic impacts	Noted. Agreed to comply.
29.	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	The soil erosion map 5km surrounding the project site has been given in chapter 3. The soil samples have been collected surrounding the project site and physical, chemical components and microbial components study has been carried out and the results are tabulated in chapter 3
30.	The Environmental Impact Assessment should study on wetlands, water bodies, river streams, lakes and farmer sites.	The water environment impacts and its mitigation measures has been given in Chapter 4
Energy		
31.	The measures taken to control Noise, Air, water. Dust control and steps adopted to efficiently utilise the Energy shall be furnished.	Noted. Agreed to comply.
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	Noted and will be complied

	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 carbon stock.	Noted and complied.
Mine Closure Plan		
34.	Detailed mine closure plan covering the entire mine lease period as per precise area communication order issued.	Mine closure plan has been attached as Plate No. VIII of the Mining plan.
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.	Environment Management Plan has been described in detail in Chapter-10 of the Draft EIA/EMP Report.
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.	The EMP details has been given in Chapter 8
Risk Assessment		
37.	To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of mining.	A Risk Assessment and management Plan is prepared and included in the Draft EIA/EMP Report.
Disaster Management Plan		
38.	To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid/reduce vulnerability to hazard & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the	Disaster Management and Risk Assessment has been incorporated in Chapter-7

	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	The VAO certificate regarding the locations of habitations within 500 m radius from the periphery of the site has been obtained.
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.	Noted and public hearing details will be included in chapter 7 of EIA report.
41.	The Project Proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impact of plastic & microplastic on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.	There will not be any plastic and microplastic pollution due to mining activity. Also, we ensure that we won't use any single use plastics in the project site.

ANNEXURE II
PRECISE AREA COMMUNICATION LETTER



From

Thiru C.Kathiravan, I.A.S.,
District Collector,
Krishnagiri.

To

Thiru.V.Nagaraja,
S/o Venkatappa Reddy,
Koppa Village,
Hulimangala Post,
Anekal Taluk,
Bangalore - 560 105

Rc.No.478/2018/Mines-2

dated: 26.07.2018

Sir,

Sub: Mines and Minerals - Krishnagiri District - Shoolagiri Taluk - Venkateshapuram village - S.F.287/1- Over an extent of 2.16,0 Hects of Patta lands - Quarry Lease for Rough Stone Application preferred by Thiru.V.Nagaraja S/o. Venkatappa Reddy.- Precise area given - reg.

- Ref:
1. Quarry lease application of Thiru.V.Nagaraja S/o. Venkatappa Reddy, Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore - 560 105 dated 26.03.2018.
 2. This office letter of 478/2018/Mines dated 02.04.2018 addressed to the Sub Collector, Hosur and District Forest Officer Hosur.
 3. The Revenue Divisional Officer, Hosur letter Roc.No.2088/2018/B2 Dated 22.06.2018.
 4. Inspection report of the Deputy Director of Geology and Mining, Krishnagiri dated 20.07.2018.
 5. The District Forest Officer, Hosur Lr.Rc.No.2572/2018 / L dated 30.04.2018.
 6. The District Collector Krishnagiri Proc. Roc. No. 478/ 2018/Mines-1 dated :
 7. The Deputy Director (G&M) technical report dated : 20.07.2018

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1.Thiru.V.Nagaraja S/o. Venkatappa Reddy, Koppa Village, Hulimangala Village, Anekal Taluk, Bangalore - 560 105 had applied for the grant of quarry lease to quarry Rough stone for a period of five years over an extent of 2.16.0hects. In patta land in S.F.No.287/2 in Venkateshapuram village, Shoolagiri Taluk, Krishnagiri District vide in their application 1st cited.

2. The Revenue Divisional Officer, Hosur in the letter 3rd cited has recommended for the grant of quarry lease for rough stone to the applicant in the area applied for after obtaining no objection certificate from the District Forest Officer, Hosur.

3. The District Forest Officer, Hosur Forest Division, Hosur in his letter 6th cited has recommended for the grant of quarry lease for rough stone to the applicant in the area applied for with certain conditions.

4. The Deputy Director (G&M), Krishnagiri has inspected the area and furnished the technical report vide in the reference 7th cited and recommended for the grant of quarry lease for rough stone to the applicant in the area applied for with certain conditions.

5. The details of the quarries situated within 500 mts. radial distance from the proposed area are as follows:

Name of the lessee	Village	S.F.No. Extent in Hect	Collector's ProceedingNo. & date	Lease period
M/S Sumuka Blue Metals & 'M' Sand, prop. Thiru.V.Nagaraja	Shoolagiri/ Venkateshapuram	294 (PART- (II) ,3.75.0 hects	Rc.216/ 2018/mines dated 09.03.2018	under Environment Clearance
Thiru.S.Rajendiran, S/o. Sengodan	Shoolagiri/ Venkateshapuram	288 , 5.00.0 hects	Rc.214/ 2008/mines-2 dated 30.07.2008	30.07.08 to 29.07.18
Thiru N.Muniraj	Shoolagiri/ Venkateshapuram	285(part) 5.00.0 hects	Rc.123/2008/ mines-2, dated 19.05.2008	04-07-18 to 03-07-23
Thiru.V.Nagaraja S/o.Venkatappa Reddy	Shoolagiri/ Venkateshapuram	287/1 , 2.16.0 hects	Rc.478/ 2018/mines dated 28.05.2018	Instant proposal

6. Based on the reports of the Revenue Divisional Officer, the District Forest Officer Hosur, and the Deputy Director (G&M) Krishnagiri precise area is hereby communicated for the proposed grant of rough stone quarry lease over an extent of 2.16.0Hects of Patta lands in S.F.No.287/1 of Venkateshapuram Village, Shoolagiri Taluk, Krishnagiri District for a period of 5 years from the date of execution of lease deed, under the provisions of Rule 19(1) of Tamil Nadu Minor Mineral Concession Rules, 1959 to the applicant Thiru.V.Nagaraja S/o. Venkatappa Reddy subject to the following conditions and the applicant is hereby directed to submit the approved mining plan, Environment Clearance from the DEIAA Tamil Nadu and consent for establishment of the Tamil Nadu Pollution Control Board within the prescribed time limit.

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- i) A safety zone of 7.5 mts. should be left out for the patta land in S.F.No.287/2 situated on the southern side of the applied area.
- ii) A safety zone distance 10 mts should be left out for the Government land S.F.No. 285 situated on the North & East and S.F.No.286/3, 288 situated on the Southern side and S.F.No.294 situated on the Western side of the applied area.
- iii) The applicant should fence the area by constructing compound wall (or) barbed wire fencing. Quarrying activity should be carried out from 7.00 A.M. to 5.00 P.M. only.
- iv) To protect noise and air pollution 500 saplings of Pungan and Neem should be planted by the applicant.

**Sd/-C.Kathiravan.,
District Collector,
Krishnagiri.**

//True Copy//

**For Collector,
Krishnagiri**

Copy to:

1. The Chairman,
District Level Environment Impact Assessment Authority,
Krishnagiri.
2. The Commissioner of Geology and Mining, Guindy, Chennai.

S.DHANASEKAR, M.Sc.(Geol)
RQP/MAS/225/2011/A

ANNEXURE III

**EXISTING PIT DIMENSION LETTER, QUANTITY
APPROVED & PERMIT ISSUED QUANTITY and MINING
PLAN APPROVAL LETTER**

From

Dr. S.Vediappan, M.Sc.,Phd.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To

Thiru. V. Nagaraja,
S.F.no. 287/1,
Venkatesapuram Village,
Shoolagiri Taluk,
Krishnagiri

Roc. No.478/2018/Mines dated: 10.10.2023

Sir,

Sub: Mines and Minerals - Krishnagiri District – Rough Stone – Shoolagiri Taluk – Venkatesapuram village – Patta land S.F.No. 287/1 over an extent 2.16.00 Hects of Rough Stone Quarry lease granted to Thiru. V. Nagaraja - Quarry pit dimension details - requested - Details furnished - reg.

- Ref: 1. The District Collector, Krishnagiri Proc. Rc.No. 478/2018 /Mines dated: 19.02.2021.
2. Mining Plan approved by the Deputy Director of Geology and Mining, krishnagiri Lr. No. 478/2018/Mines dated: 30.07.2018.
3. Thiru. V. Nagaraja letter dated: 11.08.2023.


Kind attention is invited to the reference cited above.

2. Thiru. V. Nagaraja, Krishnagiri has been granted Rough Stone quarrying lease over an extent of 2.16.00 hecets of Patta lands in S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District for a period of 10 years vide Proceedings dated: 19.02.2021, under the provisions of Rule 8 of Tamil Nadu Minor Mineral Concession Rule 1959. The lease deed was executed on 19.02.2021 and the lease period is valid upto 18.02.2031.

3. The Mining plan for Rough Stone quarry in Venkatesapuram Village, Shoolagiri Taluk was approved by the Deputy Director of Geology and Mining, krishnagiri letter Rc. No. 478/2018/Mines dated: 30.07.2018.

4) The pit dimension of the subject quarry requested by the applicant to furnish the same before SEIAA in order to get Environmental Clearance. In this connection the quarry pit dimension measured by Sub-Inspector of Survey, Dept of Geology & Mining, Krishnagiri is furnished as below.

Existing Pit Dimension as on 04.10.2023			
Sl.No.	Pit No.	Area (in Sq.Mtr)	Depth (in m.)
1	Pit - 1	6867.0	27.0


Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To,
The Chairman,
Tamil Nadu State Environment
Impact Assessment Authority,
3rd Floor, Panakal Maligai,
No. 1 Jeenes Road,
Saidapet, Chennai -15.


16/10/23

From

Dr. S.Vediappan, M.Sc.,Phd.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To

Thiru. V. Nagaraja,
S.F.no. 287/1,
Venkatesapuram Village,
Shoolagiri Taluk,
Krishnagiri

Roc. No.478/2018/Mines dated: 16.10.2023

Sir,

Sub: Mines and Minerals - Krishnagiri District - Rough Stone - Shoolagiri Taluk - Venkatesapuram village - Patta land S.F.No. 287/1 over an extent 2.16.00 Hects of Rough Stone Quarry lease granted to Thiru. V. Nagaraja - Details of quantity approved and permit issued quantity - requested by the lessee - Details furnished - regarding.

- Ref: 1. The District Collector, Krishnagiri Proc. Rc.No. 478/2018 /Mines dated: 19.02.2021.
2. Mining Plan approved by the Deputy Director of Geology and Mining, Krishnagiri Lr. No. 478/2018/Mines dated: 30.07.2018.
3. Thiru. V. Nagaraja letter dated: 11.08.2023.

Kind attention is invited to the reference cited above.

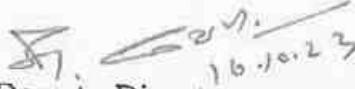
2. Thiru. V. Nagaraja, Krishnagiri has been granted Rough Stone quarrying lease over an extent of 2.16.00 hecets of Patta lands in S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District for a period of 10 years vide Proceedings dated: 19.02.2021, under the provisions of Rule 8 of Tamil Nadu Minor Mineral Concession Rule 1959. The lease deed was executed on 19.02.2021 and the lease period is valid upto 18.02.2031.


3. The Mining plan for Rough Stone quarry in Venkatesapuram Village, Shoolagiri Taluk was approved by the Deputy Director of Geology and Mining, Krishnagiri letter Rc. No. 478/2018/Mines dated: 30.07.2018.

4. In this connection, the lessee Thiru. V. Nagaraja, has requested vide letter dated: 11.08.2023 to issue the details of permit issued quantity to the subject quarry to furnish the same to SEIAA.

In this connection, it is informed that the approved quantity of approved Mining Plan and permit issued quantity upto 11.08.2023 is furnished below.

	Approved Quantity	Permit Issued Quantity
As per Mining Plan Period 19.02.2021 to 18.02.2026 (upto 11.08.2023)	1425102	99600


Deputy Director,
Dept of Geology and Mining,
Krishnagiri.


To,
The Chairman,
Tamil Nadu State Environment
Impact Assessment Authority,
3rd Floor, Panakal Maligai,
No. 1 Jeenes Road,
Saidapet, Chennai -15.

From

Dr. P.Jayapal, M.Sc.,Phd.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To

Thiru. V. Nagaraja,
S/o. Venkatappa Reddy,
Koppa Village,
Hulimangala Post,
Anekal Taluk,
Bangalore.

Roc.No. 478/2018/Mines dated: 27.01.2024.

Sub: Mines and Minerals - Krishnagiri District - Rough Stone - Shoolagiri Taluk - Venkatesapuram village - Patta land - S.F.No. 287/1 over an extent 2.16.00 Hects of Rough Stone Quarry lease granted to Thiru.V.Nagaraja - SEAC-TN - Instructed to submit Modified Mining Plan - Draft Modified Mining plan submitted - Approved - Regarding.

- Ref**
1. The Assistant Director of Geology & Mining, Krishnagiri Proc. Rc.No. 478/2018 /Mines dated: 19.02.2021.
 2. Mining Plan approved by the Deputy Director of Geology and Mining, Krishnagiri Lr. No. 478/2018/Mines dated: 30.07.2018.
 3. SEAC-TN Agenda No.417-01 & File No.10425/2023 (SIA/TN/MIN/430837/2023 dated: 26.05.2023)
 4. The lessee Thiru. V. Nagaraja letter dated: 27.11.2023.

-o0o-

Kind attention is invited to the references cited above.

2. Thiru. V. Nagaraja has been granted Rough Stone quarry lease over an extent of 2.16.00 hecets of Patta lands in S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District for a period of 10 years vide Proceedings in Rc. No. 478/2018/Mines dated: 19.02.2021, under the provisions of Rule 8 of Tamil Nadu Minor Mineral Concession Rule 1959. The lease deed was executed on 19.02.2021 and the lease period is valid upto 18.02.2031.

3. The Mining plan for the said Rough Stone quarry was approved by the Deputy Director of Geology and Mining, Krishnagiri vide letter Rc. No. 478/2018/Mines dated: 30.07.2018.

4) At this juncture, Thiru.V.Nagaraja has submitted representation vide letter dated 27.11.2023 and stated that SEAC-TN has instructed the applicant to submit Modified Mining Plan for bench geometry of not more than 6m bench height and bench width of not less than the bench height duly approved by the concerned AD (Mines), Department of Geology & Mining.

5) Based on the instructions issued by SEAC-TN, the Modified Mining Plan submitted by the applicant and the same has been verified and found correct.

6) As per the Modified Mining Plan, the year wise production proposed for next three years are given below:

Year	Reserve in CBM (100%)	Topsoil (m³)
2023-2024	70930	107722
2024-2025	82790	-
2025-2026	99775	-
Total	253495	107722

7) Hence, the power delegated under Rule 41 of the Tamil Nadu Minor Mineral Concession Rules, 1959 and as per the guidelines/instructions issued by the Commissioner of Geology and Mining, vide letter Rc.No.3868/LC/2012 dated: 19.11.2012, the

Modified Mining Plan is here by approved subject to the following conditions:

(i) 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 Mines and Minerals Development and Regulation) Act 1957, or any other connected laws including Forest (Conservation) Act 1957, or any other connected Laws industry Forest (Conservation) Act 1980, Forest Conservation Rules 1981 Environment protection Act 1980, Indian Explosive Act 1884 (Central Act IV of 1884), Metalliferous Mines Regulation, 1961 and the rules made there under Minor Mineral Conservation and Development Rules 2017 and the Tamil Nadu Minor Mineral Concession rules, 1959.

iii) The Mining Plan is approved without prejudice to any other order or directions from any court of competent jurisdiction.

(iv) All the conditions mentioned in the precise area communicated to the applicant shall be followed during quarry operation as per Act and Rules.

Encl: Re-estimated year wise production plan & section.

[Handwritten Signature]
24/01/24
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

Copy to :-

The Chairman, Tamil Nadu State Environment
Impact Assessment Authority,
3rd Floor, Panakal Maligai,
No. 1 Jeenes Road, Saidapet,
Chennai -15.

ANNEXURE IV

MODIFIED MINING PLAN

MODIFIED MINING PLAN

FOR

ROUGH STONE QUARRY

(Prepared Under Rule 9(2) Tamil Nadu Minor Mineral Concession Rules, 1959 & As Per Amendment Under Rule 41 & 42)



LOCATION OF THE EXISTING LEASE AREA

EXTENT : 2.16.0 Ha.
S.F.No : 287/1
VILLAGE : VENKATESAPURAM
TALUK : SHOOLAGIRI.
DISTRICT : KRISHNAGIRI.
STATE : TAMIL NADU.

LESSEE

THIRU.V.NAGARAJA,
S/o. VENKATAPPA REDDY,
KOPPA VILLAGE,
HULIMANGALA POST,
ANEKAL TALUK,
BANGALORE -560 105.

PREPARED BY:

S.DHANASEKAR, M.Sc.,
QUALIFIED PERSON
5/30-7B, AVVAI NAGAR.,
PONKUMAR MINES ROAD,
JAGIR AMMAPALAYAM,
SALEM -636 302.

Email: geodhana@yahoo.co.in

CELL : 98946-28970 & 73733-74702.

V.NAGARAJA,
S/o. VENKATAPPA REDDY,
KOPPA VILLAGE,
HULIMANGALA POST,
ANEKAL TALUK,
BANGALORE-560 105.



CONSENT LETTER FROM LESSEE

I hereby give my consent for preparing the Modified Mining Plan in respect of Rough Stone Quarry over an extent of 2.16.0 Ha. of Patta land in S.F. No.287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu State has been prepared by **Shri. S. DHANASEKAR, M.Sc.,** Qualified Person.

I request the Department of Geology and Mining, Krishnagiri to make further correspondence regarding modification of the Mining Plan with the said Qualified Person in his following Address:

S.DHANASEKAR, M.Sc.,

Qualified Person

No.5/30-7B, Avvai Nagar,

Ponkumar Mines Road,

Jagir Ammapalayam,

Salem District-636 302.

E-mail: geodhana@yahoo.co.in

Cell: 98946-28970

I hereby undertake that all the modifications, if any, made in the Modified Mining Plan by the Qualified Person may be deemed to have been made with our knowledge and consent and shall be acceptable to me and binding on me in all respects.

(V. NAGARAJA)

Signature of the Lessee

Place: Krishnagiri

Date:

V.NAGARAJA,
S/o. VENKATAPPA REDDY,
KOPPA VILLAGE,
HULIMANGALA POST,
ANEKAL TALUK,
BANGALORE-560 105.



DECLARATION OF THE MINE OWNER

I hereby declare that the Modified Mining Plan in respect of Rough Stone Quarry over an extent of 2.16.0 Ha. in S.F. No.287/1 of Venkatesapuram Village, Shoologiri Taluk, Krishnagiri District, Tamil Nadu State has been prepared in full consultation with us by **Shri S. DHANASEKAR, M.Sc.,** Qualified Person. I have understood its contents and agree to implement the same in accordance with the Mining Laws.

A handwritten signature in black ink, appearing to be 'V. Nagaraja', written in a cursive style.

(V. NAGARAJA)
Signature of the Lessee

Place: Krishnagiri

Date:

S.Dhanasekar.M.Sc.,(Geol),
Qualified Person,

No.5/30-7B, Arvai Nagar
Ponkumar Mines Road,
Jagif Ammapalayam,
Salem- 686 302



CERTIFICATE

This is to certify that, the provisions of Minor Minerals Conservation and Development Rules, 2010 (MMCDR) have been observed in the Modified Mining Plan for Venkatesapuram Rough Stone Quarry over an extent of 2.16.0 Ha. in S.F. No.287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu State prepared for Thiru. V.Nagaraja, S/o. Venkatappa reddy, Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore.

Whenever specific permissions, approvals, exemptions or relaxations are required, the lessee will approach the concerned authorities of Commissioner of Geology and Mining, Government of Tamil Nadu, Guindy, Chennai- 600 032, Tamil Nadu for such permissions, exemptions, relaxations and approvals.

It is also certified that the information furnished in the above Modified Mining Plan are true and correct to the best of our knowledge.

Certified


Signature of Qualified Person.
S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

Place: SALEM

Date:



S.Dhanasekar.M.Sc.,(Geol),
Qualified Person,

No.5/30-7B, Arwainagar,
Ponkumar Mines Road,
Jagir Ammasalayam,
Salem- 636 02.



CERTIFICATE

Certified that provision of Mines Act, Rules and Regulations and orders made there under have been observed in the Modified Mining Plan for Venkatesapuram Rough Stone Quarry over an extent of 2.16.0 Ha. in S.F.No.287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu State prepared for Thiru. V.Nagaraja, S/o. Venkatappa reddy, Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore-560 105.

Whenever specific permissions, approvals, exemptions or relaxations are required, the lessee will approach the concerned authorities of the Director General of Mines Safety (DGMS), No. 5, IInd Street, Block - AA, Anna Nagar, Chennai-40, Tamil Nadu for such permissions, exemptions, relaxations and approvals.

It is also certified that information furnished in the above Modified Mining Plan are true and correct to the best of our knowledge.

Certified


Signature of Qualified Person.
S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

Place: SALEM

Date:

CONTENTS



S.NO.	DESCRIPTION	PAGE NO.
1.0	General	01
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3.0	Details of approved Mining Plan	04
	Part-A	
1.0	Geology and Exploration	06
2.0	Mining	11
	A. Open Cast Mining	11
	B. Underground Mining	19
3.0	Mine Drainage	20
4.0	Stacking of Mineral Reject /Sub Grade Material and Disposal of Waste	21
5.0	Use of Mineral and Mineral Reject	21
6.0	Processing of ROM and Mineral Reject	22
7.0	Other	23
8.0	Progressive Mine Closure Plan	24
9.0	Any Other Information	30

Rev

ANNEXURES



Sl. No.	Description	Annexure No.
1.	Copy of Proceeding letter	I
2.	Copy of Execution Deed	II
3.	Copy of Environmental Clearance Letter	III
4.	Copy of Pollution Control Board Letter	IV
5.	Copy of FMB	V
6.	Copy of Combined Sketch	VI
7.	Copy of Patta, Adangal & 'A' Register	VII
8.	Copy of Land Registration Document	VIII
9.	Copy of ID Proof	IX
10.	Copy of Mining Plan Approval Letter	X
11.	Copy of Minutes of the 417 th SEAC Meeting	XI
12.	Copy of Qualification Certificate	XII
13.	Copy of Experience Certificate	XIII
14.	Copy of Lease Area Photos	XIV

LIST OF PLATES



Sl. No.	Description	Plate No.	
1.	Location Plan	I	Not to scale
2.	Route Map	IA	Not to scale
3.	Topo Sheet Map of the Lease Area	IB	1:50,000
4.	Satellite Image (Lease Area)	IC	1:1000
5.	Satellite Image (500m Radius)	ID	1:5000
6.	Mine Lease Plan	II	1:1000
7.	Surface and Geological Plan	III	1:1000
8.	Geological Sections	III- A	1:1000
9.	Year wise Development and Production Plan	IV	1:1000
10.	Year wise Development and Production Sections	IV- A	1:1000
11.	Mine Layout, Land Use Pattern and Afforestation Plan	V	1:1000
12.	Environment Plan	VI	1:5000
13.	Conceptual & Final Mine Closure Plan	VII	1:1000
14.	Conceptual & Final Mine Closure Sections	VII- A	1:1000
15.	Progressive Mine Closure Plan	VIII	1:1000

[Handwritten signature]

MODIFIED MINING PLAN FOR MINOR MINERALS

ROUGH STONE QUARRY

Over an extent of 2.16.0Hectares of Patta Land in S.F.No.287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamilnadu State

(Prepared Under Rule 9(2) Tamil Nadu Minor Mineral Concession Rules, 1959 & As Per Amendment Under Rule 41 & 42)

1.0 General:

This Modified Mining Plan has been prepared in respect of Rough Stone Quarry over an extent of 2.16.0Hectares of Patta Land in S.F.No.287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamilnadu State, prepared for Thiru.V.Nagaraja, S/o. Venkatappa Reddy, residing at Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore District.

The fresh Mining Plan was approved by Deputy Director, Geology and Mining, Krishnagiri vide letter No.478/2018/Mines dated:30.07.2018 for a period of 2021-2022 to 2025-2026. Please refer Annexure-X. Copy of Approved Mining plan Letter.

Accordingly, the Lessee had obtained Environmental Clearance from DEIAA-TN vide Lr.No.03/DEIAA-KG/ECNo.98/2018 dated 27.08.2018. Please refer Annexure- III.

The District Collector, Krishnagiri granted Quarry lease Vide Proceeding No. Roc.No. 478/2018/Mines dated 19.02.2021 for a period of Five years.

The lease deed was executed on 19.02.2021. The lease will expire on 18.02.2026.

The mining operations are done by opencast semi-mechanized methods with jackhammer drilling and blasting, hydraulic excavators are used for loading the Rough stone from pithead to the needy crushers.

Based on MoEF&CC O.M. dated 28.04.2023 the SEIAA Tamilnadu was directed to re-appraise the EC granted by DEIAA. The lessee applied to SEIAA-TN for re-appraisal.

Based on the details furnished by the Lessee, in the minutes of 417th meeting of the State Expert Appraisal Committee held on 18.10.2023, the committee had directed to submit the Modified Mining Plan. Complying the direction by accommodating the bench geometry of not more than 6 m bench height and bench width of not less than the bench height approved duly by the Deputy Director, Department of Geology and mining, Krishnagiri along with the Certified Compliance Report of the previous EC issued by DEIAA. Please refer Annexure- XI.




S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

1.1. Review of Mining Plan:

a) Name of lessee : V. Nagaraja,
S/o. Venkatappa Reddy,
Koppa Village,
Hulimangala Post,
Anekal Taluk,
Bangalore District.



District : Bangalore
Pin code : 560 105.
Mobile No : 98450 13945.

b) Status of lessee

The lessee is an Individual.

c) Mineral(s) which is / are included in the prospecting license (For Fresh grant):

-Nil-

d) Mineral(s) which is / are included in the letter of Intent / lease deed:

Rough Stone occurs in the lease area and the Lessee intends to quarry the same.

e) Mineral(s), which is the lessee, intends to Quarry:

Rough Stone occurs in the lease area and the Lessee intends to quarry the same.

f) Name and Address of the Qualified Person :

Name : SHRI S. DHANASEKAR, M.Sc.,
Address : Qualified Person
No.5/30-7B, Avvai Nagar,
Ponkumar Mines Road
Jagir Ammapalayam,
Salem - 636 302.

Cell No. : 98946-28970 & 73733-74702.
Email : geodhana@yahoo.co.in

2.0 LOCATION AND ACCESSIBILITY**a) Lease Details (Existing Quarry)**

Name of the Quarry : Venkatesapuram Rough Stone Quarry
Lat/long of any boundary point : N 12 ° 45' 22.70" & E 77° 57' 36.06"
Date of grant of lease : 19.02.2021
Period/Expiry Date : Five years / 18.02.2026.
Name of leaseholder : Thiru. V. Nagaraja, S/o.Venkatappa Reddy,
Postal Address : Koppa Village,
Hulimangala Post,
Anekal Taluk,
Bangalore District. 560 105
Mobile No : 98450 13945.



b) Details of lease area with location map (Quarry)

Table-1

Forest (specify)	Area (Ha.) -NIL-	i) Waste land	* Nil
		ii) Grazing land	Nil
		iii) Agriculture land	Nil
		iv) Others, patta land (specify)	2.16.0Ha.

Total lease area : 2.16.0 Ha
 State : Tamil Nadu
 District : Krishnagiri
 Taluk : Shoologiri
 Village : Venkatesapuram
 Whether the area is recorded to be in forest : This is Patta land and is not covered in Forest area of any kind.

Please refer Location Plan and Mine lease plan – Plate No. I & II.

c) Existence of public road/railway line, if any nearby and approximate distance:

Extent of the area is shown in the FMB. The District Head Quarter Krishnagiri is at a distance about 44.0 Km. from quarry site. The area is at a distance of about 1.0 kms. from Mensandoddi Village. Berigai – Shoologiri Road (NH-422) is at a distance of about 2.0 kms East from the Quarry area.

Nearest Railhead is Hosur Railway Station that is located about 19.2 kms. from the Quarry. Post office and Police Station are available in Berigai at a distance of about 8.8Kms. Air Port is available in Bangalore, about 75.6 kms from the Quarry. Nearest Port is Chennai about 304.0 kms. from the area.

d) The Mining lease area is bounded by four corners and the coordinates are:

Table No:2

Toposheet No	: 57 H/14
Latitude	: N 12 ° 45' 22.70" to N 12 ° 45' 14.42"
Longitude	: E 77° 57' 36.06" to E 77° 57' 34.84"
North East	: N 12° 45' 22.70" E 77° 57' 36.06"
South East	: N 12° 45' 14.86" E 77° 57' 38.76 "
North West	: N 12° 45' 21.36" E 77° 57' 34.81"
South West	: N 12° 45' 14.42" E 77° 57' 34.84"

e) A general location map showing area and access routes. It is preferred that the area be marked on a Survey of India topographical map or a cadastral map or forest map as the case may be. However, if none of these are available, the area may be shown on an administrative map:

A general location map showing area boundaries and existing access routes shown on the Toposheet Plan (Key Plan) which is enclosed as Plate No.Ib. Since existing routes are being followed to reach the lease area no fresh access routes are proposed hence not shown.

Top Sheet No. with : The area falls in Topo Sheet No.57 H/14

Latitude and longitude of Survey of India

Latitude : N 12 ° 45' 22.70" to N 12 ° 45' 14.42"

Longitude : E 77° 57' 36.06" to E 77° 57' 34.84"

f) Land use pattern :

Dry Mineral bearing land.

g) Location of the Area :

The Quarry Lease area of Venkatesapuram Rough Stone Quarry is located in S.F. No. 287/1 over an extent of 2.16.0 Ha. in Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamilnadu State.

3.0 DETAILS OF APPROVED MINING PLAN :

3.1 Date and reference of earlier approved MP:

The fresh Mining Plan was approved by Deputy Director, Department of Geology and Mining, Krishnagiri District vide letter No.478/2018/Mines-I dated:30.07.2018 for a period of five years from 2021-2022 to 2025-2026. Please refer Annexure-X. Copy of letter Approving Mining plan.

3.2 Details of last modifications if any (for the previous approved period) of approved MP/SOM, indicating date of approval, reason for modification:

-Nil-

3.3 Give review of earlier approved proposal (if any) in respect of exploration, excavation, reclamation etc:

i) Exploration:

In the previous approved Mining Plan, it was mentioned that no exploration was carried out. Massive rough stone exposures were clearly visible from the existing pit within the lease area.

Present Mine working had reached a depth of about 27m (12.0m Topsoil +15.0m Rough stone).



There is only one working pit available in this area, the dimensions of which is given below:

Table No.3

Existing Pit Dimension
6867 Sq.m x 27m (D) (12.0m Topsoil +15.0m Rough stone)



The area is very small. The attitude of the deposits like width and length are clearly known. Depth persistence of Rough Stone in this area is already proved upto 27m and even more.

ii) Mine Development :

The Mine workings have reached a depth of nearly 27m. Development of the pits has been done only in the areas where the Rough Stone could be easily mined.

iii) Exploitation :

The Quarry workings have reached a maximum depth of nearly 27m (12.0m Topsoil +15.0m Rough stone).

There is only one working pit, the dimensions of which is given below :

Table No.4

Existing Pit Dimension
6867 Sq.m x 27m (D) (12.0m Topsoil +15.0m Rough stone)

The Planned Production for last approved Mining Plan period 2021-2022 to 2025-2026 was 1425102cu.m and the actual production of Rough Stone for the period 19.02.2021 to 11.08.2023 is about 99600 cu.m of saleable Rough Stone.

iv) Waste Management:

In the Previous approved Mining Plan Period, the topsoil was removed and preserved all along the boundary barrier for afforestation development. The part of the topsoil has been used for roads in the low laying adjacent area.

v) Reserves and Resources estimated in the earlier approved mining plan period (2021-2022 to 2025-2026) with grade:

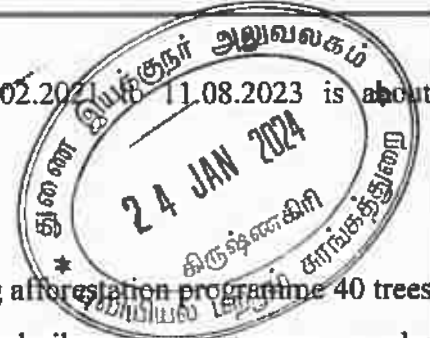
Geological Reserve (insitu) under Proved category	: 3106390 cu.m
Mineable Reserve	: 1425102 cu.m
Yearwise Production	: 1425102 cu.m

While calculating Mineable Reserve, the boundary barrier and bench width, height and slope are taken into account. Hence; the Mineable Reserve will be always less than the insitu reserve.

R

vi) Depletion of Reserve:

The actual production of Rough Stone for the period 19.02.2021 to 11.08.2023 is about 99600 cu.m of saleable Rough Stone.



vii) Afforestation and Reclamation :

It was clearly stated in the approved Mining Plan that during afforestation programme 40 trees will be planted yearly, in the lease area. Presently, lessee had planted vilvam, pungan, neem, vembu trees in the lease area in boundary barrier of the lease area. Since, the Quarry is active. Mining should be carried out in such a manner that after certain period, some part is available for reclamation.

viii) Control of Dust, Noise & Ground Vibrations:

Quarrying of Rough Stone had been carried out by drilling and control blasting by using low power explosives, and hence, noise will be very minimum. .

The dust control was taken care by water sprinkling on the haul roads. The amount of ground vibration is very less since only control blasting by using low power explosives is used.

Reclamation & Rehabilitation :

Reclamation of mined out area does not arise and has not reached the full extent of working. After closure of the Mine, the pit will be allowed to collect seepage and rain water. This will help to charge the nearby agricultural wells.

PART - 'A'

1.0 GEOLOGY AND EXPLORATION

A) Briefly Describe The Topography, Drainage Pattern, Vegetation, Climate, Rainfall Data of the Area Applied/Mining Lease Area:

a) Topography :

The Mining Lease area is approximately at N 12° 45' 22.70" latitude and E 77° 57' 36.06" longitude and is represented by Topo Sheet No.57 H/14 of Survey of India.

The area is a hilly terrain and gently sloping towards SouthEastern side. The altitude of the area is about 817m MSL.

Vegetation:

It is a dry Mineral bearing. It is a dry place with a top soil cover of about 12.0m.

Water table and Drainage Pattern:

Water table is touched at a depth of 85m in rainy season, ie. during North-East monsoon and at 90m in summer months. The water table fluctuation is verified by observing the water levels in the above seasons in the nearby wells.

Climatic Conditions:

The area receives rainfall of about 800mm to 900mm per annum and the rainy season is mainly from October-January during NorthEast Monsoon. The summer is hot with maximum temperature of 38°C and winter encounters a minimum temperature of 18°C.

Rainfall Data:

The area receives scanty rainfall and the annual rainfall of the area varies between 800mm to 900mm.

b) Geology of the Area :

The lease area is a hilly topography, the area has been quarrying operation earlier. Rough stone exposures are clearly visible in existing pit within the lease area. Top soil is noticed at the average thickness of 12m. However, in the mining plan the top soil was estimated at 1m only. This 12.0m was arrived only after the excavation. The slope is gentle towards Southeastern side. The altitude of the area is above 817m from MSL.

Peninsular gneiss forms the oldest rock formations, in which the massive formation of charnockite lies over with rich accumulation of recent quaternary formation. On regional scale the charnockite body trends NE-SW with dipping towards SE70°.

The general geological sequences of the rocks in this area are given below

AGE	FORMATION
Recent	Quaternary Recent (Top soil)
Archaean	Charnockite (Granitoid Gneiss)
	Peninsular Gneiss Complex II.

c) Details of Exploration already carried out:

The area was thoroughly explored by the Qualified Person and his geological team. No exploration was carried out. Massive rough stone exposures are clearly visible from the existing pit within the lease area.

In this area, the mine working has reached a depth of about 27.0m (12.0m Topsoil +15.0m Rough stone).

There is only one working pit available in this area, the dimensions of which is given below :

Table No.5

Existing Pit Dimension
6867 Sq.m x 27.0m (D) (Top Soil 12.0m + Rough Stone 15.0m)

The area is very small. The attitude of the deposits like width and length are clearly known. Depth persistence of Rough Stone in this area is already proved upto 27m and even more.

d) The Physical Character of the Rough Stone :

Rough stone texture is medium to coarse grained and is composed of recrystallized minerals, hence it is a metamorphic rock. The grains are subhedral, inequigranular with a granoblastic texture. The grains are crystalline ie. Complete crystallization has occurred. Cleavage is absent. The color is dark olive green. The details collected during the field survey and found to be sufficient for the preparation of the Modified Mining Plan.

e) Number of boreholes indicating type (Core/RC/DTH), diameter, spacing, inclination, Collar level, depth etc... with standard bore hole logs duly marking on

There is no borehole exist in the lease area.

i)RESERVES :

a. Method of Estimation of Reserves:

The Geological and Recoverable reserves are estimated by cross sectional method up to a depth of 47.0m (12.0m Topsoil + 35.0m Rough Stone), as the Rough Stone. Plans and Sections have been drawn with a scale of 1:1000 respectively.

Selecting a method of reserve estimation depends upon the geology of the mineral deposit, exploration method, purpose of computation and the required degree of accuracy and also on the contemplated mining system.

The ideal method should be simple, rapid, reliable, consistent with the character of the mineral body and available data and suitable for rapid checking. The method adopted for calculation of reserves in this area is by computing the volume by cross sectional method upto a particular level. The volume is calculated by multiplying the cross sectional area with the length of the sectional influences.

The details of estimation of Geological Reserves and Mineable Reserves with reference to the Geological Plan & Cross section and Conceptual Plan & Section as shown in (Plate No.III & III-A and VII & VII-A) respectively.

b. GEOLOGICAL RESERVES:

The Geological reserve of Rough Stone and Topsoil is calculated upto a depth of 47.0m (12.0m Topsoil + 35.0m Rough Stone) Surface Ground Level above-28m and Surface Ground Level below-19m. Total Geological reserve is estimated as 696340 Cu.m by area cross sectional method.



Table No.6

GEOLOGICAL RESERVES							
Section	Bench	L (m)	W (m)	D(m)	Volume in (Cu.m.)	Geological Reserve in Cbm (100%)	Topsoil in Cbm
XY-AB	I	140	80	2			22400
	II	140	80	5			56000
	III	140	80	5			56000
	IV	140	80	5	56000	56000	
	V	140	80	5	56000	56000	
	VI	140	80	5	56000	56000	
	VII	140	97	5	67900	67900	
	VIII	140	97	5	67900	67900	
	IX	140	97	5	67900	67900	
	X	140	97	5	67900	67900	
Total=					439600	439600	134400
XY-CD	I	41	36	2			2952
	II	41	1	5			205
	III	41	36	5			7380
	IV	41	36	5	7380	7380	
	V	41	36	5	7380	7380	
	VI	41	36	5	7380	7380	
	VII	85	138	5	58650	58650	
	VIII	85	138	5	58650	58650	
	IX	85	138	5	58650	58650	
	X	85	138	5	58650	58650	
Total=					256740	256740	10537
Grand Total=					696340	696340	144937

Topsoil	=	144937 cu.m
Total Geological Reserves in ROM	=	696340 cu.m
Recoverable Reserves @ 100%	=	696340 cu.m

C. MINEABLE RESERVES:

The Mineable reserves are calculated by deducting 7.5m & 10.0m Safety distance and Bench Loss. The Mineable Reserve is calculated upto a depth of 47.0m (12.0m Topsoil + 35.0m Rough Stone). Surface Ground Level above-28m and Surface Ground Level below-19m.

Table No.7

MINEABLE RESERVES							
Section	Bench	L(m)	W (m)	D(m)	Volume (Cu.m.)	Mineable Reserve* in Cbm(100%)	Topsoil in Cbm
XY-AB	I	130	70	2			18200
	II	128	68	5			43520
	III	123	63	5			38745
	IV	118	58	5	34220	34220	
	V	113	53	5	29945	29945	
	VI	108	48	5	25920	25920	
	VII	103	45	5	23175	23175	
	VIII	98	35	5	17150	17150	
	IX	93	25	5	11625	11625	
	X	88	15	5	6600	6600	
Total=					148635	148635	100465
XY-CD	I	41	26	2			2132
	II	41	1	5			205
	III	41	24	5			4920
	IV	41	19	5	3895	3895	
	V	41	14	5	2870	2870	
	VI	41	9	5	1845	1845	
	VII	70	91	5	31850	31850	
	VIII	65	81	5	26325	26325	
	IX	60	71	5	21300	21300	
	X	55	61	5	16775	16775	
Total=					104860	104860	7257
Grand Total=					253495	253495	107722

Topsoil = 107722 cu.m
 Total Mineable Reserves in ROM = 253495 cu.m
 Recoverable Reserves 100% = 253495 cu.m

The geological reserves computed based on the geological cross sections up to the economically workable depth of 47.0m (12.0m Topsoil + 35.0m Rough Stone) works out to 696340 cu.m (100% recovery) (Table-7) and mineable reserves have been computed as 253495 cu.m (Table-8) at the rate of 100% recovery upto a depth of 47.0m (12.0m Topsoil + 35.0m Rough Stone) (Refer plate No.VII & VII-A). The above projections are for the Three years plan period.

Mineable reserves have been computed as 253495cu.m at the rate of 100% recovery up to a depth of 47.0m (12.0m Topsoil + 35.0m Rough Stone). The Mineable reserves are calculated by deducting 7.5m & 10.0m Safety distance and Bench Loss.

2.0 MINING

A. Open Cast Mining

a) Briefly describe the existing as well as proposed method for excavation with all design parameters indicating on plans /sections:-

Existing method :

The mining operations are done by opencast semi-mechanized method with jack hammer drilling and blasting, hydraulic excavators are used for loading the Rough stone from pithead to the needy crushers.

There is only one existing working pit, the dimensions of which is given below :

Table No.8

Existing Pit Dimension
6867 Sq.m x 27m (D)
(12.0m Topsoil +15.0m Rough stone)

Proposed method :

The quarry is proposed to carry out mining operation with semi-mechanized opencast method. The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, loading and transportation of Rough Stone.

The operation will be confined to general shift only ie. from 8.00 AM to 5.00 PM with one hour lunch interval between 12.00 PM to 1.00 PM.

The Rough Stone, totally seven benches will be 5.0m height and 5.0m width for next Three years only. Please refer Plate Nos.IV & IV-A. The advancement of the pit will be from boundary towards middle side of the lease area for the next Three years. Please refer Plate No.IV.

A bund will be constructed around the pit to prevent accident call and inrush of rainwater. Proper footpaths will be provided between benches for easy accessibility for workers.

Haul roads, to conform to statutory standards will be made according to convenience for smooth transport of Rough stone and waste. Wherever necessary, crossing platforms will be provided in the haul roads at suitable point for safe crossing as tractors, tippers, trucks etc.,

The Top Soil will be utilized for the formation of mine roads, construction of bund and afforestation purpose.

Average annual production is about 84498 cum of Rough Stone with 300 working days in a year. Considering the nature of the deposit and the anticipated daily production level, semi-mechanized mining is proposed.

A boundary barrier of 7.5m & 10m width will be maintained as per statute. Rough Stone locked up in this barrier will be excavated after obtaining permission from DGMS under Regulation 111 of Mines and Mineral Regulation, 1961. The sequence of working for the next Three years is indicated in Plate No. IV and the rate of production is given in Table No.11.



b) Indicate Year-Wise Tentative Excavation in Cu.m indicating Production & Development, ROM, pit wise as in table below.

i) Planned Development for next Three years is given below :

The top soil is gravelly soil and estimated quantity is 107722m³. Topsoil formation will be removed and utilized for road low-lying areas and Plantation purposes.

ii) Planned Production for next Three years is given below :

The proposed rate of production of Rough Stone is about 253495 cu.m for Three years at the rate of 100% recovery up to a 47m depth (12m Top soil + 35m Rough Stone).

Table No.9

Year	ROM Cu.m	Production 100%
2023- 2024	70930	70930
2024-2025	82790	82790
2025-2026	99775	99775
TOTAL	253495	253495

From Total ROM the Rough Stone deposits are categorized with the following percentage. Rough stone : 100% .

The average production of Rough Stone per year will be about 84498 cu.m. Please refer Table No.11 and Plate No.IV.

YEARWISE DEVELOPMENT & PRODUCTION SCHEDULE FOR NEXT THREE YEARS

The proposed rate of production of Rough Stone is about 253495cu.m for Three years. The average proposed rate of production of Rough Stone is about 84498cu.m. at the rate of 100% recovery up to 47.0m depth (12.0m Top soil + 45m Rough Stone) Surface Ground Level above-28m and Surface Ground Level below-19m.

The proposed Production & development for next Three years 2023-2024 to 2025-2026 are given below :

Table - 10

YEARWISE DEVELOPMENT AND PRODUCTION								
Year	Section	Bench	L (m)	W(m)	D (m)	Volume in (Cu.m.)	Reserve Cbm(100%)	Topsoil in Cbm
2023-2024	XY-AB	I	130	70	2			18200
		II	128	68	5			43520
		III	123	63	5			38745
		IV	118	58	5	34220	34220	
		V	113	53	5	29945	29945	
	XY-CD	I	41	26	2			2132
		II	41	1	5			205
		III	41	24	5			4920
		IV	41	19	5	3895	3895	
		V	41	14	5	2870	2870	
Total=						70930	70930	107722
2024-2025	XY-AB	VI	108	48	5	25920	25920	
		VII	103	45	5	23175	23175	
	XY-CD	VI	41	9	5	1845	1845	
		VII	70	91	5	31850	31850	
Total=						82790	82790	
2025-2026	XY-AB	VIII	98	35	5	17150	17150	
		IX	93	25	5	11625	11625	
		X	88	15	5	6600	6600	
	XY-CD	VIII	65	81	5	26325	26325	
		IX	60	71	5	21300	21300	
		X	55	61	5	16775	16775	
Total=						99775	99775	
Grand Total=						253495	253495	107722

Topsoil = 107722 cu.m
 Total Reserves = 253495 cu.m
 Recoverable Reserves @ 100% = 253495 cu.m

ROM: The material excavated from mineralized zone and includes mineral reject and useable mineral component.

OB: Means overburden capping waste.

iv) Estimated Life of the quarry

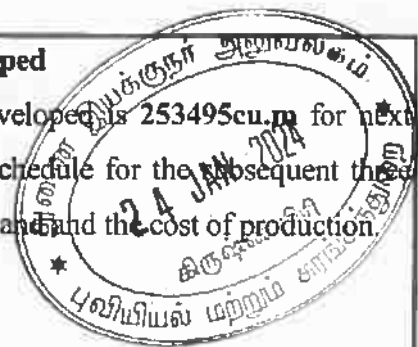
Mineable ROM = 253495 cu.m
 Mineable Reserves @ 100% = 253495 cu.m
 Average production (Rough Stone) per year @ 100% = 84498 cu.m
 Estimated Life of the Quarry = $253495 / 84498 = 3.0$ years

Life = 3 years

The average proposed rate of production of Rough Stone is about 84498 cu.m per year.

v) Proposed Rate of Production When The Quarry is Fully Developed

The proposed rate of production when the quarry is fully developed is 253495cu.m for next Three years and 84498cu.m per annum. (Table-11) The production schedule for the subsequent three years is drawn mainly in consideration of reserves position, market demand and the cost of production



vi) Mineable Reserves and Anticipated Life of Mine

The Rough Stone is Massive in nature. The depth persistence of the Rough Stone will be beyond the economically workable depth. An optimum depth of 47.0m (12.0m topsoil+ 35.0m Rough Stone) for entire lease period has been established as economically viable depth. Eventually this depth is the optimum depth for safe and scientific quarrying.

The mineable reserves are calculated by excluding the mining loss due to formation of benches, ultimate depth of mine, the mineral reserve held up within the safety distances all along the boundary of quarry lease area.

The mineable reserves for this Rough stone is thus arrived as 253495cu.m (Table-15) for an assumed depth of 47m from top surface (12.0m Topsoil + 35.0m Rough Stone). The details of estimation of three years development & production plan (plate no.IV) is furnished in Table-19. The average rate of production of Rough Stone from this quarry is 84498 cu.m per year and mineable recoverable reserves 253495cu.m.

c). Composite development plans showing pit layouts, dumps, stacks of mineral reject, if any, etc. and year wise sections in case of 'B' category mines:

A composite development year wise Plan and Sections are shown in Plate Nos.IV & IV-A. The details are furnished in Table-11. The average annual production of Rough Stone per year will be about 84498 cu.m.

d). Describe briefly giving salient features of the proposed method of working Indicating Category of mine:

The quarry is proposed to carry out mining operation with semi-mechanized opencast method. The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, loading and transportation of Rough Stone. The removal of blasted Rough Stone material is loaded into 10 MT capacity trucks with the help of hydraulic excavators.

Extent of Mechanization:

The mine will be worked by semi-mechanized method. However for drilling and hauling, jack hammers, hydraulic excavators and tippers will be used respectively.

Drilling Machines :

Drilling of shot holes will be carried out using compressor and jack hammer. Depth of holes shall be 1 to 2m bench height and spacing shall be 0.75m and burden shall be 0.6m from the pit face.

Details of drilling equipments are given below.

Table No.11

Type	Nos	Dia of hole	Size / Capacity	Make	Motive power	H.P.
Jack Hammer	4	25.5 mm	Hand held	Atlas copco	Diesel	60

Loading Equipment:

Loading of rough stone shall be carried out by Hydraulic Excavator from the working place periodically. Details of loading equipment are given as under.

Table No.12

Type	Nos	Bucket Capacity (MT)	Make	Motive power	H.P.
Hydraulic excavator	1	1.2 M ³	L&T or Ex200	Diesel	120

Transportation:

Transport of raw materials and waste shall be done by Tipper of 10 M.T. capacity.

Table No.13

Type	Nos	Size / Capacity	Make	Motive power	H.P.
Tipper	2	10 M.T	Ashok Leyland	Diesel	110

Miscellaneous :

There is no other miscellaneous operation worth mentioning except drilling by jack hammer, working of Rough stone deposit by opencast semi-mechanized methods, transport of Rough stone by tippers and trucks and pumping out seepage water during rainy season.

Afforestation :

The 7.5m & 10.0m safety distance all along the lease boundary has been identified to be utilized for afforestation purpose. Yearly 100 Neem & Pungan trees will be planted in this lease area. These trees will be planted along the boundary line(Please refer Plate No.V for Mine layout, Land use and Afforestation Plan).

The Topsoil soil will be spread over the same and vegetative cover with suitable species will be provided. The extent of area to be afforested in next Three years is 0.40.0 Ha. interval between trees - 5m, survival rate - 70%. A retaining wall will be constructed around the pit.

The Afforestation programme for the next Three years are described as follows :

Table No. 14

Year	Name of the species	No. of species	Interval	Area in Ha	Survival rate
2023-2024	Neem & Pungan	100	5m	0.13.0	70%
2024-2025	Neem & Pungan	100	5m	0.13.0	70%
2025-2026	Neem & Pungan	100	5m	0.14.0	70%
TOTAL		300		0.40.0	

e). Describe briefly the layout of mine workings, pit road layout, the layout of faces and sites for disposal of Topsoil/waste along with ground preparation prior to disposal of waste, reject etc. A reference to the plans and sections may be given. UPL or ultimate size of the pit is to be shown for identification of the suitable dumping site:

The quarry is proposed to carry out mining operation with semi-mechanized opencast method. The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, loading and transportation of Rough Stone.

The operation will be confined to general shift only ie. from 8.00 AM to 5.00 PM with one hour lunch interval between 12.00 PM to 1.00 PM.

The Rough Stone, totally seven benches will be 5.0m height and 5.0m width for next Three years only. Please refer Plate No.IV & IV-A. The advancement of the pit will be from boundary towards middle side of the lease area for the next Three years. Please refer Plate No.IV.

A bund will be constructed around the pit to prevent accident call and inrush of rainwater. Proper footpaths will be provided between benches for easy accessibility for workers.

Haul roads, to conform to statutory standards will be made according to convenience for smooth transport of Rough Stone and waste. Wherever necessary, crossing platforms will be provided in the haul roads at suitable point for safe crossing as tractors, tippers, trucks etc.,

The Top Soil will be utilized for the formation of mine roads, construction of bund and afforestation purpose.

Average annual production is about 84498 cum of Rough Stone with 300 working days in a year. Considering the nature of the deposit and the anticipated daily production level, semi-mechanized mining is proposed.

A boundary barrier of 7.5m & 10.0m width will be maintained as per statute. Rough Stone locked up in this barrier will be excavated after obtaining permission from DGMS under Regulation 111 of Mines and Mineral Regulation, 1961. The sequence of working for the next Three years is indicated in Plate Nos. IV & VI and the rate of production is given in Table No.11.

f) Conceptual Mine planning upto the end of lease period taking into consideration the present available reserves and resources describing the excavation, recovery of ROM, Disposal of waste, backfilling of voids, reclamation and rehabilitation showing on a plan with few relevant sections:

Conceptual Mining Plan :

Conceptual mining plan is prepared with an object of long-term systematic development of benches, lay outs, selection of permanent ultimate pit limit, depth of quarrying and ultimate pit, selection of sites for construction of infrastructure etc.,

While making the Conceptual Mining Plan and deciding the ultimate pit limits the following factors are considered.

i) Pit dimension :

a. Table No:15

	PIT
Length(m)	205.0
Width (m) avg	77.0
Depth (m)	47.0m (12.0m Topsoil + 35.0m Rough Stone)

01. Boundary Barriers

In this case a barrier of 7.5m and 10.0m is left along the lease boundary.

02. Depth of Mining :

The depth of mining is about 47.0m (12.0m Topsoil + 35.0m Rough Stone).

03. No. of benches :

The no. of benches will be seven including the Topsoil bench.

04. Size and slope of benches :

In Rough Stone, the bench 5.0m height and width 5.0m for next Three years.

05. Nature of Topsoil :

The nature of the topsoil in this area is gravelly soil, thickness of topsoil is about 12.0m.

06. The size of the lease hold :

The lease area has an extent of 2.16.0Ha.

07. Nature of ore body :

In the area Rough Stone is of massive Deposit and without much of geological disturbances.

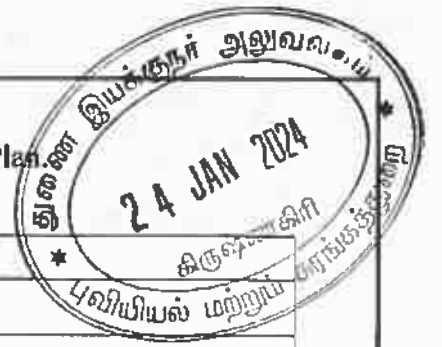


The ultimate pit limits will be :

Ultimate pit limits have been marked in the Conceptual Mining Plan.

Table No. 16

	PIT
Length(M)	205.0
Width (m) avg	77.0
Depth (m)	47.0m (12.0m Topsoil + 35.0m Rough Stone)



- 01. Area already worked out – Plate No.III : 0.68.67 Ha.
- 02. The outline of the area to be worked out in the next Three years : 1.74.0 Ha.
- Plate No. IV.
- 03. Yearwise area to be planted for next Three years –Plate No.IV. : 0.40.0 Ha.
- 04. Extent of areas occupied by roads, site services, : 0.02.0 Ha.
etc., - Plate No.V.

Table No. 17

Sl. No.	Description	Present Area (Ha.)	Area in use during the quarrying period (Ha.)
01.	Area under Quarrying	0.68.67	1.74.0
02.	Infrastructure	Nil	0.01.0
03.	Roads	0.01.0	0.01.0
04.	Green Belt	Nil	0.40.0
05.	Unutilized Area	1.46.33	Nil
	TOTAL	2.16.0	2.16.0

Ultimate pit boundaries:

Ultimate pit limits have been marked in the Conceptual Plan in Plate No.VII.

i) Waste dumps :

There is no waste generation as there is 100% recovery.

Blasting Pattern:

The massive formation shall be broken into pieces of portable size by drilling and Proposed Control Blasting using jack hammers and shot hole Blasting. Powder factor of explosives for breaking such hard rock shall be in the order of 6 to 7 tonnes per K.g of explosives.

Proposed Control Blasting parameters are as follows.

Table No.18

Diameter of the hole	: 32-36 mm
Spacing	: 60 Cms
Depth	: 1 to 1.5m
Charge / Hole	: D.Cord with water or 70 gms of gun powder or Gelatine.
Pattern of hole	: Zig Zag
Inclination of hole	: 70° from the horizontal.
Quantity of rock broken	: 0.45 MT x 2.6 = 1.17 MT
Control Blasting efficiency @ 90%	: 1.17 x 90% = 1.05MT / hole
Charge per hole	: 140 gms of 25mm dia cartridge
Quantity of rock broken per day	: 281.66M ³ .



b) During dry season, nitrate mixture as base charge and any conventional type of explosives as booster charge will be used:

In rainy season, it is preferable to use only conventional type of explosives like slurry based explosives. Since it is a small mine and the working of the mine is also seasonal, drilling will be done by contractors and supply of explosives will be done by authorized dealer. However, blasting will be done by a qualified mate or Blaster.

c) Secondary Blasting:

Secondary blasting is not needed, since the primary blasting itself will take care of the required fragmentation of waste rock and mineral body.

d) Storage of Explosives:

The explosive shall be supplied by the authorized contractor at the blasting site at the time of blasting. The explosive shall be directly used so no storage of explosive is proposed.

e) Safety Precautions:

1. During handling all care shall be taken that no inflammable elements should be there.
2. Only safety explosive container with explosive license shall be used for safe and secure transportation of explosive.
3. Efficient Siren will be blown prior to the blasting & after clearance of blasting.

f) Underground Mines :

Not applicable.

3.0 MINE DRAINAGE

The area is hilly topography. Rain water finds its natural course. The water table is touched at a depth of 90m in summer and at 85m in NE monsoon. The water table fluctuation is verified by observing the water levels in the above seasons in the nearby wells.

During the mining of eighteenth bench, it may be necessary to pump out water. A 5 HP pump can easily deal rain water and seepage water and keep the mine dry. The pumped out water will be left out far away from the Southeastern boundary.

a. Depth of Mining:

The working in Rough Stone will reach a depth of 47.0m (12.0m Topsoil + 35.0m Rough Stone) in the next Three years.

b. Quantity and quality of water likely to be encountered:

In the next Three years, the water table will not pose any problem. However, to deal with storm water and seepage water, a diesel pump of 5 HP capacities is used.

In future, proper dewatering pumping arrangements to be made from pit bottom to nearby agricultural lands.

c. Describe regional and local drainage pattern. Also indicate annual rain fall, catchments area, and likely quantity of rain water to flow through the lease area, arrangement for arresting solid wash off etc.

Ground water is the main source in this area, apart from rain in the monsoon period. The water table is at a depth of 90m in summer and at 85m in rainy season. The ground water will be collected in the sump for the deposition of solid particles. Once the suspended particles are deposited it will be pumped out for domestic purpose, dust suppression system, gardening and Afforestation purpose. The excess water only will be pumped out to the ponds/closer water bodies-pond after the deposition of solid particles. There are no toxic elements found in the sump water.

To cope up with storm water and seepage water, an energy efficient electrical pump of 5 H.P capacity will be installed and the discharge will be left-out in the nallah/pond. Garland drains will be made all along the periphery of dumpsites to prevent the water carrying the wash-offs from the dumps. The water collected in the garland drains will flow towards a settling tank formed near by the dumpsite. The water will be allowed to settle the wash offs from the dumps in the settling tank and pure and clear water will be utilized for Afforestation purposes and for haul roads arrest the dust generation.



4.0. STACKING OF MINERAL REJECT /SUB GRADE MATERIAL AND DISPOSAL OF WASTE

a) Indicate briefly the nature and quantity of Topsoil, Topsoil/waste and Mineral Reject to be disposed off.

Topsoil:

The Topsoil is gravelly soil. It occurs to a depth of 12.0m. The generation of Topsoil for next Three years is about 107722 tonnes.

Sub-grade Mineral:

There is no Sub-grade Mineral produced in the next Three years.

Mineral reject:

There is no waste generation as there is 100% recovery.

b) The proposed dumping ground within the lease area be proved for presence or absence of mineral and be outside the UPL unless simultaneous backfilling is proposed or purely temporary dumping for a short period is proposed in mineralized area with technical constraints & justification.

Construction of garland drain in around the pit and dump and settling tank will be provided to guard against the heavy rainwater.

Periodically sprinkling/spraying water on roads leading from working face to waste dump, so that areas are always kept wet to prevents emission of air borne dust. Retaining wall will be constructed around the pit.

c) Attach a note indicating the manner of disposal of waste, configuration and sequence of year wise buildup of dumps along with the proposals for protective measures.

There is no waste generation as there is 100% recovery.

Construction of garland drain in and around the pit. Settling tank will be provided to guard against the heavy rainwater.

Periodically sprinkling/spraying water on roads, so these areas are always kept wet to prevent emission of air borne dust.

Retaining wall and garland drain will be constructed around the pit. Afforestation programme will be carried out.

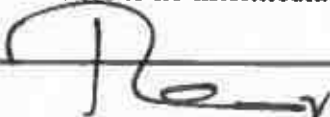
5.0 USE OF MINERAL AND MINERAL REJECT:

a) Describe briefly the requirement of end-use industry specifically in terms of

The entire mined out mineral is been utilized by the nearby Crusher unit in Krishnagiri.

b) Give brief requirement of intermediate industries involved in up gradation of Mineral before its end-use:

There is no intermediate industries involved for up gradation of Mineral.



c) Give detail requirements for other industries, captive consumption,

Associated industrial use etc:

Not Applicable.

d) Physical specifications:

Rough stone texture is medium to coarse grained and is composed of various minerals, hence it is a metamorphic rock. The grains are subhedral, inequigranular, with a granoblastic texture. The grains are crystalline ie. Complete crystallization has occurred. Cleavage is absent. The color is dark olive green.

Supply of buyers :

Used in nearby Crusher units at Krishnagiri.

e) Give details of processes adopted to upgrade the ROM to suit the user Requirements:

Not applicable.

6.0 PROCESSING OF ROM AND MINERAL REJECT :

a) If processing / beneficiation of the ROM or Mineral Reject is planned to be conducted, briefly describe nature of processing / beneficiation. This may indicate size and grade of feed material and concentrate (finished marketable product), recovery etc:

The minerals produced from the mines need only specific sorting & grading for Size, Grade & Recovery factor. No mineral beneficiation processing is involved. Besides there is no other processing or beneficiation is required for upgrading.

Mineral Beneficiation of Mineral :

Not applicable, no beneficiation is being carried out at the mine. Since the entire mineral was supplied in raw form.

Beneficiation Test Done On Sub-Grade Mineral:

Not applicable, since no sub-grade mineral is anticipated.

b) Give a material balance chart with a flow sheet or schematic diagram of the Processing procedure indicating feed, product, recovery, and its grade at each stage of processing:


Not applicable.

c) Explain the disposal method for tailings or reject from the processing plant:

Not applicable.

d) Quantity and quality of tailings /reject proposed to be disposed, size and capacity of tailing pond, toxic effect of such tailings, if any, with process adopted to neutralize any such effect before their disposal and dealing of excess water from the tailings dam:

Not applicable.



e) Specify quantity and type of chemicals if any to be used in the processing plant:

Not applicable.

f) Specify quantity and type of chemicals to be stored on site / plant:

Not applicable.

g) Indicate quantity (cum per day) of water required for mining and processing and sources of supply of water, disposal of water and extent of recycling:

Water balance chart may be given.

Not applicable.

7.0. OTHERS:

a. Site Services :

The proposed site services are:

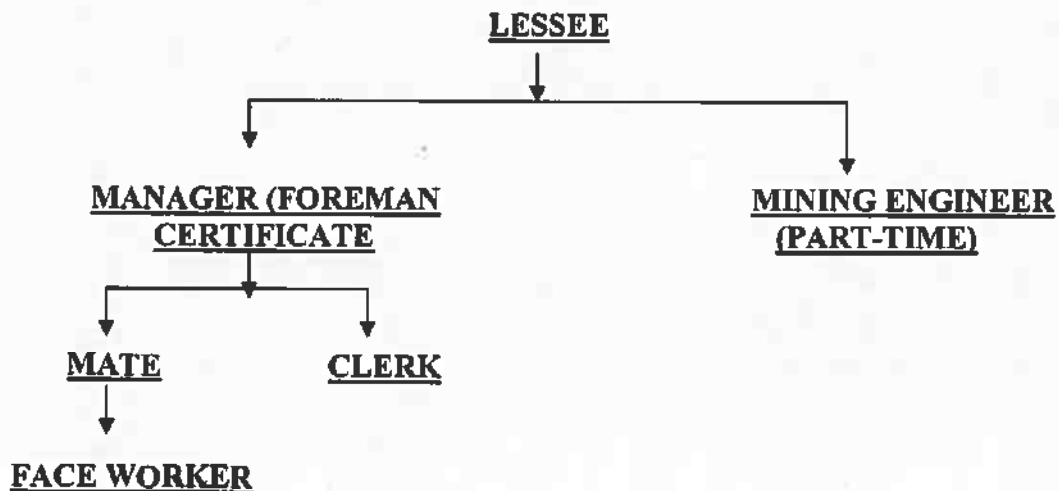
Drinking water, rest shed, store room, public convenience etc., mines office and blaster shelter etc., please refer Plate Nos.IV, V and VIII.

Employment Potential:

i) Skilled Labour:

Foreman/ Part time Mining Engineer	:	1
Excavator operator	:	1
Co- operator	:	2
Jack hammer operator	:	6
Blaster/mate	:	1
ii) Semi-skilled:	:	4
watchman	:	1
iii) Unskilled helper	:	5
Total	:	21 Nos.

The proposed organization chart :



Re



The drilling will be done by contractors. The mine will work in a single shift from 8.00 AM to 4.00 PM with one hour lunch interval between 12.00 Noon and 1.00 PM.



8.0 PROGRESSIVE MINE CLOSURE PLAN

INTRODUCTION

Name of the Mine : Venkatesapuram Rough Stone Quarry
 Lessee : Thiru. V. Nagaraja,
 Address : Thiru. V. Nagaraja,
 S/o. Venkatappa reddy,
 Koppa Village,
 Hulimangala Post,
 Anekal Taluk,
 Bangalore District-560 105.
 Cell : 98450 13945.

Location :

Extent : 2.16.0 Ha.
 S.F.No. : 287/1
 Village : Venkatesapuram
 Taluk : Hosur
 District : Krishnagiri

Type of Lease Area : Patta Land - Non-Forest area
 Present land use pattern : Quarrying of Rough Stone
 Method of Mining : Semi-mechanized
 Mineral processing operation : Drilling and blasting is done.

8.1 Environment Base line information: Attach a note on the status of baseline

Information with regard to the following:

Existing land use pattern:

Table No:19

Sl. No.	Description	Present Area (Ha.)	Area in use during the quarrying period (Ha.)
01.	Area under Quarrying	0.68.67	1.74.0
02.	Infrastructure	Nil	0.01.0
03.	Roads	0.01.0	0.01.0
04.	Green Belt	Nil	0.40.0
05.	Unutilized Area	1.46.33	Nil
	TOTAL	2.16.0	2.16.0

Water Regime

Ground water is touched at a depth of 90m in summer and at 85m in NE monsoon season. The average rainfall is 800-900mm. There is no lake, reservoir or river near the area. Villagers use open well water for drinking and other domestic purposes for ages without any adverse health effects. However drinking water will be supplied from the public water supply system from nearby hamlets.

Air-Quality:

The air quality will be affected during the quarrying period due to blasting and jack hammer drilling, which will be within permissible limits. Since this is an open area, the impact on air quality will be to the minimum. The mine roads will be sprinkled with water before starting the transportation of rough stone and wastes to minimize air pollution.

Noise Level:

Quarrying of Rough Stone had been carried out by drilling and control blasting by using low power explosives, and hence, noise will be very minimum.

Flora and Fauna

Since the sub-seed area is a stony waste, it does not contain much vegetation. There is no report of existence of wild animals in this region.

Climate Conditions

The area receives rainfall of about 800mm to 900mm per annum and the rainy season is mainly from October-January during NorthEast Monsoon. The summer is hot with maximum temperature of 38°C and winter encounters a minimum temperature of 18°C.

Human Settlement

The hamlets near the area are: Table No:20

Name of Hamlet	Population	Direction from the area	Distance
Midithepalli	260	North	2.8 kms.
Punnaharam	200	South	2.0 kms.
Gollapalli	180	West	2.4 kms.
Athimugam	250	East	1.7 kms.

Public building, Places of worship and Monuments

There is no public building, places of worship or archaeological or national monuments near the area. There is no wild life or bird sanctuary or no reserve or any protected social forest closer to the area.



8.2 Impact Assessment: Attach an Environmental Impact Assessment Statement describing the impact of mining and beneficiation on environment on the following:

a) **Environmental Impact Assessment Statement:**

The factors that should be covered in this Para are: -

01. Land
02. Air Quality
03. Water Quality
04. Noise Levels
05. Vibration Levels
06. Water Regime
07. Socio-Economics
08. Historical Monuments etc.



Land:

It is a working mine. There is no proposal for back filling and reclamation. Before closure of the mine, a parapet wall will be constructed to prevent inadvertent entry of cattle and human beings. After closure of the mine, the pit will be allowed to collect seepage and rain water.

This will help to charge the nearby agricultural wells. Fish forming will also be attempted.

Afforestation will be attempted in the boundary barrier.

Air-Quality:

The air quality will be affected during the quarrying period due to blasting and jack hammer drilling, which will be within permissible limits. Since this is an open area, the impact on air quality will be to the minimum. The mine roads will be sprinkled with water before starting the transportation of rough stone and wastes to minimize air pollution.

Water Quality:

Mining operation will not produce any toxic effluent in the form of solid, liquid or gas. The existing water quality will not be affected by mining operation. The Surface rain water flow through the seasonal water course as usual.

Noise Level:

Quarrying of Rough Stone had been carried out by drilling and control blasting by using low power explosives, and hence, noise will be very minimum.

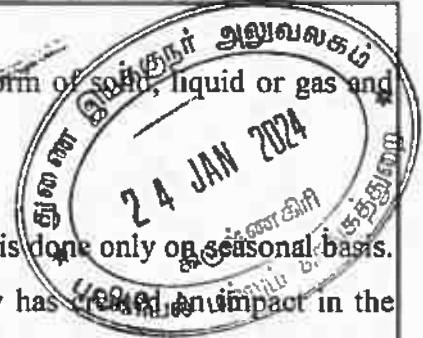
Vibration levels:

The ground vibration will be caused due to movement of earth moving equipment and blasting. But the impact on the environment will be negligible, since the quantity of explosives used will be very small and the movement of equipment will be intermittent.

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Water Regime:

Mining operation will not produce any toxic effluent in the form of solid, liquid or gas and will not have any impact on quality of water and also on ground water.



Socio-Economics:

The local population is mostly agriculture based. Agricultural is done only on seasonal basis. Mining in this area is an avenue for employment. Mining certainly has created an impact in the Socio-economic standards of the local people. It has improved the life style of the local people and has improve the standard of living.

Historical Monuments:

There is no historical or Archaeological monument near the area. The mining operation does not have any impact on these aspects.

8.3 PROGRESSIVE RECLAMATION PLAN:

Since, it is an existing mine, the only proposal now is to plant 100Neem & Pungan trees every year in the boundary barrier. A retaining wall will be constructed around the pit. Please refer Plate No.V. The Afforestation programme for the next Three years are described as follows :

Table No. 21

Year	Name of the species	No. Of species	Interval	Area in Ha.	Survival rate
2023-2024	Neem & Pungan	100	5m	0.13.0	70%
2024-2025	Neem & Pungan	100	5m	0.13.0	70%
2025-2026	Neem & Pungan	100	5m	0.14.0	70%
TOTAL		300		0.40.0	

After complete extraction of mineral, the pit will be allowed to collect rain and seepage water to serve as a reservoir to charge the nearby wells. Fish culture will also be attempted. A bund will be constructed around the pits.

8.3.1. MINED OUT LAND:

It is an existing mining lease. There is no proposal for back filling and reclamation at this stage.

- 01. The area covered by pits : 1.74.0 Ha.
- 02. The area covered by Afforestation : 0.40.0 Ha.
- 03. The area covered by roads, infrastructure : 0.02.0 Ha.
- 04. Unutilized area : Nil

8.3.2. Topsoil management:

The top soil of the lease area is gravelly soil. It will be utilized for low level afforestation purposes.

8.3.3. Tailing Dam Management

Does not arise.

8.3.4 Acid mine drainage, if any and its mitigative measures.

Not applicable.

8.3.5 Safety And Security

All the quarry workers will be provided with safety equipments like helmets, Mine Goggles, Ear plugs, Ear muffs, Dust mask, reflector jackets and Safety Shoes as personal protective device as per the specification approved by Director of mines safety. Periodically medical checkup will be conducted for all workers for any mine health related problems. Proper training and induction will be given by qualified and experienced safety officer to all employed about the safe and systematic Rough stone quarrying operations. The drillers and workers will be sent for vocational training periodically to carry out the quarrying operations scientifically to safe guard the men machinery and mineral and to create awareness of conventional opencast quarrying operations.

Parapet wall or bund have been constructed on all sides of the openings. Proper pumping arrangements during rainy season. Trees planted all along the mining lease boundary.

8.4 Disaster Management And Risk Assessment

The nearby hamlet is Krishnagiri which is at a distance of 15.0 kms. where facilities like Primary Health Centre etc., are available. Mode of transport available is Jeep. All the employee will be shifted to the nearest hamlet Shoolagiri. Mobile phone will be provided to the Mines Manager. The Manager/Supervisor will be provided with a mobile phone. The Mining area is very small. There is no chance for risk for any disaster. However, the details of contact person are given :

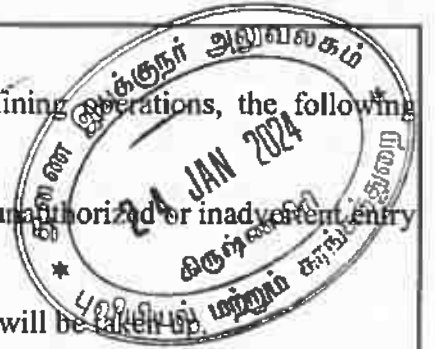
Contact person : V. Nagaraja
Postal Address : Koppa Village,
Hulimangala Post,
Anekal Taluk,
Bangalore District – 560105.
Mobile No : 98450 13945.



8.5 Care and maintenance during temporary discontinuance:

In case, of any temporary closure or discontinuance of mining operations, the following steps are proposed.

- Watchman will be posted round the clock to prevent any unauthorized or inadvertent entry of general public.
- Works on stabilization of dumps to provide vegetal cover will be taken up.
- Construction of garland drains in the pit and retaining walls around the dumps will be attempted.



8.6 .Project Cost:

Table No.22

A. Fixed Asset Cost:	
1. Land Cost	: Rs. 22,20,000/-(Patta Land)
2. Labour Shed	: Rs. 1,80,000/-
3. Sanitary Facility	: Rs. 90,000/-
4. Fencing cost	: Rs. 1,00,000/-
Total=	: Rs. 25,90,000/-
B. Operational Cost:	
Machinery cost	: Rs.40,00,000/-
C. EMP Cost:	
Drinking water facility	: Rs. 1,20,000/-
Safety kits	: Rs. 1,00,000/-
Water sprinkling	: Rs. 60,000/-
Afforestation	: Rs. 30,000/-
Water quality test	: Rs. 40,000/-
Air quality test	: Rs. 40,000/-
Noise/vibration test	: Rs. 40,000/-
Total=	: Rs. 4,30,000/-
Total Project Cost(A+B+C)	: Rs. 70,20,000/-

9.0 Any Other Information:

The Modified Mining Plan proposed has fully covered the aspects of Tamil Nadu Minor Mineral Concession Rules with a plan to extend the proposed working of the mine to the maximum possible depth of the deposit. To avoid wastage, the deposit has to be carefully and economically mined. Work persons have to be educated about the value of mineral. The licensee endeavors every attempt to win mineral economically without wastage and to improve the environment and ecology.



S. Dhanasekar
S. DHANASEKAR, M.Sc. (Geo)
Qualified Person

This Mining Plan is approved based on guidelines / instruction issued and in corporation of the particulars specified in the letter Roc. No. A 78/2018 Dated 24.1.2018 of the Deputy Director of Geology and Mining, Krishnagiri and subject to further fulfillment of the conditions laid down under Tamil Nadu Minor Mineral Concession Rules, 1959 and Minor Mineral Conservation and Development Rule 2010.

S. Dhanasekar
DEPUTY DIRECTOR
Geology and Mining,
Collectorate, Krishnagiri.

24
24/1/2018

This Mining Plan is approved subject to the conditions / Stipulation Indicated in the Mining Plan Approval
Letter Roc. No. A 78/2018 Dated 24.1.2018

R

**PROCEEDINGS OF THE ASSISTANT DIRECTOR, GEOLOGY AND
MINING, KRISHNAGIRI**

Present: L.SURESH M.Sc.,



Roc.No.478/2018/Mines

Dated 12.02.2021

**Sub: Mines and Minerals - Krishnagiri District-
Shoolagiri Taluk - Venkateshapuram Village -
S.F.No. 287/1 - Over an extent of 2.16.0 Hects of
patta lands - Quarry Lease for Rough Stone
Application preferred by Thiru V.Nagaraja S/o
Venkatappa Reddy, Koppa Village, Hulimangala
Post, Anekal Taluk, Bangalore 560 105 - precise
area given to the applicant - SEIAA clearance and
pollution consent obtained - orders issued - reg.**

- Ref:**
- 1 Quarry lease application of Thiru V.Nagaraja S/o Venkatappa Reddy, Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore 560 105 dated 26.03.2018.
 - 2 The Revenue Divisional Officer, Hoaur letter Roc. No. 2088/2018/B2 Dated 22.06.2018.
 - 3 The District Forest Officer, Hosur letter RC No. 2572/2018/L dated 30.04.2018 .
 - 4 Inspection report of the Deputy Director, Geology and Mining, Krishnagiri 20.07.2018.
 - 5 The Deputy Director of Geology and Mining, Krishnagiri letter Roc. 478/2018/Mines dated 30.07.2018.
 - 6 The District Level Environmental Impact Assessment Authority Krishnagiri Lr.No.03/DEIAA-KGI/EC NO. 98/2018 dated 27.08.2018.
 - 7 The District Environmental Engineer, Tamil Nadu Pollution Control Board Hosur proceedings No. F.2025HSR/ RS/DEE/ TNPCB /HSR/W/2019 dated 31.01.2019.
 - 8 The District Environmental Engineer, Tamil Nadu Pollution Control Board Hosur proceedings No. F.2025HSR/ RS/DEE/ TNPCB /HSR/A/2019 dated 31.01.2019.
 9. G.O (Ms) No. 169 Industries (MNIC) Department dated 04.08.2020.
 10. G.O (Ms) No. 208 Industries (MMC-1) Department dt 21.09.2020.
 - 11 The Deputy Director of Town and County Paining Hosur letter No.231/2021Kema dated 12.02.2021.

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- 12 Thiru V.Nagaraja S/o Venkatappa Reddy, Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore 560 105 letter dated 16.02.2021.
13. Inspection report of the Assistant Geologist, O/o Assistant Director of Geology and Mining, Krishnagiri 17.02.2021.

-oOo-

ORDER:

Thiru V.Nagaraja S/o Venkatappa Reddy, Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore 560 105 had applied for the grant of quarry lease to quarry Rough stone for a period of five years over an extent of 2.16.0 hecets. in patta land in S.F. No. 287/1 in Venkateshpuram village, Shoolagiri Taluk Krishnagiri District under the provisions of Rule 19-1 of Tamil Nadu Minor Mineral Concession Rules, 1959 vide in their application 1st cited.

2) The Revenue Divisional Officer, Hosur, District Forest Officer, Hosur and the Deputy Director of Geology and Mining Krishnagiri had inspected the applied area and recommended for the grant of lease to the applicant with certain conditions.

3) Based on the recommendation of the Revenue Divisional Officer, Hosur, District Forest Officer, Hosur and the Deputy Director of Geology and Mining Krishnagiri, precise area had been given over an extent of 2.16.0 Hecets in S.F.No. 287/1 of Venkateshpuram Village, Shoolagiri Taluk Krishnagiri District for the proposed grant of quarry lease for rough stone for a period of five years from the date execution of lease deed subject to certain special conditions in addition to the usual conditions stipulated for rough stone quarry and the applicant had been directed to submit the Approved Mining Plan and Environmental Clearance from the District Level Environmental Impact Assessment Authority, Krishnagiri.

4) The applicant have submitted the approved mining plan approved by the Deputy Director of Geology and Mining vide in the reference 5th cited and the Environment clearance given by the District Level Environment Impact Assessment Authority Krishnagiri



in the reference 6th cited. Further the applicant had submitted the letter of the Deputy Director of Town & Country Planning Dharmapuri letter RC No. 231/2021/Kema dated 12.09.2021 informed that the lease granted area are classified as "Unclassified dry agriculture land".

5) (i) In the G.O (Ms) 208 Industries (MNIC) Department dated 21.09.2020 an amendment had been issued to substitute Rule 20. In sub Rule (2)(a) of Rule 20 the maximum period of lease for quarrying rough stone in the areas which have not been subjected to so for quarrying shall not be less than one year and the maximum period for grant of such lease shall not exceed. 10 years and shall not exceed 5 years in respect of other areas.

6) The Assistant Geologist of Geology and Mining, Krishnagiri has inspected the applied area on .02.2021 and submitted his technical report vide reference 12th cited. From his report the following facts are revealed Subject to the following Condition

i) The area applied for lease over an extent of 2.16.0 Hects in patta lands S.F No. 287/1 of Venkatesapuram Village of Shoolagiri Taluk of Krishnagiri District is Virgin and Sufficient inferred reserves of 1425102 CBM of rough stone is available and lease may be granted for 10 years.

(ii) In the G.O (Ms) No. 169 Industries (MN 1C) Department dated 04.08.2020 Amendment had been carried out in the Tamil Nadu Minor Mineral Concession Rules 1959. As per the Amended Rule 19 (1) (b) . The Assistant Director of Geology and Mining had been empowered to grant lease for minor minerals in patt lands. As per Amended Rule 19 (i) (c) after the grant of the lease the applicant shall execute the lease deed in Appendix-IV with the Assistant Director of Geology and Mining.

(iii) Mean while, the applicant Thiru V. Nagaraja has requested to issue orders regarding the extension of lease period from 5 years to 10 years for the proposed rough stone quarry in patta land S.F No.



287/1 of Venkateshpuram Village, Shoolagiri Taluk, Krishnagiri District.

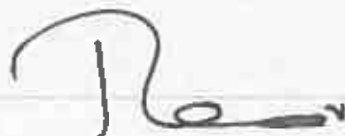
(vi) The grantee shall submit approved scheme of Mining as per Rule 41 (9) of Tamil Nadu Minor Mineral Concession Rule 1959 approved by Assistant Director of Geology and Mining, Krishnagiri at least 180 days before the expiry of the mining plan period.

(v) The grantee shall also submit the environmental clearance from the competent authority as per Rules 42 of Tamil Nadu Minor Mineral Concession Rules 1959 within the time limit as prescribed.

vi) The grantee shall remit the difference amount of stamp duty if any due to the Government.

7) In view of the above a quarry lease for rough stone is granted to Thiru V.Nagaraja S/o Venkatappa Reddy, Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore 560 105 over an extent of 2.16.0 Hects in S.F.Nos. 287/1 of Venkateshpuram Village, Shoolagiri Taluk Krishnagiri District under the provisions of Rule 19 (1) (b) of Tamil Nadu Minor Mineral Concession Rules, 1959 for a period of Ten years from the date of execution of lease deed subject to the following conditions.

1. A safety distance of 7.5 mts shall be maintained for the patta land in S.F No. 287/2 situated on the southern side of the applied area.
2. A safety distance 10 mts should be left out for the Governemnt land S.F No. 285 situated on the North & East and S.F No. 286/3, 288 situated on the Southern side and S.F No. 294 situated on the Western side of the applied area.
3. The applicant should fence the area by constructing compound wall (or) barbed wire fencing. Quarrying activity should be carried out from 7.00 A.M to 5.00 P.M only.
4. To protect noise and air pollution 500 saplings of pungan and neem should be planted by the applicant.



The grantee shall submit approved scheme of Mining as per Rule 41 (9) of Tamil Nadu Minor Mineral Concession Rule 1959 approved by Assistant Director of Geology and Mining, Krishnagiri least 180 days before the expiry of the mining plan period.



The grantee shall also submit the environmental clearance from the competent authority as per Rules 42 of Tamil Nadu Minor Mineral Concession Rules 1959 within the time limit as prescribed.

The grantee shall remit the difference amount of stamp duty if any due to the Government.

II i) The grantee should remit Rs.10,000/- towards security deposit and Rs. 3,240/- towards area assessment in the relevant head of account and submit the original challans.

ii) The grantee should submit the non judicial stamp papers for the value of Rs. 8,41,000/- and to execute the lease deed with the District Collector in the prescribed time limit.

II.a) The grantee should sent the notice for operating the quarry to Director of Mines safety, Bangalore.

b) Quarrying operation should carried out only after appointing Mines Manager, Mines Mate and Foremen.

c) At any cost the blasting activity should be carried out under the Supervision of Mines Manger / Mines mate

d). If any accident occur in the quarry area the lessees should give intimation to the Director of Mines safety Bangalore and District Collector, Krishnagiri at once and lessee is solely responsible for any violation.

III) Conditions imposed for rough stone quarrying:

1. குத்தகை காலம், குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றும் நாள்விரிந்து பத்து ஆண்டுகளாகும்.
2. குவாரி குத்தகை வழங்கப்பட்ட இடத்தில் குவாரி செய்பவன் வேலிக்கல் / குண்டுக்கல் / கட்டுக்கல் / சக்கை மற்றும் ஜஸ்டி ஆகியவற்றை மேற்படி இடத்திலிருந்து வெளியில் எடுத்துச் செல்வதற்கு முன்பு அவை ஒவ்வொன்றிற்கும் அவற்றிற்குரிய வீதத்தில் சீரியசெஜ் தீர்வை செலுத்தி இவ்வலுவலகத்தில் பார்ட்டி மற்றும் நடைச்சீட்டு பெற்ற பின்புதான் மேற்படி களியங்களை குவாரியிலிருந்து வெளியில் எடுத்துச் செல்ல வேண்டும். 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகளிய சலுகை விதிகள், இணைப்பு II-ல் அடங்கியபொது அரசாங்க தீர்மானிக்கப்படும் வீதத்தில் பரப்பு தீர்வை செலுத்த வேண்டும். மேற்கண்ட

தொலைகையைத் தவிர அரசால் ஆவப்போது நிர்ணயிக்கப்படும் இது தொலைகையையும் குத்தகைதாரர் செலுத்த வேண்டும்.

3. குத்தகை இடத்திற்கு அருகிலுள்ள குடியிருப்புகள், கட்டடங்கள், நீர்நிலைகள், குளங்களின் கரைகள், மரங்கள், சாலைகள், வண்டிப்பாதைகள், நடைபாதைகள் மற்றும் இது பொதுச் சொத்துக்களுக்கு பாதகமில்லாமல் குவாரி செய்ய வேண்டும்.
4. குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகாமையில் உள்ள பட்டாதாரர்கள் மற்றும் பொது மக்களுக்கு பாதகமில்லாமல் குவாரி செய்ய வேண்டும்.
5. குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகிலுள்ள ஏரில்பாதைகள், சாலைகள், மின்சாரம் மற்றும் தொலைபேசி கம்பிகளுக்கு 50 மீட்டரும், குடியிருப்பு பகுதியிலிருந்து 300 மீட்டரும், நடைபாதைகள், கிராம சாலைகளுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரி செய்ய வேண்டும்.
6. மாவட்ட ஆட்சித்தலைவர் (அல்லது) அரசால் அதிகாரம் வழங்கப்பட்ட அலுவலரை குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிடவும், குவாரி பதிவேடுகள், ஆவணங்கள் மற்றும் கணக்கை சரிபார்க்கவும் அனுமதிக்க வேண்டும். இது சம்பந்தமாக அவர்கள் கோரும் அனைத்து விவரங்களையும் வழங்க வேண்டும்.
7. சுற்றுப்புற சூழ்நிலை பாதுகாப்பு, கனிம பாதுகாப்பு, தொழிலாளர் பாதுகாப்பு முதலியவற்றைக் கருத்தில் கொண்டு விஞ்ஞான அடிப்படையில் திறமைபுள்ள முறையாகக் குவாரி செய்ய வேண்டும்.
8. மாவட்ட ஆட்சித்தலைவர் மற்றும் ஆணையர், புலியேரி மற்றும் கரங்கத்துறை, ஆகியோரால் அதிகாரம் வழங்கப்பட்ட அலுவலரை மேலே பத்தி (5)-ல் குறிப்பிட்டுள்ள நிபந்தனைகள் தொடர்பாகவும், பெற்கண்ட அலுவலர்களின் ஆணையை நிறைவேற்றவும் குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிட அனுமதிக்க வேண்டும்.
9. குத்தகைதாரரின் செலவில் குத்தகை ஒப்புத்தப்பத்திரம் திறைவேற்றி அதனை பதிவு செய்வதற்கு முன்பு குத்தகை இடத்தில் குவாரி மற்றும் இது சம்பந்தப்பட்ட வேலைகளைத் தொடங்கக்கூடாது.
10. குத்தகை வழங்கப்பட்டுள்ள இடத்திற்குள் எல்லையிலிருந்து 7.5 மீட்டர் தூரத்திற்குள் குவாரி செய்யக் கூடாது.
11. பொது சாலைகளிலிருந்து குத்தகை வழங்கப்பட்ட இடத்திற்குச் செல்ல பாதை வசதி குத்தகைதாரர் சொந்த பொறுப்பில் செய்து கொள்ள வேண்டும்.
12. குத்தகை ஒப்புத்தப்பத்திரத்துடன் இணைத்துள்ள வரைபடத்தில் காட்டப்படும் குத்தகை இடத்தைச் சுற்றிலும் எல்லைக்கற்கள் ஈட்டு அவற்றைச் சரியானபடி பாளரிக்க வேண்டும்.
13. 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் இணைப்பு XII மற்றும் XII-ல் உள்ள படிவங்களின் முறையே இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டிணைத் தயார் செய்து அவற்றில் மாவட்ட ஆட்சித்தலைவரால் அதிகாரம் வழங்கப்பட்ட அலுவலரின் கையொப்ப முத்திரை மற்றும் அலுவலக முத்திரைகள் பெற்று குவாரியிலிருந்து குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஐஸ்லி ஆகியவற்றை வெளியில் எடுத்துச் செல்லும் ஒவ்வொரு வாகனத்திற்கும் ஒவ்வொரு நடைக்கும் வழங்கப்படவேண்டும். குண்டுக்கல், கட்டுக்கல், சக்கைக்கல், ஐஸ்லி ஆகியவற்றை ஏற்றிச் செல்லும் ஒவ்வொரு வாகனமும் அதனைச் சோதனைச் செய்வதற்கு அதிகாரம் பெற்ற அலுவலர் சோதனைச் செய்யப்போது நடைச்சீட்டிணைக் காண்பிக்க வேண்டும். இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டின் நகல்களை குவாரியில் வைத்திருக்க வேண்டும். முறையான இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டுகள் இல்லாமல் கனிமங்களை ஏற்றிச் செல்லும் வாகனங்கள் 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் மற்றும் கரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம், 1957-ன்படி கைப்பற்றப்பட்டு, குத்தகைதாரர் மீது நடவடிக்கை எடுக்கப்படுவதுடன் குவாரிக் குத்தகையையும் ஏந்து செய்ய நடவடிக்கை எடுக்கப்படும்.



14. குத்தகை வழங்கப்பட்ட இடத்தை குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஐஸ்லி குவாரி செய்ய மட்டும் பயன்படுத்த வேண்டும். குத்தகை உரிய ஆணை அல்லது குத்தகை ஒப்பந்தப்பத்திரத்தில் தவறுதலாக கனிம விநியம் குறிக்கப்பட்டு இருந்தால் அதனை எந்த நேரத்திலும் திருத்துவதற்கு மாவட்ட ஆட்சியருக்கு அதிகாரம் உண்டு. குத்தகைதாரர் அதனுடையபடையில் எந்த உரிமையையும் மீறியால் மற்றும் சாங்கத்துறை கோரியபடி.
15. பெருகேற்றுவதற்கும், அயல் நாட்டிற்கு ஏற்றுமதி செய்வதற்கும் பயன்படும் பொய் கந்துண்டங்கள் வடிவத்தில் கற்குவாரி செய்யக் கூடாது.
16. குத்தகை ஒப்பந்தப்பத்திரத்தில் குறிக்கப்படாத வேறு ஏதாவதொரு கனிமம் கிடைத்தால், அதனை சம்பந்தப்பட்ட அலுவலரின் அனுமதியைப் பெறாமலும், அதற்குரிய சீரியரேஜ் தொகையைச் செலுத்தாமலும் எடுக்கக்கூடாது. புதிய கனிமம் கிடைத்த விவரத்தை 30 தினங்களுக்குள் தெரிவிக்காமல் எடுத்துச் சென்றால் இக்குற்றத்திற்கு அந்த கனிமத்திற்குரிய சாதாரண சீரியரேஜ் கட்டணத்தைப்போல் 15 மடங்குவரை மாவட்ட ஆட்சித்தலைவரால் அபராதம் விதித்து வசூலிக்கப்படும்.
17. குத்தகை காலம் முடிந்தபிறகு, குத்தகை வழங்கப்பட்ட இடத்திலிருந்து குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஐஸ்லி குவாரி செய்து வெளியில் எடுத்துச் செல்ல குத்தகைதாரருக்கு உரிமையில்லை.
18. குத்தகை காலம் முடிவடைந்த பிறகு குத்தகை இடத்தில் எஞ்சின், மொபின் போன்ற எந்தவிதமான தளவாட பொருட்களையும் வைத்திருக்கக்கூடாது. அவற்றை குத்தகை காலத்தில் கடைசி நாளன்று குத்தகைதாரர் எடுத்துச் சென்றவிட வேண்டும்.
19. குத்தகையை வேறு எவருக்கும் உள் குத்தகைக்கு விடக்கூடாது.
20. குவாரி செய்வதில் இழப்பு ஏற்படின் நஷ்டஈடு கேட்கக்கூடாது.
21. குவாரியில் வேலை செய்யும் தொழிலாளர்கள் மற்றும் இதர நபர்களுக்கு விபத்து ஏதாவது ஏற்படின் அதற்கு முழுப் பொறுப்பினையும் குத்தகைதாரனாச்சேரும். இதற்கு அரசு பொறுப்பில்லை.
22. அரசுக்கு செலுத்த வேண்டிய தொகையை உரிய காலத்திற்குள் செலுத்தவில்லை என்றால் அத்தொகை 24% அல்லது அரசால் அவ்வப்போது நிர்ணயிக்கப்படும் வீதத்தில் வட்டியுடன் குத்தகைதாரரிடமிருந்து வசூலிக்கப்படும்.
23. அரசுக்கு செலுத்த வேண்டிய பாக்கித் தொகை தமிழ்நாடு வருவாய் வசூல் சட்டம் 1884-ன் கீழ் வசூலிக்கப்படும்.
24. குத்தகை நிபந்தனைகள், 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், அரசு, ஆணைகள், புவியியல் மற்றும் சாங்கத்துறை, மாவட்ட ஆட்சித்தலைவர் ஆகியோரது ஆணைகள் மீறப்படின் மீறலுக்கு அபராதம் விதிப்பதோடு அல்லாமல் குத்தகைதாரருக்கு நேர்முக விசாரணைக்கு வாய்ப்பளித்த பின்பு குத்தகை உரியம் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.
25. அரசின் அவ்வப்போதைய ஆணைகளுக்கேற்ப நிபந்தனைகளை மாற்றி அமைக்கவோ, நீக்கவோ, கூடுதலாக சேர்க்கவோ, மாவட்ட ஆட்சித்தலைவருக்கு முழு அதிகாரம் உண்டு.
26. பெற்குறிய நிபந்தனைகளுடன் 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், சரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம் 1957, மாவட்ட ஆட்சித்தலைவர் ஆகியோரால் அவ்வப்போது பிறப்பிக்கப்படும் ஆணைகள் குத்தகைதாரரைக் கட்டுப்படுத்தும்.
27. குவாரிகள்/சரங்கங்களுக்கு பொருந்தக்கூடிய தொழிலாளர் சட்டங்களுக்கு கட்டுப்பட்டு குத்தகைதாரர் குவாரி செய்யவேண்டும். தவறினால் சம்பந்தப்பட்ட அரசின் சட்டப்பூர்வமான நடவடிக்கைகளுக்கு குத்தகைதாரர் உன்னாக வேண்டி இருக்கும்.
28. இந்திய வெடிமருந்து சட்டம் 1884 (Central Act IV of 1884)-ன்படி உரிய வெடிமருந்து உரியம் பெற்று குத்தகைதாரர் பாறைகளை வெடிவைத்து உடைக்க

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வேண்டும் தவறும் பட்சத்தில் குத்தகைதாரர் கும் தண்டனைக்கு உள்ளாக வேண்டியிருக்கும்.

29. குத்தகைதாரர் குவாரியில் குழந்தை தொழிலாளர்களை பணிபுர்த்தக்கூடாது.

IV) a) The conditions imposed by the Tamil Nadu Pollution Control Board in the consent to establishment in Air and Water Pollution Act should be strictly adhered and the consent should be renewed periodically.

b) The Environment Clearance issued by the DEIAA, Krishnagiri should be renewal within the prescribed time limit.

VI) Conditions imposed by the DEIAA.

1. (i) The Environmental Clearance is granted to Mining of Rough Stone for the production quantity of 1425102 Cu.m of Rough stone for the period of 5 Years from the date of execution of the Mining lease period.

(ii) The approved quantity of rough stone to be quarried = 1425102 cbm

(iii) Depth of mining permitted = 148 mts (including topsoil and burden) from a period of 5 years. After reaching 40 mts Bgl. depth, further quarry should be carried out, after obtaining NOC from PWD Ground water devision.

2.) Conditions to complied before the commencing of mining operation

1. The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that.

- i. The project has been accorded Environmental Clearance.
- ii. Copies of clearance letters are available with the Tamil Nadu Pollution Control Board.
- iii. Environmental Clearance may also be seen on the website of the SEIAA.
- iv. The advertisement should be made within 7 days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the SEIAA.

2. The applicant has to obtain land use classification as industrial use before issue / renewal of mining lease.

3. NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 km from the proposed project side.

4. The project proponent shall comply the conditions laid down in section V Rule 36 of Tamil Nadu Minor Mineral Concession Rules, 1959.





5. A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat Panchayat union/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.

6. Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.

7. The proponent shall ensure that First Aid Box is available at site.

8. The excavation activity shall not alter the natural drainage pattern of the area.

9. The excavated pit shall be restored by the project proponent for use ful purposes.

10. The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.

11. The quarrying operation shall be restricted between 7AM and 5 PM.

12. The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.

13. A minimum distance of 15 mts. From any civil structure shall be kept from the periphery of any excavation area.

14. Depth of quarrying shall be 2m above the ground water table /approved depth of mining whichever is lesser to be considered as a safe guard against Environmental Contamination and over exploitation of resources.

15. The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.

16. Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.

17. Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.

18. The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.

19. Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.

20. A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.

21. The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF, GoI on 16.11.2009.(GLC = Ground Level Concentration), (NAAQ= Noise and Ambient Air Quality).

22. The following measures are to be implemented to reduce Air Pollution during transportation of mineral


- i. Roads shall be graded to mitigate the dust emission.
- ii. Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust.

23. The following measures are to be implemented to reduce Noise Pollution

- i. Proper and regular maintenance of vehicles and other equipment.
- ii. Limiting time exposure of workers to excessive noise.
- iii. The workers employed shall be provided with protection equipment and earmuffs etc.
- iv. Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.

24. Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt:11.01.2010 issued by the MoE&F, GoI to control noise to the prescribed levels.

25. Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in



consultation with Assistant Director, Ground Water Division, PWD, Krishnagiri.



26. Rain water harvesting to collect and utilize the entire water falling in land area should be provided by construction of a storage tank with a capacity of 5,00,000 litres and the rain water harvested in the entire quarry area should be stored in it and used for the quarry purpose like dust prevention, wet drilling, providing water for green belt etc.

27. Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.

28. Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.

29. The following measures are to be adopted to control erosion of dumps:-

- i. Retention/ toe walls shall be provided at the foot of the dumps.
- ii. Worked out slopes are to be stabilized by planting appropriate shrub / grass species on the slopes.

30. Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and trans boundary movement) Rules, 2008 and its amendments thereof to the recyclers authorized by TNPCE.

31. Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

32. Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the (lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season. Photographs of the silt trap should be furnished before commencing quarry operation.

33. The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this

activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, that the ground water is getting depleted due to the quarrying activity, necessary corrective measures shall be carried out. The Assistant Director Ground water Division, PWD Krishnagiri shall monitor.

34. No tree-felling shall be done in the leased area, except only with the permission from competent Authority.

35. To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic Institution and it should be monitor by the District Environmental Engineer, TNPCB, Hosur on yearly basis.

36. It shall be ensured that the total extent of nearby quarries (existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 25.00.0 hectares within the mining lease period of this application.

~~37. It shall be ensured that there is no habitation is located~~ within 500 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 500m radius from the periphery of the quarry site.

38. Ground water quality monitoring should be conducted once in 3 Months.

39. Transportation of the quarried materials shall not cause an hindrance to the Village people/Existing Village road.

40. Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI once in three months.

41. Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI. Periodically once in six months.

42. Bunds to be provided at the boundary of the project site and it should be properly maintained.

43. The project proponent shall undertake plantation / afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree saplings should



be planted on the bunds and other suitable areas in and around the work place.

44. At least 10 Neem trees should be planted around the boundary of the quarry site.

45. Floor of excavated pit to be leveled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.

46. The Project Proponent shall ensure a minimum of 2.5 % of the annual turnover will be utilized for the CSR Activity.

47. The Project Proponent shall provide solar lighting system to the nearby villages.

48. The project proponent shall comply with the mining and other relevant rules and regulations where ever applicable.

49. Rainwater shall be pumped out Via Settling Tank only

50. Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.

51. As per MoEF & CC, GoI, Office Memorandum dated 30.03.2015, prior clearance from Forestry & Wild Life angle including clearance from obtaining committee of the National Board for Wild life as applicable shall be obtained before starting the quarrying operation, if the project site is located within 10 KM from National Park and Sanctuaries.

52. The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.

53. Safety equipments to be provided to all the employees.

54. Safety distance of 50m has to be provided in case of railway, reservoir, canal/odai.

55. The Assistant / Deputy Director, Department of Geology & Mining shall ensure that the proponent has engaged the blaster with valid Blasting license / certificate obtained from the competent authority before execution of mining lease.

56. The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.

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57. The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked boundary of the quarry site to monitor electronically before execution of mining lease.

58. The proponent shall furnish the data obtained from the Public Works Department regarding the details of ground water table in the quarry site.

59. The Proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.

60. The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent etc., with respect to the existing activity before execution of mining.

61. Heavy earth machinery equipments if utilized, after getting approval from the competent authority.

62. The environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.

63. The Assistant Director Public Works Department, Ground Water Division Krishnagiri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.

64. NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.

65. Yearly medical examination of the quarry workers should be carried out by a registered medical practitioner and the report should be filed in the quarry office in a separate file and copy should be sent to the Deputy Director, Health Services, Krishnagiri.

66. Closed circuit camera should be erected at the quarry site and the passage of vehicles in and out of the quarry should be recorded and the footage of the recordings of the camera should be maintained and should be produced before the enforcing officials when ever called for.

67. Vehicles used for transportation of quarried materials should be fitted with GPS and monitored.

68. Pit Mouth register should be maintained in online.

69. Auditor report on the annual turnover amount should be submitted to the District Collector within once month from the end of the financial year.



70. 02.5 % of the turn over amount should be utilized for the CSR activity after consultation with the District Collector.



B. General Conditions:

1. EC is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the proponent.
2. The Proponent shall obtain the Consent for Establishment from the TNPC Board before commencing the activity.
3. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Tamil Nadu.
4. No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.
5. Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
6. Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.
7. A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
8. Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
9. Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying them mineral shall not be overloaded.
10. Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
11. All Personnel shall be provided with protective respiratory devices including safety shoes, Masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
12. Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For

- the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.
13. Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.
 14. The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.
 15. The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its regional office located at Chennai.
 16. The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.
 17. This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance.
 18. ~~The DEIAA, Krishnagiri may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.~~
 19. The DEIAA, Krishnagiri may cancel the environmental clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this SEIAA.TN that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.
 20. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
 21. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, draft Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/

Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.

22. NOC shall be obtained from DGMS for working common boundaries with quarries.
23. The Periodical analysis of Air, dust, vibration & noise done while mining.
24. Any other conditions stipulated by other Statutory/Patta authorities shall be complied.

VI. The lessee should strictly adhere all the conditions imposed in the environmental clearance issued by The DEIAA Krishnagiri and consent order of the Tamil Nadu Pollution Control Board.

VII. The lessee should periodically renew the environmental clearance and the consent orders of the Tamil Nadu Pollution Control Board without any lapse.

VIII. If any illicit quarrying is found in the area over an extent of 2.16.0 hectares in S.F.No.287/1 of Venkateshpuram Village, Shoolagiri Taluk Krishnagiri District before the date of execution of lease deed, this lease deed is liable to be cancelled and criminal action will be initiated.

IX. If the quarry area is situated within 10 km distance from any protected areas NOC from the Standing committee of NBWL should be obtained before commencing the quarry operation.

X. If the lease holder wants to quarry more than the quantity permitted in the environmental clearance within the lease period, modified mining plan / scheme and Environment Clearance for the additional quantity should be submitted.

[Signature]
Assistant Director,
Additional Charge,
Geology and Mining,
Krishnagiri.

To
Thiru V. Nagaraja,
S/o Venkatappa Reddy, *[Signature]*
Koppa Village,
Hulimangala Post,
Anekal Taluk,
Bangalore District.

Copy to the Revenue Divisional Officer, Hosur.

Copy to the Tahsildar, Shoolagiri.

Copy to the Village Administrative Officer, Venkateshpuram village.

[Signature]
S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

TP/100391502/31

மறுக்குநர் அலுவலகம் 37
971/2021



தமிழ்நாடு தமிழ்நாடு TAMILNADU

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Nagaraja v
Bangalore

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K. SELVARANI
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APPENDIX IV

(See Rule 19 of ...)

FORM OF AGREEMENT FOR QUARRYING AND CARRYING AWAY MINOR MINERALS FROM RYOTWARI LANDS WHICH THE MINERALS BELONG TO GOVERNMENT.

Assistant Director of Geology and Mining Krishnagiri Proceedings Roc. 478 /2018
(M.) dated .02.2021.

AGREEMENT made on the 10th day of February 2021 between Thiru V. Nagaraja, S/o Venkataswara Reddy, Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore District hereinafter referred to as "the registered holder" which term shall include in these presents where the context so admits include also his heirs, executors, administrators, legal representatives and assigns) of the one part and the Governor of Tamil Nadu hereinafter called "the Government" which term shall where the context so admits include also his successors in office and assigns) of the other part;

SEE

LESSOR
ASSISTANT DIRECTOR

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WHEREAS the registered holder holds (amongst others) the lands described in the schedule hereunder written (hereinafter referred to as the said lands);

AND WHEREAS, the registered holder has made application to the Director of the District of Krishnagiri (hereinafter referred to as "the Director") seeking grant of quarrying lease for quarrying Rough stone in the said lands and to deposit mining waste in the said lands and has lodged with the Assistant Director an accurate map or sketch of the said lands;

AND WHEREAS, the Assistant Director, acting for and on behalf of the Government has granted a quarrying lease to the registered holder and allowed him to commence quarrying operations for Rough stone in the said lands and to deposit mining waste thereon by the registered holder;

AND WHEREAS, the registered holder have deposited with the Assistant Director the sum of Rs. 10,000/- (Rupees ten thousand only) as security against any loss or damage which may be incurred by the Government, by reason of any of the said lands being rendered unfit for cultivation by any mining operations therein of the registered holder or by the deposit of mining waste thereon by the registered holder;

NOW THESE PRESENTS WITNESS and the registered holder doth hereby agree with the Government in the manner following, that is to say :-

1. The registered holder shall be at liberty at all times during the period of the lease to carry on mining operations for Rough stone in the said lands in a proper and workman like manner and to deposit mining waste on the said lands and shall at all times be answerable and accountable to the Government for all acts and defaults by any of his nominees, servants or agents in carrying on such operations or in making such deposit.

2. The registered holder shall and will on the 1st day of February next and on the 1st day of February every succeeding year during so long as he shall have carried on any such mining operations as aforesaid pay to the Assistant Director for and on behalf of the Government in addition to the land assessment for the time being payable in respect of the said lands, seigniorage on the minor minerals at the rate specified in Appendix II to the TamilNadu Minor Minerals Concession Rules, 1959.

3. The registered holder shall and will keep correct accounts in such form as the Assistant Director shall from time to time require and direct showing the quantities and other particulars of all minerals obtained by the registered holder from the said lands and also the number of persons employed in carrying on the said mining operations therein and shall from time to time when so directed by the Assistant Director prepare and maintain

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LESSEE

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Registering Office			

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ASSISTANT DIRECTOR

4/18



complete and correct plans of all mines and working in the said lands and shall allow any officer hereunto authorised by the Commissioner/ Director of Geology and Mining, Tamil Nadu from time to time and at any time to examine such accounts and any such plans and shall when so required supply and furnish all such information and returns all or any of the matter aforesaid as the Government shall, from time to time require and direct.

4. The registered holder shall and will at all times allow any officer authorised by the Commissioner/Director of Geology and Mining, Tamil Nadu in that behalf to enter upon any part of the said lands where any mining operations may be carried on for the purpose of inspecting the same.

5. The registered holder shall forthwith send to the District Assistant Director a report of any accident which may occur at or in the said lands and also of the discovery of any mineral other than Rough stone.

6. It shall be lawful for the registered holder at any time to cease mining operations under these presents provided he shall pay to Assistant Director for and on behalf of the government, land assessment , cess and seigniorage due to the Government and shall restore the said lands or fence or fill in abandoned pits and excavations therein if required by the Assistant Director and upon his so doing these presents shall cease and determine.

7. In case the registered holder shall relinquish the whole or any part of the said lands or in case of the expiry or sooner determination of this agreement then and in any such case, he shall restore the lands so relinquished or so much thereof as the Assistant Director shall require to be restored or so much thereof as the Assistant Director shall require to be restored to a state fit for cultivation or shall securely and permanently fence or fill in all such abandoned pits and excavations there in as the Assistant Director shall require to be so fenced or filled in, and in case the registered holder shall fail or neglect to restore any such land which he shall be required to restore to a state fit for cultivation or to so fence, or fill in any such abandoned pit, or excavation which he shall be required to so fence, or fill in them and in any such case, it shall be lawful for the Assistant Director to so restore any such lands, or as the case may be to so fence or fill any such pits or excavation at the expense of the registered holder and to apply the said sum of Ra 10,000/- (Rupees ten thousand only) so deposited in or towards the cost of so doing and to deduct from the amount of the said deposit and retain on behalf of the Government a sum equal to thirty times the assessment of the said lands which shall have been rendered unfit for cultivation. If however, the amount of deposit is not sufficient to cover the cost of such restoration of fencing or filling in or to meet thirty times the assessment on the area rendered uncultivable, it shall be lawful for the Government to recover the balance by resort to civil court.

LESSEE

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Registering Officer

LESSOR

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8. The registered holder shall not be entitled to any remission of assessment in respect of any of the said lands which shall be rendered unfit for surface cultivation by the carrying on of any mining operations or by the deposit of mining waste, unless thirty times the assessment thereon has already been deposited in accordance with the preceding clause.

9. The registered holder shall not assign, lease or part with the possession of the said lands or any part thereof for the whole or any part of the said term without previous intimation in writing to the Assistant Director.

10. If the registered holder does not intend to carry on mining operations himself, but intends to lease out the right to do so to another person, the registered holder and his Lessee shall enter into an agreement with Government binding themselves jointly and severally to accept the conditions and stipulations herein contained which agreement shall be in the Form set out in Appendix V to the Tamil Nadu Minor Mineral Concession Rules, 1959.

11. All land assessment, cess and seigniorage payable under these presents shall be recoverable under the provisions of the TamilNadu Revenue Recovery Act, 1864, as if they were arrears of land revenue.

12. In the event of any breach by the registered holder by any of the conditions of this agreement, it shall be lawful for the Government to levy enhanced seigniorage or for the Assistant Director to give notice in writing to the registered holder of his intention to cancel these presents whereupon the same shall stand cancelled but without prejudice to any rights which the Government may have against the pattadar in respect of any antecedent claim or breach of covenant or condition.

13. Any notice to be given to the registered holder may be addressed to his last known place of abode and where a notice has been so addressed, it shall be deemed to have been duly served for the purpose of these presents.

14. Should any question or dispute arise regarding the agreement executed in pursuance of these Rules or any matter or thing connected therewith or the powers of the registered holder thereunder, the amount or payment of the seigniorage fee or area assessment made payable thereby, the matter in issue shall be decided by the Commissioner/ Director of Geology and Mining. In case the registered holder/registered holders, Lessee/Lesseees is/ are not satisfied with the decision of the Commissioner/ Director of Geology and Mining, the matter shall be referred to the State Government for decision.

15. The registered holder shall abide by the conditions laid down in the payment of Wages Act, 1936 (Central Act IV of 1936), the Mines Act, 1952 (Central Act XXXV of 1952) and the Indian Explosives Act, 1884. (Central Act IV of 1884).

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16. For the purpose of calculation of stamp duty, The total anticipated seigniorage fee for entire lease period of ten years Rs. 8,40,81,018/-, area assessment for ten years Rs. 3,240/- and security deposit amount of Rs. 10,000/- were taken into account.

17. The lease period is Ten years from 19th day of February - 2021 to 18th day of February - 2031

18 SEPCIAL CONDITIONS :

I) a) A safety distance of 7.5 mts shall be maintained for the patt land in S.F No. 287/2 situated on the southern side of the applied area..

b) A safety distance 10 mts should be left out for the Government land S.F 285 situated on the North & East and S.F. No. 286/3, 288 situated on the Southern side and S.F No. 294 situated on the western side of the applied area.

c) The lessee should fence the area by constructing compound wall (or) barbed wire fencing. Quarrying activity should be carried out from 7.00 A.M to 5.00 P.M only.

d) To protect noise and air pollution 500 saplings of pungan and neem should be planted by the applicant.

II a) The grantee should get the consent of establishment from TNPCCB before the stating of quarrying.

b) The grantee should get the consent for operation from the Tamil Nadu Pollution Control Board before the commencement of quarrying operation.

c) The grantee should sent the notice for operating the quarry to Director of Mines safety, Bangalore.

d) Quarrying operation should carried out only after appointing Mines Manager, Mines Mate and Foremen.

e) At any cost the blasting activity should be carried out under the Supervision of Mines Manger / Mines mate.

f). If any accident occur in the quarry area the lessees should give intimation to the Director of Mines safety Bangalore and District Assistant Director, Krishnagiri at once and lessee is solely responsible for any violation.

g) The grantee shall remit the difference amount of stamp duty if any due to the Government.


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9. நிபந்தனைகள்

- (1) குத்தகை காலம், குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றும் தாளிலிருந்து பத்து ஆண்டுகளாகும்.
- (2) குவாரி குத்தகை வழங்கப்பட்ட இடத்தில் குவாரி செய்யும் வேலிக்கல்/ குண்டுக்கல்/ கட்டுக்கல் மற்றும் ஜல்லி ஆகியவற்றை மேற்படி இடத்திலிருந்து வெளியில் எடுத்துச் செல்வதற்கு முன்பு ஒவ்வொன்றிற்கும் அவற்றிற்குரிய வீதத்தில் சீரியரெஜ் தீர்வை செலுத்தி இவ்வலுவலகத்தில் பரீட்சி மற்றும் நடைச்சீட்டு பெற்ற பின்புதான் மேற்படி கனிமங்களை குவாரியிலிருந்து வெளியில் எடுத்துச் செல்ல வேண்டும். 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், இணைப்பு II-ல் அவ்வப்போது அரசால் நிர்ணயிக்கப்படும் வீதத்தில் பரப்பு தீர்வை செலுத்த வேண்டும். மேற்கண்ட தொகையைத் தவிர அரசால் அவ்வப்போது நிர்ணயிக்கப்படும் இது தொகைகளையும் குத்தகைதாரர் செலுத்த வேண்டும்.
- (3) குத்தகை இடத்திற்கு அருகிலுள்ள குடியிருப்புகள், கட்டடங்கள், நீர்நிலைகள், குளங்களின் கரைகள், மாங்கள், சாலைகள், வண்டிப்பாதைகள், நடைபாதைகள் மற்றும் இது பொதுச் செத்துக்களுக்கு பாதுகாப்பில்லாமல் குவாரி செய்ய வேண்டும்.
- (4) குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகாமையில் உள்ள பட்டாதாரர்கள் மற்றும் பொது மக்களுக்கு பாதுகாப்பில்லாமல் குவாரி செய்ய வேண்டும்.
- (5) குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகிலுள்ள ரயிப்பாதைகள், சாலைகள், மின்சாரம் மற்றும் தொலைபேசி கம்பிகளுக்கு 50 மீட்டரும், குடியிருப்பு பகுதியிலிருந்து 300 மீட்டரும், நடைபாதைகள், கிராம சாலைகளுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரி செய்ய வேண்டும்.
- (6) மாவட்ட ஆட்சித்தலைவர் (அல்லது) அரசால் அதிகாரம் வழங்கப்பட்ட அலுவலரை குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிடவும், குவாரி பதிவேடுகள், ஆவணங்கள் மற்றும் கணக்கை சரிபார்க்கவும் அனுமதிக்க வேண்டும். இது சம்பந்தமாக அவர்கள் கோரும் அனைத்து விவரங்களையும் வழங்க வேண்டும்.
- (7) சுற்றுப்புற சூழ்நிலை பாதுகாப்பு, கனிம பாதுகாப்பு, தொழிலாளர் பாதுகாப்பு முதலியவற்றைக் கருத்தில் கொண்டு விஞ்ஞான அடிப்படையில் திறமையுடன் முறையாகக் குவாரி செய்ய வேண்டும்.
- (8) மாவட்ட ஆட்சித்தலைவர் மற்றும் ஆணையர், புலியியல் மற்றும் காங்கத்துறை, ஆகியவரால் அதிகாரம் வழங்கப்பட்ட அலுவலரை மேலே பத்தி (5)-ல் குறிப்பிட்டுள்ள நிபந்தனைகள் தொடர்பாகவும், மேற்கண்ட அலுவலர்களின் ஆணையை நிறைவேற்றவும் குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிட அனுமதிக்க வேண்டும்.
- (9) குத்தகைதாரரின் செலவில் குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றி அதனை பதிவு செய்வதற்கு முன்பு குத்தகை இடத்தில் குவாரி மற்றும் இது சம்பந்தப்பட்ட வேலைகளைத் தொடங்கக்கூடாது.
- (10) குத்தகை வழங்கப்பட்டுள்ள இடத்திற்குள் எல்லையிலிருந்து 7.5 மீட்டர் தூரத்திற்குள் குவாரி செய்யக் கூடாது.
- (11) பொது சாலைகளிலிருந்து குத்தகை வழங்கப்பட்ட இடத்திற்குச் செல்ல பாதை வசதி குத்தகைதாரர் கொடுத்த பொறுப்பில் செய்து கொள்ள வேண்டும்.
- (12) குத்தகை ஒப்பந்தப்பத்திரத்துடன் இணைத்துள்ள வரையடத்தில் காட்டியுள்ள குத்தகை இடத்தைச் சுற்றிலும் எல்லைக்கற்கள் நட்டு அவற்றைச் சரியானபடி பராமரிக்க வேண்டும்.
- (13) 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் இணைப்பு XII மற்றும் XII-ல் உள்ள படிவங்களில் முறையே இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டிணைத் தயார் செய்து அவற்றில் மாவட்ட ஆட்சித்தலைவரால் அதிகாரம் வழங்கப்பட்ட அலுவலரின் கைபொப்ப முத்திரை மற்றும் அலுவலக முத்திரைகள் பெற்று குவாரியிலிருந்து குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லி ஆகியவற்றை வெளியில் எடுத்துச் செல்லும் ஒவ்வொரு வாகனத்திற்கும் ஒவ்வொரு நடைக்கும் வழங்கப்படவேண்டும். குண்டுக்கல், கட்டுக்கல், சக்கைகல், ஜல்லி ஆகியவற்றை ஏற்றிச் செல்லும் ஒவ்வொரு வாகனமும் அதனைச் சோதனைச் செய்வதற்கு அதிகாரம் பெற்ற அலுவலர் சோதனைச் செய்யப்போது நடைச்சீட்டிணைக் காண்பிக்க வேண்டும். இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டின் நகல்களை குவாரியில் வைத்திருக்க வேண்டும். முறையான இசைவாணைச்சீட்டு மற்றும் நடைச்சீட்டுகள் இல்லாமல் கனிமங்களை ஏற்றிச் செல்லும் வாகனங்கள் 1959-ம் வருடத்திய தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் மற்றும் காங்கத்துறை மற்றும் சூழ்நிலை மற்றும் அபிவிருத்தி சட்டம், 1957-ன்படி கைப்பற்றப்பட்டு, குத்தகைதாரர் மீது நடவடிக்கை எடுக்கப்படுவதுடன் குவாரிக் குத்தகையும் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.

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ASSISTANT DIRECTOR

Registered Officer



குத்தகை வழங்கப்பட்ட இடத்தை குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லி குவாரி செய்வதில் மட்டும் பயன்படுத்த வேண்டும். குத்தகை உரிய ஆணை அல்லது குத்தகை ஒப்பந்தப்பத்திரத்தில் குறிப்பிடப்பட்டிருக்காதவிடத்துக்கு உட்படியுக்கு அதிகாரம் உண்டு. குத்தகைதாரர் அதன்படிமையில் எந்த உரிமையும் கோரமுடியாது.

- (15) பெருசேற்றுவதற்கும், அயல் நாட்டிற்கு ஏற்றுமதி செய்வதற்கும் பயன்படும் பெரிய வடிவத்தில் சுற்குவாரி செய்யக் கூடாது.
- (16) குத்தகை ஒப்பந்தப்பத்திரத்தில் குறிக்கப்படாத வேறு ஏதாவதொரு கனியம் கிடைத்தால், அதனை எம்மந்தப்பட்ட அலுவலரின் அனுமதியைப் பெறாமலும், அதற்குரிய சீனியரேஜ் தொகையைச் செலுத்தாமலும் எடுக்கக்கூடாது. புதிய கனியம் கிடைத்த விவரத்தை 30 தினங்களுக்குள் தெரிவிக்காமல் எடுத்துச் சென்றால் இக்குற்றத்திற்கு அந்த கனியத்திற்குரிய சாதாரண சீனியரேஜ் கட்டணத்தைப்போல் 15 மடங்குவரை மாவட்ட ஆட்சித்தலைவரால் அபராதம் விதித்து வசூலிக்கப்படும்.
- (17) குத்தகை காலம் முடிந்தபிறகு, குத்தகை வழங்கப்பட்ட இடத்திலிருந்து குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லியை குவாரி செய்து வெளியில் எடுத்துச் செல்ல குத்தகைதாரருக்கு உரிமையில்லை.
- (18) குத்தகை காலம் முடிவடைந்த பிறகு குத்தகை இடத்தில் எஞ்சின, மொஷின் போன்ற எந்தவிதமான தளவாட பொருட்களையும் வைத்திருக்கக்கூடாது. அவற்றை குத்தகை காலத்தில் கடைசி நாளன்று குத்தகைதாரர் எடுத்துச் சென்றுவிட வேண்டும்.
- (19) குத்தகையை வேறு எவருக்கும் உள் குத்தகைக்கு விடக்கூடாது.
- (20) குவாரி செய்வதில் இழப்பு ஏற்படும் நஷ்டங்களைக் கேட்கக்கூடாது.
- (21) குவாரியில் வேலை செய்யும் தொழிலாளர்கள் மற்றும் இது நங்களுக்கு விபத்து ஏதாவது ஏற்படின் அதற்கு முழுப் பொறுப்பினையும் குத்தகைதாரரைச்சேரும். இதற்கு அரசு பொறுப்பில்லை.
- (22) அரசுக்கு செலுத்த வேண்டிய தொகையை உரிய காலத்திற்குள் செலுத்தவில்லை என்றால் அத்தொகை 24 % அல்லது அரசால் அவ்வப்போது நிர்ணயிக்கப்படும் வீதத்தில் வட்டியுடன் குத்தகைதாரரிடமிருந்து வசூலிக்கப்படும்.
- (23) அரசுக்கு செலுத்த வேண்டிய பாக்கித் தொகை தமிழ்நாடு வருவாய் வசூல் சட்டம் 1884-ன் கீழ் வசூலிக்கப்படும்.
- (24) குத்தகை நிபந்தனைகள், 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், அரசு, ஆணையர், முகியில் மற்றும் சுரங்கத்துறை, மாவட்ட ஆட்சித்தலைவர் ஆகியோரது ஆணைகள் மீறப்படும் மீறலுக்கு அபராதம் விதிப்பதோடு அவ்வாறு குத்தகைதாரருக்கு நேர்முக விளாசனைக்கு வாய்ப்பளித்த பின்பு குத்தகை உரிய ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.
- (25) அரசின் அவ்வப்போதைய ஆணைகளுக்கேற்ப நிபந்தனைகளை மாற்றி அமைக்கவோ, நீக்கவோ, கூடுதலாக கோக்கவோ, மாவட்ட ஆட்சித்தலைவருக்கு முழு அதிகாரம் உண்டு.
- (26) மேற்கூறிய நிபந்தனைகளுடன் 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், சுரங்கங்கள் மற்றும் கனியங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம் 1957, மாவட்ட ஆட்சித்தலைவர் ஆகியோரால் அவ்வப்போது பிறப்பிக்கப்படும் ஆணைகள் குத்தகைதாரரைக் கட்டுப்படுத்தும்.
- (27) குவாரிகள்/சுரங்கங்களுக்கு பொருந்தக்கூடிய தொழிலாளர் சட்டங்களுக்கு கட்டுப்பட்டு குத்தகைதாரர் குவாரி செய்வதில் தவறானால் சம்பந்தப்பட்ட அரசின் சட்டப்பூர்வமான நடவடிக்கைகளுக்கு குத்தகைதாரர் உள்ளாக வேண்டி இருக்கும்.
- (28) இந்திய வெடிமருந்து சட்டம் 1884 (Central Act IV of 1884)-ன்படி உரிய வெடிமருந்து உரிய பெற்று குத்தகைதாரர் பாறைகளை வெடிவைத்து உடைக்க வேண்டும். தவறும் பட்சத்தில் குத்தகைதாரர் கடும்தண்டனைக்கு உள்ளாக வேண்டியிருக்கும்.
- (29) குத்தகைதாரர் குவாரியில் குடிநீர் தொழிலாளர்களை பணியமர்த்தக்கூடாது.

20) a) The conditions imposed by the Tamil Nadu Pollution Control Board in the consent to establishment in Air and Water Pollution Act should be strictly adhered and the consent should be renewed periodically.

b) The Environment Clearance issued by the SEIAA, Tamil Nadu should be renewed within the prescribed time limit.

V) Conditions imposed by the SEIAA.

1. (i) The Environmental Clearance is granted to Mining of Rough Stone for the production quantity of 1425102 Cu.m of Rough stone for the period of 5 Years from the date of execution of the Mining lease period.

(ii) The approved quantity of rough stone to be quarried = 1425102 cbm

(iii) Depth of mining permitted = 148 mts. (including topsoil and burden) from a period of m5 years. After reaching 40 mts Bgl. depth, further quarry should be carried out, after obtaining NOC from PWD ground water devision.

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2.1 Conditions to be complied before the commencement of mining operation

1. The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that.

- i. The project has been accorded Environmental Clearance.
- ii. Copies of clearance letters are available with the Pollution Control Board.
- iii. Environmental Clearance may also be seen on the website of the SEIAA.
- iv. The advertisement should be made within 7 days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the SEIAA.

2. The applicant has to obtain land use classification as industrial use before issue / renewal of mining lease.

3. NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 km from the proposed project side.

4. The project proponent shall comply the conditions laid down in section V Rule 36 of Tamil Nadu Minor Mineral Concession Rules, 1959.

5. A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat / Panchayat union/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.

6. Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.

7. The proponent shall ensure that First Aid Box is available at site.

8. The excavation activity shall not alter the natural drainage pattern of the area.

9. The excavated pit shall be restored by the project proponent for use full purposes.

10. The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.

11. The quarrying operation shall be restricted between 7AM and 5 PM.

12. The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.

13. A minimum distance of 15 mts. From any civil structure shall be kept from the periphery of any excavation area.

14. Depth of quarrying shall be 2m above the ground water table /approved depth of mining whichever is lesser to be considered as a safe guard against Environmental Contamination and over exploitation of resources.

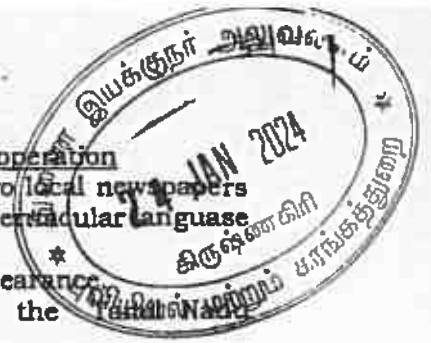
15. The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.

16. Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.

17. Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.

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18. The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.

19. Blasting shall be carried out after announcing to the public adequately through public address system to avoid any accident.

20. A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.

21. The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF, GoI on 16.11.2009. (GLC = Ground Level Concentration), (NAAQ= Noise and Ambient Air Quality).

22. The following measures are to be implemented to reduce Air Pollution during transportation of mineral

- i. Roads shall be graded to mitigate the dust emission.
- ii. Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust.

23. The following measures are to be implemented to reduce Noise Pollution

- i. Proper and regular maintenance of vehicles and other equipment.
- ii. Limiting time exposure of workers to excessive noise.
- iii. The workers employed shall be provided with protection equipment and earmuffs etc.
- iv. Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.

24. Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt:11.01.2010 issued by the MoE&F, GoI to control noise to the prescribed levels.

25. Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Assistant Director, Ground Water Division, PWD, Krishnagiri.

26. Rain water harvesting to collect and utilize the entire water falling in land area should be provided by construction of a storage tank with a capacity of 5,00,000 litres and the rain water harvested in the entire quarry area should be stored in it and used for the quarry purpose like dust prevention, wet drilling, providing water for green belt etc.

27. Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.

28. Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.

29. The following measures are to be adopted to control erosion of dumps:-

- i. Retention/ toe walls shall be provided at the foot of the dumps.
- ii. Worked out slopes are to be stabilized by planting appropriate shrub / grass species on the slopes.

30. Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and trans boundary movement) Rules, 2008 and its amendments thereof to the recyclers authorized by TNPCCB.

31. Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.



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32. Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be discharged into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season. Photographs of the silt trap should be furnished before commencing quarry operation.

33. The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, that the ground water is getting depleted due to the quarrying activity, necessary corrective measures shall be carried out.. The Assistant Director Ground water Division, PWD Krishnagiri shall monitor.

34. No tree-felling shall be done in the leased area, except only with the permission from competent Authority.

35. To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic Institution and it should be monitor by the District Environmental Engineer, TNPCB, Hosur on yearly basis.

36. It shall be ensured that the total extent of nearby quarries (existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 25.00.0 hectares within the mining lease period of this application.

37. It shall be ensured that there is no habitation is located within 500 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 500m radius from the periphery of the quarry site.

38. Ground water quality monitoring should be conducted once in 3 Months.

39. Transportation of the quarried materials shall not cause an hindrance to the Village people/Existing Village road.

40. Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI. once in three months.

41. Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI. Periodically once in six months.

42. Bunds to be provided at the boundary of the project site and it should be properly maintained.

43. The project proponent shall undertake plantation / afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place.

44. At least 10 Neem trees should be planted around the boundary of the quarry site.

45. Floor of excavated pit to be levelled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.

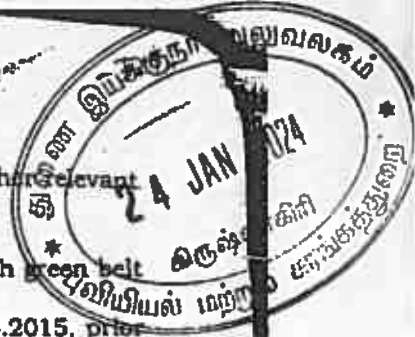
46. The Project Proponent shall ensure a minimum of 2.5 % of the annual turnover will be utilized for the CSR Activity.

47. The Project Proponent shall provide solar lighting system to the nearby villages.

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48. The project proponent shall comply with the mining and other relevant rules and regulations where ever applicable.

49. Rainwater shall be pumped out Via Settling Tank only

50. Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.

51. As per MoEF & CC, GoI, Office Memorandum dated 30.03.2015, prior clearance from Forestry & Wild Life angle including clearance from obtaining committee of the National Board for Wild life as applicable shall be obtained before starting the quarrying operation, if the project site is located within 10 KM from National Park and Sanctuaries.

52. The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.

53. Safety equipments to be provided to all the employees.

54. Safety distance of 50m has to be provided in case of railway, reservoir, canal/odai.

55. The Assistant / Deputy Director, Department of Geology & Mining shall ensure that the proponent has engaged the blaster with valid Blasting license / certificate obtained from the competent authority before execution of mining lease.

56. The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.

57. The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked boundary of the quarry site to monitor electronically before execution of mining lease.

58. The proponent shall furnish the data obtained from the Public Works Department regarding the details of ground water table in the quarry site.

59. The Proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.

60 The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent etc., with respect to the existing activity before execution of mining.

61. Heavy earth machinery equipments if utilized, after getting approval from the competent authority.

62. The environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.

63. The Assistant Director Public Works Department, Ground Water Division Krishnagiri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.

64. NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.

65. Yearly medical examination of the quarry workers should be carried out by a registered medical practitioner and the report should be filed in the quarry office in a separate file and copy should be sent to the Deputy Director, Health Services, Krishnagiri.

66. Closed circuit camera should be erected at the quarry site and the passage of vehicles in and out of the quarry should be recorded and the footage of the recordings of the camera should be maintained and should be produced before the enforcing officials when ever called for.

67. Vehicles used for transportation of quarried materials should be fitted with GPS and monitored.

68. Pit Mouth register should be maintained in online.

69. Auditor report on the annual turnover amount should be submitted to the District Assistant Director within once month from the end of the financial

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ASSISTANT DIRECTOR

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70. 02.5 % of the turn over amount should be utilized for the CSR activity after consultation with the District Assistant Director.

B. General Conditions:

1. EC is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the proponent.
2. The Proponent shall obtain the Consent for Establishment from the Board before commencing the activity.
3. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Tamil Nadu.
4. No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.
5. Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
6. Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.
7. A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
8. Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
9. Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying them mineral shall not be overloaded.
10. Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
11. All Personnel shall be provided with protective respiratory devices including safety shoes, Masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
12. Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.
13. Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.
14. The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.
15. The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its regional office located at Chennai.
16. The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.
17. This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance.



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18. The DEIAA, Krishnagiri may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.
19. The DEIAA, Krishnagiri may cancel the environmental clearance granted to this project under the provisions of EIA Notification, 2006 at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this SEIAA.TN that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.
20. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
21. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, draft Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.
22. NOC shall be obtained from DGMS for working common boundaries with quarries.
23. The Periodical analysis of Air, dust, vibration & noise to be done while mining.
24. Any other conditions stipulated by other Statutory/Patta authorities shall be complied.

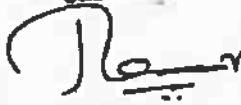
VI. The lessee should strictly adhere all the conditions imposed in the environmental clearance issued by The SEIAA Tamil Nadu and consent order of the Tamil Nadu Pollution Control Board.

VII. The lessee should periodically renew the environmental clearance and the consent orders of the Tamil Nadu Pollution Control Board without any lapse.

VIII. If any illicit quarrying is found in the area over an extent of 2.16.0 hectares in S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk Krishnagiri District before the date of execution of lease deed, this lease deed is liable to be cancelled and criminal action will be initiated.

IX. If the quarry area is situated within 10 km distance from any protected areas NOC from the Standing committee of NBWL should be obtained before commencing the quarry operation.

X. If the lease holder wants to quarry more than the quantity permitted in the environmental clearance within the lease period, modified mining plan / scheme and Environment Clearance for the additional quantity should be submitted.

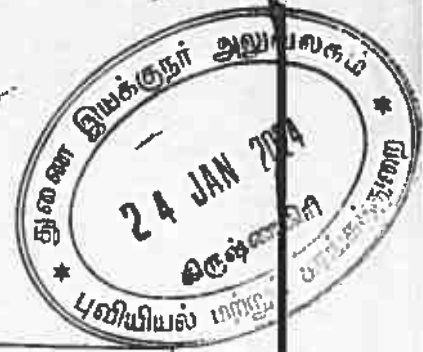

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THE SCHEDULE

Taluk : SHOOLAGIRI
 Village : VENKATESHPURAM



Sl No.	Survey FieldNumber	Extent Leased Out inhectares	Boundary			
			North S.F. No.	East S.F No.	South S.F No.	West S.F No.
1	287/1	2.16.0	285	285	286/3, 288, 287/2	294
	Total	2.16.0				

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 LESSOR
 ASSISTANT DIRECTOR

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 Registering Officer

In Witness whereof Thiru L. Suresh M.Sc., the Assistant Director Geology and Mining, Krishnagiri District acting for and on behalf of the order and direction of the Governor of TamilNadu, "The Lessor" and Thiru Nagaraja, S/o Venkatappa Reddy, Koppa Village, Hulimangala Post, Bangalore District " The lessee" hereunto set their respective hands.



[Handwritten Signature]
LESSEE

Signed by the above named lessee in the presence of following witnesses.

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LESSOR
ASSISTANT DIRECTOR

Signed by the above named lessor in the presence of following witnesses.

(L SURESH)

[Handwritten Signature]
ASSISTANT GEOLOGIST (E LPH)
C/o. the Dept. of Geology and Mining,
Collectorate, Krishnagiri.

[Handwritten Signature]
[D. ISAMLANATHAN]
தனி உருவம் சும்வாணர் (கலியம்)
தனி இயக்குநர் அலுவலகம்
புலியியல் மற்றும் கரிமத்துறை
விருதுநகர்.

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Registering Officer



From
Thiru L. Suresh M.Sc.,
Assistant Director,
Geology and Mining,
Krishnagiri.

To
The Sub Registrar,
Shoolagiri.



Roc. 478/2018/Mines dated. 20.02.2021.

Sir,

Sub : Mines and Minerals - Minor Minerals - Rough stone - Krishnagiri District - Shoolagiri Taluk - Venkatesapuram Villages - quarry lease for Rough Stone granted in Patta land SF.Nos. 287/1 over an extent of 2.16.0 Hect. to Thiru V. Nagaraja S/o Venkatappa Reddy, Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore District. - Lease agreement sent for registration - regarding.

Ref : The Assistant Director Geology and Mining, Krishnagiri Proceedings Roc. 478/2018/Mines dated 19.02.2021.

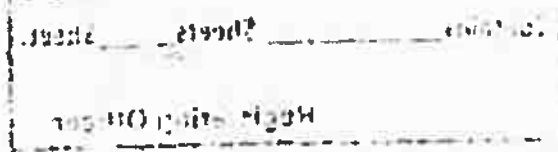
In the order cited, the Assistant Director Geology and Mining, Krishnagiri had granted a quarry lease for Rough Stone over an extent of 2.16.00 Hect. in patta land S.F.Nos. 287/1 of Venkatesapuram Village of Shoolagiri Taluk Krishnagiri District for a period of Ten years from the date of execution of lease deed under provisions of Rule 19(1) of the Tamil Nadu Minor Mineral Concession Rules 1959 to Thiru V. Nagaraja S/o Venkatappa Reddy, Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore District The lease agreement was executed on 19.02.2021 and the lease period is 10 years from 19.02.2021 to 18.02.2031.

The lessee to Thiru V. Nagaraja S/o Venkatappa Reddy, Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore District has been instructed to register the lease agreement at the Office of the Sub Registrar at Shoolagiri.

In this connection I am to inform you that the stamp duty worked out on the basis of the average seigniorage fee calculated on the expected production of 1425102 cbm of Rough Stone during the entire lease period of ten years and security deposit remitted by the lessee is as detailed below.

Seigniorage fee for 1425102 cum of Rough Stone@	: Rs.	8,40,81,018/-
Rs.59/- per cbm of Rough Stone		
Security Deposit	: Rs.	10,000/-
Area Assessment	: Rs.	3,240/-
Total	: Rs	8,40,94,258/-
Stamp duty at the rate of 1%	: Rs.	8,40,943/- (or)

Total value of Stamp papers, Rs. 8,41,000/- ✓



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Contains 24 Sheets 17 Sheet.
Registering Officer



The lease deed agreement is herewith enclosed for registration requested to return the registered lease deed through the lessee.

The lease deed executed in Rs. 5,000/- Stamp paer registration and the remaining portion of stamp duty may be collected from the lessee. The lease deed may be registrered at the cost of the lease holder.

Further it is informed that the Assistant Director is exempted from personal appearance for the Registration under section 88 (1) of the Indian Registration Act, 1908.

Encl: Executed lease deed

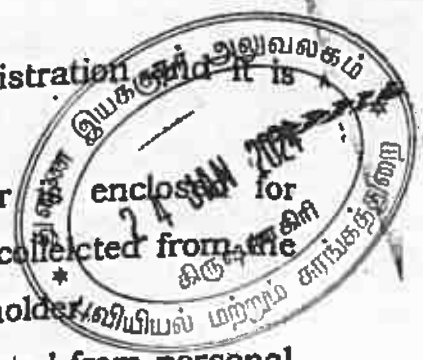
Assistant Director,
Geology and Mining,
Krishnagiri

Copy to

Thiru V. Nagaraja
S/o Venkatappa Reddy,
Koppa Village, Hulimanagala Post,
Anekal Taluk, Bangalore District.

Reddy

(with a direction to register the lease Deed and to submit the executed lease deed)



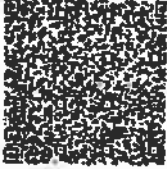
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Registering Officer





ಭಾರತ ಸರ್ಕಾರ
Government of India
 ನಾಗರಾಜ ವಿ
 Nagaraja V
 ತಂದೆ : ವೆಂಕಟಪ್ಪ ರೆಡ್ಡಿ
 Father : Venkatappa Reddy
 ಜನ್ಮ ದಿನಾಂಕ / DOB : 22/07/1974
 ಲಿಂಗ / Male



7737 5467 1259

ನನ್ನ ಆಧಾರ್, ನನ್ನ ಗುರುತು

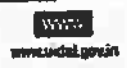


ಭಾರತೀಯ ಗುರುತು ಅಧಿಕಾರ
Unique Identification Authority of India

ವಿಳಾಸ
 S/O ವೆಂಕಟಪ್ಪ ರೆಡ್ಡಿ, #225, ಕೊಪ್ಪ ಗ್ರಾಮ,
 ಹುಲಿಮಂಗಲಾ ಪೋಸ್ಟ್, ಜಿಗನಿ ಹಬ್ಬಿ,
 ಅನೇಕಾ ತಾಲ್ಲೂಕು, ಜಿಗನಿ, ಬೆಂಗಳೂರು,
 ಕರ್ನಾಟಕ. 560105

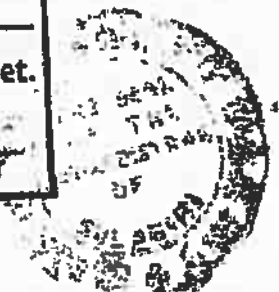
Address:
 S/O Venkatappa Reddy, #225,
 Koppa Village, Hulimangala Post,
 Jigani Hobli, Anekal Taluk, Jigani,
 Bengaluru, Jigani, Karnataka
 560105

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Document No. 971 of 2021 of Book 1
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 Registering Officer





சென்னை
Government of India

சென்னை,
Tamil Nadu

பே. எண் / DOB: 24081988

பே. / Mobile

9347 3952 2991



Unique Identification Authority of India

பே. எண் / மொ. எண்:
9347 3952 2991
பே. எண் / Mobile: 9347 3952 2991

பே. எண் / DOB: 24081988
பே. எண் / Mobile: 9347 3952 2991

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Registering Officer



சென்னை



Government of Tamil Nadu
Registration Department
Acknowledgement

Reference Details

SRO Name Soolagiri
Application No. S01LANDVW202102229167237
Transaction No. REG202102228126483
Transaction Date 22/02/2021

Application Details

Applicant Name V Nagaraja
Service Type Document Registration (New) in SRO
Stamp Duty (₹) 836000/-
Registration Fee (₹) 20000/-
Computer Fee (₹) 285/-
CD Fees (₹) 100/-

Payment Details

Name of the Bank SBI
Bank Ref. No. CPAAQOHFF9
Payment Mode Online
Amount Paid (₹) 856385/-
Payment Status Success
Payment Date 22/02/2021

ஏதேனும் சந்தேகங்கள்/குறைகள் இருப்பின் கீழ்க்கண்ட வழிமுறைகளில் தெரிவிக்கலாம்
கட்டணமில்லா தொலைபேசி எண் 1800 102 5174
மின்னஞ்சல் முகவரி helpdesk@tnreglnet.net

Document No. 971 of 2021 of Book 1
Contains 24 Sheet 22 Sheet.
Registering Officer

R/Soolagiri/Book-1/971/2021



CERTIFICATE UNDER SECTION 42 OF THE INDIAN STAMP ACT 1899

S.No 819 of 2021

I hereby certify that a sum of ₹ 8,36,000/- (Rupees Eight Lakh Thirty Six Thousand only) on account of deficit stamp duty has been levied under section 41 of the Stamp Act in respect of this instrument from Mr. நாகராஜா வி residing at Koppa Village Hulimangala Post Aneka Taluk bangalore, Karnataka, India, 560105.

Sub Registrar: Soolagiri
Date: 23/02/2021



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

Presented in the office of the Sub Registrar of Soolagiri and fee of ₹ 20,365/- paid at 11:00 AM on the 23/02/2021 by

Left Thumb



[Handwritten Signature]

Additions as per recitals of document

I have satisfied myself as to the execution of the instrument by Mr. எல் சுரேஷ். கிருஷ்ணகிரி, Krishnagiri, Tamil Nadu, India, 635120 (அரசு பிரதிநிதி, Krishnagiri) who is exempted from personal appearance under section 88(1) of the registration act.

Sub Registrar: Soolagiri

Claim admitted by
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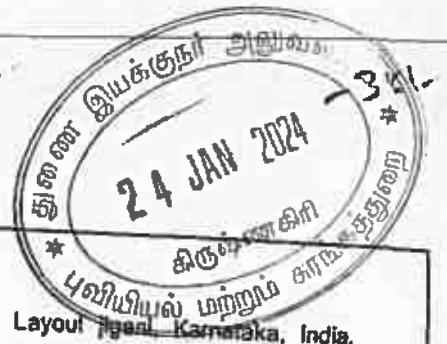
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Additions as per recitals of document
Document No. 971/2021 of Book 1

Contains 24 Sheets 23 Sheet.

[Handwritten Signature]

R/Soolagiri/Book-1/971/2021



verified by

1. *[Signature]*
2. *K. Kempa*

Mr. JAGADESH Son of YELLAPPA Manjunath Layout, Soolagiri, Karnataka, India, 560105.

Mr. SHARAVANA KUMAR Son of KISHNAPPA Banasankari 3rd Stage, Bangalore, Karnataka, India, 560085.

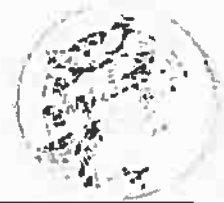
23rd day of February 2021

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SIVAKUMAR G
Sub Registrar
Soolagiri

Registered as Number R/Soolagiri/Book-1/971/2021.

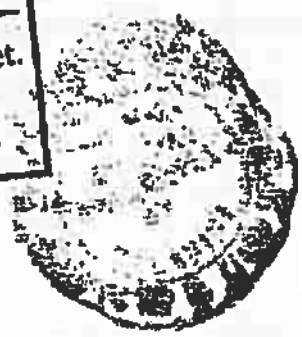
Date: 23/02/2021
Soolagiri



SIVAKUMAR G
Sub Registrar

[Signature]
S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

Document No. 971 of 2021 of Book 1
Contains 24 Sheets 24 Sheet.
[Signature]
Registering Officer



[Signature]

**THIRU C.KATHIRAVAN, I.A.S.,
CHAIRMAN/
DISTRICT COLLECTOR.**

ANNEXURE - III
Krishnagiri District
Environment Impact
Assessment Authority,
Room No.30,
Collectorate
Krishnagiri.



ENVIRONMENTAL CLEARANCE

Lt.No.03/DEIAA-KOI/EC No 98/2018 dated: 08.2018

TO:

**THIRU.V.NAGARAJA
S/o VENKATAPPA REDDY,
KOPPA VILLAGE,
HULIMANGALA-POST
ANEKAL TALUK,
BANGALORE DISTRICT-560105**

Sr

Sub: DEIAA - Application for Environment Clearance for the Proposed quarrying and transportation of 1425102 cbm from the rough stone quarry over an extent of 2.16.0Hects. in Patta land S.F.No.287/1 of Venkatesapuram village of Shoalagiri Taluk Krishnagiri District preferred by THIRU.V.NAGARAJA S/o VENKATAPPA REDDY, KOPPA VILLAGE, HULIMANGALA-POST, ANEKAL TALUK, BANGALORE DISTRICT-560105 - Issue of Environmental Clearance - Reg.

- Ref:**
1. Thiru.V.NAGARAJA Application for Environment Clearance dated 31.07.2018
 2. Minutes of the DEAC meeting conducted on 25.08.2018
 3. Minutes of the DEIAA meeting held on 27.08.2018

Details of Minor mineral Activity:

This has reference to your application first cited. The proposal is for obtaining Environmental Clearance for mining / quarrying of minor mineral rough stone based on the particulars furnished in your application, as shown below:

Name of Project Proponent and address	THIRU.V.NAGARAJA S/o VENKATAPPA REDDY KOPPA VILLAGE, HULIMANGALA-POST ANEKAL TALUK, BANGALORE DISTRICT-560105
---------------------------------------	--

2. Location of the Proposed Activity		
Survey Number and Extent		287/1 Extent : 2.16.0hectrs
Latitude and Longitude		12° 45' 13.88" N To 12° 45' 22.70" N 77° 57' 34.81" E To 77° 57' 39.66" E
Topo Sheet No.		57 H / 14
Village		Venkatapuram
Taluk		Shoplagiri
District		Krishnagiri District
3. Proposed Activity		
i.	Minor mineral	Rough Stone
ii.	Mining Lease Area	2.16.0Hectrs.
iii.	Approved quantity	142510277 cmm of Rough Stone.
iv.	Depth of Mining	148mts (including topsoil and burden) from a period of 5 years. After reaching 40 mts Bgl. depth, further quarry should be carried out, after obtaining NOC from PWD Ground water division.
v.	Type of mining	Open cast Semi mechanised mining.
vi.	Category (B1 / B2)	B2
vii.	Process - Area Communication	The District Collector Roc.No.478/2018/Mines-1dated:26.07.2018
viii.	Mining Plan approval	Mining Plan approved by the Deputy Director of Geology of Mining, Krishnagiri Lr.No,478/2018/Mines-1dated:30.07.2018
ix.	Mining lease period	Environment Clearance for 5 years
a.	Whether Project area attracts any general conditions specified in the EIA notification, 2006 as amended.	Not attracted Affidavit furnished
b.	Man Power requirement per day	18 Employees
Source of Water		a. For Drinking and Domestic purpose water will be purchased from approved water vendors. b. For dust suppression and

		Green belt development water from the existing bore hole situated near by the quarry area will be used.
ii.	Quantity of Water Requirement in KLD:	
	a. Domestic & Drinking	0.750 litre
	b. Industrial	
	c. Green Belt & Dust Suppression	1.750 KLD
iii.	Power requirement	
	a. Domestic purpose	TNEB
	b. Industrial purpose	Fu is used for operating machineries and vehicles during the quarrying process and transportation and the fuel required for the entire project life is 1143514 ts of HSD.
7.	Cost	
	i. Project Cost	Rs.42,60,000/-
	ii. EMP Cost	Rs 3,70,000/-
8.	Public Consultation	Not required as per J.M. dated 24.12.20 of M. EP, GOI
9.	Date of Appraisal by DEAC, Agenda No.	Agenda No.57 of 3rd meeting of DEAC conducted on 25.08.2018
10.	Date of review / discussion by DEIAA and the Remarks.	The proposal was placed before the DEIAA in its 3rd meeting on 27.08.2018 as agenda No.57 and the authority after careful consideration, decided to grant Environmental Clearance to the said project of quarrying of rough stone subject to terms and conditions stipulated under the provisions of Environment Impact Assessment Notification, 2006 as amended.
11.	Validity	This Environmental Clearance is granted to quarry of Rough Stone for the production quantity of 1425102 Cbm of rough stone for the period of five years from the date of execution of the quarrying lease deed.
12.	NBWL Clearance	The proposal area is situated 15.86km away from The Cauvery north Wild Life Sanctuary and it does not attract NBWL clearance.
13.	Special Condition	1. Ground Water Quality test shall be conducted periodically.



- ii) Water Sprinkling arrangement shall be maintained as proposed.
 - iii) Environment Management plan should be submitted before the grant of permission.
- Conditions to be Complied before / during commencing operations:**

(1) The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that

- i) The project has been accorded Environmental Clearance.
- ii) Copies of clearance letters are available with the Tamil Nadu Pollution Control Board.
- iii) Environmental Clearance may also be seen on the website of the State Level Environment Impact Assessment Authority.
- iv) The advertisement should be made within 7 days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the DEIAA.

(2) The applicant has to obtain land use classification as industrial use before issue/renewal of mining lease.

(3) NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site.

(4) The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1952.

(5) A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat / Panchayat union/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.

(6) Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.

(7) The proponent shall ensure that First Aid Box is available at site.

(8) The excavation activity shall not alter the natural drainage pattern of the area.

(9) The excavated pit shall be restored by the project proponent for useful purpose.

(10) The proponent shall quarry and remove only in the permitted area as per Mining Plan details.



(12). The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.

(13). A minimum distance of 15 mts. from any civil structure shall be kept from the periphery of any excavation area.

(14). Depth of quarrying shall be 2m above the ground water table / approved depth of mining whichever is lesser to be considered as a safeguard against Environmental Contamination and over exploitation of resources.

(15). The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.

(16). Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.

(17). Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.

(18). The explosives shall be stored at site as per the conditions stipulated in the permits issued by the Licensing Authority.

(19). Blasting shall be carried out after announcing to the public adequately through public address system to avoid any accident.

(20). A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibrations at specified location is to be conducted and records kept for all year.

(21). The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF, Govt on 15.11.2009. (GLC = Ground Level Concentration) (NAAQ = Noise and Ambient Air Quality)

(22). The following measures are to be implemented to reduce Air Pollution during transportation of mineral:

(i). Roads shall be graded so mitigate the dust and silt.

(ii). Water shall be sprinkled at regular interval on the main road and other bye roads to suppress dust.

(23). The following measures are to be implemented to reduce Noise Pollution:

(42) Bunds should be provided at the boundary of the project site and it should be properly maintained.

(43) The project proponent shall undertake plantation/ afforestation work by planting the native species on all side of the lease area at the rate of 600/Ha. Suitable tall tree saplings should be planted on the bunds and other suitable areas inside and around the work place.

(44) At least 10 Neem trees should be planted around the boundary of the quarry site.

(45) Floor of excavated pit to be leveled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.

(46) The Project Proponent shall ensure a minimum of 25% of the annual turnover will be utilized for the CSR Activity.

(47) The Project Proponent shall provide solar lighting system to the nearby villages.

(48) The Project Proponent shall comply with the mining and other relevant rules and regulations wherever applicable.

(49) Rainwater shall be pumped out via Settling Tank daily.

(50) Barbed wire and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.

(51) As per MPTC & GOI Govt. Office Memorandum dated 30/03/2015, prior clearance from Ministry of Wild life including clearance from obtaining committee of the National Board for Wild life as applicable shall be obtained before starting the quarrying operation. If the project site is located within 10KM from National Park and Sanctuaries.

(52) The quarrying activity shall be stopped if the entire quarry indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.

(53) Safety equipments to be provided to all the employees.

(54) Safety distance of 50 m has to be provided in case of railway, reservoir, canal/canal.

(55) The Assistant / Deputy Director Department of Geology and Mining shall ensure that the proponent has engaged the blaster with valid blasting license issued by the competent authority. For the safety of nearby

(56) The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.

(57) The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked boundary of the quarry site & monitor electronically before execution of mining.

(58) The proponent shall furnish the data obtained from the Public Works Department regarding the details of ground water table in the quarry site.

(59) The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.

(60) The proponent has to display the name board at the quarry site showing the details of proponent, leased period, extent etc., with respect to the existing activity before execution of mining.

(61) Heavy earth machinery equipments if utilized, after getting approval from the competent authority.

(62) The environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.

(63) The Assistant Director Public Works Department, Ground Water Division, Krishnagiri shall monitor whether the quarrying activity is carried on above the ground water level on yearly basis.

(64) NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.

(65) Yearly medical examination of the quarry workers should be carried out by a registered medical practitioner and the report should be filed in the quarry office in a separate file and copy should be sent to the Deputy Director, Health Services, Krishnagiri.

(66) Closed circuit camera should be erected at the quarry site and the passage of vehicles in and out of the quarry should be recorded and the footage of the recordings of the camera should be maintained and should be produced before the enforcing officials when ever called for.

(67) Vehicles used for transportation of quarried materials should be fitted with GPS and monitored.

(68) The weigh bridge should be maintained in online.

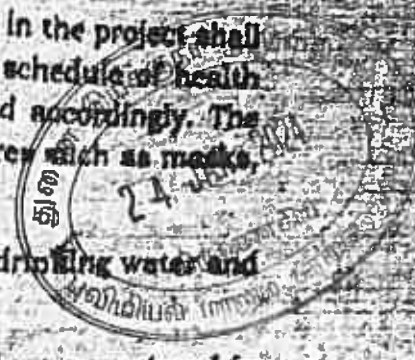
(69) Audio report on the annual inventory should be submitted to the District Collector within one month from the end of the financial year.

(70) 02.5% of the turn over amount should be utilized for activity after consultation with the District Collector.

B. General Conditions:

- (1) EC is given only on the factual records, documents and the committee furnished in non judicial stamp paper by the proponent.
- (2) The Proponent shall obtain the Consent for Establishment from the TNE Board before commencing the activity.
- (3) No change in mining technology and scope of working should be made without prior approval of the DEIAA, Tamil Nadu.
- (4) No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.
- (5) Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (6) Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.
- (7) A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
- (8) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- (9) Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying them mineral shall not be overloaded.
- (10) Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
- (11) All Personnel shall be provided with protective respiratory devices including safety shoes, Masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. A periodic health surveillance program of the workers should be undertaken periodically if observe any contractions due to exposure to dust and other harmful elements, if needed.

Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.



(13) Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.

(14) The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.

(15) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its regional office located at Chennai.

(16) The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.

(17) This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance.

(18) The DEIAA, Krishnagiri may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.

(19) The DEIAA, Krishnagiri may cancel the environmental clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this environmental clearance, if it is found or if it comes to the knowledge of this DEIAA/IN that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.

(20) Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

(21) The above conditions will be enforced inter alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, and the Minor Mineral Conservation & Development Rules, 2010 framed under MMCR Act, 1957, National Commission for protection of Child Rights, 2005 and rules made there under and also any other orders issued by the Hon'ble Supreme Court of India, Hon'ble High Court of Madhya Pradesh, Hon'ble Courts of Law relating to the subject matter.

(21) Noise shall be obtained quarterly.

MS for working component location

(23) The Periodical analysis monitoring

Air, dust, vibration & noise to be done

(24) Any other conditions to be complied.

as per other Statutory/ Patta authorities

(25) Any appeal against this environmental Clearance shall be with the Hon'ble National Green Tribunal, if preferred within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act 2010

9/12

**CHAIRMAN DELIA-KGE/
DISTRICT COLLECTOR,
KRISHNAGIRI**

Copy to

1. The Secretary, Ministry of Mines, Patta of India, Shanti Bhawan, New Delhi
2. The Principal Secretary, Environment and Forest Department, Patta of Tamil Nadu, Tamil Nadu
3. The Principal Secretary to Patta, Industries Department, Patta of Tamil Nadu, Tamil Nadu
4. The Additional Principal Chief Conservator of Forests, Regional Office 84, 84, HEPG Building 1st & 2nd Floor, Cathedral Garden Road, Mungambakkam, Chennai 84
5. The Chairman, Central Pollution Control Board, Parvash Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi 110 032
6. The Member Secretary, State Level Environmental Impact Assessment Authority, Tamil Nadu, Panagal Building, Saldapet, Chennai
7. The Chairman, Tamil Nadu Pollution Control Board, 5, Mount Sairaj Quinny, Chennai 600 027
8. The Commissioner of Geology and Mining, Quinny, Chennai 600 027
9. The Director, Ministry of Environment and Forests, Parvash Bhawan, New Delhi
10. The Director, Environment, Chennai



TAMILNADU POLLUTION CONTROL BOARD

CONSENT ORDER NO. 1905120274045

DATED: 31/01/2019.

PROCEEDINGS NO.F.2025HSR/RS/DEE/TNPCB/HSR/W/2019 DATED: 31/01/2019



SUB: Tamil Nadu Pollution Control Board -CONSENT TO OPERATE - DIRECT -M/s. V NAGARAJA ROUGH STONE QUARRY , S.F.No. 287/1, VENKATESAPURAM village Shoolagiri Taluk and Krishnagiri District - Consent for the operation of the plant and discharge of sewage and/or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act 6 of 1974) - Issued- Reg.

Ref: 1. Unit's OCMMS application No. 20274045 for CTO - Direct, Dated: 19.01.2019.

2. IR.No: F.2025 HSR / RS / AE / HSR / 2019, Dated: 30.01.2019.

3. Minutes of the 178th DLCCC Meeting held on 30.01.2019 (Item No: HSR-178-9).

CONSENT TO OPERATE is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act, 6 of 1974) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Proprietor,
M/s. V NAGARAJA ROUGH STONE QUARRY
S.F.No.287/1,
VENKATESAPURAM Village,
Shoolagiri Taluk,
Krishnagiri District.

Authorising the occupier to make discharge of sewage and for trade effluent.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This CONSENT is valid for the period ending March 31, 2023

S. PALANISAMY
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

To
The Proprietor,
M/s.V NAGARAJA ROUGH STONE QUARRY,
No. 287/1, Ahlmugam Road, Venkateshapuram Village, Buickasagaram Post, Shoolagiri Union & Taluk, Krishnagiri District.,
Pin: 635109

- Copy to:
- 1.The Commissioner, SHOOLAGIRI-Panchayat Union, Shoolagiri Taluk, Krishnagiri District .
 2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
 3. Copy submitted to the JCBE-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
 4. File

POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD

SPECIAL CONDITIONS

1. This consent to operate is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
Product Details			
1.	Rough Stone(Quarrying in an extent of 2.16 Hec at SF No. 287/1(Patta Land) Venkateshapuram Vil. Shoolagiri Union & Tk. Krishnagiri Dist. In Latitude:12°45'13.88"N-12°45'22.70"N,Longitude:77°57'34.81"E-77°57'39.68"E	1425102	CubicMeter/Five years

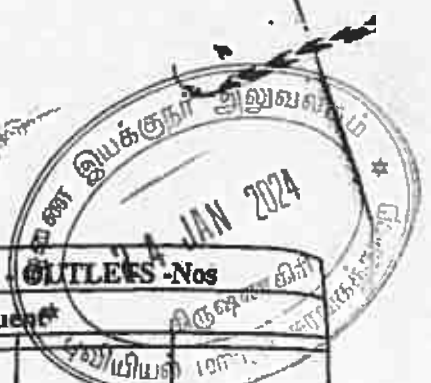
2. This consent to operate is valid for operating the facility with the below mentioned permitted outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
Effluent Type : Sewage			
1.	Sewage	0.65	On Industrys own land
Effluent Type : Trade Effluent			

3. The effluent discharge shall not contain constituents in excess of the tolerance Limits as laid down hereunder.



TAMILNADU POLLUTION CONTROL BOARD



Sl. No.	Parameters	Unit	TOLERANCE LIMITS		OUTLETS -Nos
			Sewage	Trade Effluent	
1.	pH		5.5 to 9		
2.	Temperature	oC	-		
3.	Particle size of Suspended solids	-	-		
4.	Total Suspended Solids	mg/l	30		
5.	Total Dissolved solids (inorganic)	mg/l	-		
6.	Oil & Grease	mg/l	-		
7.	Biochemical Oxygen Demand (3 days at 27oC)	mg/l	20		
8.	Chemical Oxygen Demand	mg/l	-		
9.	Chloride (as Cl)	mg/l	-		
10.	Sulphates (as SO4)	mg/l	-		
11.	Total Residual Chlorine	mg/l	-		
12.	Ammonical Nitrogen (as N)	mg/l	-		
13.	Total Kjeldahl Nitrogen (as N)	mg/l	-		
14.	Free Ammonia (as NH3)	mg/l	-		
15.	Arsenic (as As)	mg/l	-		
16.	Mercury (as Hg)	mg/l	-		
17.	Lead (as Pb)	mg/l	-		
18.	Cadmium(as Cd)	mg/l	-		
19.	Hexavalent Chromium (as Cr+6)	mg/l	-		
20.	Total Chromium (as Cr)	mg/l	-		
21.	Copper (as Cu)	mg/l	-		
22.	Zinc (as Zn)	mg/l	-		
23.	Selenium (as Se)	mg/l	-		
24.	Nickel (as Ni)	mg/l	-		
25.	Boron (as B)	mg/l	-		
26.	Percent Sodium	%	-		
27.	Residual Sodium Carbonate	mg/l	-		
28.	Cyanide (as CN)	mg/l	-		
29.	Fluoride (as F)	mg/l	-		
30.	Dissolved Phosphates(as P)	mg/l	-		
31.	Sulphide (as S)	mg/l	-		
32.	Pesticides	mg/l	-		
33.	Phenolic Compounds (as C6H5OH)	mg/l	-		
34.	Radioactive materials a) Alpha emitters	micro curie/ml	-		
35.	Radioactive materials b) Beta emitters	micro curie/ml	-		
36.	Fecal Coliform	MPN/100ml	-		

4. All units of the sewage and Trade effluent treatment plants shall be operated efficiently and continuously so as to achieve the standards prescribed in Sl No.3 above or to achieve the zero liquid discharge of effluent as applicable.

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POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD

5. The occupier shall maintain the Electro Magnetic Flow Meters/water Meters installed at the inlet of the water supply connection for each of the purposes mentioned below for assessing the quantity of water used and ensuring that such meters are easily accessible for inspection and maintenance and for other purposes of the Act.
 - a. Industrial Cooling, Spraying in mine pits or boiler feed.
 - b. Domestic purpose.
 - c. Process.
6. The occupier shall maintain the Electro Magnetic Flow Meters with computer recording arrangement for measuring the quantity of effluent generated and treated for the monitoring purposes of the Act.
7. Log book for each of the unit operations of ETP have to be maintained to reflect the working condition of ETP along with the readings of the Electro Magnetic Flow Meters installed to assess effluent quantity and the same shall be furnished for verification of the Board officials during inspection.
8. The occupier shall at his own cost get the samples of effluent/surface water/ground water collected in and around the unit by Board officials and analyzed by the TNPC Board Laboratory periodically.
9. Any upset condition in any of the plants of the factory which is, likely to result in increased effluent discharge and result in violation of the standards mentioned in Sl. No.3 above shall be reported to the Member Secretary / Joint Chief Environmental Engineer-Monitoring and the concerned District/Assistant Environmental Engineer of the Board by e-mail immediately and subsequently by Post with full details of such upset condition.
10. The occupier shall always comply and carryout the order/directions issued by the Board in this Consent Order and from time to time without any negligence. The occupier shall be liable for action as per provisions of the Act in case of non compliance of any order/directions issued.
11. The occupier shall develop adequate width of green belt at the rate of 400 numbers of trees per Hectare.
12. The occupier shall provide and maintain rain water harvesting facilities.
13. The occupier shall ensure that there shall not be any discharge of effluent either treated or untreated into storm water drain at any point of time.
14. In the case of zero liquid discharge of effluent units, the occupier shall adhere the following conditions as laid under.
 - i). The occupier shall ensure zero liquid discharge of effluent, thereby no discharge of untreated / treated effluent on land or into any water bodies either inside or outside the premises at any point of time.
 - ii) The occupier shall operate and maintain the Zero liquid discharge treatment components comprising of Primary, Secondary and tertiary treatment systems at all times and ensure that the RO permeate/Evaporator condensate shall be recycled in the process and the final RO reject shall be disposed off with the reject management system ensuring zero liquid discharge of effluents in the premises.
 - iii) The occupier shall operate and maintain the reject management system effectively and recover the salt from the system which shall be reused in the process if reusable or shall be disposed off as ETP sludge.
 - iv) In case of failure to achieve zero discharge of effluents for any reason, the occupier shall stop its production and operations forthwith and shall be reported to the Member Secretary/Joint Chief Environmental Engineer-Monitoring and the concerned District/Assistant Environmental Engineer of the Board by e-mail immediately and subsequently by Post with full details of such upset condition.
 - v) The occupier shall restart the production only after ascertaining that the Zero discharge treatment system can perform effectively for achieving zero discharge of effluents.

Additional Conditions:



TAMILNADU POLLUTION CONTROL BOARD



1. The unit shall comply all the conditions prescribed in the Environmental Clearance issued by the DEIAA, Krishnagiri District vide Letter No. 03 / DEIAA-KGI / EC.No.98 / 2018, Dated: 27.08.2018.
2. The unit shall execute the Mining Lease Agreement with the District Administration before commissioning of the quarrying activities and shall be complied with all the conditions prescribed in the same.
3. The unit shall treat and dispose the sewage generated from the unit through Septic tank and Soak Pit arrangement as reported.
4. The unit shall ensure that no trade effluent is generated at any stage of its manufacturing process.
5. The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
6. The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.
7. The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 165/2013.
8. In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

S. PALANISAMY PALANISAMY signed by S.
Date: 2018.02.01
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District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD

GENERAL CONDITIONS

1. The occupier shall make an application along with the prescribed consent fee for grant of renewal of consent at least 60 days before the date of expiry of this Consent Order along with all the required particulars ensuring that there is no change in Production quantity and change in sewage/Trade effluent.
2. This Consent is issued by the Board in consideration of the particulars given in the application. Any change or alteration or deviation made in actual practice from the particulars furnished in the application will also be ground for review/variation/revocation of the Consent Order under Section 27 of the Act and to make such variation as deemed fit for the purpose of the Act.
3. The consent conditions imposed in this order shall continue in force until revoked under Section 27(2) of the Act.
4. After the issue of this order, all the 'Consent to Operate' orders issued previously under Water (Prevention and Control of Pollution) Act, 1974 as amended stands defunct.
5. The occupier shall maintain an Inspection Register in the factory so that the inspecting officer shall record the details of the observations and instructions issued to the unit at the time of inspection for adherence.
6. The occupier shall provide and maintain an alternate power supply along with separate energy meter for the Effluent Treatment Plant sufficient to ensure continuous operation of all pollution control equipments to maintain compliance.
7. The occupier shall provide all facilities to the Board officials for inspection and collection of samples in and around the factory at any time.
8. The occupier shall display the flow diagram of the sources of effluent generation and pollution control systems provided at the ETP site.
9. The solid waste such as sweepings, wastage, package, empty containers, residues, sludge including that from air pollution control equipments collected within the premises of the industrial plant shall be collected in an earmarked area and shall be disposed off properly.
10. The occupier shall collect, treat the solid wastes like food waste, green waste generated from the canteen and convert into organic compost.
11. The occupier shall segregate the Hazardous waste from other solid wastes and comply in accordance with Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.
12. The occupier shall maintain good house-keeping within the factory premises.
13. All pipes, valves, sewers and drains shall be leak proof. Floor washings shall be admitted into the trade effluent collection system only and shall not be allowed to find their way in storm drains or open areas.
14. The occupier shall ensure that there shall not be any diversion or by-pass of trade effluent on land or into any water sources.
15. The occupier shall ensure that solar Evaporation pans shall be constructed in such a way that the bottom of the solar pan is at least 1 m above the Ground level (if applicable).
16. The occupier shall furnish the following returns in the prescribed formats to the concerned District office regularly.
 - a) Monthly water consumption returns of each of the purposes with water meter readings in Form-I on or before 5th of every month.
 - b) Yearly return on Hazardous wastes generated and accumulated for the period from 1st April to 31st March in Form-4 before the end of the subsequent 30th June of every year (if applicable).
 - c) Yearly Environmental Statement for the period from 1st April to 31st March in Form -V before the end of the subsequent 30th September of every year(if applicable).
17. If applicable, the occupier has to comply with the provisions of Public Liability Insurance Act, 1991 to provide immediate relief in the event of any hazard to human beings, other living creatures/plants and properties while handling and storage of hazardous substances.
18. The issuance of this consent does not authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any natural watercourse or in Government Poramboke lands.
19. The issuance of this Consent does not convey any property right in either real personal property or any exclusive privileges, nor does it authorize any injury to private property or Government property or any invasion of personal rights nor any infringement of Central, State laws or regulation.



TAMILNADU POLLUTION CONTROL BOARD

20. The occupier shall forth with keep the Board informed of any accident of unforeseen act or event of any poisonous, noxious or polluting matter or emissions are being discharged into stream or well or air as a result of such discharge, water or air is being polluted.
21. If due to any technological improvements or otherwise the Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any treatment system, either in whole or in part) the Board shall, after giving the applicant an opportunity of being heard, vary all or any of such conditions and thereupon the applicant shall be bound to comply with the conditions as so varied.
22. In case there is any change in the constitution of the management, the occupier of the new management shall file fresh application under Water (Prevention and Control of Pollution) Act, 1974, as amended in Form-II alongwith relevant documents of change of management immediately and get the necessary amendment with renewal of consent order.
23. In case there is any change in the name of the company alone, the occupier shall inform the same with relevant documents immediately and get the necessary amendments for the change of name from the Board.
24. The occupier shall display this consent order granted to him in a prominent place for perusal of the inspecting Officers of this Board.

S. PALANISAMY Digitally signed by S. PALANISAMY

Date: 2019.02.01
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District Environmental Engineer,
Tamil Nadu Pollution Control Board,
ROSUR

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POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD

CONSENT ORDER NO. 1905120274045

DATED: 31/01/2019.

PROCEEDINGS NO.F.2025HSR/RS/DEE/TNPCB/HSR/W/2019 DATED: 31/01/2019



SUB: Tamil Nadu Pollution Control Board -CONSENT TO OPERATE - DIRECT -M/s. V NAGARAJA ROUGH STONE QUARRY , S.F.No. 287/1, VENKATESAPURAM village Shoolagiri Taluk and Krishnagiri District - Consent for the operation of the plant and discharge of sewage and/or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act 6 of 1974) - Issued- Reg.

Ref: 1. Unit's OCMMS application No. 20274045 for CTO - Direct, Dated: 19.01.2019.

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3. Minutes of the 178th DLCCC Meeting held on 30.01.2019 (Item No: HSR-178-9).

CONSENT TO OPERATE is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act, 6 of 1974) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Proprietor,
M/s. V NAGARAJA ROUGH STONE QUARRY
S.F.No.287/1,
VENKATESAPURAM Village,
Shoolagiri Taluk,
Krishnagiri District.

Authorising the occupier to make discharge of sewage and /or trade effluent.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This CONSENT is valid for the period ending March 31, 2023

S. PALANISAMY
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

To
The Proprietor,
M/s.V NAGARAJA ROUGH STONE QUARRY,
No. 287/1, Athimugam Road, Venkatesapuram Village, Bukkasagaram Post, Shoolagiri Union & Taluk, Krishnagiri District.,
Pin: 635109

Copy to:

- 1.The Commissioner, SHOOLAGIRI-Panchayat Union, Shoolagiri Taluk, Krishnagiri District .
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
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4. File

POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD

193

SPECIAL CONDITIONS

- This consent to operate is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
Product Details			
1.	Rough Stone(Quarrying in an extent of 2.16 Hec at SF No. 287/1(Patta Land) Venkateshapuram Vil. Shoolagir Union & Tk. Krishnagiri Dist. in Latitude:12°45'13.88"N-12°45'22.70"N,Longitude:77°57'34.81"E-77°57'39.68"E	1425102	CubicMeter/Five years

- This consent to operate is valid for operating the facility with the below mentioned permitted outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
Effluent Type : Sewage			
1.	Sewage	0.65	On Industrys own land
Effluent Type : Trade Effluent			

- The effluent discharge shall not contain constituents in excess of the tolerance Limits as laid down hereunder.



TAMILNADU POLLUTION CONTROL BOARD



Sl. No.	Parameters	Unit	TOLERANCE LIMITS - OUTLETS - Nos			
			Sewage	Trade Effluent		
1.	pH		5.5 to 9			
2.	Temperature	oC	-			
3.	Particle size of Suspended solids	-	-			
4.	Total Suspended Solids	mg/l	30			
5.	Total Dissolved solids (inorganic)	mg/l	-			
6.	Oil & Grease	mg/l	-			
7.	Biochemical Oxygen Demand (3 days at 27oC)	mg/l	20			
8.	Chemical Oxygen Demand	mg/l	-			
9.	Chloride (as Cl)	mg/l	-			
10.	Sulphates (as SO4)	mg/l	-			
11.	Total Residual Chlorine	mg/l	-			
12.	Ammonical Nitrogen (as N)	mg/l	-			
13.	Total Kjeldahl Nitrogen (as N)	mg/l	-			
14.	Free Ammonia (as NH3)	mg/l	-			
15.	Arsenic (as As)	mg/l	-			
16.	Mercury (as Hg)	mg/l	-			
17.	Lead (as Pb)	mg/l	-			
18.	Cadmium (as Cd)	mg/l	-			
19.	Hexavalent Chromium (as Cr+6)	mg/l	-			
20.	Total Chromium (as Cr)	mg/l	-			
21.	Copper (as Cu)	mg/l	-			
22.	Zinc (as Zn)	mg/l	-			
23.	Selenium (as Se)	mg/l	-			
24.	Nickel (as Ni)	mg/l	-			
25.	Boron (as B)	mg/l	-			
26.	Percent Sodium	%	-			
27.	Residual Sodium Carbonate	mg/l	-			
28.	Cyanide (as CN)	mg/l	-			
29.	Fluoride (as F)	mg/l	-			
30.	Dissolved Phosphates (as P)	mg/l	-			
31.	Sulphide (as S)	mg/l	-			
32.	Pesticides	mg/l	-			
33.	Phenolic Compounds (as C6H5OH)	mg/l	-			
34.	Radioactive materials a) Alpha emitters	micro curie/ml	-			
35.	Radioactive materials b) Beta emitters	micro curie/ml	-			
36.	Fecal Coliform	MPN/100ml	-			

4. All units of the sewage and Trade effluent treatment plants shall be operated efficiently and continuously so as to achieve the standards prescribed in SI No.3 above or to achieve the zero liquid discharge of effluent as applicable.

POLLUTION PREVENTION PAYS

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TAMILNADU POLLUTION CONTROL BOARD

5. The occupier shall maintain the Electro Magnetic Flow Meters/water Meters installed at the inlet of the water supply connection for each of the purposes mentioned below for assessing the quantity of water used and ensuring that such meters are easily accessible for inspection and maintenance and for other purposes of the Act.
 - a. Industrial Cooling, Spraying in mine pits or boiler feed.
 - b. Domestic purpose.
 - c. Process.
6. The occupier shall maintain the Electro Magnetic Flow Meters with computer recording arrangement for measuring the quantity of effluent generated and treated for the monitoring purposes of the Act.
7. Log book for each of the unit operations of ETP have to be maintained to reflect the working condition of ETP along with the readings of the Electro Magnetic Flow Meters installed to assess effluent quantity and the same shall be furnished for verification of the Board officials during inspection.
8. The occupier shall at his own cost get the samples of effluent/surface water/ground water collected in and around the unit by Board officials and analyzed by the TNPC Board Laboratory periodically.
9. Any upset condition in any of the plants of the factory which is, likely to result in increased effluent discharge and result in violation of the standards mentioned in Sl. No.3 above shall be reported to the Member Secretary / Joint Chief Environmental Engineer-Monitoring and the concerned District/Assistant Environmental Engineer of the Board by e-mail immediately and subsequently by Post with full details of such upset condition.
10. The occupier shall always comply and carryout the order/directions issued by the Board in this Consent Order and from time to time without any negligence. The occupier shall be liable for action as per provisions of the Act in case of non compliance of any order/directions issued.
11. The occupier shall develop adequate width of green belt at the rate of 400 numbers of trees per Hectare.
12. The occupier shall provide and maintain rain water harvesting facilities.
13. The occupier shall ensure that there shall not be any discharge of effluent either treated or untreated into storm water drain at any point of time.
14. In the case of zero liquid discharge of effluent units, the occupier shall adhere the following conditions as laid under.
 - i). The occupier shall ensure zero liquid discharge of effluent, thereby no discharge of untreated / treated effluent on land or into any water bodies either inside or outside the premises at any point of time.
 - ii) The occupier shall operate and maintain the Zero liquid discharge treatment components comprising of Primary, Secondary and tertiary treatment systems at all times and ensure that the RO permeate/Evaporator condensate shall be recycled in the process and the final RO reject shall be disposed off with the reject management system ensuring zero liquid discharge of effluents in the premises.
 - iii) The occupier shall operate and maintain the reject management system effectively and recover the salt from the system which shall be reused in the process if reusable or shall be disposed off as ETP sludge.
 - iv) In case of failure to achieve zero discharge of effluents for any reason, the occupier shall stop its production and operations forthwith and shall be reported to the Member Secretary/Joint Chief Environmental Engineer-Monitoring and the concerned District/Assistant Environmental Engineer of the Board by e-mail immediately and subsequently by Post with full details of such upset condition.
 - v) The occupier shall restart the production only after ascertaining that the Zero discharge treatment system can perform effectively for achieving zero discharge of effluents.

Additional Conditions:



TAMILNADU POLLUTION CONTROL BOARD



1. The unit shall comply all the conditions prescribed in the Environmental Clearance issued by the DEIAA, Krishnagiri District vide Letter No. 03 / DEIAA-KGI / EC.No.98 / 2018, Dated: 27.08.2018.
2. The unit shall execute the Mining Lease Agreement with the District Administration before commissioning of the quarrying activities and shall be complied with all the conditions prescribed in the same.
3. The unit shall treat and dispose the sewage generated from the unit through Septic tank and Soak Pit arrangement as reported.
4. The unit shall ensure that no trade effluent is generated at any stage of its manufacturing process.
5. The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
6. The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.
7. The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 165/2013.
8. In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

S. PALANISAMY Digitally signed by S.
Date: 2018.02.01
15:22:23 +05'30'
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR



TAMILNADU POLLUTION CONTROL BOARD

GENERAL CONDITIONS

1. The occupier shall make an application along with the prescribed consent fee for grant of renewal of consent at least 60 days before the date of expiry of this Consent Order along with all the required particulars ensuring that there is no change in Production quantity and change in sewage/Trade effluent.
2. This Consent is issued by the Board in consideration of the particulars given in the application. Any change or alteration or deviation made in actual practice from the particulars furnished in the application will also be ground for review/variation/revocation of the Consent Order under Section 27 of the Act and to make such variation as deemed fit for the purpose of the Act.
3. The consent conditions imposed in this order shall continue in force until revoked under Section 27(2) of the Act.
4. After the issue of this order, all the 'Consent to Operate' orders issued previously under Water (Prevention and Control of Pollution) Act, 1974 as amended stands defunct.
5. The occupier shall maintain an Inspection Register in the factory so that the inspecting officer shall record the details of the observations and instructions issued to the unit at the time of inspection for adherence.
6. The occupier shall provide and maintain an alternate power supply along with separate energy meter for the Effluent Treatment Plant sufficient to ensure continuous operation of all pollution control equipments to maintain compliance.
7. The occupier shall provide all facilities to the Board officials for inspection and collection of samples in and around the factory at any time.
8. The occupier shall display the flow diagram of the sources of effluent generation and pollution control systems provided at the ETP site.
9. The solid waste such as sweepings, wastage, package, empty containers, residues, sludge including that from air pollution control equipments collected within the premises of the industrial plant shall be collected in an earmarked area and shall be disposed off properly.
10. The occupier shall collect, treat the solid wastes like food waste, green waste generated from the canteen and convert into organic compost.
11. The occupier shall segregate the Hazardous waste from other solid wastes and comply in accordance with Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.
12. The occupier shall maintain good house-keeping within the factory premises.
13. All pipes, valves, sewers and drains shall be leak proof. Floor washings shall be admitted into the trade effluent collection system only and shall not be allowed to find their way in storm drains or open areas.
14. The occupier shall ensure that there shall not be any diversion or by-pass of trade effluent on land or into any water sources.
15. The occupier shall ensure that solar Evaporation pans shall be constructed in such a way that the bottom of the solar pan is at least 1 m above the Ground level (if applicable).
16. The occupier shall furnish the following returns in the prescribed formats to the concerned District office regularly.
 - a) Monthly water consumption returns of each of the purposes with water meter readings in Form-I on or before 5th of every month.
 - b) Yearly return on Hazardous wastes generated and accumulated for the period from 1st April to 31st March in Form-4 before the end of the subsequent 30th June of every year (if applicable).
 - c) Yearly Environmental Statement for the period from 1st April to 31st March in Form -V before the end of the subsequent 30th September of every year (if applicable).
17. If applicable, the occupier has to comply with the provisions of Public Liability Insurance Act, 1991 to provide immediate relief in the event of any hazard to human beings, other living creatures/plants and properties while handling and storage of hazardous substances.
18. The issuance of this consent does not authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any natural watercourse or in Government Poramboke lands.
19. The issuance of this Consent does not convey any property right in either real personal property or any exclusive privileges, nor does it authorize any injury to private property or Government property or any invasion of personal rights nor any infringement of Central, State laws or regulation.

7

POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD



20. The occupier shall forth with keep the Board informed of any accident of unforeseen act or event of any poisonous, noxious or polluting matter or emissions are being discharged into stream or well or air as a result of such discharge, water or air is being polluted.
21. If due to any technological improvements or otherwise the Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any treatment system, either in whole or in part) the Board shall, after giving the applicant an opportunity of being heard, vary all or any of such conditions and thereupon the applicant shall be bound to comply with the conditions as so varied.
22. In case there is any change in the constitution of the management, the occupier of the new management shall file fresh application under Water (Prevention and Control of Pollution) Act, 1974, as amended in Form-II alongwith relevant documents of change of management immediately and get the necessary amendment with renewal of consent order.
23. In case there is any change in the name of the company alone, the occupier shall inform the same with relevant documents immediately and get the necessary amendments for the change of name from the Board.
24. The occupier shall display this consent order granted to him in a prominent place for perusal of the inspecting Officers of this Board.

S. PALANISAMY Digitally signed by S. PALANISAMY

Date: 2019.02.01
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District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR


POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD



Category of the Industry :

RED



CONSENT ORDER NO. 2308150594872 DATED: 03/03/2023.

PROCEEDINGS NO.F.2025HSR/RS/DEE/TNPCB/HSR/W/2023 DATED: 03/03/2023

SUB: Tamil Nadu Pollution Control Board - RENEWAL OF CONSENT - M/s. V NAGARAJA ROUGH STONE QUARRY , S.F.No. 287/1, VENKATESAPURAM village, Shoolagiri Taluk and Krishnagiri District - Renewal of Consent for the operation of the plant and discharge of sewage and/or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act 6 of 1974) - Issued- Reg.

**REF: 1. CTO Proceedings No.F.2025HSR/RS/DEE/TNPCB/HSR/A/2019 dated 31.01.2019.
2. The unit's application for renewal of consent No 50594872 vide OCMMS dated.10.02.2023
3. This office (R.No : F.2025HSR/RS/AE/HSR/2023 dated 03.03.2023**

RENEWAL OF CONSENT is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act, 6 of 1974) (hereinafter referred to as "The Act") and the rules and orders made there under to

**The Proprietor
M/s.V NAGARAJA ROUGH STONE QUARRY,
S.F.No. 287/1,
VENKATESAPURAM Village,
Shoolagiri Taluk,
Krishnagiri District.**

Authorising the occupier to make discharge of sewage and /or trade effluent.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending February 18, 2026

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Date: 2023.03.05
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**District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR**

POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products/byproducts (Col. 2) at the rate (Col 3) mentioned below. Any change in the product/byproduct and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
Product Details			
1.	Rough Stone(Quarrying in an extent of 2.16 Hec at SF No: 287/1(Patta Land) Venkateshapuram VII, Shoolagin Union & Tk. Krishnagiri Dist. In Latitude:12°45'13.88"N-12°45'22.70"N,Longitude:77°57'34.81"E-77°57'38.66"E	1425102	CubicMeter/Five years

2. This renewal of consent is valid for operating the facility with the below mentioned outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
Effluent Type : Sewage			
1.	Sewage	0.65	On Industry's own land
Effluent Type : Trade Effluent			

Re



TAMILNADU POLLUTION CONTROL BOARD



Special Additional Conditions:

The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional Conditions:

1. The unit shall comply all the conditions prescribed in the Environmental Clearance issued by the DEIAA, Krishnagiri District vide Letter No. 03/DEIAAKGI/EC.No. 98/ 2018, Dated: 27.08.2018.
2. The unit shall ensure to comply with the conditions stipulated in the Mining Lease Agreement dated 19.02.2021 with the District Administration at all times.
3. The unit shall treat and dispose the sewage generated from the unit through Septic tank and Soak Pit arrangement as reported.
4. The unit shall ensure that no trade effluent is generated at any stage of its manufacturing process.
5. The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
6. The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.
7. The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 165/2013.
8. In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

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Digitally signed by
R VENKATESAN
Date: 2023.03.05
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District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

To
The Proprietor,
M/s.V NAGARAJA ROUGH STONE QUARRY,
V,NAGARAJA,
S/o. Venkatappa Reddy,
Koppa Village, Hulimangala Post,
Anekal Taluk, Bangalore Dist.
KARNATAKA.,
Pin: 560105

Copy to:

1. The Commissioner, SHOOLAGIRI-Panchayat Union, Shoolagiri Taluk, Krishnagiri District .
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. The District Environmental Engineer, Tamil Nadu Pollution Control Board, HOSUR for favour of kind information.
4. File

POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD

POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD



Category of the Industry :

RED



CONSENT ORDER NO. 2308250594872 DATED: 03/03/2023.

PROCEEDINGS NO.F.2025HSR/RS/DEE/TNPCB/HSR/A/2023 DATED: 03/03/2023

SUB: Tamil Nadu Pollution Control Board - RENEWAL OF CONSENT -M/s.V NAGARAJA ROUGH STONE QUARRY , S.F.No. 287/1, VENKATESAPURAM village, Shoolagiri Taluk and Krishnagiri District - Renewal of Consent for the operation of the plant and discharge of emissions under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) -Issued- Reg.

**REF: 1. CTO Proceedings No.F.2025HSR/RS/DEE/TNPCB/HSR/A/2019 dated 31.01.2019.
2. The unit's application for renewal of consent No 50594872 vide OCMMS dated.10.02.2023
3. This office IR.No : F.20251HSR/RS/AE/HSR/2023 dated 03.03.2023**

RENEWAL OF CONSENT is hereby granted under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) (hereinafter referred to as "The Act") and the rules and orders made there under to

**The Proprietor
M/s.V NAGARAJA ROUGH STONE QUARRY,
S.F.No. 287/1,
VENKATESAPURAM village,
Shoolagiri Taluk,
Krishnagiri District.**

Authorizing the occupier to operate the industrial plant in the Air Pollution Control Area as notified by the Government and to make discharge of emission from the stacks/chimneys.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending February 18, 2026

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Date: 2023.03.05
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**District Environmental Engineer,
Tamil Nadu Pollution Control Board,
TIOSUR**

POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
Product Details			
1.	Rough Stone (Quarrying in an extent of 2.16 Hec at SF No. 287/1 (Patta Land) Venkateshapuram VII, Shoolagiri Union & Tk. Krishnagin Dist. in Latitude: 12°45'13.88"N-12°45'22.70"N; Longitude: 77°57'34.81"E-77°57'39.68"E	1425102	Cubic Meter/Five years

2. This renewal of consent is valid for operating the facility with the below mentioned emission/noise sources along with the control measures and/or stack. Any change in the emission source/control measures/change in stack height has to be brought to the notice of the Board and fresh consent/Amendment has to be obtained.

I Point source emission with stack :				
Stack No.	Point Emission-Source	Air pollution Control measures	Stack height from Ground Level in m	Gaseous Discharge in Nm ³ /hr
II Fugitive/Noise emission :				
Sl. No.	Fugitive or Noise Emission sources	Type of emission	Control measures	
1.	Quarrying area	Fugitive	Water Sprinklers	
2.	Vehicle Movement	Fugitive	Water Sprinklers	

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TAMILNADU POLLUTION CONTROL BOARD



Special Additional Conditions:

- The unit shall install the approved retrofit emission control device/equipment with at least 70% Particulate matter reduction efficiency on all DG sets with capacity of 125 KVA and above or otherwise the unit shall be shift to gas based generators within the time frame prescribed in the notification No. TNPCB/Labs/DD(L)02151/2019 dated 10.06.2020 issued by TNPCB.
- The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional Conditions:

- The unit shall comply all the conditions prescribed in the Environmental Clearance issued by the DEIAA, Krishnagiri District vide Letter No. 03 / DEIAAKGI / EC.No. 98/2018, Dated: 27.08.2018.
- The unit shall ensure to comply with the conditions stipulated in the Mining Lease Agreement dated 19.02.2021 with the District Administration at all times.
- The unit shall operate and maintain the APC measures in the form of portable water sprinklers effectively and continuously so as to satisfy the NAAQ / Emission standards prescribed by the Board.
- The unit shall adhere to the ANL standards as prescribed by the Board.
- The unit shall continue to develop more green belt with trees having thick canopy cover in the unit's premises.
- The unit's operation/ activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
- The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.
- The consent issued is subject to the outcome of National Green Tribunal (South Zone) in application No. 165/2013.
- The unit shall not use 'Use and throwaway plastics' such as plastic sheets used for food wrapping, spreading on dining table etc, plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastics bags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco-friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.
- In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing which this order will be withdrawn without any notice and further action will be initiated against the unit as per law.

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Digitally signed by R
VENKATESAN
Date: 2023.03.05
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District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

To
The Proprietor,
M/s.V NAGARAJA ROUGH STONE QUARRY,
V.NAGARAJA,
S/o. Venkatappa Reddy,
Koppa Village, Hulimangala Post,
Anekal Taluk, Bangalore Dist.
KARNATAKA.,
Pin: 560105

S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

Copy to:

- The Commissioner, SHOOLAGIRI-Panchayat Union, Shoolagiri Taluk, Krishnagiri District.
- Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.

POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD

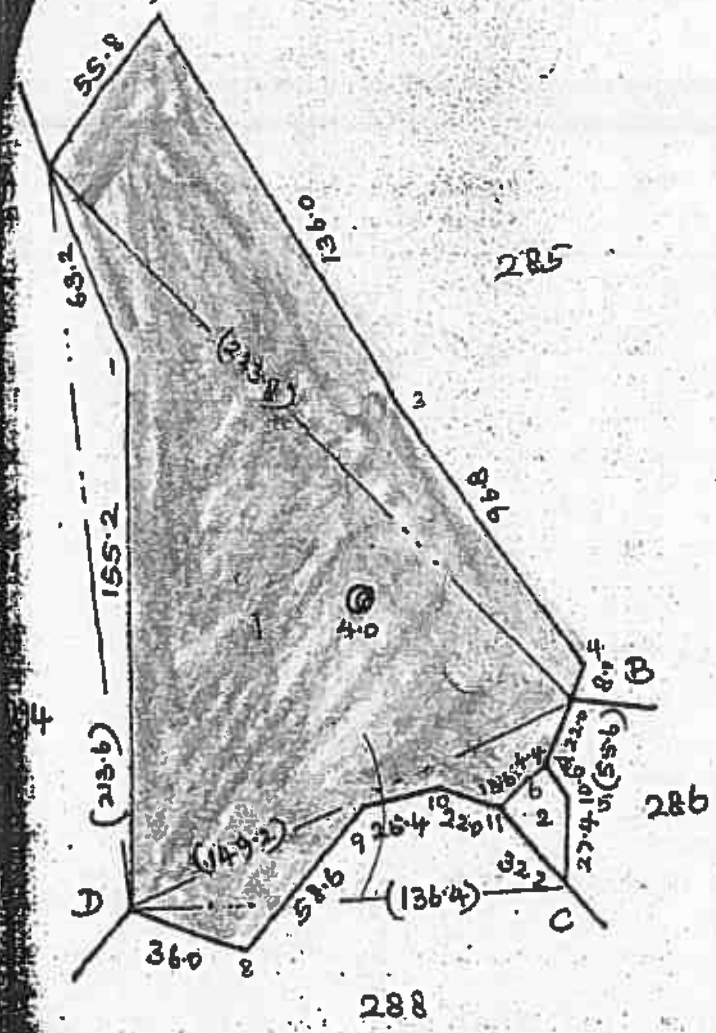
POLLUTION PREVENTION PAYS



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3	23.8		124.8		
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			213.6		
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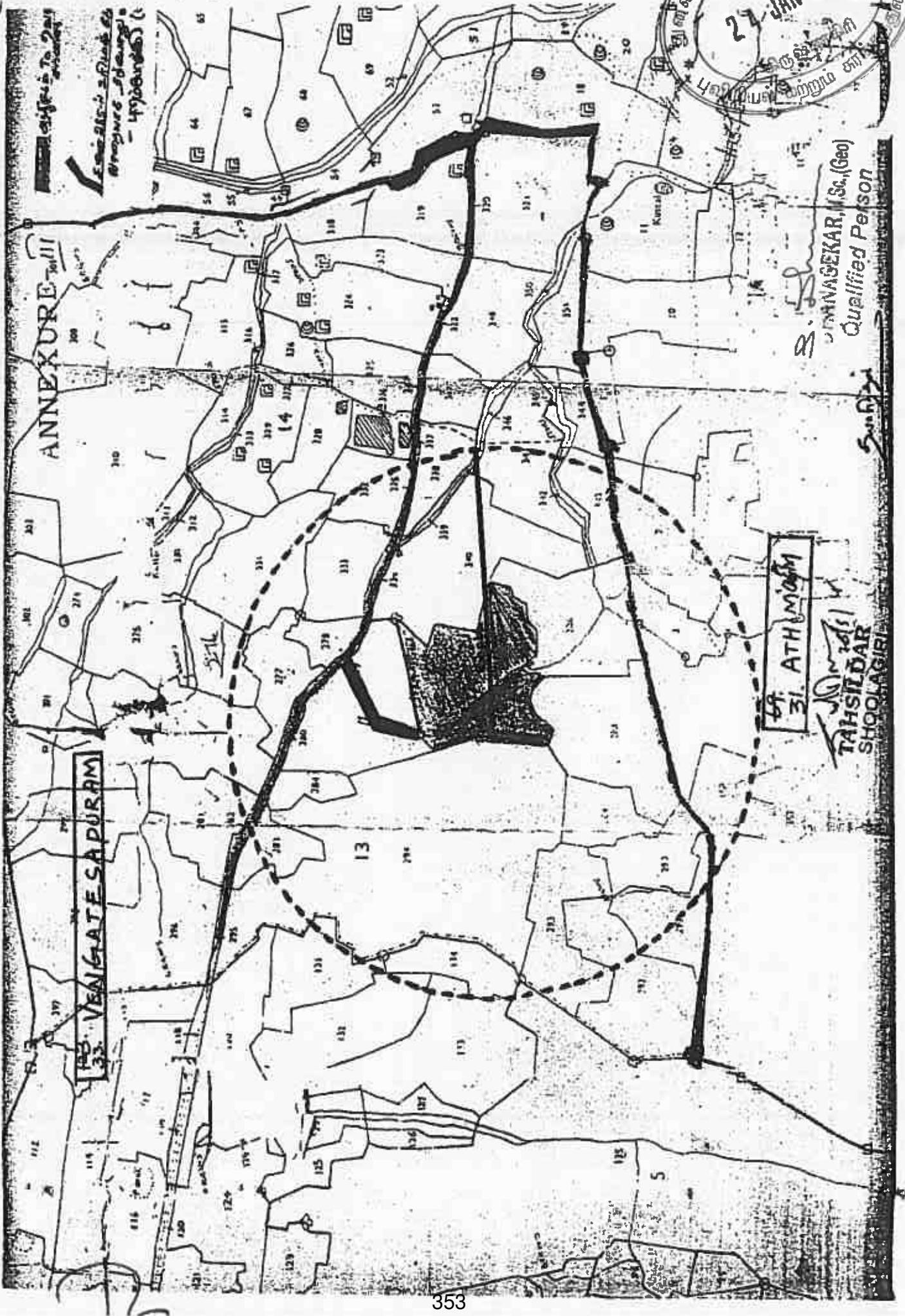
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22/1/16
Village Administration Offices
124, PUSKASARAI
127, Venkateswara

சமஸ்தி: 2000 1/2

P. Anil
f.s
1/11/16

S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

ANNEXURE - D



இயக்குநர் அலுவலகம்
 27 JAN 2024
 புலியேரி
 தஞ்சை மாவட்டம்

ANNAGEKAR, (Geo)
 Qualified Person

31. ATHMAM

TAHSILDAR
 SHOOLAGIRI



தமிழக அரசு

வருவாய்த் துறை

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

மாவட்டம் : திருச்செங்கல்

வட்டம் : தளவிரி

வருவாய் பிரிவு : வெங்கடசபை

பட்டா எண் : 1000

உரிமையாளர்கள் பெயர்

1.	வெங்கடசபை		மகன்		நாகராஜா		
	பஞ்சாய	புள்ளி	பஞ்சாய	புள்ளி	பஞ்சாய	புள்ளி	
புல எண்	உட்பிரிவு	ஒற்றை - ஏர்	கு - பை	ஒற்றை - ஏர்	கு - பை	ஒற்றை - ஏர்	கு - பை
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குறிப்பு 2 :



1. செற்கண்ட தகவல் / சான்றிதழ் தகவல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தங்கள் <http://eservices.tn.gov.in> என்ற இணைய தளத்தில் 31/11/2018/01000/100311 என்ற குறியீடு எண்ணை உடனடி செய்து உறுதி செய்துகொள்ளவும்.
2. இது தகவல்கள் 26-03-2018 அன்று 02:41:34 PM க்குள் அளிக்கப்பட்டது.
3. கைப்பிரிவு செயலாளர் 2D barcode டிபன்ஸ்கள் மூலம் டிபன்ஸ்கள் 3G/GPRS வரி இணையதளத்தில் சரிபார்க்கவும்.

Rev

1433 - ஆம் பரலிபில் Krishnagiri மாவட்டம் Sholagiri வட்டம் Venkateshpuram கிராமக் கணக்கு

நில வரித் திட்டத்தின்படி புலன்களின் விபரம்.

மாவட்டம் Sholagiri வட்டம் Venkateshpuram கிராமக் கணக்கு

எண் 2 கிராமத்தில் வருடவாரி புலவாரி கைப்பற்று சாகுபடி அடங்கல் கணக்கு இரண்டாம் யோகம்.

(1) நில அளவை எண்.	(2) உட்பிரிவு எண்.	(3) பரப்பு.	(4) தீர்வை.	(5) ஒரு போகம் அல்லது ஒரு போகம்.	(6) 1000 கைப்பற்று தரகுடைய பெயரும் என்னும் அல்லது அனுபோக தரகுடைய பெயர்.	(7) சாகுபடி யாளரின் பெயர்.	(8) எந்த மாதத்தில் பயிர் செய்யப்பட்டது எந்த மாதத்தில் அறுவடை செய்யப்பட்டது.	(9) பயிரின் பெயர்.	(10) பயிரான / அறுவடையான பரப்பு.	(11) உண்மையான பாய்ச்சல் ஆகாரம்.	(12) விளைச்சல் அளவு விவரிக்காடு.
287	1	2.1600	1.98		நாகராஜா						

(13) எந்த மாதத்தில் பயிர் செய்யப்பட்டது எந்த மாதத்தில் அறுவடை செய்யப்பட்டது.	(14) பயிரின் பெயர்.	(15) பயிரான / அறுவடையான பரப்பு.	(16) உண்மையான பாய்ச்சல் ஆகாரம்.	(17) விளைச்சல் அளவு விவரிக்காடு.	(18அ) கிராம அலுவலரின் குறிப்புரை :- (1) புலன்களின் பகுதிகளில் மட்டும் பயிரிடப்பட்ட இடங்களில் விளங்குகின்றன. (2) கைப்பற்றில் இல்லாத நிலங்களின் சாகுபடியின் பரப்பு தன்மையும் (3) முந்தைய மாதத்தில் பாய்ச்சல் உதவியின்றி பயிரிடப்பட்டவை என்று பதிவாகியுள்ள நிலங்களின் முந்தைய மாதங்களில் பாய்ச்சப்பட்ட விவரங்கள்.	(18ஆ) கீழ்க்கண்டவகையில் தன்மை பரப்பின் விவரங்கள் ஒவ்வொரு நில அளவை எண் அல்லது அடங்கல் பகுதியில். (அ) வளம், (ஆ) பயனற்ற பயிர் செய்யப்பட்ட இடம், (இ) விவசாயம் மற்றும் இதர காரணங்களுக்கு பயன் படுத்தப்படும் நிலம், (ஈ) பயிரிடத்தக்க தரிக் (உ) நிலையான புல் தரைகளும் மற்றும் இதர மேய்ச்சல் நிலங்களும், (ஊ) விதைக்கப்பட்ட தரிக் பரப்பில் சோக்கப்பட்ட மரவகைப் பயிர்களும் தேசப்புகளும், (எ) நடப்புத் தரிகள் (ஏ) இதர தரிக் நிலங்கள்.	(19) பயிர் பரப்பையும் அறுவடையும் குறிப்புகள்.
					தரிக்		

True copy / 189. J...
 33, VENKATESAPURAM
 Sholagiri Tk, Krishnagiri Dt



இ. எண். 123. வெங்கடேசுபுரம்.



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S. DHANASEKAR, M.Sc., (Geo)
 Qualified Person
 Village Administrator
 124, BUKKASASAPPA
 Vengalapuram

ANNEXURE III

2862/2017



தமிழ்நாடு தமிழ்நாடு TAMILNADU

Rs: 100/-

RP 802855

T. SRINIVASAN

S.V.Licence No:3925/B1/2000
NALLAGANAKOTHAPALLI (T.N)

6388
11-10-2017

V. Nagaraja
Bangalore

ABSOLUTE SALE DEED

THIS DEED OF ABSOLUTE SALE IS MADE AND EXECUTED AT
SHOOLAGIRI ON THIS 12th DAY OF OCTOBER 2017, (12.10.2017),

"BETWEEN"

Mr. JAGANNATH, S/o Dodda Venkataramanappa, residing at Ragihalli,
Jigani Hobali, Anekal Taluk, Bangalore District, Karnataka, (Aadhar No.
4798 3692 4424) Mobile No. 9845584366)

(Hereinafter called the "VENDOR / SELLER ")

Which expression shall unless the context other wise requires, include
his, Legal heirs successors, agents, representatives and assigns of the
ONE PART.

VENDOR

VENDEE

Jagannath R.D

[Signature]

[Signature]

DOCUMENT
 No: 2862/2017
 Page No: 1
 Total Pages: 13

TO AND IN FAVOUR OF:

Mr.V.NAGARAJA S/o Venkatappa Reddy, residing at No.225, Koppa Village, Hulimangala Post, Anekal Taluk, Bangalore District, Karnataka State. (Pan No. ACYFV3693E) Mobile No. 9845013945

(Hereinafter called the "VENDEE / PURCHASER")

which expression shall unless the context otherwise requires mean and include his heirs, legal representatives, nominees, and assigns of the **OTHER PART.**

WHEREAS as the Schedule mentioned property belongs to Vendor by way of **Self Acquired and Registered Sale Deed** vide **Document No. 366/2016** dated. 27.01.2016 of Book 1, Registered in SRO Shoolagiri. and Thus the Vendor have got good, valid, absolute and marketable title over the schedule mentioned property and they are legally and lawfully entitled to sell the same to the Vendee.

And whereas, the Vendor has agreed to sell absolutely to the Vendee the under mentioned property for valid and proper sale consideration amount **Rs.10,83,340/- (Rupees Ten Lakhs Eighty Three Thousand Three Hundred Forty Only)** in order to discharge his sundry debts and also for other necessities and benefits and also to meet his urgent family necessities .

AND WHEREAS Vendee have also agreed to purchase the Schedule mentioned property from the Vendor. And in pursuance of the sale talk, The Vendor has agreed to receive the entire sale consideration amount of **Rs.10,83,340/- (Rupees Ten Lakhs Eighty Three Thousand Three Hundred Forty Only)** at the time to the execution and registration of the sale deed by way of Cheques and now in pursuance of the above said sale talk the Vendor execute this deed of sale in the following manner.

VENDOR

Jagannath.R.D

VENDEE

Devi

DOCUMENT

No: 2862/2017

Page No : 2

Total Pages : 17



NOW THIS DEED OF SALE WITNESSETH:

That in pursuance of the sale talk the Vendor has this day received the entire sale consideration amount Rs.10,83,340/- (Rupees Ten ~~Lakh~~ **Eighty Three Thousand Three Hundred Forty Only**) from the Vendee by way of Cheque No. 373635 Dated. 11.10.2017, Canara Bank, Jigani Branch

The entire sale consideration amount has been paid to Vendor by way of above mentioned Cheques thus the Vendor do hereby acknowledge that the entire sale consideration amount has been duly received from the Vendee in the above said manner and in consideration thereof, the Vendor do hereby convey, transfer, assign and sell absolutely the schedule mentioned property for the absolute use of the Vendee together with all rights easements, privileges and appurtenances whatsoever belonging to or enjoyed there under and reputed so to be.

All the rights, title, easements, interest, property claim and demand whatsoever of the Vendor into or upon the under mentioned schedule property is hereunder conveyed absolutely unto the VENDEE free from all encumbrances, charges, liens, and Demand whatsoever by the Vendor.

The Vendor do hereby covenant and agree that the Vendor and all persons claiming under them shall and will from time to time, upon the request and at the cost of the Vendee do and execute or cause to be done and execute all such acts, deeds and things whatsoever for further and more perfectly assuring the under mentioned schedule property lands and every part thereof, according to the to the true intent and meaning of these presents, as shall or may be reasonably required.

VENDOR

Jagannath R.D

VENDEE

[Signature]

[Signature]



IT IS hereby, covenanted by the Vendor that the under mentioned schedule property hereby conveyed is free from all encumbrances, charges, liens, or demand or litigations of any sort and the Vendor hereby assure and covenant that he has not suppressed any material defects affecting the title to the properties hereby conveyed and covenant and undertakes to clear any defect or encumbrances affecting the schedule property, if come to light after the execution of the sale deed, at their own cost and fully protect the VENDEE in all respects.

THE VENDOR do hereby assure and covenant that they have not entered into any agreement of sale with respect of the under mentioned schedule property or any part thereof with any other person or persons and Vendor has not done any thing whereby, the schedule mentioned property and the source to title and other details relevant for the sale of property without any omission or suppressing any details in any respect in the behalf

THE VENDOR do hereby covenant and assure that the schedule mentioned property is not notified or subject to any proceedings under the Lands Acquisition Act, for any purpose and they do not hold lands in excess of Tamil Nadu Lands Reforms Act.1961, and that the sale will not be hit by any Provisions of the above said Act. The Schedule property is not hit by any provisions of the Tenancy Laws, or other related enactments in any manner and also hit by any lispendens or any claim from any minors.

VENDOR

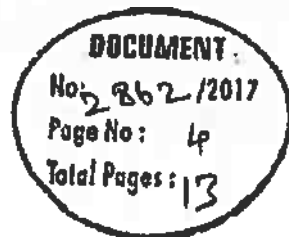
Jegannath . R.D.

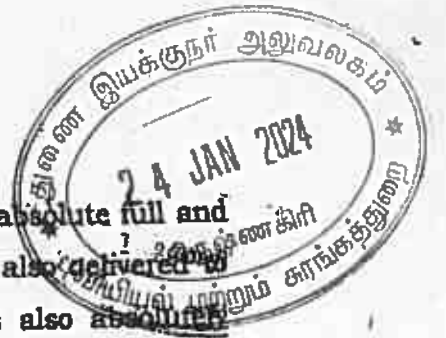
VENDEE

Ravi



Ravi





THE VENDOR do hereby admit and covenant that the absolute full and actual physical possession of the schedule property is also delivered to the VENDEE on this day itself and the VENDEE is also absolute entitled to apply to the Revenue Authorities for transfer of patta in his name and the Vendor do hereby give full consent for the transfer of patta or change of registry in the Revenue Accounts in the name of the VENDEE by giving Patta Transfer application with respect to the land sold hereunder.

THE VENDOR has also paid the land revenue to the schedule property without any arrears and the VENDEE shall hereafter pay the land revenue, cess etc., to the Government in their own right the Vendor has also handed over the original title deed to support their title of the schedule mentioned property

THE VENDOR do hereby covenant and assure that they agree and undertake to indemnify the Vendee against all claims and demands or disputes of any sort with respect to the schedule mentioned property in all respects at all times

SCHEDULE OF PROPERTY

IN **VENKATESAPURAM VILLAGE** of Shoolagiri Taluk, Krishnagiri District, attached to the Registration District of Krishnagiri and Sub Regn., District of Shoolagiri and also attached to the village Panchayat limits of Venkatesapuram and Union Council of Shoolagiri the land bearing

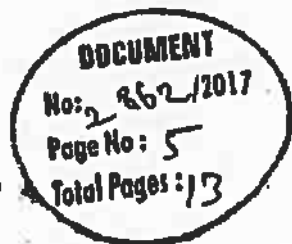
VENDOR

Jagannath.R.D.

VENDEE

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[Handwritten signature]





SURVEY NUMBER. 287, Dry Extent 2.20.0 as Per UDR. NUMBER. 287/1, Dry Extent 2.16.0 (or) Ac. 5.34 Cents (FIVE ACRES THIRTY FOUR) CENTS Asst Rs. 1.97 Full land of Agricultural land and in this 10 Ten Mango Trees are Covered under this deed of Absolute Sale

The Present Market Value of the property is Rs. 10,83,340/-

IN WITNESSES WHERE OF THE VENDOR AND VENDEE HAVE SIGNED THIS DEED OF SALE ON THE DAY, MONTH AND YEAR FIRST ABOVE WRITTEN.

VENDOR

Jaynath.R.D

VENDEE

[Signature]

WITNESSES:

(1) AD Mahalingam DEVIAM KOPPA Gate Arnikkal Tk

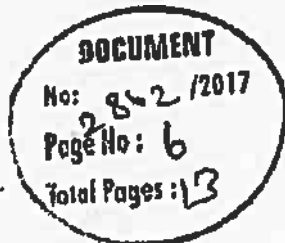
(2) Yellappa.m No1 Annaladobbi Raghalla
mettal (th)

DRAFTER BY

R. Sankar,

R. Sankar
Document Writer
Licence No. B/2/KSG/2014
SHOOLAGIRI.

[Signature]



STATEMENT UNDER SECTION 3 (1) OF MADRAS STAMP ACT, 1957
 (PREVENTION OF UNDER VALUATION OF INSTRUMENTS)



S No Sy No Description of Property Ext Market Value

YENKATESAPURAM VILLAGE

1.	287/1	Dry	Ac.5.34	Rs. 10,73,340.00
		In this 10 mango Trees Value		Rs. 10,000.00
Total			Ac.5.34	Rs.10,83,340/-

VENDOR

Jegannath R.D.

VENDEE

Ray

3000,

Ray



S. Dharm
 S. DHANASEKAR, M.Sc., (Geo)
 Qualified Person



From
Thiru L. Suresh, M.Sc.,
Deputy Director,
Geology and Mining,
Collectorate, Krishnagiri.

To
Thiru.V.Nagaraja
S/o. Venkatappa Reddy,
Koppa village,
Hulimangala Post,
Anekal Taluk,
Bangalore District - 560 105.

Roc.478/2018/Mines dated 27.07.2018

Sir,

Sub: Mines and Minerals - Krishnagiri District - Shoolagiri Taluk - Venkatesapuram - ~~ಎ~~ Patta Land in S.F.No.287/1 - Over an extent of 2.16.0 Hectares - Precise area given for the proposed grant of Quarry lease for Rough Stone for a period of 5 years from the date of execution of lease deed to Thiru.V.Nagaraja S/o. Venkatappa Reddy - Draft Mining Plan submitted - Mining Plan approved - reg.

- Ref: 1. The District Collector Krishnagiri Memorandum in Rc.No.478/2018/Mines dated 27.07.2018.
2. Thiru.V.Nagaraja S/o.Venkatappa Reddy, Koppa village, Hulimangala Post, Anekal Taluk, Bangalore District letter dated
-o0o-

Thiru.V.Nagaraja S/o.Venkatappa Reddy, Koppa village, Hulimangala Post, Anekal Taluk, Bangalore District had been given precise area over an extent of 2.16.0 hectares in ~~ಎ~~ Patta land in S.F.No.287/1 of Venkatesapuram village, Shoolagiri Taluk, Krishnagiri District for a period of Five years from the date of execution of lease deed under Tender Cum Auction System under the provisions of Tamil Nadu Minor Mineral Concession Rules, 1959 and he had been directed to submit the approved mining plan and Environmental Clearance from the State Level Environmental Impact Assessment Authority Tamilnadu vide reference 2nd cited.

2. In the reference 2nd cited Thiru.V.Nagaraja S/o. Venkatappa Reddy has submitted draft Mining Plan for approval for the proposed rough stone quarry lease over an extent of 2.16.0 hectares in ~~ಎ~~ Patta land in S.F.No.285(part-1) of Venkatesapuram village, Shoolagiri Taluk, Krishnagiri District for a period Five years from the date of execution of lease deed.

3. The Mining Plan submitted by Thiru.V.Nagaraja S/o. Venkatappa Reddy has been scrutinized as per the guide lines/ Instructions issued by the Commissioner of Geology and Mining, Chennai-32 in Rc.No.3868/LC/2012 dated 19.11.2012. The mining plan is prepared in accordance with the guide lines/ instructions issued and tallies with the field conditions.

4. Hence as per the guide lines/ instructions issued by the Commissioner of Geology and Mining, Chennai, the said mining plan is hereby 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 Mines and Minerals (Development and Regulation) Act 1957, or any other connected laws including Forest (Conservation) Act 1957, or any other connected Laws industry Forest (Conservation) Act 1980, Forest Conservation Rules 1981 Environment protection Act 1980, Indian Explosive Act 1884 (Central Act IV of 1884) and the rules made There under, Minor Mineral Conservation and Development Rules, and The Tamil Nadu Minor Mineral Concession rules, 1959.
- iii) That the mining plan is approved without prejudice to any other order or directions from any court of competent jurisdiction.
- iv) The applicant has incorporated all the conditions and details given in the District Collector, Krishnagiri Memorandum in Rc.No.478/2018/ Mines dated 27.07.2018 and the conditions should be adhered without any omission during quarrying.
- v) The applicant should get prior clearance from the State level Environment Impact Assessment Authority, Chennai -15 and should submit it to the District Collector, Krishnagiri.

5. The details of other quarries situated within a radial distance of 500 mts. from the lease granted area is

Sl. No	Name of the lessee	Village	S.P.No.	Extent in hec.	Collector's proceedings & date	Lease period
1	Thiru.V.Nagaraja S/o.Venkatappa Reddy	SHCOLAGIRI / VENKATESAPURAM	257/1	2.16.0	Rc.478/2018/Mines dated 28.05.2018	Instant Proposal



2	M/s.Sunulan Bluc Metals & "M"Land, Prop.Thiru.V. Kagazala	SHOOLAGIRI / VENKATESAP URAM	297(PART-III)	3.75.0	Re.216/2018/M Incs dated 09.03.2018	Under Environmental Clearance
3	Thiru.V.Munir aj	SHOOLAGIRI / VENKATESAP URAM	285(Part)	1.45.0	Re.123/2018/M Incs dated 19.05.2008	04.07.2018 to 03.07.2023
4	Thiru.S.Rajan diran, S/d.Sengodan	SHOOLAGIRI / VENKATESAP URAM	285	5.00.0	Re.314/2008/M Incs-2 dated 30.07.2008	30.07.2008 to 29.07.2018
			Total	10.20.0		

Deputy Director
Geology and Mining,
Kishnagiri.

Copy submitted to: 1. The Chairman, State Level Environment Impact
Assessment Authority, 3rd Panagal maligai, No.1 Jeenes
Road, Saidapet, Chennai -15,
2. The Commissioner of Geology and Mining, Guindy,
Chennai -32.

Re

S. Dhanasekar
S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

State Expert Appraisal Committee (SEAC)



Minutes of 417th meeting of the State Expert Appraisal Committee (SEAC) held on 18.10.2023 (Wednesday) at SEIAA Conference Hall, 2nd Floor, Paragal, Marigai, Saidapet, Chennai 600 015 for consideration of CRZ and Mining projects.

Confirmation of Earlier Minutes

The minutes of the 416th SEAC meeting held on 13.10.2023 were circulated to the Members in advance and as there are no remarks, the Committee decided to confirm the minute.


Agenda No: 417-01

(File No.10425/2023)


Proposed Rough Stone Quarry lease over an Extent of 2.16.0 Ha (Patta Land) at S.F.Nos. 287/1 of Venkateshapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu by Thiru V. Nagaraja – For Terms of Reference (SIA/TN/MIN/430837/2023 dt.26.05.2023)

The proposal was placed in the 417th meeting of SEAC held on 18.10.2023. The details of the project furnished by the proponent are given in the website (parivesh.nic.in). The SEAC noted the following:

1. The project proponent, Thiru V. Nagaraja has applied for Terms of Reference for the Proposed Rough Stone Quarry lease over an Extent of 2.16.0 Ha (Patta Land) at S.F.Nos. 287/1 of Venkateshapuram Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu.
2. The project/activity is covered under Category "B1" of Item 1(a) "Mining of Minerals Projects" of the Schedule to the EIA Notification, 2006.
3. Earlier, EC was accorded to the project proponent by DEIAA vide Lr.No.03/DEIAA-KGI/EC.No.98/2018 dated.27.08.2018 for a period of 5 years from the date of execution of mining lease. EC was accorded for the quantity of 14.25.102m³ of rough stone up to a depth of 148m.
4. Now, based on MuEF&CC O.M dated.24.04.2023, the proponent has submitted the application at SEIAA-TN for re-appraisal of EC granted by DEIAA.


MEMBER SECRETARY
SEAC -TN




CHAIRMAN
SEAC- TN

Based on the details furnished by the Project Proponent, the SEAC directed the PP to submit the following details:

1. Last Permit issued for carrying out the mining & transportation of minerals (Rough stone) by the concerned AD (Mines), Department of Geology & Mining.
2. Modified Mining Plan for accommodating the bench geometry of not more than 6 m bench height and bench width of not less than the bench height, approved duly by the concerned AD (Mines), Department of Geology & Mining.
3. Certified Compliance Report for the previous EC issued by the DEIAA obtained from the IRO, MoEF & CC, Chennai and action plan for the remedial measures.

On receipt of the above details, the SEAC will deliberate further and decide on future course of action.

Agenda No: 417-02

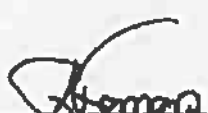
File No.10153/2023)


Proposed Rough Stone and Gravel Quarry lease over an extent of 2.45.0 Ha in S.F.Nos. 986/B2A (P) (Patta land) of Mudalipalayam Village, Kangayam Taluk, Tiruppur District, Tamil Nadu by M/s. Sri Muthukumar Blue Metals – For Environmental clearance. (SIA/TN/MIN/433715/2023, dated: 19.06.2023)


The proposal was placed in the 417th meeting of SEAC held on 18.10.2023. The details of the project furnished by the proponent are given in the website (parivesh.nic.in).

The SEAC noted the following:

1. The Proponent, M/s. Sri Muthukumar Blue Metals has applied for Environmental Clearance for the Proposed Rough Stone and Gravel Quarry lease over an extent of 2.45.0 Ha in S.F.Nos. 986/B2A (P) (Patta land) of Mudalipalayam Village, Kangayam Taluk, Tiruppur District, Tamil Nadu.
2. The project/activity is covered under Category "B2" of Item 1(a) "Mining of Minerals Projects" of the Schedule to the EIA Notification, 2006


MEMBER SECRETARY
SEAC - TN


CHAIRMAN
SEAC- TN


S. DHANASEKAR, M.Sc., (Geo)
369alified Person

Reg. No 01BDB1005
Col Code 106/106



அறிவியல் புலம்

FACULTY OF SCIENCE

பெரியார் பல்கலைக்கழக ஆட்சிக்குழு 2003 ஆம் ஆண்டு ஏப்ரல் மாதம்
நடந்த பயன்பாட்டு புவியமைப்பியல் தேர்வில்
S தனசேகர் என்பவர்
முதல் வகுப்பில் தேர்ச்சி பெற்றார் என்று தக்க தேர்வாளர்கள்
சான்றளித்தபடி அறிவியல் நிறைஞர் என்னும்
பட்டத்தை அவருக்குப் பல்கலைக்கழக இலச்சினையுடன் வழங்குகிறது.

*The Syndicate of the Periyar University hereby makes known
that DHANASEKAR S has been
admitted to the DEGREE OF MASTER OF SCIENCE in
APPLIED GEOLOGY*

*he/she having been certified by duly appointed Examiners to be qualified
to receive the same and was placed in the FIRST CLASS at the
Examination held in APRIL 2003*



Given under the seal of this University

நாள்
Dated 15-09-2004
சேலம் 636011, தமிழ்நாடு, இந்தியா.
Salem 636011, TamilNadu, India.

பதிவாளர்
Registrar

துணைவேந்தர்
Vice-Chancellor

S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

PRITHVI MINERALS,



ANNEXURE - XIII

© : 04288 - 262489.

VARANALLAMPALAYAM,
ALATHUR POST - 637 303. *
SANKARI TK, Salem Dt. Tamil Nadu



TO WHOMSOEVER IT MAY CONCERN

This is to certify that SHRI S. DHANASEKAR, S/o. Shri A. Sundaram residing at No.8/3, Kullappan Street, Onalur Taluk, Salem District - 636 455 is working in our mines for the date of 15.10.2003 to till date as Geologist. During the above tenure of service his execution of the assigned work is exemplary and worth mentioning. We wish him success in his future endeavours.

For PRITHVI MINERALS,

(T.P. THANGAVEL.)
Partner

S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

ANNEX

PHOTO SHOWN EXISTING LEASE AREA VIEW-1

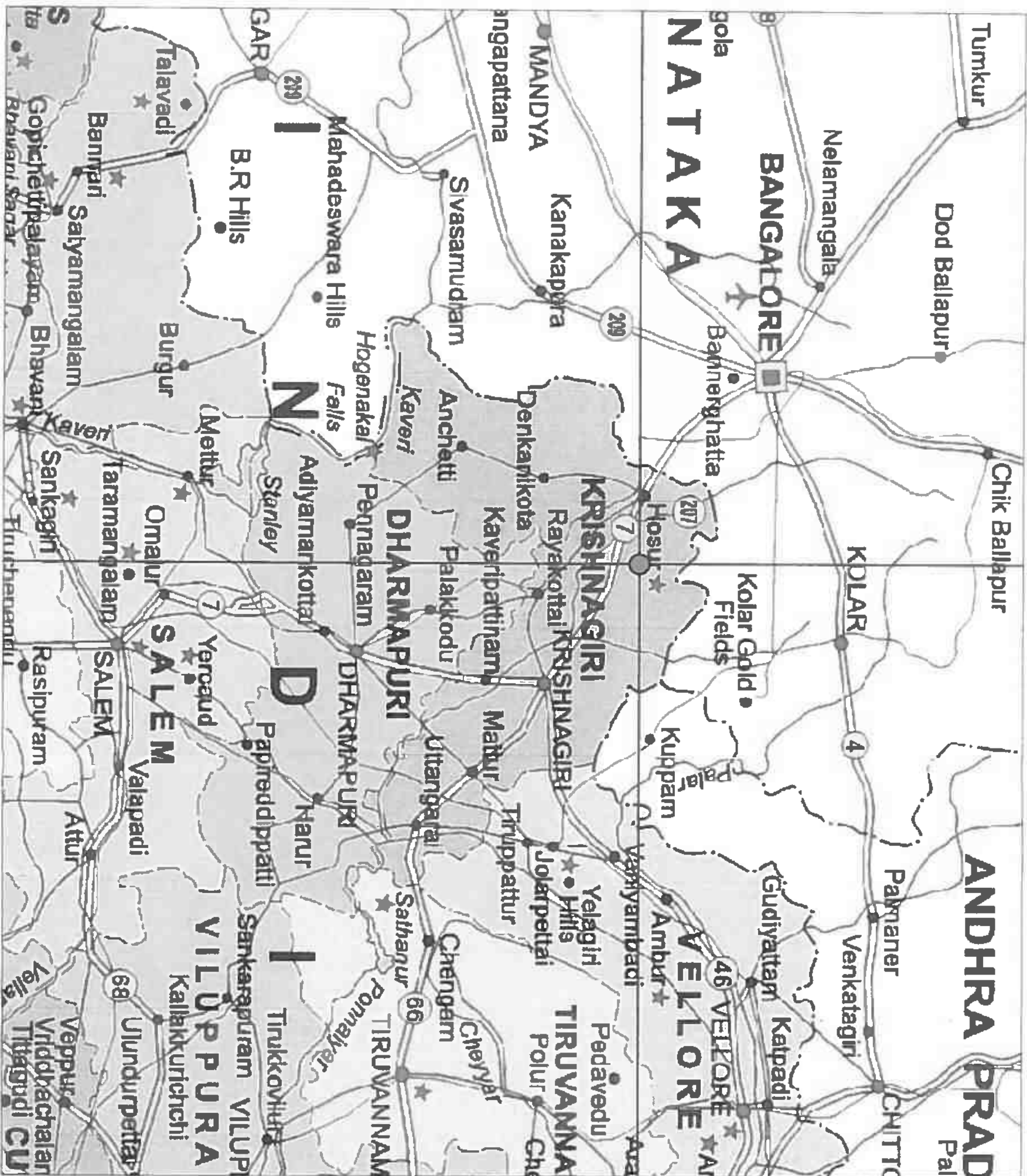


PHOTO SHOWN EXISTING LEASE AREA VIEW-2



S. DHANASEKAR, M.Sc., (Geo)
Qualified Person

77° 57' 34.84"E



12° 45' 22.70"N

12° 45' 14.42"N

77° 57' 36.06"E

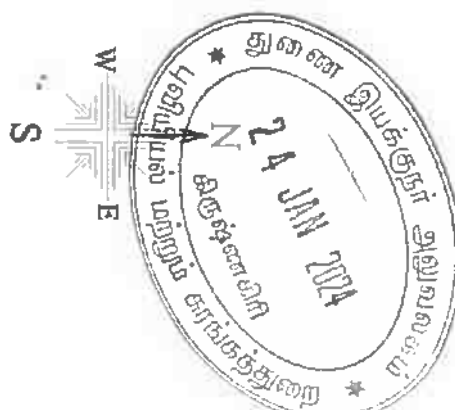


PLATE NO-1

APPLICANT ADDRESS:

THIRU. V. NAGARAJA
S/o. VENKATAPPA RADDY,
KOPPA VILLAGE,
HULIMANGALA POST,
ANEKAL TALUK,
BANGALORE DISTRICT-560 105.

LOCATION OF QUARRY

EXTENT : 2.16.0 Ha,
S.F.NO : 287/1
VILLAGE : VENKATESAPURAM,
TALUK : HOSUR,
DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE AREA :



TOPO SHEET NO. : 57 H/14

LATITUDE : 12° 45' 22.70"N to 12° 45' 14.42"N

LONGITUDE: 77° 57' 36.06"E to 77° 57' 34.84"E

LOCATION PLAN

NOT TO SCALE

PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE
HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE!

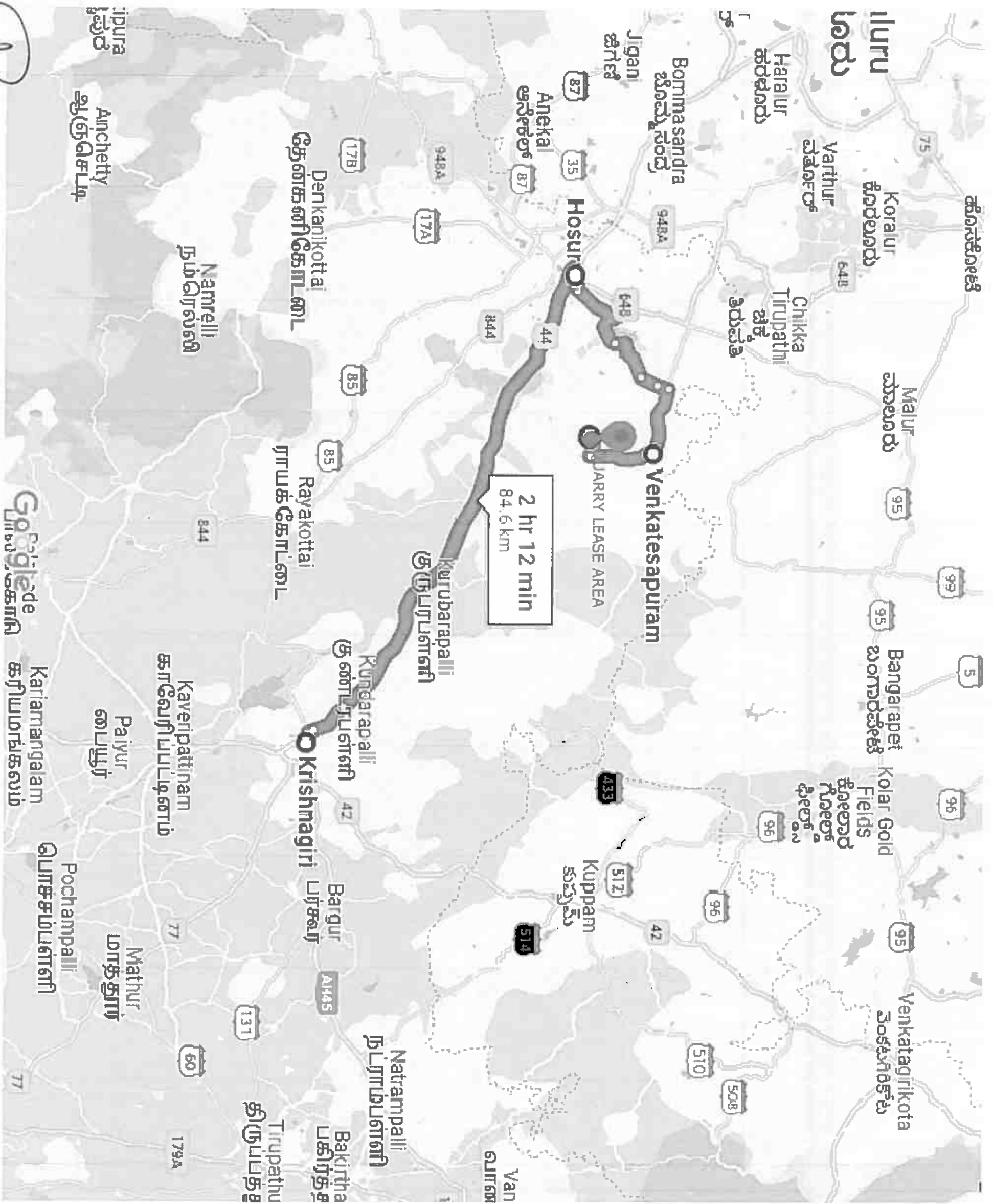


PLATE NO-1A

APPLICANT'S ADDRESS:

THIRU. V. NAGARAJA
S/O. VENKATAPPA RADDY,
KOPPA VILLAGE,
HULIMANGALA POST,
ANEKAL TALUK,
BANGALORE DISTRICT-560 105.

LOCATION OF QUARRY

EXTENT : 2.16.0 Ha,
S.F.NO : 287/1
VILLAGE : VENKATESAPURAM,
TALUK : HOSUR,
DISTRICT : KRISHNAGIRI.

INDEX

- QUARRY LEASE AREA
- ROAD

ROUTE MAP

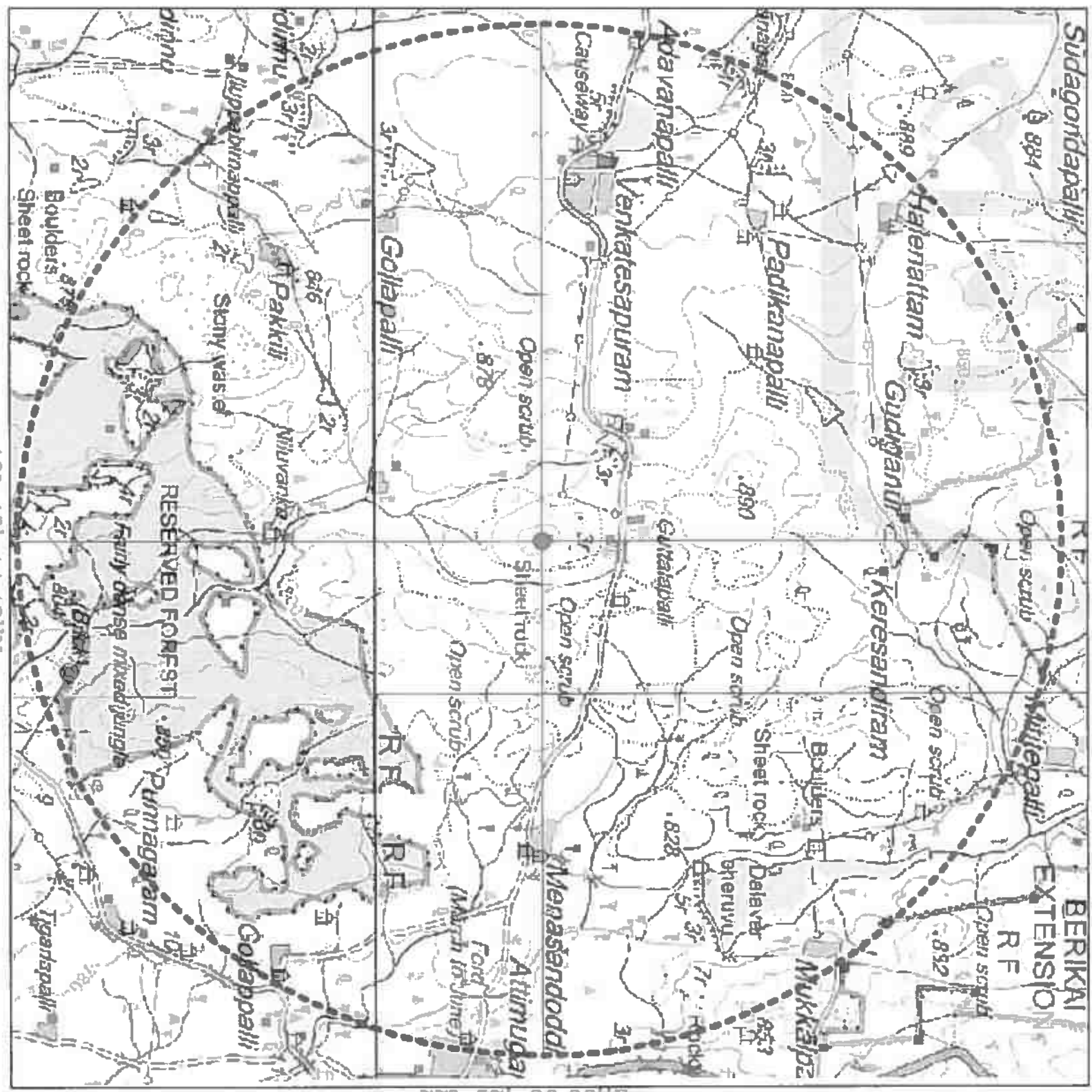
NOT TO SCALE

PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE
HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE

Ben

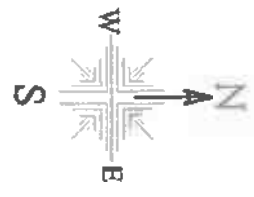
77° 57' 34.84'' E



12° 45' 22.70'' N

12° 45' 14.42'' N

77° 57' 36.06'' E



APPLICANT ADDRESS
 THIRU. V. NAGARAJA
 S/O. VENKATESA RAO RAO
 KOPPA VILLAGE
 HULIMANGALA POST,
 ANEKAL TALUK
 BANGALORE DISTRICT
 21 JAN 2024
 86 96 000 619
 86 96 000 619

LOCATION OF QUARRY
 EXTENT : 2.16.0 Ha,
 S.F.NO : 287/1
 VILLAGE : VENKATESAPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

QUARRY LEASE AREA
 SKM RADIUS

TOPO SHEET NO.: 57 H/14
 LATITUDE : 12° 45' 22.70"N to 12° 45' 14.42"N
 LONGITUDE: 77° 57' 36.06"E to 77° 57' 34.84"E



TOPO SHEET MAP

SCALE - 1:50,000

PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.

[Signature]
 C. VEERANAGARATHAN M.F.C.



PLATE NO-IC

APPLICANT ADDRESS:

THIRU. V.NAGARAJA
 S/o. VENKATAPPA RADDY,
 KOPPA VILLAGE,
 HULIMANGALA POST,
 ANEKAL TALUK,
 BANGALORE DISTRICT-560 105.

LOCATION OF QUARRY

EXTENT : 2.16.0 Ha,
 S.F.NO : 287/1
 VILLAGE : VENKATESAPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY

SATELLITE IMAGE

(LEASE AREA)

SCALE: 1:1000

PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE!



BOUNDARY CO-ORDINATES

PILLAR NO	LATTITUDE	LONGITUDE
1	12° 45' 14.00" N	77° 45' 11.60" E
2	12° 45' 13.50" N	77° 45' 11.60" E
3	12° 45' 13.00" N	77° 45' 11.60" E
4	12° 45' 12.50" N	77° 45' 11.60" E
5	12° 45' 12.00" N	77° 45' 11.60" E
6	12° 45' 11.50" N	77° 45' 11.60" E
7	12° 45' 11.00" N	77° 45' 11.60" E
8	12° 45' 10.50" N	77° 45' 11.60" E
9	12° 45' 10.00" N	77° 45' 11.60" E
10	12° 45' 9.50" N	77° 45' 11.60" E
11	12° 45' 9.00" N	77° 45' 11.60" E
12	12° 45' 8.50" N	77° 45' 11.60" E
13	12° 45' 8.00" N	77° 45' 11.60" E

12° 45' 14.42"N
77° 57' 34.84"E

77° 57' 36.06"E



12° 45' 13.88"N
77° 57' 35.92"E

12° 45' 16.03"N
77° 57' 39.68"E



PLATE NO-ID


APPLICANT ADDRESS:

THIRU. V. NAGARAJA
S/O. VENKATAPPA RADDY,
KOPPA VILLAGE,
HULIMANGALA POST,
ANEKAL TALUK,
BANGALORE DISTRICT-560 105.

LOCATION OF QUARRY

EXTENT : 2.16.0 Ha,
S.F.NO : 287/1
VILLAGE : VENKATESAPURAM,
TALUK : HOSUR,
DISTRICT : KRISHNAGIRI.

INDEX

- QUARRY LEASE BOUNDARY 
- 500M RADIUS 
- 300M RADIUS 

SATELLITE IMAGE
(500m RADIUS)

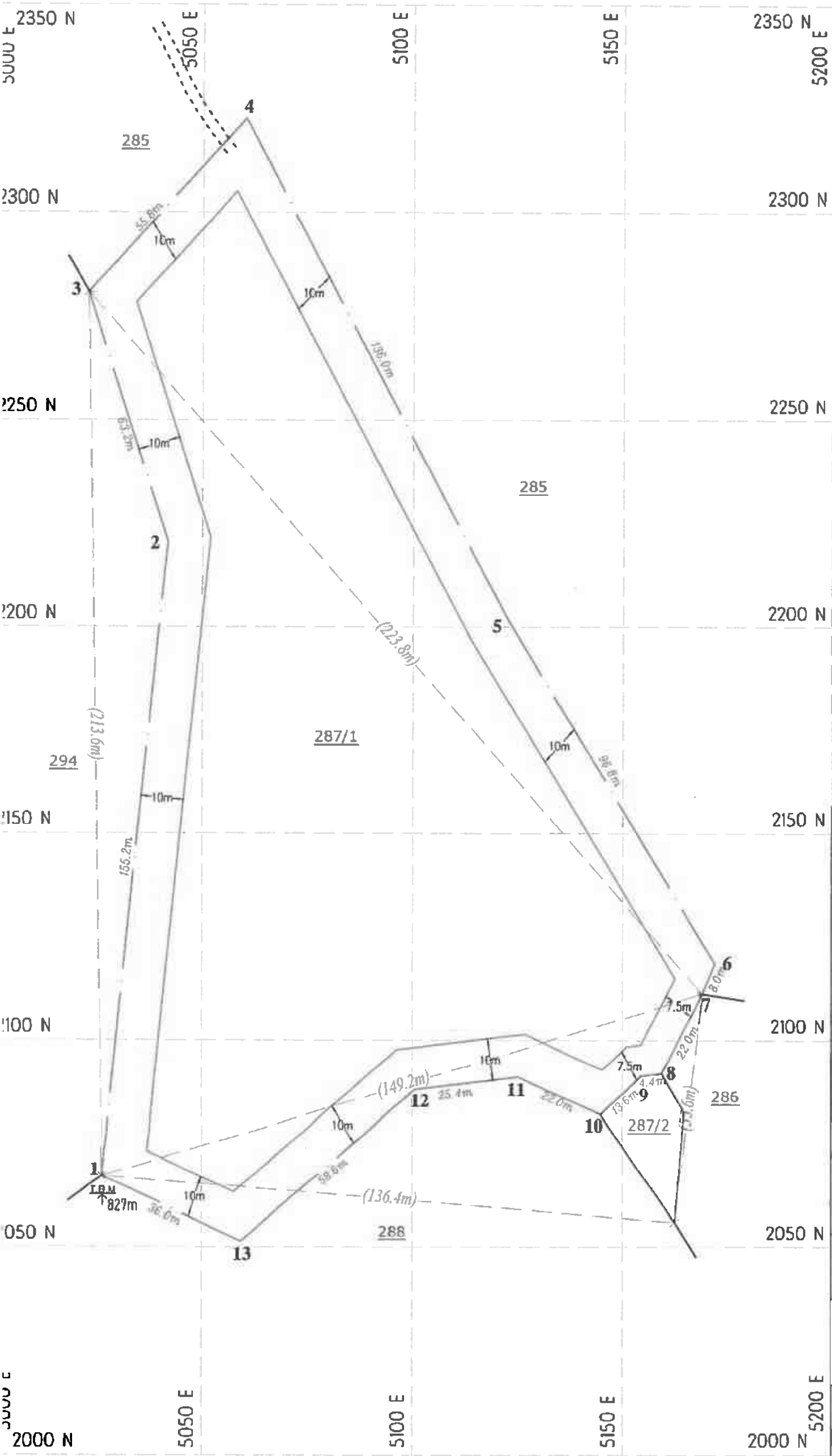
SCALE: 1:5000

PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE
HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE


CHITANANDARAO S.F.O.

17



BOUNDARY CO-ORDINATES

PILLAR NO	LATITUDE	LONGITUDE
1	12° 45' 14.42"N	77° 57' 34.84"E
2	12° 45' 19.40"N	77° 57' 35.41"E
3	12° 45' 21.36"N	77° 57' 34.81"E
4	12° 45' 22.70"N	77° 57' 36.06"E
5	12° 45' 18.75"N	77° 57' 38.07"E
6	12° 45' 16.03"N	77° 57' 39.68"E
7	12° 45' 15.79"N	77° 57' 39.58"E
8	12° 45' 15.17"N	77° 57' 39.25"E
9	12° 45' 15.15"N	77° 57' 39.09"E
10	12° 45' 14.86"N	77° 57' 38.76"E
11	12° 45' 15.16"N	77° 57' 38.12"E
12	12° 45' 15.07"N	77° 57' 37.31"E
13	12° 45' 13.88"N	77° 57' 35.92"E

DATUM WGS-84

PLATE NO-II

APPLICANT ADDRESS:
 THIRU. V.NAGARAJA
 S/o. VENKATAPPA RADDY,
 KOPPA VILLAGE,
 HULIMANGALA POST,
 ANEKAL TALUK,
 BANGALORE DISTRICT-560 105.

LOCATION OF QUARRY
 EXTENT : 2.16.0 Ha,
 S.F.NO : 287/1
 VILLAGE : VENKATESAPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

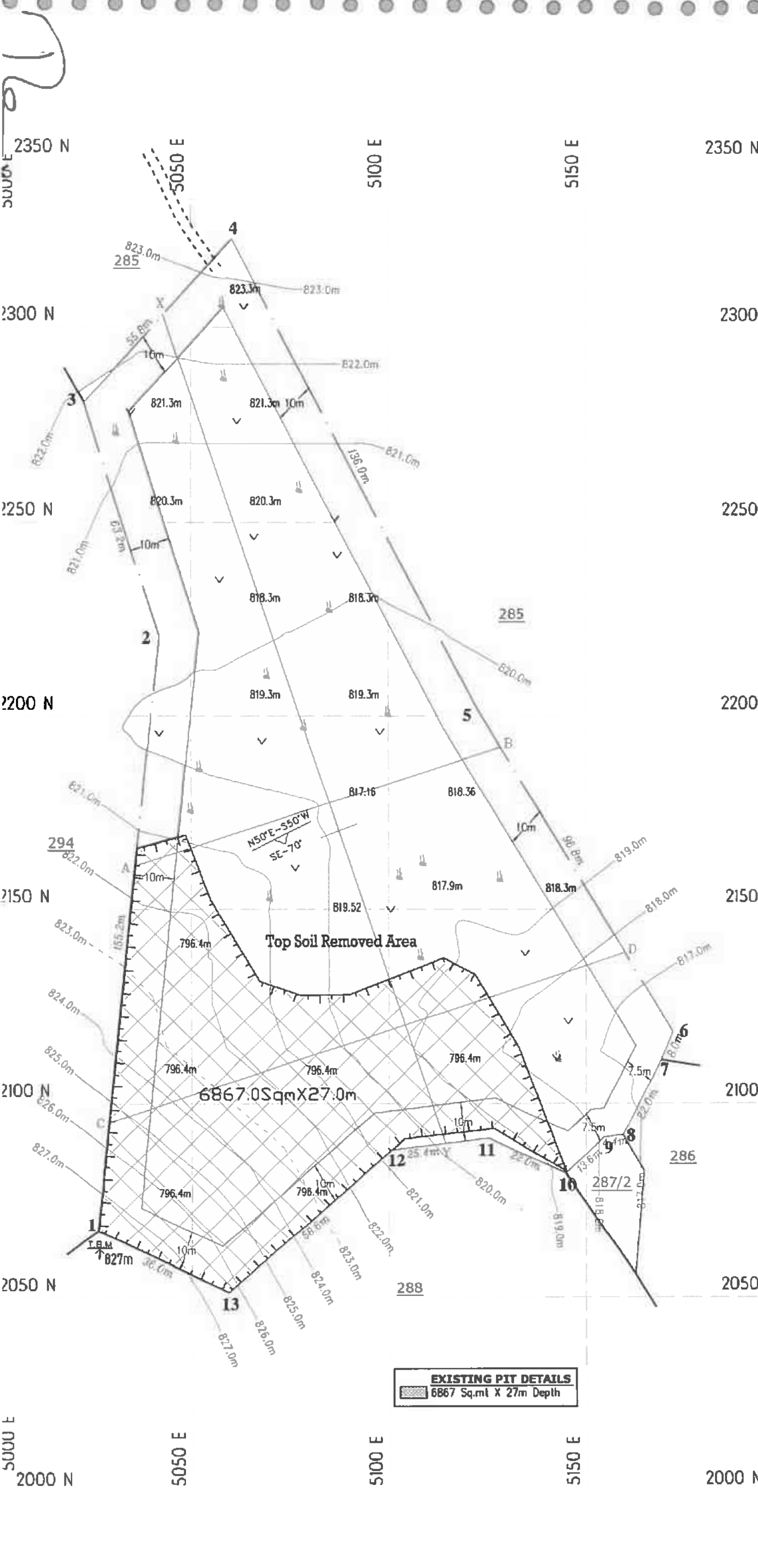
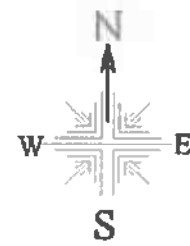
INDEX

QUARRY LEASE BOUNDARY	
7.5m,10.0m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	

MINE LEASE PLAN
 SCALE 1:1000

Prepared By:
 I DO HEREBY CERTIFY THAT THE PLAN HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

S. Dhanasekar
 S. DHANASEKAR, M.Sc.,
 QUALIFIED PERSON



BOUNDARY CO-ORDINATES

PILLAR NO	LATITUDE	LONGITUDE
1	12° 45' 14.42"N	77° 57' 34.84"E
2	12° 45' 19.40"N	77° 57' 35.41"E
3	12° 45' 21.36"N	77° 57' 34.81"E
4	12° 45' 22.70"N	77° 57' 36.06"E
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8	12° 45' 15.17"N	77° 57' 39.25"E
9	12° 45' 15.15"N	77° 57' 39.09"E
10	12° 45' 14.86"N	77° 57' 38.76"E
11	12° 45' 15.16"N	77° 57' 38.12"E
12	12° 45' 15.07"N	77° 57' 37.31"E
13	12° 45' 13.88"N	77° 57' 35.92"E

DATUM WGS-84

PLATE NO-III

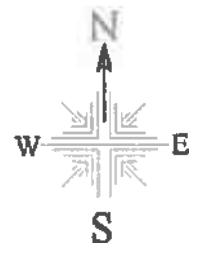
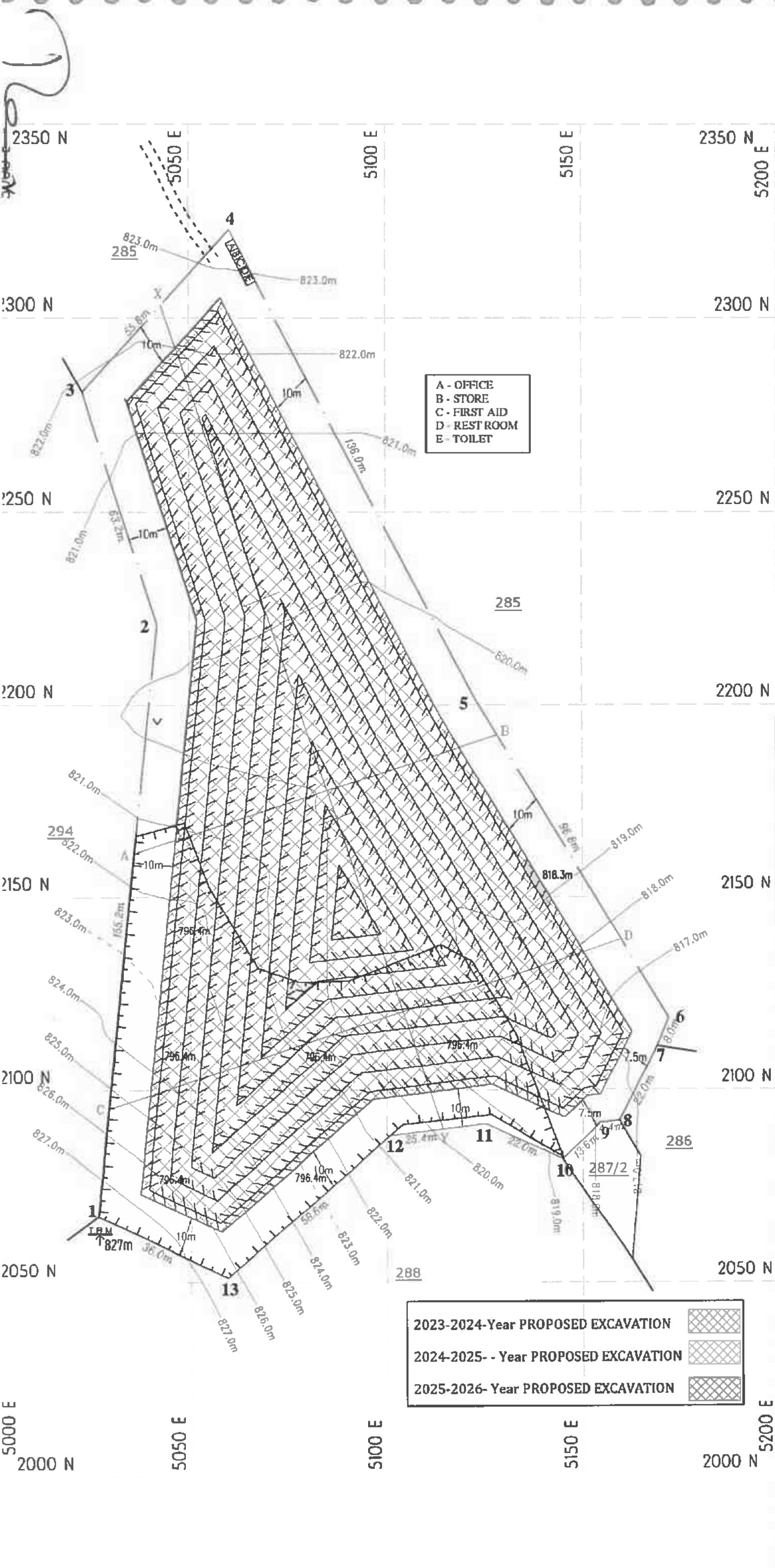
APPLICANT ADDRESS:
 THIRU. V.NAGARAJA
 S/o. VENKATAPPA RADDY,
 KOPPA VILLAGE,
 HULIMANGALA POST,
 ANEKAL TALUK,
 BANGALORE DISTRICT-560 105.

LOCATION OF QUARRY
 EXTENT : 2.16.0 Ha,
 S.F.NO : 287/1
 VILLAGE : VENKATESAPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

INDEX

- QUARRY LEASE BOUNDARY
- 7.5m,10.0m SAFETY DISTANCE
- TEMPORARY BENCH MARK
- TOP SOIL
- ROUGH STONE
- STRIKE AND DIP
- EXISTING PIT
- CONTOUR LINE
- QUARRY ROAD
- SHRUB

SURFACE AND GEOLOGICAL
 SCALE: 1:1000
 Prepared By:
 I DO HEREBY CERTIFY THAT THE PLAN HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE
 S.DHANASEKAR, M.Sc.
 QUALIFIED PERSON



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

2023-2024-Year PROPOSED EXCAVATION [diagonal hatching]
 2024-2025- - Year PROPOSED EXCAVATION [cross-hatching]
 2025-2026- Year PROPOSED EXCAVATION [horizontal hatching]

APPLICANT ADDRESS:

THIRU. V.NAGARAJA
 S/o. VENKATAPPA RADDY,
 KOPPA VILLAGE,
 HULIMANGALA POST,
 ANEKAL TALUK,
 BANGALORE DISTRICT-560 105.

LOCATION OF QUARRY

EXTENT : 2.16.0 Ha,
 S.F.NO : 287/1
 VILLAGE : VENKATESAPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

INDEX

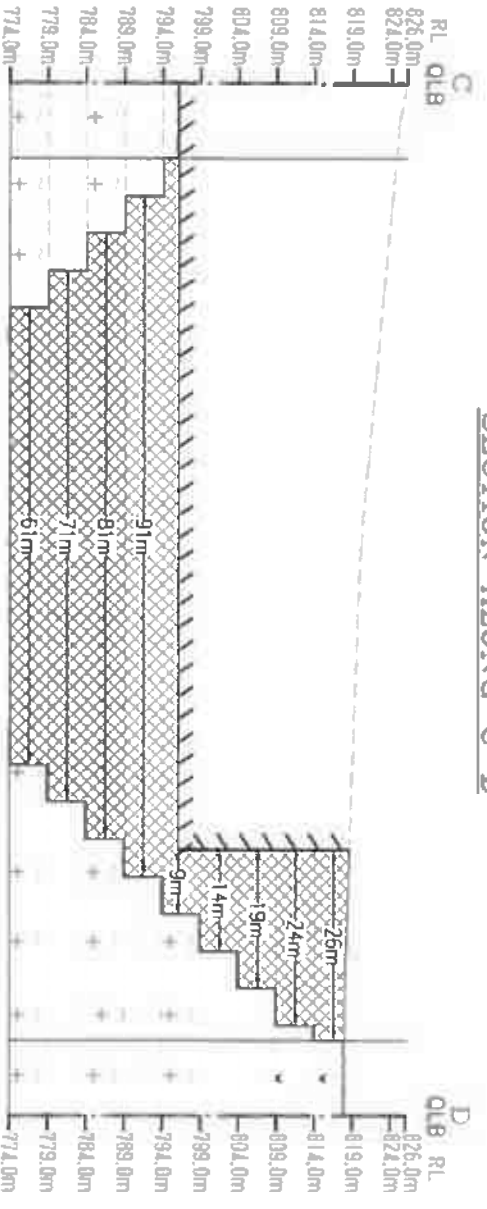
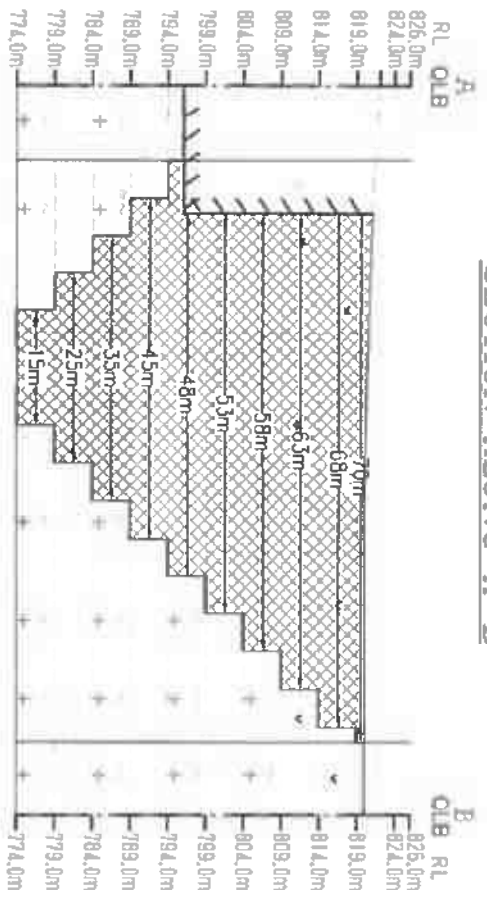
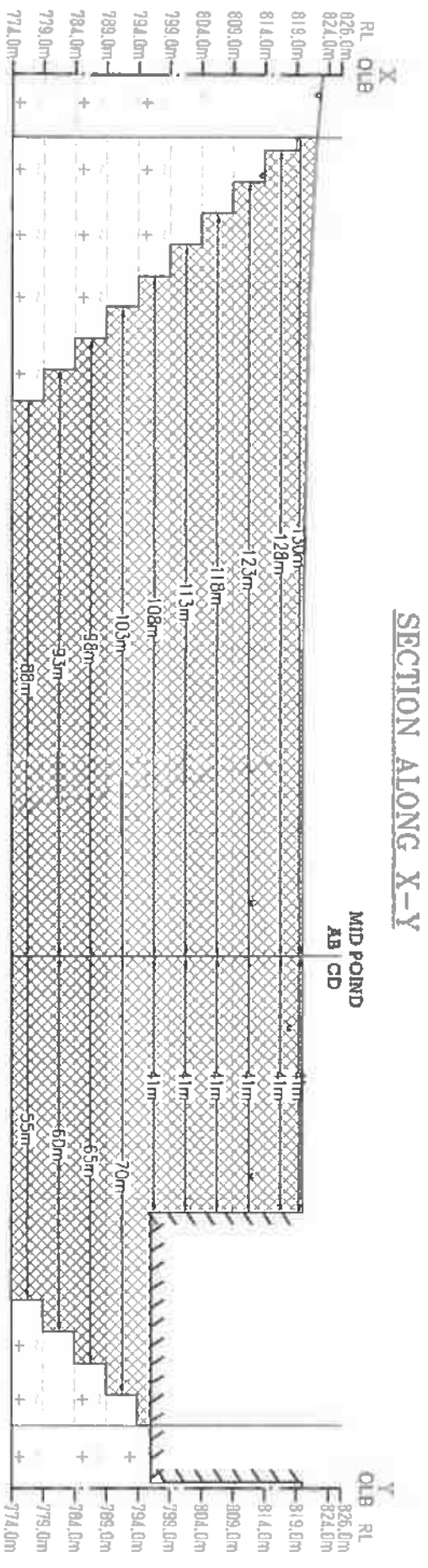
- QUARRY LEASE BOUNDARY [double line symbol]
- 7.5m,10.0m SAFETY DISTANCE [dashed line symbol]
- TEMPORARY BENCH MARK [TBM symbol]
- TOP SOIL [V symbol]
- ROUGH STONE [dotted pattern symbol]
- QUARRY PIT [T symbol]
- CONTOUR LINE [solid line with ticks symbol]
- QUARRY ROAD [dashed line symbol]

YEARWISE DEVELOPMENT AND PRODUCTION PLAN

SCALE: 1:1000

Prepared By:
 I DO HEREBY CERTIFY THAT THE PLAN HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

S. DHANASEKAR, M.Sc.,
 QUALIFIED PERSON



2023-2024 Year PROPOSED EXCAVATION
 2024-2025 - Year PROPOSED EXCAVATION
 2025-2026- Year PROPOSED EXCAVATION

YEARWISE DEVELOPMENT AND PRODUCTION								
Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cm.m.)	Reserve in (Cm.m.(100%)	Topsoil in (Cm.m)
2023-2024	XY-AB	I	130	70	2			18200
		II	128	68	5			43520
		III	123	63	5			38745
		IV	118	58	5			
		V	113	53	5			
2023-2024	XY-CD	I	41	26	2			2132
		II	41	1	5			205
		III	41	24	5			4920
		IV	41	19	5			
		V	41	14	5			
2024-2025	XY-AB	Total=			70930		70930	107722
		VI	108	48	5	25920	25920	
		VII	103	45	5	23175	23175	
		VI	41	9	5	1845	1845	
		VII	70	91	5	31850	31850	
		Total=			82790		82790	
		VIII	98	35	5	17150	17150	
2025-2026	XY-AB	Total=			11625		11625	
		X	88	15	5	6600	6600	
		VIII	65	81	5	26325	26325	
		IX	60	71	5	21300	21300	
		X	55	61	5	16775	16775	
		Total=			99775		99775	
		Grand Total=			253495		253495	107722



TOTAL DEPTH = 47m
 ABOVE SURFACE GROUND LEVEL - 28m
 BELOW SURFACE GROUND LEVEL - 19m

PLATE NO-IV-A

APPLICANT ADDRESS:
 THIRU. V.NAGARAJA
 S/O. VENKATAPPA RADDY,
 KOPPA VILLAGE,
 HULIMANGALA POST,
 ANEKAL TALUK,
 BANGALORE DISTRICT-560 105.

LOCATION OF QUARRY
 EXTENT : 2.16.0 Ha,
 S.F.NO : 287/1
 VILLAGE : VENKATESAPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

- INDEX**
- QUARRY LEASE BOUNDARY
 - 7.5m, 10.0m SAFETY DISTANCE
 - TOP SOIL
 - ROUGH STONE
 - QUARRY PT

YEARWISE DEVELOPMENT AND PRODUCTION SECTIONS
 SCALE:1:1000

Prepared By:
 I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

S.DHANASEKAR.M.Sc.,
 QUALIFIED PERSON

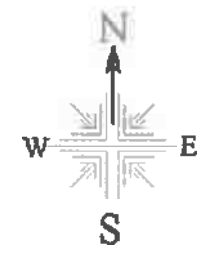
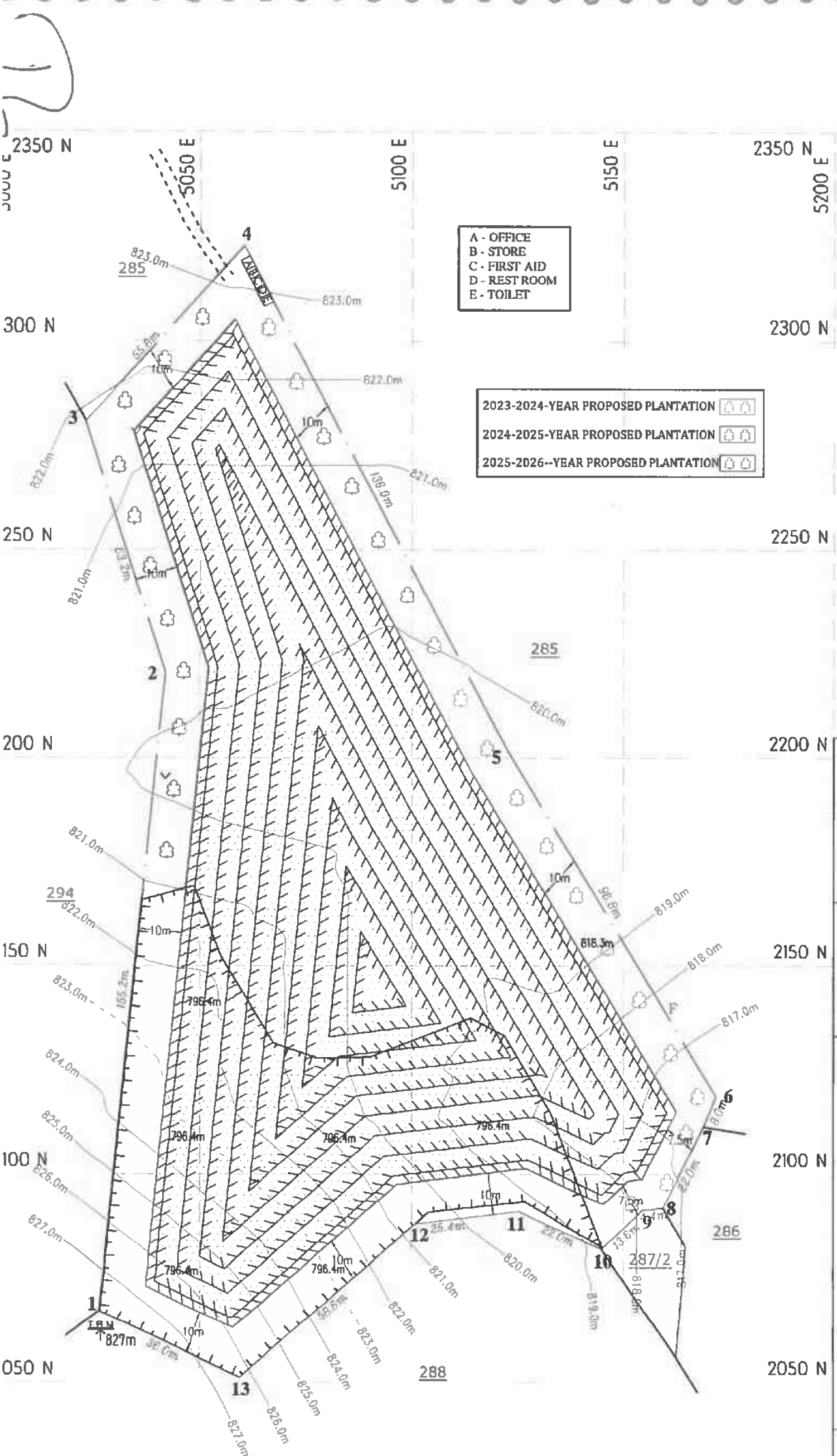


PLATE NO-V

APPLICANT ADDRESS:
 THIRU. V.NAGARAJA
 S/o. VENKATAPPA RADDY,
 KOPPA VILLAGE,
 HULIMANGALA POST,
 ANEKAL TALUK,
 BANGALORE DISTRICT-560 105.

LOCATION OF QUARRY
 EXTENT : 2.16.0 Ha,
 S.F.NO : 287/1
 VILLAGE : VENKATESAPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY	
7.5m,10.0m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
TOP SOIL	
ROUGH STONE	
QUARRY PIT	
CONTOUR LINE	
QUARRY ROAD	
MINE LAYOUT	

MINE LAYOUT, LAND USE PATTERN & AFFORESTATION

SCALE: 1:1000

Prepared By:
 I DO HEREBY CERTIFY THAT THE PLAN HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.

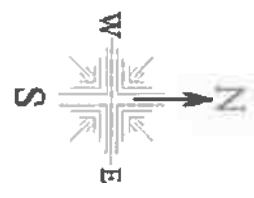
S. DHANASEKAR, M. Engg
 QUALIFIED PERSON

MINE LAYOUT LAND USE PATTERN

DESCRIPTION	PRESENT AREA (Ha)	AREA IN USE DURING THE QUARRYING PERIOD (Ha)	COLOR CODE
AREA UNDER QUARRYING	0.68.67	1.74.0	
INFRASTRUCTURE	NII	0.01.0	
ROADS	0.01.0	0.01.0	
GREEN BELT & DUMP	NII	0.40.0	
UN-UTILIZED AREA	1.46.33	NIL	
GRAND TOTAL	2.16.00	2.16.0	

77° 57' 36.06"E

OCTOBER TO DECEMBER



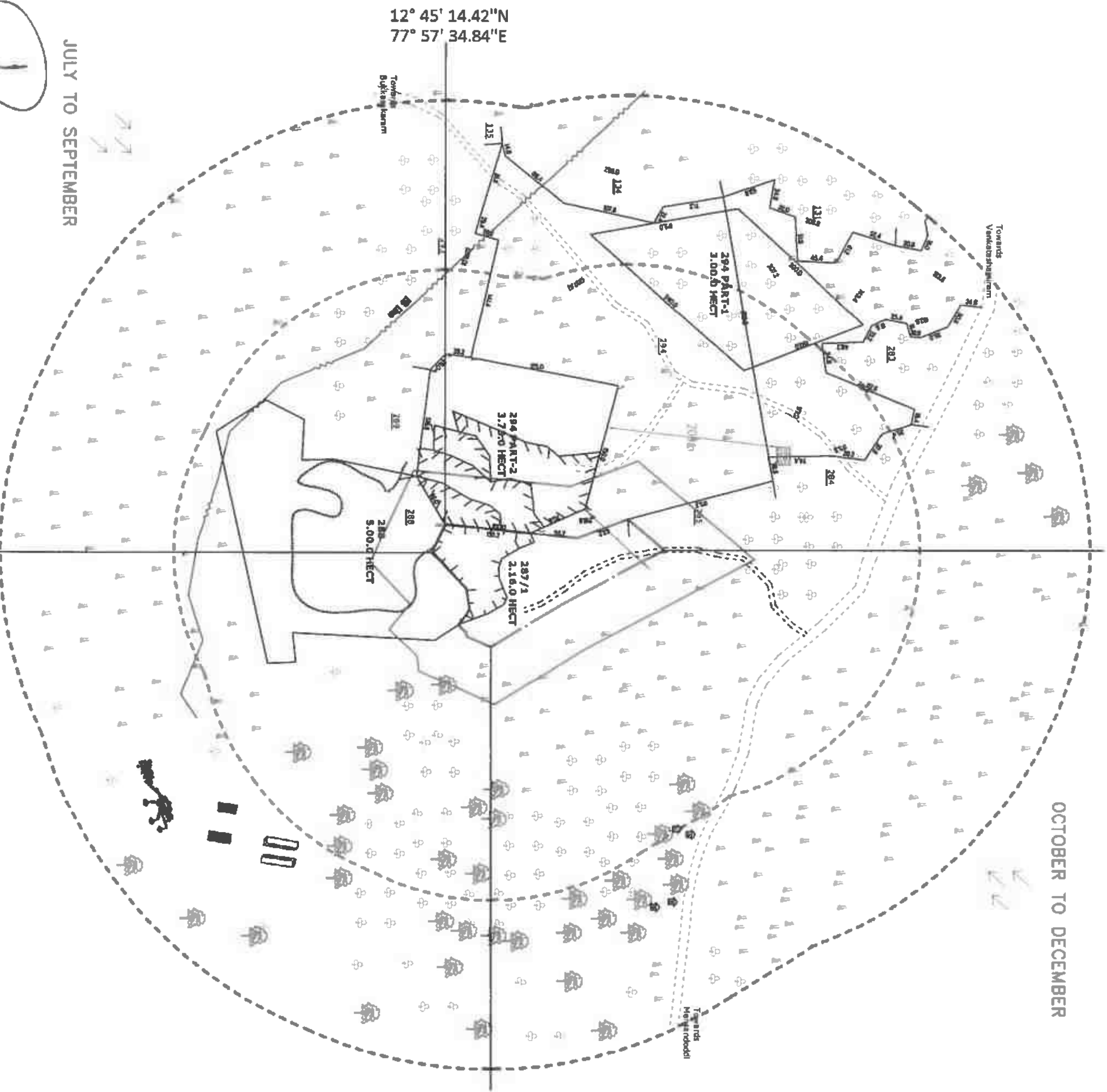
12° 45' 14.42"N
77° 57' 34.84"E

JULY TO SEPTEMBER

[Handwritten signature]

12° 45' 13.88"N
77° 57' 25.02"E

12° 45' 16.03"N
77° 57' 39.68"E



APPLICANT ADDRESS: 100-560-105
 THIRU. V.NAGARAJA
 S/O. VENKATAPPA RADDY,
 KOPPA VILLAGE,
 HULIMANGALA POST,
 ANEKAL TALUK,
 BANGALORE DISTRICT-560 105.

24 JAN 2024
 PLATE NO-VI

LOCATION OF QUARRY

EXTENT : 2,16.0 Ha,
 S.F.NO : 287/1
 VILLAGE : VENKATESAPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

INDEX

- QUARRY LEASE BOUNDARY
- 500M RADIUS
- 300M RADIUS
- 60M RADIUS
- APPROACH ROAD
- QUARRY ROAD
- TREES
- SHRUB
- WIND DIRECTION
- ADJACENT QUARRY
- INFRASTRUCTURES
- DRY AGRICULTURAL LAND

ENVIRONMENT PLAN

SCALE 1:5000

Prepared By:

I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

[Handwritten signature]
S.DIANASEKAR,M.Sc.

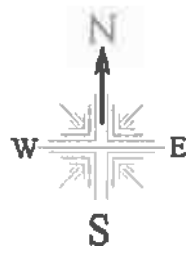
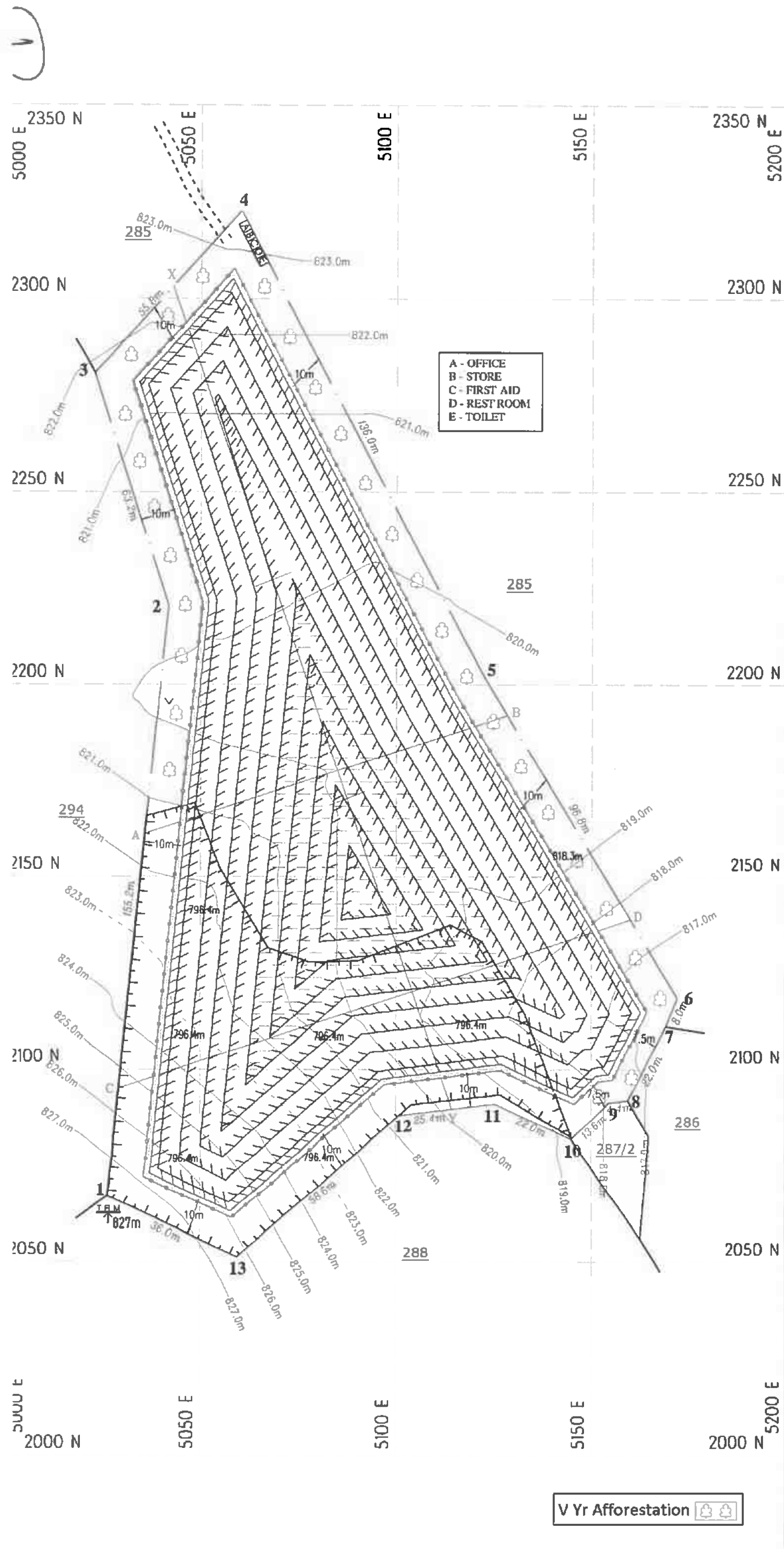


PLATE NO-VII

APPLICANT ADDRESS:
 THIRU. V.NAGARAJA
 S/o. VENKATAPPA RADDY,
 KOPPA VILLAGE,
 HULIMANGALA POST,
 ANEKAL TALUK,
 BANGALORE DISTRICT-560 105.

LOCATION OF QUARRY
 EXTENT : 2.16.0 Ha,
 S.F.NO : 287/1
 VILLAGE : VENKATESAPURAM,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

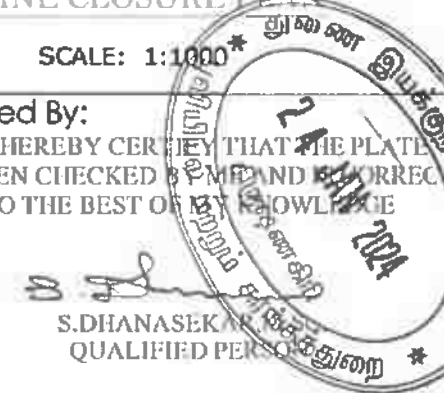
INDEX

QUARRY LEASE BOUNDARY	
7.5m,10.0m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
TOP SOIL	
ROUGH STONE	
QUARRY PIT	
CONTOUR LINE	
QUARRY ROAD	
FENCING	
PARAPET WALL	
ULTIMATE PIT LIMIT	
PROPOSED WATER STORAGE	

CONCEPTUAL & FINAL
 MINE CLOSURE PLAN

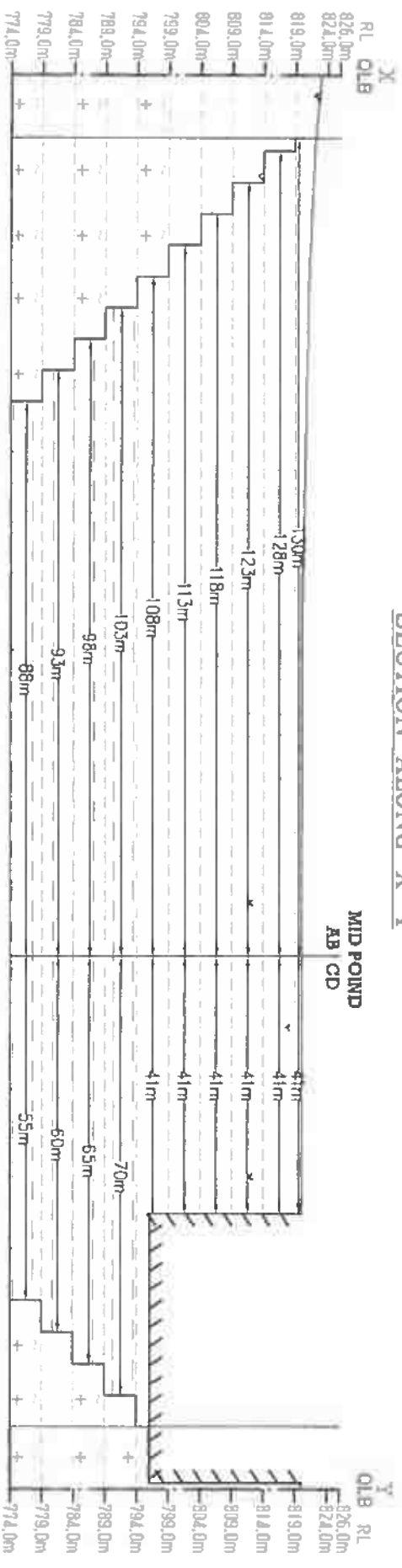
SCALE: 1:1000*

Prepared By:
 I DO HEREBY CERTIFY THAT THE PLATE
 HAS BEEN CHECKED & FOUND CORRECT
 TO THE BEST OF MY KNOWLEDGE

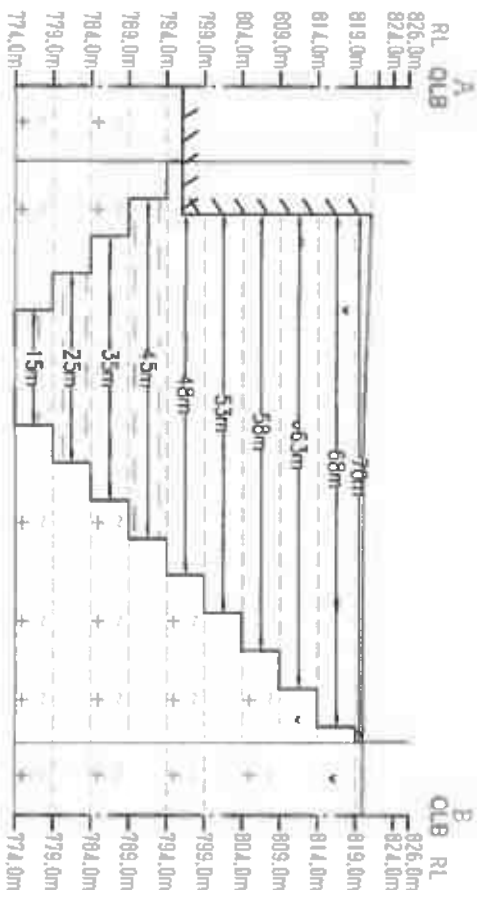


V Yr Afforestation

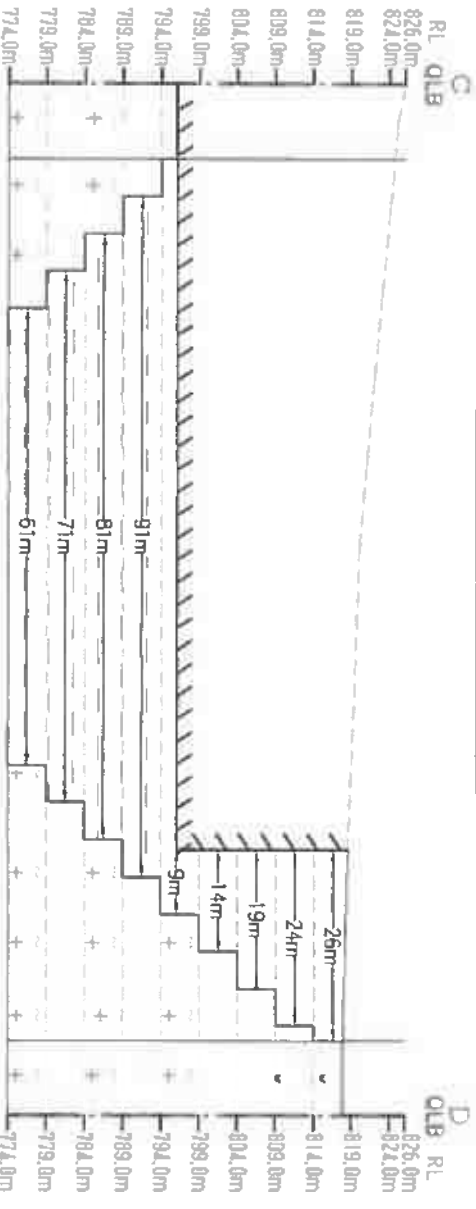
SECTION ALONG X-Y



SECTION ALONG A-B



SECTION ALONG C-D



ULTIMATE PIT DIMENSION
= 205.0m(L) X 77.0m(W) Avg X 47.0m (D)

MINABLE RESERVES

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Minable Reserve in Cbm(100%)	Topsoil in Cbm
XY-AB	I	130	70	2			18200
	II	128	68	5			43520
	III	123	63	5			38745
	IV	118	58	5	34220	34220	
	V	113	53	5	29945	29945	
	VI	108	48	5	25920	25920	
	VII	103	45	5	23175	23175	
	VIII	98	35	5	17150	17150	
	IX	93	25	5	11625	11625	
	X	88	15	5	6600	6600	
Total=		41	26	2	148635	148635	100465
XY-CD	I	41	1	5			205
	II	41	1	5			4920
	III	41	24	5	3895	3895	
	IV	41	19	5	2870	2870	
	V	41	14	5	1845	1845	
	VI	41	9	5	31850	31850	
	VII	70	91	5	26325	26325	
	VIII	65	81	5	21300	21300	
	IX	60	71	5	16775	16775	
	X	55	61	5	104860	104860	7257
Total=		55	61	5	104860	104860	7257
Grand Total=		253495	253495		253495	253495	107722

TOTAL DEPTH ABOVE SURFACE GROUND LEVEL - 28m
BELOW SURFACE GROUND LEVEL - 19m

24 JAN 2024

PLATE NO-VII-A

APPLICANT ADDRESS:

THIRU. V.NAGARAJA
S/O. VENKATAPPA RADDY,
KOPPA VILLAGE,
HULIMANGALA POST,
ANEKAL TALUK,
BANGALORE DISTRICT-560 105.

LOCATION OF QUARRY

EXTENT : 2.16.0 Ha,
S.F.NO : 287/1
VILLAGE : VENKATESAPURAM,
TALUK : HOSUR,
DISTRICT : KRISHNAGIRI.

INDEX

- QUARRY LEASE BOUNDARY
- 7.5m, 10.0m SAFETY DISTANCE
- TOP SOIL
- ROUGH STONE
- QUARRY PIT
- ULTIMATE PIT SLOPE
- PROPOSED WATER STORAGE

CONCEPTUAL / FINAL MINE
CLOSURE SECTIONS

SCALE:1:1000

Prepared by:
I DO HEREBY CERTIFY THAT THE PLATE
HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE

S.DHANASEKAR.M.Sc.
QUALIFIED PERSON

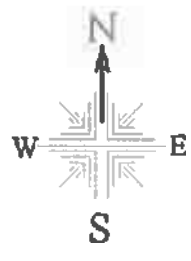
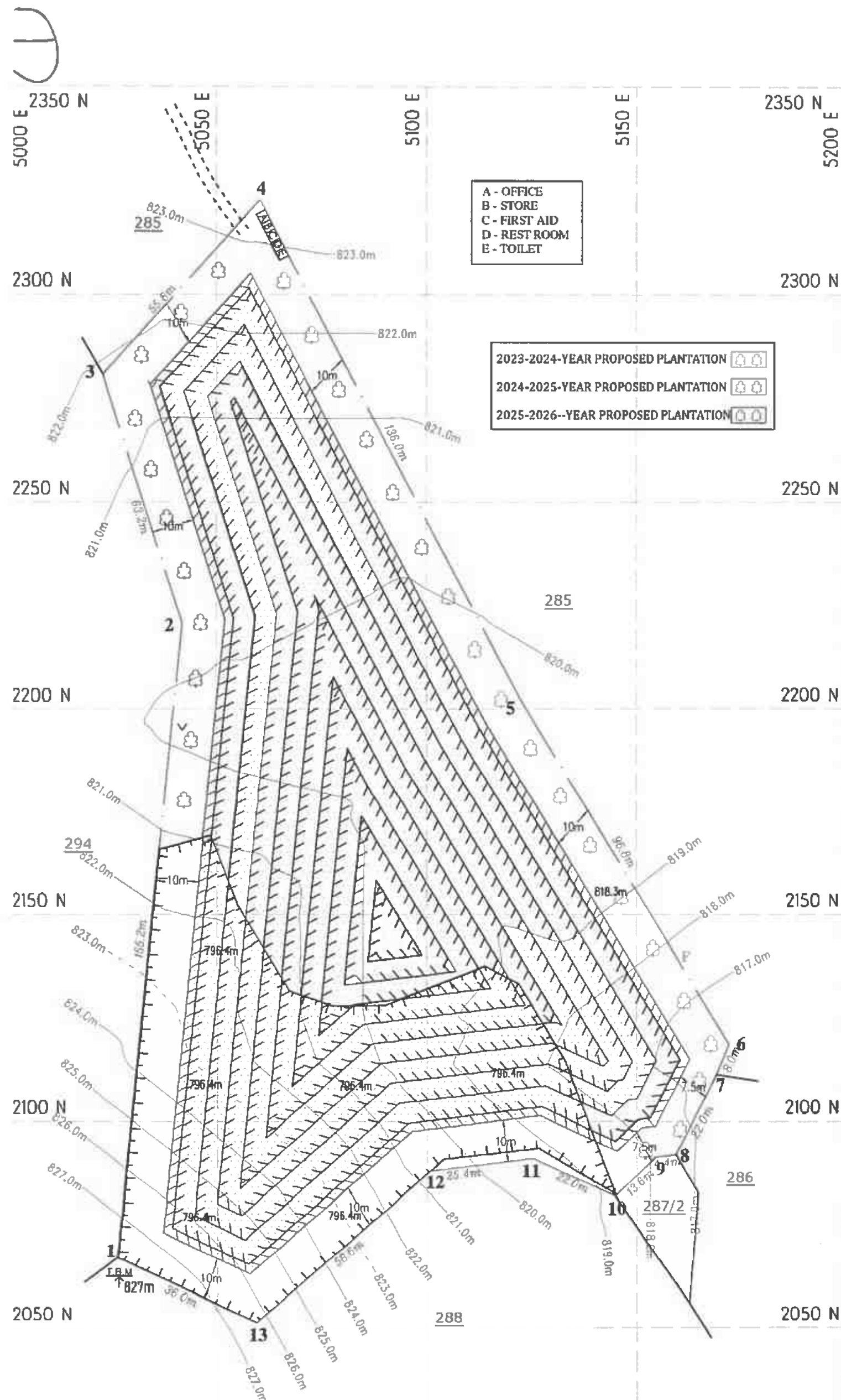


PLATE NO-VIII

APPLICANT ADDRESS:
THIRU. V.NAGARAJA
S/o. VENKATAPPA RADDY,
KOPPA VILLAGE,
HULIMANGALA POST,
ANEKAL TALUK,
BANGALORE DISTRICT-560 105.

LOCATION OF QUARRY
EXTENT : 2.16.0 Ha,
S.F.NO : 287/1
VILLAGE : VENKATESAPURAM,
TALUK : HOSUR,
DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY	
7.5m,10.0m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
TOP SOIL	
ROUGH STONE	
QUARRY PIT	
CONTOUR LINE	
QUARRY ROAD	
MINE LAYOUT	

PROGRESSIVE MINE CLOSURE PLAN

SCALE: 1:1000

Prepared By:
 I DO HEREBY CERTIFY THAT THIS PLAN HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

S. DIHANASEKARAN
 QUALIFIED PROFESSIONAL

MINE LAYOUT LAND USE PATTERN

DESCRIPTION	PRESENT AREA (Ha)	AREA IN USE DURING THE QUARRYING PERIOD (Ha)	COLOR CODE
AREA UNDER QUARRYING	0.68.67	1.74.0	
INFRASTRUCTURE	NII	0.01.0	
ROADS	0.01.0	0.01.0	
GREEN BELT & DUMP	NII	0.40.0	
UN-UTILIZED AREA	1.46.33	NIL	
GRAND TOTAL	2.16.00	2.16.0	

ANNEXURE V

500m RADIUS LETTER

From

Dr. S.Vediappan, M.Sc.,Phd.,
Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

To

Thiru. V. Nagaraja,
S.F.no. 287/1,
Venkatesapuram Village,
Shoolagiri Taluk,
Krishnagiri

Roc. No.478/2018/Mines dated: 2.08.2023

Sir,

Sub: Mines and Minerals - Krishnagiri District - Rough Stone - Shoolagiri Taluk - Venkatesapuram village - Patta land S.F.No. 287/1 over an extent 2.16.00 Hects of Rough Stone Quarry lease granted to Thiru. V. Nagaraja - Other quarry situated in 500 mtrs radial distance - requested - Details furnished - reg.

- Ref: 1. The District Collector, Krishnagiri Proc. Rc.No. 478/2018 /Mines dated: 19.02.2021.
2. Mining Plan approved by the Deputy Director of Geology and Mining, krishnagiri Lr. No. 478/2018/Mines dated: 30.07.2018.
3. Thiru. V. Nagaraja letter dated: 11.08.2023.

Kind attention is invited to the reference cited above.

2. Thiru. V. Nagaraja, Krishnagiri has been granted Rough Stone quarrying lease over an extent of 2.16.00 hecets of Patta lands in S.F.No. 287/1 of Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District for a period of 10 years vide Proceedings dated: 19.02.2021, under the provisions of Rule 8 of Tamil Nadu Minor Mineral Concession Rule 1959. The lease deed was executed on 19.02.2021 and the lease period is valid upto 18.02.2031.

3. The Mining plan for Rough Stone quarry in Venkatesapuram Village, Shoolagiri Taluk was approved by the Deputy Director of Geology and Mining, krishnagiri letter Rc. No. 478/2018/Mines dated: 30.07.2018.

4. In this connection, the lessee Thiru. V. Nagaraja has requested vide letter dated: 11.08.2023 to issue the details of other quarries situated within 500 mts radial distance from the subject quarry is furnished as follows.

I. Details of Existing quarries.

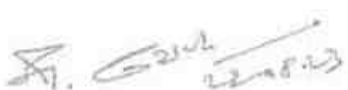
Sl. No.	Name of the Applicant/Lessee	Taluk / Village	S.F.No.	Extent in Hect	Collector's Proceedings No. & date	Lease period
1	Thiru. V.Nagaraja S/o.Venkatappa reddy	SHOOLAGIRI / VENKATESHAPUR AM	287/1	2.16.0	Rc.478/2018 /Mines dated 28.05.2018	This Proposal 19.02.2021 to 18.02.2031
2.	M/s. Sumukha Blue Metals & 'M' Sand, Prop.Thiru. V.Nagaraj.	SHOOLAGIRI / VENKATESHAPUR AM	294 (Part-2)	3.75.0	Rc.216/2018 /mines dated 09.03.2018	30.04.2021 to 29.04.2031

II. Details of abandoned/Old quarries.

Sl. No.	Name of the Applicant/Lessee	Taluk / Village	S.F.No.	Extent in Hect	Collector's Proceedings No. & date	Lease period
1	Thiru. S.Rajendiran S/o.Sengodan	SHOOLAGIRI / VENKATESHAPUR AM	288	5.00.0	Rc.214/2008 /mines-2 dated 30.07.2008	30.07.2008 to 29.07.2018
2	Thiru.N.Muniraj	SHOOLAGIRI / VENKATESHAPUR AM	285 (Part)	5.00.0	Rc.123/2008 /Mines-2 dated 19.05.2008	04.07.2018 to 03.07.2023

III. Details of other Proposed/applied quarries

Sl. No.	Name of the lessee	ROC .NO. dated	Village & Taluk	S.F No.	Extent in Het	Lease period.
1.	----- NIL -----					


 Deputy Director,
 Dept of Geology and Mining,
 Krishnagiri.

To,
 The Chairman,
 Tamil Nadu State Environment
 Impact Assessment Authority,
 3rd Floor, Panakal Maligai,
 No. 1 Jeenes Road,
 Saidapet, Chennai -15.

ANNEXURE VI

VAO CERTIFICATE

Thiru. V.Nagaraja Rough stone quarry in the S.F.No.287/1 over an extent of 2.16.0ha. in Venkateshapuram Village, Shoolagiri Taluk, Krishnagiri District.

GENERAL VIEW OF THE LEASE AREA



V. Nagaraja

V.Nagaraja
(Deponent)

V. Nagaraja
Village VAO, Venkateshapuram, Shoolagiri Taluk, Krishnagiri District.
10/8/2023
33, VENKATESAPURAM
Shoolagiri Tk. Krishnagiri Dt.

ANNEXURE VII

**BLASTING
CERTIFICATE**



VISHNU EXPLOSIVES



No.235/9, R.G. Nagar Engineer's Colony Extension, Jagir Reddipatty, Salem - 636 302.

Ref:

Date :

To

V. Nagaraja,
S/o. Venkatappa Reddy,
Koppa Village,
Illumangala Post,
Anekal Taluk
Bangalore - 560 105.

Sir,

Sub: Willingness to do Explosives Blasting Works – Reg.

With respect to the above subject, we would like to introduce myself as the Explosives Blasting Contractors, for which our LICENCE NO: E/HQ/TN/22/335(E64278) & E/SC/TN/22/463(E37227) S.F.No.344/3B, Paiyur Village, Krishnagiri Taluk magazine is situated in No.273-A, Keel Paiyur Village, Kaveripattinam, Krishnagiri, Tamilnadu-635 112.

We were engaged in professional blasting contract works with all facilities and License holders to carry out blasting works in specified time and period covered under Explosives Rules, 2008.

We kindly request yourself to engage us to do Explosives Blasting Works in your proposed Rough stone Quarry situated at S.F.No: 287/1 in Venkatesapuram Village, Shoolagiri Taluk, Krishnagiri District over an extent of 2.16.00 hectares.

SERVING BEST AT ALL TIMES

Thanking you.

For VISHNU EXPLOSIVES,

K. Vimalraj
Authorised Signatory

Enclosure: Magazine License Copy.

अनुज्ञप्ति प्रारूप एन.ई.-3 | LICENCE FORM LE-3

(विस्फोटक नियम, 2008 की अनुसूची 4 के भाग 1 के अनुच्छेद 3(क) से (घ) देखिए।
(See article 3(a) to (d) of Part 1 of Schedule IV of Explosives Rules, 2008)(ग) उपयोग के लिए एक समय पर वर्ग 1,2,3,4,5 या वर्ग 7 के विस्फोटक या किसी मैगजीन में वर्ग 6 के विस्फोटक रखने के लिए अनुज्ञप्ति
Licence to possess : (c) for use, explosives of class 1, 2,3,4,5,6 or 7 in a magazineअनुज्ञप्ति सं. (Licence No.): E/SC/TN/22/463(E37227)
वार्षिक फीस रूप (Annual Fee Rs): 10400/-

1. Licence is hereby granted to

M/s Vishnu Explosives (अधिभोगी / Occupier : Shri G.V.Sai Supramanian), Vishnu Explosives, 273-A, Keelpaiyur Village, Kaveripattinam Taluk, Town/Village - Kaveripattinam, District-KRISHNAGIRI, State-Tamil Nadu, Pincode - 635112



को अनुज्ञप्ति अनुदत्त की जाती है।

2. अनुज्ञप्तिधारी की प्राप्तिस्थिति ! Status of licensee : Proprietorship Firm

3. अनुज्ञप्ति निम्नलिखित प्रयोजनों के लिए विधिमान्य है।

possess for use of Detonators, Slurry Explosives, Detonating Fuse, Safety Fuse, के उपयोग के लिए

Licence is valid only for the following purpose.

4. अनुज्ञप्ति विस्फोटकों के निम्नलिखित किस्मों, प्रकार और मात्रा के लिए विधिमान्य है।

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

क्र. सं.	नाम और विवरण	वर्ग और प्रभाग	उप-प्रभाग	मात्रा किसी एक समय में
Sr. No.	Name and Description	Class & Division	Sub-division	Quantity at any one time
1.	Slurry Explosives	2.0	0	4500 Kg
2.	Detonating Fuse	6.2	0	30000 Mtrs
3.	Safety Fuse	6.1	0	10000 Mtrs
4.	Detonators	6.3	0	44000 Nos

(ख) किसी एक कलेंडर मास में खरीदे जाने वाले विस्फोटक की मात्रा | अनुच्छेद 3(ख) और (ग) के अधीन अनुज्ञप्ति के लिए

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

20 times
as above.

5. निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञप्त परिसर की पुष्टि होती है।

रेखाचित्र क्र. (Drawing No.) E/SC/TN/22/463(E37227)

The licensed premises shall conform to the following drawing(s):

दिनांक (Dated) 18/06/1990

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

Survey No. 344/JB, ग्राम (Town/Village): Paiyur, Krishnagiri-taluk

पुलिस थाना (Police Station): Kaveripattinam

जिला (District) KRISHNAGIRI

राज्य (State)

Tamil Nadu

पिनकोड (Pincode)

635112

दूरभाष (Phone)

ई.मेल (E-Mail)

फैक्स (Fax)

7. अनुज्ञप्ति परिसर में निम्नलिखित सुविधाएं अंतर्भूत हैं।

main IIE magazine, lobby & detonator room

The licensed premises consist of following facilities:

8. अनुज्ञप्ति समय-समय पर यथासंशोधित विस्फोटक अधिनियम, 1884 और उनके अधीन विरचित विस्फोटक नियम, 2004 के उपबंधों, शर्तों और अतिरिक्त शर्तों और निम्नलिखित उपबंधों के अधीन रहते हुए अनुदत्त की जाती है।

The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed there under and the conditions, additional conditions and the following Annexures.

1. उपर्युक्त क्रम सं 5 में यथा कथित रेखाचित्र (स्थान, सन्निर्माण संबंधी और अन्य विवरण दर्शित करते हुए)।

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

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

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

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

9. यह अनुज्ञप्ति तारीख 31 मार्च 1992 तक विधिमान्य रहेगी। This licence shall remain valid till 31st day of March 1992.

यह अनुज्ञप्ति, अधिनियम या उसके अधीन विरचित नियमों या अनुसूची V के भाग 4 के प्रति निर्दिष्ट सेट-VII के अधीन तथा उपवर्णित इस अनुज्ञप्ति की शर्तों का अधिकरण करने या यदि अनुज्ञप्त परिसर योजना या उसके संलग्न उपबंध में दर्शित विवरण के अनुरूप नहीं पाए जाने पर जिलेबंद या प्रतिबंधित की जा सकती है, जहां यह लागू हो।

This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set forth under Set VII, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexure attached hereto.

तारीख The Date - 18/06/1990

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

Amendments :

- Change in Postal Address dated : 11/01/2017
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 15/01/2018
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 15/03/2018
- Amendment in Drawings/Facilities/Premises dated : 11/10/2021
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated : 11/10/2021

Transfers :

- Change in Licensee Name/Address/Status dated : 23/08/2011
- Change in Licensee Name/Address/Status dated : 08/10/2021

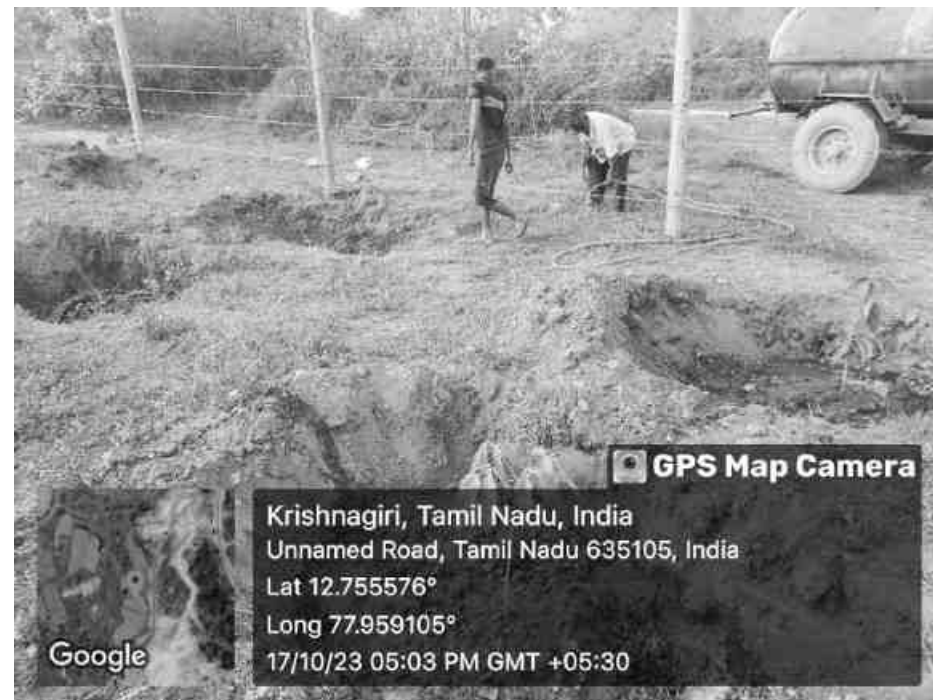
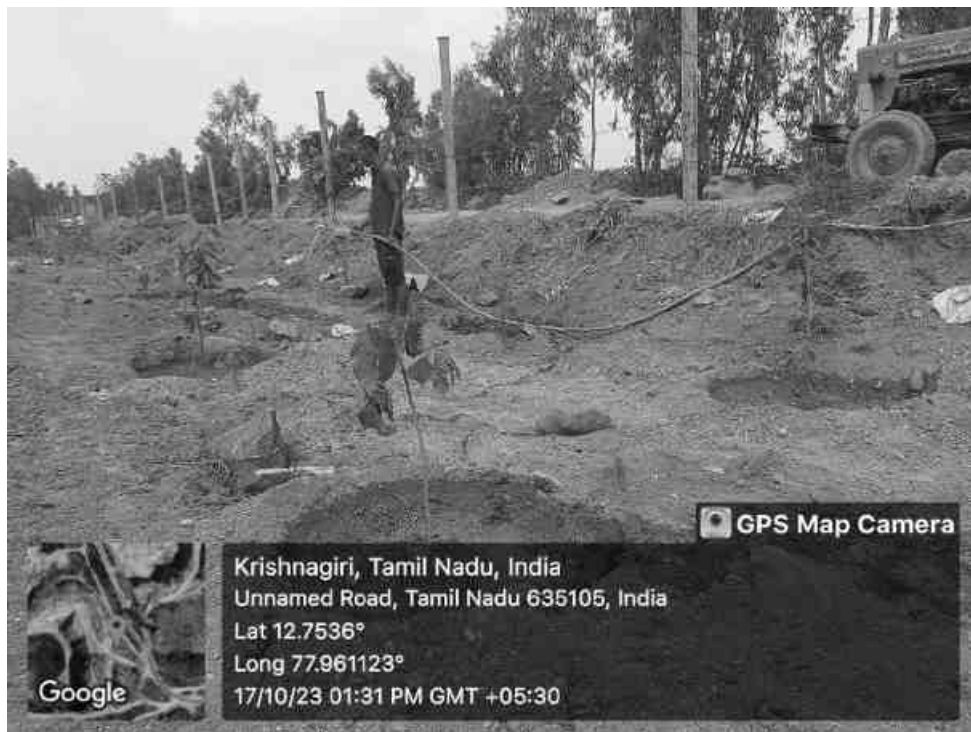
नवीनीकरण के पृष्ठांकन के लिए स्थान
Space for Endorsement of Renewal

नवीकरण की तारीख Date of Renewal	समाप्ति की तारीख Date of Expiry	अनुज्ञप्त प्राधिकारी के हस्ताक्षर और स्टाम्प Signature of licensing authority and stamp
10/03/2022	31/03/2027	 Controller of Explosives, Vellore विस्फोटक नियंत्रक, वेल्लूर Controller of Explosives, Vellore

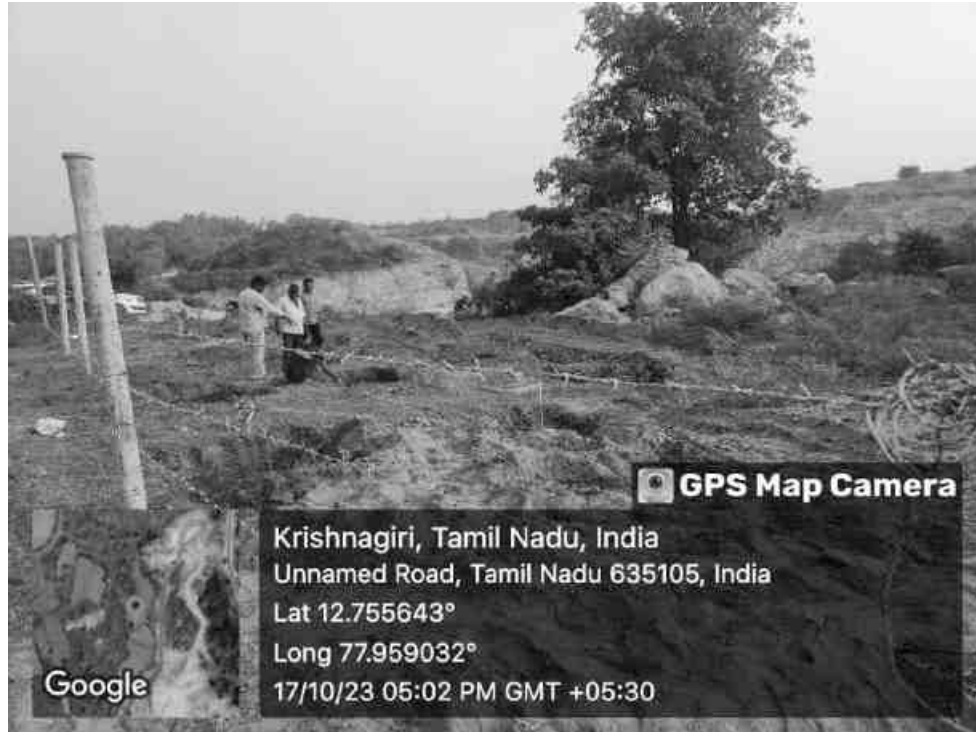
ANNEXURE VIII

GREENBELT & FENCING PHOTOS

Greenbelt & Fencing Photographs



Greenbelt & Fencing Photographs



National Accreditation Board for Education and Training

Certificate of Accreditation

Eco Tech Labs Pvt Ltd., Chennai

48, 2nd main road, Ram Nagar South Extension, Pallikaranai, Chennai-600100, 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.	Metallurgical industries-Ferrous only	8	3 (a)	B
4.	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	21	5 (f)	A
5.	Airports	29	7 (a)	A
6.	Industrial estates/ parks/ complexes/ Areas, export processing zones (EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	31	7 (c)	A
7.	Building and construction projects	38	8 (a)	B
8.	Townships and Area development projects	39	8 (b)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in SAAC minutes dated March 07, 2024, posted on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no QCI/NABET/ENV/ACO/24/3202 dated Apr. 23, 2024. The accreditation needs to be renewed before the expiry date by Eco Tech Labs Pvt. Ltd., Chennai following due process of assessment.

Issue Date
Apr. 23, 2024

Valid up to
Apr. 10, 2025



Mr. Ajay Kumar Jha
Sr. Director - NABET

Certificate No.
NABET/EIA/22-25/SA 0222

Prof (Dr) Varinder S Kanwar
CEO - NABET