

January 2024

Application Form (Draft EIA Report)

For

**TMT. P. Sudha , Rough Stone Quarry – 2.50.0 Ha
at**

**S.F.Nos. 265 (PART-II) of Mathakondapalli Village,
Denkanikottai Taluk, Krishnagiri District, Tamil Nadu State**

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

Category of the Project: B1

Baseline Period: October 2023 – December 2023

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



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

Proponent details:
**Tmt. P. Sudha,
W/o. R.Venugopal,
No.27, Malleshwaram green
park,
Naga Nayakkanahalli,
Kasaba hobli,
Post-Marsur,
Taluk-Anekkal,
Bangalore - 562106..**

Application Form For ToR

From,

TMT. P. Sudha

W/o. R.Venugopal,
NO.27, Malleshwaram Green Park,
Naga Nayakkanahalli,
Kasaba Hobli, Marsur Post,
Anekkal Taluk,
Bangalore - 562106

To,

The District Environmental Engineer
Tamilnadu Pollution Control Board,
Plot No:140A, SIPCOT Industrial Complex,
Hosur, Krishnagiri – 635 126.

Sub: Request to Conduct Public Hearing – Environmental Clearance for the “Tmt. P. Sudha Rough Stone Quarry” over a total extent of 2.50.00 Ha at S. F. Nos. 265 (Part-II) Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District, Tamil Nadu – Reg

Ref: Letter No. SEIAA-TN/F. No. 10386/ ToR-1615/2023 Dated: 06.11.2023.

Dear Sir,

Please find enclosed herewith the application of Draft EIA Report along with necessary enclosures towards seeking environmental clearance for the “Tmt. P. Sudha Rough Stone Quarry” over a total extent of 2.50.00 Ha at S. F. Nos. 265 (Part-II) Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District, Tamil Nadu. In this regard, we had obtained the Terms of Reference from State Environmental Impact Assessment Authority (SEIAA) TamilNadu; vide reference mentioned above for conducting EIA studies. We wish to inform that the draft EIA report complying with all the conditions mentioned in the TOR has been prepared and the copies of the same are enclosed with this letter. With reference to the above, we kindly request the TNPCB to make the necessary arrangements for **Conducting the Public hearing for the Rough Stone Quarry**. With the above, we request the TNPCB to accept and process our application for conducting the Public Hearing at the earliest.

Thanking you

Yours faithfully

Authorized Signatory

Enclosures: Draft EIA Report

Tmt. P. Sudha,
W/o. R.Venugopal,
NO.27, Malleshwaram Green Park,
Naga Nayakkanahalli,
Kasaba Hobli, Marsur Post,
Anekkal Taluk,
Bangalore - 562106

UNDERTAKING

We, Tmt. P. Sudha, undertaking that the Draft Environmental Impact Assessment (EIA) Report for Rough Stone Quarry over an extent of 2.50.0 Ha at S.F.No. 265 (Part-II) Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District, Tamilnadu 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. 10386/ ToR-1615/2023 Dated: 06.11.2023.

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.

Yours Faithfully,

Tmt. P. Sudha

Place: Krishnagiri.

Date:

Plot No.48A, 2nd Main Road,
Ram Nagar, South Extension,
Pallikarantal, Chennai - 600 100.
GST NO. 33AADCE6103A22H
PAN NO. AADCE6103A



Eco Tech Labs Pvt Ltd

Cell No. 98400 87542
Email : info@ecotechlabs.in
Website www.ecotechlabs.in
CIN : U74900TN2014PTC094895

UNDERTAKING

I, Dr. A. Dhamodharan, Managing Director confirms that this Draft EIA Report of Rough Stone Quarry over an extent of 2.50.0 Ha at S.F.No. 265 (Part-II) of Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District, Tamilnadu State has been prepared at M/s. Ecotech Labs Pvt. Ltd., Chennai.

I also confirm that I shall be fully accountable for any miss-leading 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/2124/SA 0147.



Place: Chennai

Date:

Declaration of Experts contributing to the EIA




Declaration by experts contributing to the EIA report for Rough Stone Quarry (minor mineral) mining project of Tmt. P. Sudha Rough Stone Quarry over a total extent of 2.50.0 Ha at S.F.No. 265 (Part-II) of Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District, Tamilnadu State.





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

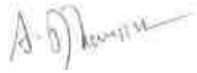

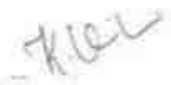

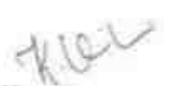
Project	Rough Stone Quarry - 2.50.0 Ha
Type & Category	1 (a) Mining of Minerals
Project Proponent	Tmt. P. Sudha
Environment Consultant with their Accreditation Status	M/s. Eco Tech Labs Pvt. Ltd., QCI Accredited
NABET Certificate No.	NABET/ EIA/2124/ SA 0147
EIA Coordinator Name Signature	Dr. A. Dhamodharan (Mining of Minerals)  
Period of Involvement	October 2023 to December 2023
Contact Information	M/s. Eco Tech Labs Pvt. Ltd. No. 48, 2nd Main Road, Ram Nagar South Extension Pallikaranai, Chennai - 600 100 Mobile: +91 9789906200 E-mail: dhamo@ecotechlabs.in

Functional Area Experts

The basic fact division that environment and laboratory are accredited by NABL and Ministry of Environment and Forests, India and by other international bodies, stand testimony to its emphasis.

S. No.	Functional areas	Name of the experts	Involvement (period and task)	Signature and date
1	AP	Mrs. K. Vijayalakshmi	<p>1. Selection of Baseline Monitoring stations based on the wind direction.</p> <p>2. Interpretation of Baseline data by comparing it with standards prescribed by CPCB against the type of area.</p> <p>3. Identification of sources of air pollution and suggesting mitigation measures to minimize impact.</p> <p><i>Period: March 2022 – Till now</i></p>	
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><i>Period: March 2022 – Till now</i></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><i>Period: March 2022 – Till now</i></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><i>Period: March 2022 – Till now</i></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><i>Period: March 2022 – Till now</i></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><i>Period: March 2022 – Till now</i></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><i>Period: March 2022 – Till now</i></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: March 2022 – 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: March 2022 – Till now</p>	
10	NV	Mrs. K. Vijayalakshmi	<p>1. Selection of monitoring locations</p> <p>2. Interpretation of baseline data</p> <p>3. Prediction of impacts due to noise pollution and suggestion of appropriate mitigation measures</p> <p>Period: May 2022 – Till now</p>	
11	LU	Dr. T. P. Natesan	<p>1. Collection of Remote sensing satellite data to study the land use pattern.</p> <p>2. Primary field survey and limited field verification for land categorization in the study area</p> <p>3. Preparation of Land use map using Satellite data for 10km radius around the project site.</p> <p>Period: March 2022 – Till now</p>	
12	RH	Mrs. K. Vijayalakshmi	<p>1. Identification of the risk</p> <p>2. Interpreting consequence contours</p> <p>3. Suggesting risk mitigation measures</p> <p>Period: March 2022 – 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. 265 (Part-II) of Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District, Tamilnadu 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: NABET/ EIA/2124/ SA 0147

Project	Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.	Draft EIA Report
Project Proponent	Tmt. P. Sudha	
Project Location	Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District	

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<i>Project Proponent</i>	<i>Tmt. P. Sudha</i>	
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<i>Project Proponent</i>	<i>Tmt. P. Sudha</i>	
<i>Project Location</i>	<i>Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District</i>	

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<i>Project Proponent</i>	<i>Tmt. P. Sudha</i>	
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<i>Project Proponent</i>	<i>Tmt. P. Sudha</i>	
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<i>Project</i>	<i>Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Sudha</i>	
<i>Project Location</i>	<i>Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District</i>	

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

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EXECUTIVE SUMMARY

1. Project Background:

The Proposed project's total extent area is 2.50.0 Hectares, It is a Government Poramboke land in Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District. The category of the project is B1, it is a rough stone quarry. The lease area sloping towards the Southeastern side is covered with Rough Stone., and the altitude of the area is above 950.0 m MSL.

The quarry operation is proposed to carry out with conventional Opencast, Semi-mechanized Mining with a bench height of 5m and bench width of 5m is proposed. Quarrying operation is carried out by Splitting rock mass of considerable volume from the parent rock mass by shallow jackhammer drilling and slurry blasting, hydraulic excavators are used for loading the rough stone from the pithead to the needy Crusher. Occasionally hydraulic excavators are attached with rock breakers for fragmentation to avoid secondary blasting.

The quarry operation is proposed. The water table is noticed at a depth of 90 m from below the surface in the adjacent open wells of the area. The Total Geological reserve is about 6,89,210 m³ of Rough Stone. The Mineable Reserves is about 3,02,975 m³ of Rough Stone. The year-wise recoverable resources of rough stone for 5 years is about 3,02,975 m³ of Rough Stone. The Scheme of Mining Plan was approved by the Deputy director, Dept. of Geology & Mining, Krishnagiri vide letter Rc. No. 1393/2023/MINES dated: 25.08.2023. The project area does not fall in Hill Area Conservation Authority region. There is no interstate boundary, CRZ zone, Western Ghats, notified Bird sanctuaries, or wildlife sanctuaries as per the Wildlife Protection Act 1972, within the radius of 15 Km.

2. Nature & Size of the Project

The Rough Stone Quarry over an extent of 2.50.00 Hectares land is located Mathakondapalli Village of Denkanikottai Taluk, Krishnagiri District.

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Mineral intends to quarry : Rough Stone
District : krishnagiri
Taluk : Denkanikottai
Village : Mathakondapalli
S. F. Nos : 265 (PART-II)
Extent : 2.50.0 hectares

Table 1: Brief Description of the Project

S. No	Particulars	Details
1	Latitude	12° 38' 11.49"N To 12° 38' 20.54"N
2	Longitude	77° 45' 12.26"E To 77° 45' 17.17"E
3	Site Elevation above MSL	950 m
4	Topography	Hilly terrain
5	Land use of the site	Government Poramboke land
6	The extent of the lease area	2.50.0 Ha
7	Nearest highway	NH-948A-1.74 km- WNWest
8	Nearest railway station	Anekal railway station-10.45 km- NWest
9	Nearest airport	Hosur Airport-NNEast-2.95 km
10	Nearest town/city	Mattukur-0.70 km- WSWest
11	Rivers / Canal	Ponnaiyar River-14.58 Km- NEast
12	Lake	Pattalamman lake-13.55 km- SSEast Bynakanahalli Kere-0.72 km- SSEast Donna Muniswamy Kere-1.75km- ESE Mathukur Kere lake-0.33 km- WSWest Uliveeranahally Kere lake-1.39 km- NNWest Lake-3.52 km- NNWest KS Agrahara Lake-12.21 km- NWest Vasa Kere lake-3.05 km- ENEast Devaganapalli Lake-4.52 km- ENEast Hosur Seasonal lake-5.08 km- ENEast

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		<p>Achettapalli Lake-8.90 km- ENEast Mathigiri Lake-7.50 km- NNEast Nanjapuram Lake-8.48 km- NNEast Lake 2-9.52 km- NNEast Marsur Lake-13.18 km- NNWest Nagandahally Lake-4.07 km- NEast Bedarapalli Lake-14.23 km- NNE Chandramkudi Eri-12.56 km- NNEast Thally Lake-11.38 km- WSWest Doddaubbanur Lake-8.57 km- WSWest Nanjappan Kodigai Eri-11.54 km- ESEast Dholasetti Cheruvu (Lake)-14.86 km- SEast Thorapalli Lake-13.16 km- ENEast Rama Naicken Lake-11.33 km- NNEast Rangopanditha Agraharam Lake-10.50 km- NNEast Lake-11.02 km- NNEast Gokul Nagar Lake-11.34 km- NNEast NB Agraharam Lake-11.70 km- NNEast Karapalli Lake-12.51 km- NNEast Chennathur Lake-13.63 km- NNEast Tippalam Lake-14.51 km- NNEast Kasavugatta Lake-14.08 km- NNEast Bathlapalli lake-14.33 km- NNEast Alasanatham Lake-13.73 km- NNEast Basthi Lake-14.61 km- NNEast Vasanth Nagar Lake-14.28 km- NNEast Bedrapalli lake-14.25 km- NNEast Mayasandra Lake (seasonal lake)-12.66 km- North Vannama Lake-11.41 km- SWest Hosur lake-10.27 km- NEast Vagganadoddi Lake-14.77 km- SWest Thandarai Lake-6.45 km- SSEast TheppaKulam-12.96 km- NNEast</p>
13	Hills/valleys	Brahmma Hills-12.29 km- NNEast
14	Archaeologically places	<p>Mathigiri Joint Road-9.38 km- NNEast Abandoned Flower Garden-6.02 km-South Anumanthappa Home-6.06 km- SSEast</p>

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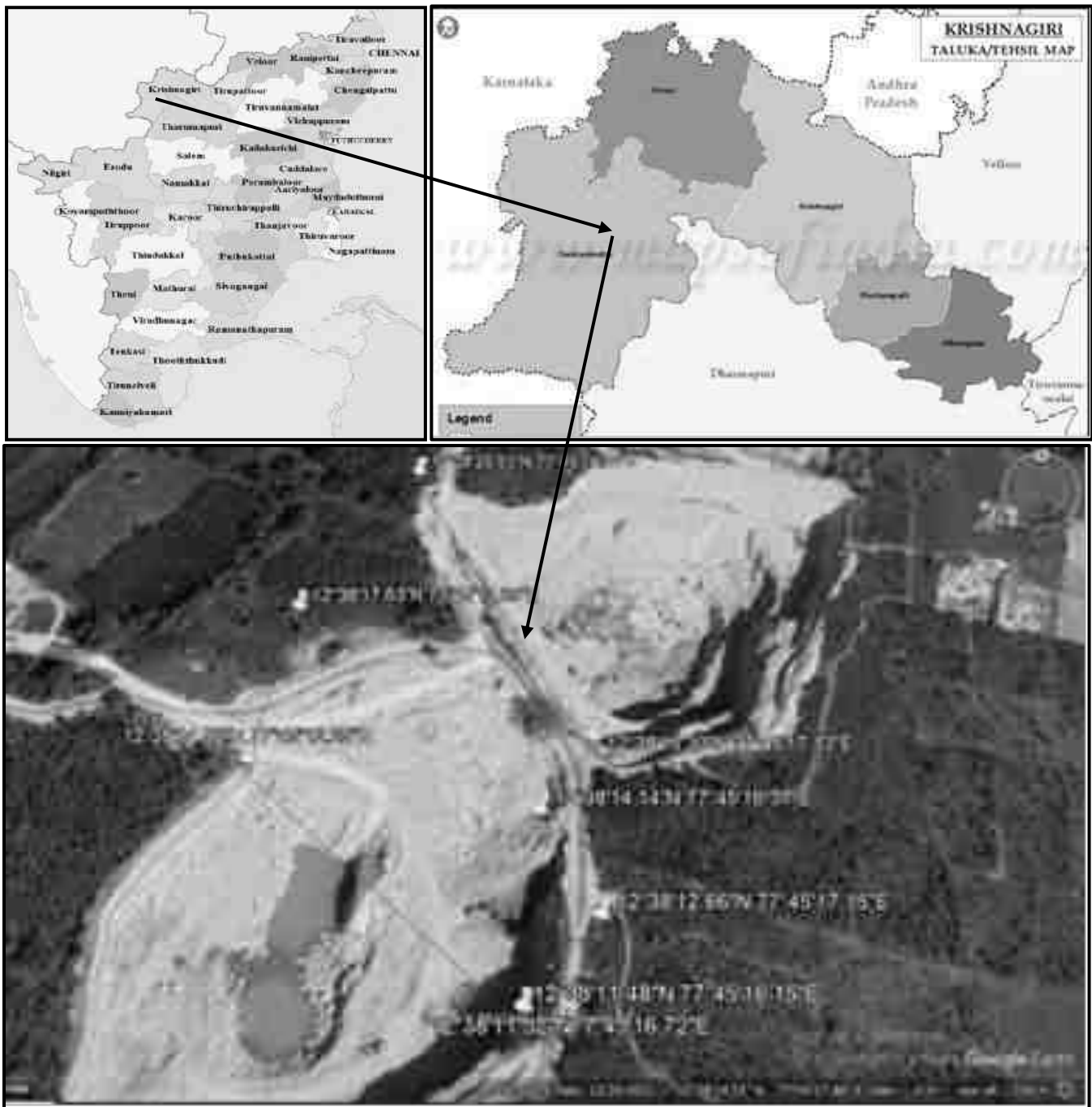
		Gandhi Statue-13.10 km- NNEast
15	National parks / Wildlife Sanctuaries	Cauvery North Wildlife Sanctuary-17.96 km- SWest
16	Reserved / Protected Forests	Thali R.F-12.87 Km-West Denkanikotta R.F.-14.37 km- SSEast Sanamavu Forest (national Forest)-13.06 km- ESEast
17	Seismicity	The proposed Lease area comes under Seismic zone II (low-risk area)

3. Need for the Project

- ❖ The mining activities as proposed are the backbone of all construction and infrastructure projects as the raw material for construction is available only from such mining. The Rough stone extracted will be transported to be Stone crusher of district Krishnagiri.
- ❖ The raw rough stone as well as the crushed material of stone is in high demand in real estate, construction projects as well as in building construction projects.
- ❖ Rough stone is quarried for producing crusher aggregates to the nearby building contractors, road contractors and nearby villagers.
- ❖ After quarrying the entire reserves mined out, the area will be used as water reservoir to have an artificial recharge to the nearby wells.
- ❖ No damage to the land is caused, 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

Charnockite and granitic gneisses are extensively quarried as rough stone, which is used as aggregates for construction of building, laying of roads and for preparation of value added products like hollow blocks, pillar stones, M-sand etc. Charnockite occurs as massive bodies, greyish color, medium to coarse grained, composed quartz, feldspar and orthopyroxene. At places, metamorphic gneissic banding (alternate dark and black color) in charnockite is noticed. On the top portion, it gives a genetic appearance but 1-5m depth below it is typical charnockite of grey color.

5. Geological resources

The geological resources have been calculated based on the cross-section method.

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Table 2. Geological resources

GEOLOGICAL RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In m³	Geological Reserves in m³ @ 100%	Topsoil in m³
XY-AB	I	9	52	3			1404
	II	20	86	3	5160	5160	
	III	54	128	5	34560	34560	
	IV	54	144	5	38880	38880	
	V	54	144	5	38880	38880	
	VI	54	144	5	38880	38880	
	VII	54	144	5	38880	38880	
	VIII	54	144	5	38880	38880	
	IX	54	144	5	38880	38880	
	X	54	144	5	38880	38880	
TOTAL					311880	311880	1404
XY-CD	I	1	11	3			33
	II	1	25	5	125	125	
	III	21	79	5	8295	8295	
	IV	37	104	5	19240	19240	
	V	73	104	5	37960	37960	
	VI	73	104	5	37960	37960	
	VII	73	104	5	37960	37960	
	VIII	73	104	5	37960	37960	
	IX	73	124	5	45260	45260	
	X	73	124	5	45260	45260	
TOTAL					270020	270020	33
XY-EF	I	16	12	3			576
	II	16	12	5	960	960	
	III	16	12	5	960	960	

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	IV	16	12	5	960	960	
	V	59	59	5	17405	17405	
	VI	59	59	5	17405	17405	
	VII	59	59	5	17405	17405	
	VIII	59	59	5	17405	17405	
	IX	59	59	5	17405	17405	
	X	59	59	5	17405	17405	
TOTAL					107310	107310	576
GRAND TOTAL					689210	689210	2013

Table 3. Mineable Reserves

MINEABLE RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In m³	Mineable Reserves in m³ @ 100%	Topsoil in m³
XY-AB	I	1	41	3			123
	II	20	72	3	4320	4320	
	III	45	109	5	24525	24525	
	IV	41	110	5	22550	22550	
	V	36	100	5	18000	18000	
	VI	31	90	5	13950	13950	
	VII	26	80	5	10400	10400	
	VIII	21	70	5	7350	7350	
	IX	16	60	5	4800	4800	
	X	11	50	5	2750	2750	
TOTAL					108645	108645	123
XY-CD	II	1	25	5	125	125	
	III	21	68	5	7140	7140	
	IV	37	88	5	16280	16280	
	V	73	83	5	30295	30295	
	VI	73	78	5	28470	28470	
	VII	73	73	5	26645	26645	

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	VIII	73	68	5	24820	24820	
	IX	68	73	5	24820	24820	
	X	63	63	5	19845	19845	
TOTAL					178440	178440	
XY-EF	V	43	37	5	7955	7955	
	VI	38	27	5	5130	5130	
	VII	33	17	5	2805	2805	
TOTAL					15890	15890	
GRAND TOTAL					302975	302975	123

Table 4. Year wise Production Plan

YEARWISE DEVELOPMENT AND PRODUCTION								
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume In m³	Roughstone Reserves in m³ @ 100%	Topsoil in m³
09.11.2023 TO 08.11.2024	XY-AB	I	1	41	3			123
		II	20	72	3	4320	4320	
		III	45	109	5	24525	24525	
		IV	41	110	5	22550	22550	
	XY-CD	II	1	25	5	125	125	
		III	21	68	5	7140	7140	
		IV	37	88	5	16280	16280	
TOTAL						74940	74940	123
09.11.2024 TO 08.11.2025	XY-AB	V	36	100	5	18000	18000	
	XY-CD	V	73	83	5	30295	30295	
	XY-EF	V	43	37	5	7955	7955	
	TOTAL						56250	56250
09.11.2025 TO 08.11.2026	XY-AB	VI	31	90	5	13950	13950	
	XY-CD	VI	73	78	5	28470	28470	
	XY-EF	VI	38	27	5	5130	5130	
	TOTAL						47550	47550
09.11.2026 TO 08.11.2027	XY-AB	VII	26	80	5	10400	10400	
		VIII	21	70	5	7350	7350	
	XY-CD	VII	73	73	5	26645	26645	

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		VIII	73	68	5	24820	24820	
	XY-EF	VII	33	17	5	2805	2805	
	TOTAL					72020	72020	
09.11.2027 TO 08.11.2028	XY-AB	IX	16	60	5	4800	4800	
		X	11	50	5	2750	2750	
	XY-CD	IX	68	73	5	24820	24820	
		X	63	63	5	19845	19845	
	TOTAL					52215	52215	
GRAND TOTAL						302975	302975	123

6. Mining

Opencast mining

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

Process Description

- The reserves and resources are arrived based upon the Geological investigation.
- Removal of Topsoil by Excavators and directly Loaded into Tippers.
- Removal of Rough Stone by Excavators by Drilling and Blasting.
- Shallow Drilling With Jackhammer of 25.5mm Dia.
- Minimum Blasting With Class 3 Explosives.
- Loading of Rough Stone By Excavators Into Tippers.

7. Water Requirement

Total water requirement for the mining project is 2.0 KLD. Domestic water will be sourced from nearby Mattukur, Muthuganapalli Village and other water will be sourced from nearby road tankers supply.

Table 5. Water Balance

Purpose	Quantity	Source
Drinking Water	1.0 KLD	Packaged Drinking water vendors available in Mattukur, Muthuganapalli Village which is about 0.77 - S km from project area

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Green belt	0.5 KLD	Other domestic activities through road tankers supply
Dust suppression	0.5 KLD	From road tankers supply
Total	2.0 KLD	

8. Manpower

Total manpower required for the project is approximately 21 persons. Workers will be from nearby villages.

Table 6. Man Power

S.No	Skill Level	Position	Nos.
1.	Skilled	Foreman	1
		Excavator Operator	2
		Co-Operator	2
		Jack Hammer operator	6
		Blaster/mate	1
2.	Semi – skilled	Semi-skilled labour	3
		Watchman	1
3.	Unskilled	Musdoor	5
Total			21

9. Solid Waste Management

Table 7 Solid Waste Management

S. No	Type	Quantity	Disposal Method
1	Organic	3.78 kg/day	Municipal bin including food waste
2	Inorganic	5.67 kg/day	TNPCB authorized recyclers

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

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Table 8 500m Radius Cluster Mine

1) Details of Existing quarries:

S. No.	Name of the Owner	Village & Taluk	Mineral	S.F. No	Extent	GO No. & Date	Lease Period
1	Tmt. P. Sudha, R. Venugopal, No.27, Malleswaram Green Park, Naganahalli Post, Hasaba Hobil marsur post, Anekal Taluk, Bangalore District.	Mathagondapalli Village, Denkanikottai Taluk.	Rough Stone	265 (Part-2)	2.50.0	Roc.223/2018/Mines/Dt. 09.11.2018.	09.11.2018 – 08.11.2028
2	Thiru. H. R. Prasanth, S/O Ravi H.V. Handehahalli, Anekal Taluk, Bangalore -562 125	Mathagondapalli Village, Denkanikottai Taluk.	Rough Stone	265 (Part - 1)	2.50.0	Roc.222/2018/Mines. Dt. 11.02.2019.	11.02.2019 – 10.02.2024.
3	Thiru. C. Srinivasamurthy, S/o Chandrappa, D.No. 2/31 Belagondapalli Post, Denkanikottai Taluk, Krishnagiri Dist.	Mathagondapalli Village, Denkanikottai Taluk.	Rough Stone	265 (Part – 3)	1.60.0	Roc.224/2018/Mines/Dt.09.11.2018	09.11.2018 – 08.11.2028.

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2) Details of other Proposed / Applied quarries.

S. No.	Name of the lessee	Village	S.F.No	Extent	GO No. & Date	Lease period
1.	Thiru. Vinay, S/o Appoji Reddy, D.No. 146, Mugalur Post, Hosur Taluk, Krishnagiri Dist.	Mathagondapalli Village, Denkanikottai Taluk.	265 (Part - 4)	1.46.0	Roc.225/2018/Mines/ Dt.09.03.2018	Proposed Quarry.

3) Details of Abandoned/Old Quarries

S. No.	Name of the lessee	Village & Taluk	Mineral	S.F. No	Extent	GO No. & Date	Lease period
1.	Thiru. S. Krishna Reddy, No.2/58, Mathukur Village, Mathakondapalli Post, Denkanikottai Taluk, Krishnagiri District.	Mathagonda palli Village, Denkanikott ai Taluk.	Rough Stone.	337/2A 1, 337/2B	1.21.0	Roc.164/201 2/Mines/dt. 22.05.2017.	29.05.2017 - 28.05.2022

The Total extent of the Existing / Lease expired / Proposed quarries are 8.06.0 Ha.

10. Land Requirement

The total extent area of the project is 2.50.00 Ha, Government Poramboke land in Mathakondapalli Village of Denkanikottai Taluk, Krishnagiri District.

Table 9 Land Use Breakup

S. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1.	Quarrying Pit	1.10.0	1.73.0
2.	Infrastructure	Nil	0.01.0

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3.	Roads	0.02	0.01.0
4.	Green Belt & Dump	Nil	0.75.0
5.	Unutilized Area	1.38.0	Nil
Total		2.50.0	2.50.0

11. Human Settlement

There are no habitations within 300m radius. There are villages located in this area within 5km radius of the quarry.

Table 10 Habitation

SL. NO.	DIRECTION	VILLAGE	POPULATION	DISTANCE
1	North	Kalukondahally	3,640	2.70 km
2	South	Muthuganapalli	1,135	3.21 km
3	East	S. Mudugandanahally	765	3.07 km
4	North-West	Anvarthikanpeti	1,000	2.06 km
5	North-East	Kappakollu	350	0.67 km

12. Power Requirement

The 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.

13. Scope of the Baseline Study

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

1. Micro – Meteorology

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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 : 17° C
- ii) Average Maximum Temperature : 39° C
- iii) Average Annual Rainfall of the area: 968 mm

13.2 Air Environment

Ambient air monitoring was carried out on a 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 5 km. radius, an air quality survey has been conducted at 7 locations. Major air pollutants like Particulate Matter (PM₁₀), Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂) were monitored and the results are summarized below.

The baseline levels of PM₁₀ (69-42 µg/m³), PM_{2.5} (34-16 µg/m³), SO₂ (23-5 µg/m³), NO₂ (42-10µg/m³), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from Oct 2023 to Dec 2023.

13.3 Noise Environment

The maximum Day noise and Night noise were found to be 58 dB(A) and 47 dB(A) respectively in Sivaraman green Garden. The minimum Day Noise and Night noise were 39 dB(A) and 32 dB(A)

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respectively which was observed in project site. The observed values are all well within the Standards prescribed by CPCB.

13.4 Water Environment

- The average pH ranges from 6.91 – 7.95.
- TDS value varied from 398 mg/l to 1222 mg/l.
- Hardness as CaCO₃ varied from 190 to 818 mg/l.
- Chloride varied from 58.8 to 294 mg/l.

13.5 Land Environment

The analysis results show that the majority of soil in the project and surrounding area is slightly alkaline in nature and pH value ranges from 7.08 to 8.42 with organic matter 0.08 to 1.39 %. The concentration of Nitrogen, Phosphorus & Potassium has been found to be in good amount in the soil samples.

13.6 Biological Environment

The proposed 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 Government Poramboke land. There is no displacement of the population within the project area and adjacent nearby area. Social development of nearby villages will be considered in this project.
- The mine area does not cover any habitation. Hence the mining activity does not involve any displacement of human settlement.

15. Greenbelt Development

1. The development of greenbelt in the peripheral buffer zone of the mine area.

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2. The Green belt has been recommended as one of the major components of the Environmental Management Plan, which will improve ecology, the environment and quality of the surrounding area.

3. Local trees like Neem, Pungam, Naval etc., will be planted along the lease boundary and avenues as well as over non-active dumps at a rate of 250 trees per annum 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, Pungam, Poovarasu, Naval, Mantharai, Arasa Maram, Magizham, Vilvam, vaagai, Marudha maram, Thandri, Poovarasu, Manjadi, Usil, Aathi, Panai, Uzha, Illuppai, Eachai, Vanni Maram.	80%	1250
Total		1250

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 equipments shall be intermittent and does not cause much adverse impact

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Project Proponent	<i>Tmt. P. Sudha</i>	
Project Location	<i>Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District</i>	

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.2,56,95,990/-** 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

Proposed Financial Estimate / Budget for (EMP) Environment Management	:	
Fixed Asset Cost:		
1. Land Cost	:	Rs.1,26,99,990/- (Leased Tender Amount for Government Poramboke Land)
2. Labor Shed	:	Rs. 1,30,000/-
3. Sanitary Facility	:	Rs. 90,000/-
4. Fencing cost	:	Rs. 1,00,000/-
Total	=	Rs.1,30,19,990/-
Operational Cost:		
Machinery cost	=	Rs.40,00,000/-
EMP Cost:	=	Rs.86,76,000/-
Total Project Cost	=	Rs.2,56,95,990/-

<i>Project</i>	<i>Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District</i>	

20. Corporate Environmental Responsibility

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

Table 13 CER Cost

S. N o.	CER Activity	CER value (Rs)
1	Mathakondapalli Government Hr. Sec School, Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District Providing facilities are: <ul style="list-style-type: none"> ✓ Furnitures (Table, Chairs & Bench for School Students) ✓ School Building Repair and Painting for entire mining period ✓ Cabinet for Headmaster room ✓ R.O Water Facility ✓ Smart Classroom facility ✓ Greenbelt Development inside and around the campus – 50 No's. ✓ Environmental, Social Awareness and General Knowledge Books in Tamil Language ✓ Hygienic Toilet Facility and maintenance upto lease period 	5,00,000
Total		5,00,000

21. Benefits of the Project

- There is a positive impact on socioeconomics 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 the 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 nearby vicinity.

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<i>Project Proponent</i>	<i>Tmt. P. Sudha</i>	
<i>Project Location</i>	<i>Mathakondapalli Village, Denkanikottai 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

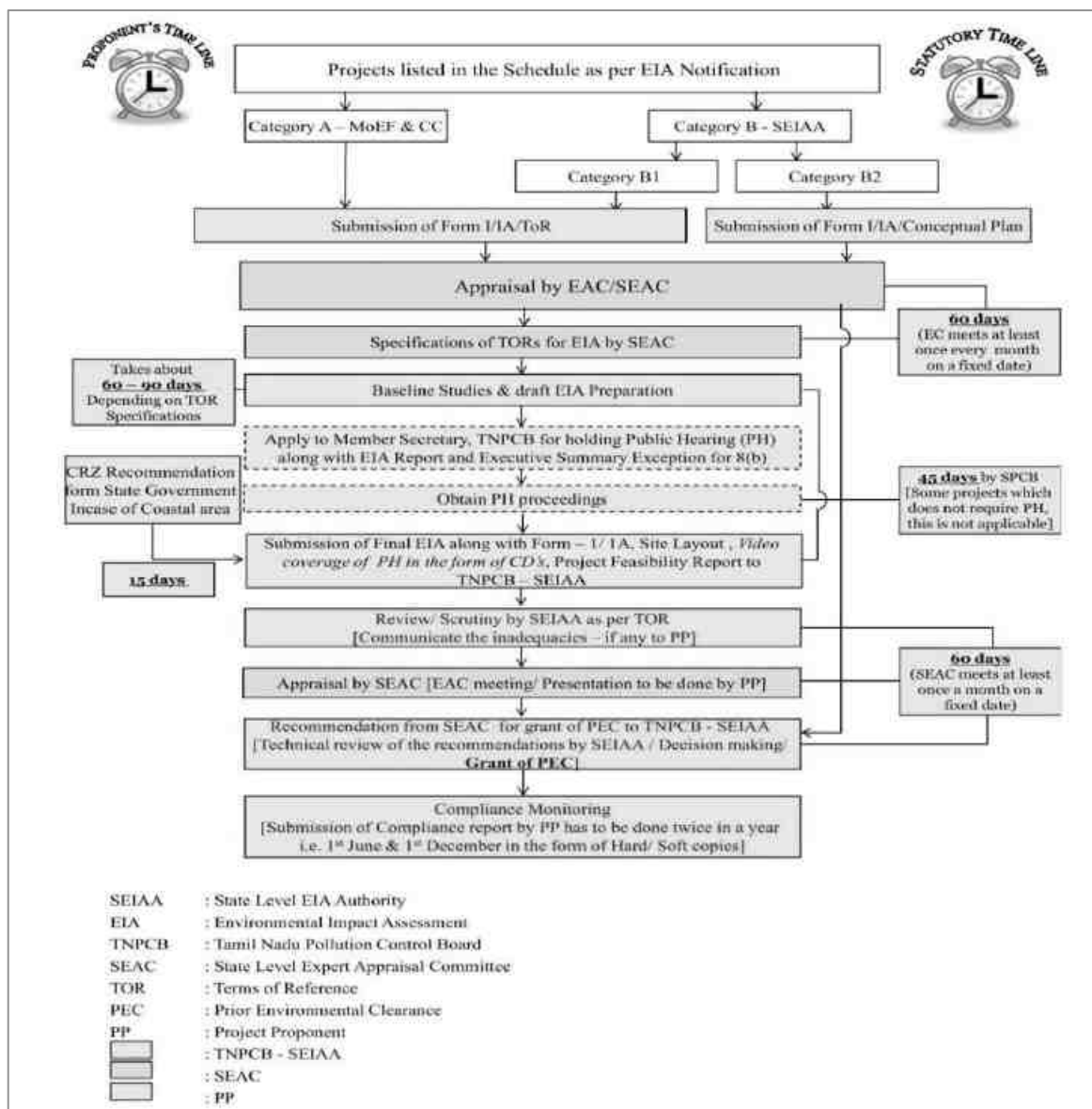
The Entire district is underlain by the rocks belonging to hard crystalline rock masses of Archaean age. The Archaean rocks in this area are represented by rocks of eastern Ghat complex comprising charnockite, Migmatite complex of composite gneiss. The district is covered by metamorphic crystalline rocks of charnockite, composite gneiss of Archaean age. These rocks are highly metamorphosed and have been subjected to sever folding, crushing and faulting. Charnockite group is occupied by the North and Southern part of the basin. The other rock type is encountered by composite granitic gneiss of Epidote hornblende biotite gneiss and hornblende biotite gneiss are occupy in the middle portion of the basin. Charnockite group occupies the high ground as well as plain and it is poorly weathered and jointed. They are generally black, grey to dark grey in colour medium to coarse grained texture, and generally massive and un-foliated. A gneissic rock occurs as linear bands in the middle portion of the area and is highly migmatite. Mostly, micaceous with bands of granites, pegmatites, quartz veins the rock is well foliated. The Hornblende biotite gneiss forms the country rock of the area and epidote hornblende gneiss (Proterozoic age) occurs as small, isolated outcrops. The crystalline formations are charnockite, granitic gneiss of Archean age have been intruded by dolerite dykes and pegmatite veins. These rocks are highly metamorphosed and have been subjected to very severe folding, crushing and faulting. The crystalline rocks are subjected to tectonic activities under various orogenic cycles resulting in the development of secondary structures such as joints. fissures and cleavages. The intensity of weathering varies from place to place.

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



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1.4 TERMS OF REFERENCE (TOR)

The terms of Reference have been issued by SEAC TN vide Letter No. SEIAA-TN/F. No. 10386/ToR-1615/2023 Dated: 06.11.2023. 43 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.

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 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 proposed 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

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<i>Project Location</i>	<i>Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District</i>	

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.

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 on 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

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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.

1.7 DETAILS OF PROJECT PROPONENT

Project Proponent	:TMT. P. SUDHA, W/o. R.VENUGOPAL
Status of the Proponent	:Government Poramboke land
Proponent's name & address	:NO.27, malleshwaram green park, Naga nayakkanahalli, Kasaba hobli, marsur post, Anekkal taluk, Bangalore - 562106..

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) Govt of India MOEF&CC on December 12th, 2018) project comes under category B1 cluster & schedule 1(a) under item 1.

Proposed proposal pertains to Rough stone mining project by mechanized open cast method on allotted mine lease area at Venkatesapuram Village, Shoolagiri Taluk of Krishnagiri District, Tamil Nadu. It is an elevated terrain. The total allotted mine lease for the proposed project is 2.50.00 Ha with their maximum production capacity i.e., 3,02,975 m³ of Rough Stone and 123 m³ of Topsoil.

Project	Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.	Draft EIA Report
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Project Location	Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District	

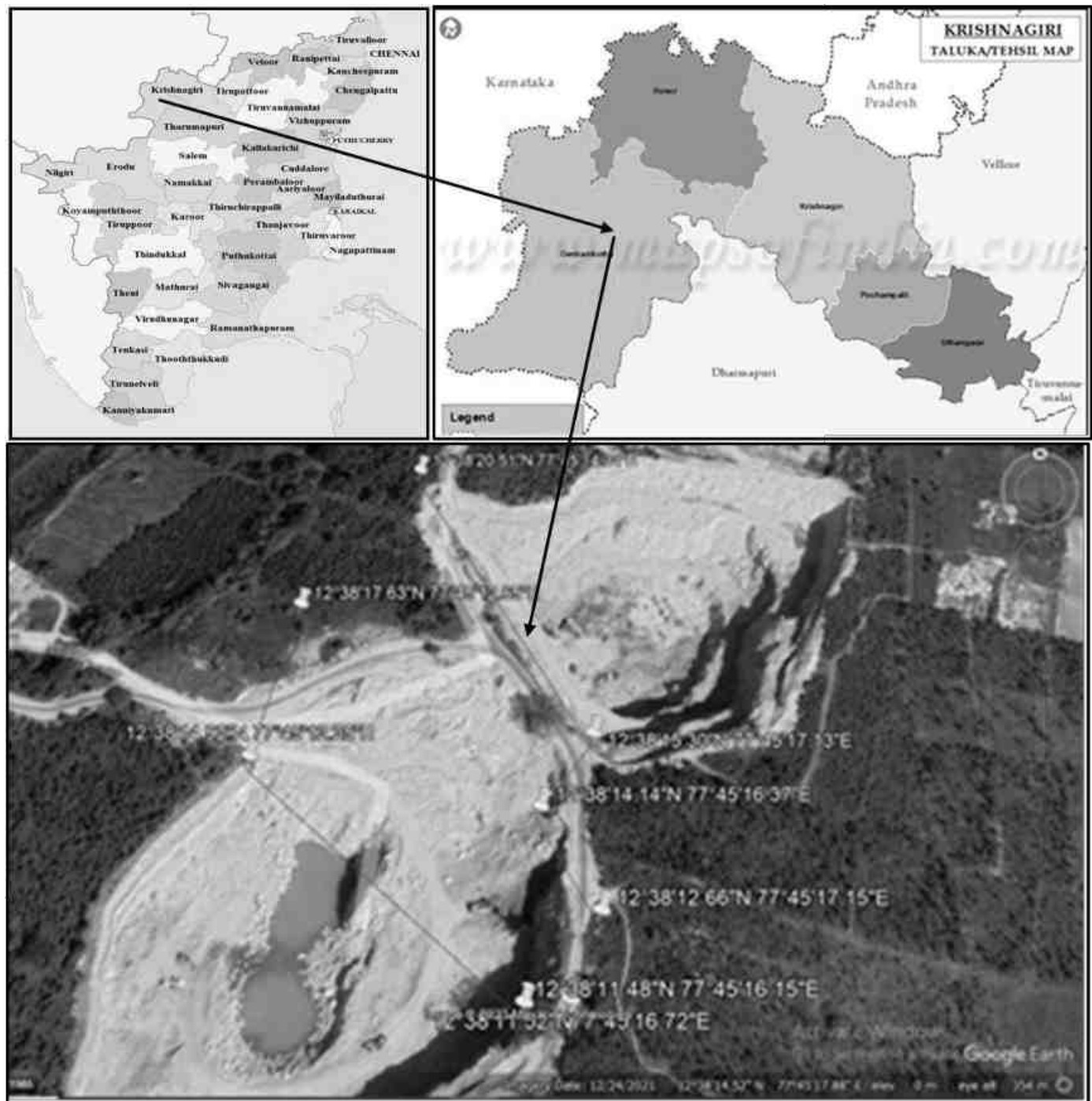


Figure 1.1: Location Map of the Project site

<i>Project</i>	<i>Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Sudha</i>	
<i>Project Location</i>	<i>Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District</i>	

2 Project Description

This chapter furnishes detailed description of the proposed 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

Proposed proposal pertains to Rough stone mining project by open cast mechanized method on allotted mine lease area at Mathakondapalli Village, Denkanikottai Taluk of Krishnagiri District, Tamil Nadu. It is a hilly terrain. We have obtained a Scheme of mining plan from the Department of Geology and Mining, Krishnagiri District for 2.50.00 Ha land area in the S.F.Nos. 265 (Part II) for a proposed mining depth of 46m Topsoil 3m + Rough stone 43m. (Surface Ground Level Above Height is 15m and Surface Ground Level Below Depth is 31m). and five years production of 3,02,975 m³ of Rough Stone and 123m³ of Topsoil.

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) Govt 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 draft 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 is listed below.

Project	Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.	Draft EIA Report
Project Proponent	Tmt. P. Sudha	
Project Location	Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District	

Table 2-1: Quarry within 500m Radius

1) Details of Existing quarries:

S. No.	Name of the Owner	Village & Taluk	Mineral	S.F. No	Extent	GO No. & Date	Lease Period
1	Tmt. P. Sudha, R. Venugopal, No.27, Malleswaram Green Park, Naganahalli Post, Hasaba Hobil marsur post, Anekal Taluk, Bangalore District.	Mathagondapalli Village, Denkanikottai Taluk.	Rough Stone	265 (Part-2)	2.50.0	Roc.223/2018/Mines/Dt. 09.11.2018.	09.11.2018 – 08.11.2028
2	Thiru. H. R. Prasanth, S/O Ravi H.V. Handehahalli, Anekal Taluk, Bangalore -562 125	Mathagondapalli Village, Denkanikottai Taluk.	Rough Stone	265 (Part - 1)	2.50.0	Roc.222/2018/Mines. Dt. 11.02.2019.	11.02.2019 – 10.02.2024.
3	Thiru. C. Srinivasamurthy, S/o Chandrappa, D.No. 2/31 Belagondapalli Post, Denkanikottai Taluk, Krishnagiri Dist.	Mathagondapalli Village, Denkanikottai Taluk.	Rough Stone	265 (Part – 3)	1.60.0	Roc.224/2018/Mines/Dt.09.11.2018	09.11.2018 – 08.11.2028.

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2) Details of other Proposed / Applied quarries.

S. No.	Name of the lessee	Village	S.F.No	Extent	GO No. & Date	Lease period
1.	Thiru. Vinay, S/o Appoji Reddy, D.No. 146, Mugalur Post, Hosur Taluk, Krishnagiri Dist.	Mathagondapalli Village, Denkanikottai Taluk.	265 (Part - 4)	1.46.0	Roc.225/2018/Mines/ Dt.09.03.2018	Proposed Quarry.

3) Details of Abandoned/Old Quarries

S. No.	Name of the lessee	Village & Taluk	Mineral	S.F. No	Extent	GO No. & Date	Lease period
1.	Thiru. S. Krishna Reddy, No.2/58, Mathukur Village, Mathakondapalli Post, Denkanikottai Taluk, Krishnagiri District.	Mathagonda palli Village, Denkanikott ai Taluk.	Rough Stone.	337/2A 1, 337/2B	1.21.0	Roc.164/201 2/Mines/dt. 22.05.2017.	29.05.2017 - 28.05.2022

The Total extent of the Existing / Lease expired / Proposed quarries are 8.06.0 Ha.

2.1.1 Need for the project:

The Entire district is underlain by the rocks belonging to hard crystalline rock masses of Archaean age. The Archaean rocks in this area are represented by rocks of eastern Ghat complex comprising charnockites, Migmatite complex of composite gneiss. The district is covered by metamorphic crystalline rocks of charnockite, composite gneiss of Archaean age. These rocks are highly metamorphosed and have been subjected to severe folding, crushing and faulting. Charnockites group is occupied by North and Southern part of the basin. The other rock type is encountered by composite granitic gneiss of

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Epidote hornblende biotite gneiss and hornblende biotite gneiss are occupy in the middle portion of the basin. Charnockite group occupies the high ground as well as plain and it is poorly weathered and jointed. They are generally black, grey to dark grey in colour medium to coarse grained texture, and generally massive and un-foliated. A gneissic rock occurs as linear bands in the middle portion of the area and is highly migmatite. Mostly, micaceous with bands of granites, pegmatites, quartz veins the rock is well foliated. The Hornblende biotite gneiss forms the country rock of the area and epidote hornblende gneiss (Proterozoic age) occurs as small, isolated outcrops. The crystalline formations are charnockite, granitic gneiss of Archean age have been intruded by dolerite dykes and pegmatite veins. These rocks are highly metamorphosed and have been subjected to very severe folding, crushing and faulting. The crystalline rocks are subjected to tectonic activities under various orogenic cycles resulting in the development of secondary structures such as joints, fissures and cleavages. The intensity of weathering varies from place to place.

2.2 BRIEF DESCRIPTION OF THE PROJECT

Table 2-2 Salient Features of the Project

S. No.	Description	Details
1	Project Name	Rough Stone Quarry-2.50.00 ha
2	Proponent	Tmt. P. Sudha
3	Mining Lease Area Extent	2.50.00 Ha
4	Location	S.F.Nos.265 (Part-II) Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District.
5	Latitude	12° 38' 11.49"N To 12° 38' 20.54"N
6	Longitude	77° 45' 12.26"E To 77° 45' 17.17"E
7	Topography	Hilly terrain
8	Site Elevation above MSL	The altitude of the area is 950 m above MSL.
9	Topo sheet No.	57- H/14
10	Minerals of Mine	Rough Stone Quarry
11	Proposed production of Mine	3,02,975 m ³ of Rough Stone & 123 m ³ of Topsoil

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12	Ultimate depth of Mining	46 m (3m Topsoil + 43 Rough stone) 15m AGL + 31 m BGL
13	Method of Mining	Open cast, mechanized mining
14	Water demand	2.0 KLD
15	Source of water	Water will be supplied through tankers supply
16	Manpower	21 Nos.
17	Mining Lease	Proceedings Letter received from The District Collector, Krishnagiri District vide letter RC.223/2018/Mines, Dated: 09.11.2018
18	Mining Plan Approval	1 st Scheme of Mining Plan was approved by the Deputy Director, Dept. of Geology & Mining, Krishnagiri vide letter Rc.No.1393/2023/Mines, Dated:25.08.2023.
19	Production details	Geological resources: 6,89,210 m ³ of Rough stone & Proposed year wise recoverable reserves: 3,02,975 m ³ of Rough Stone
20	Boundary Fencing	10 m barrier all along the boundary Fencing will be provided.
21	Disposal of overburden	The entire lease area covers 3.0m of Topsoil and estimated quantity of Topsoil is 123 m ³ . Topsoil formation will be removed and used for Green Belt areas.
22	Ground water	The ground Water Level is noticed at the depth of 90m below Ground Level by monitoring nearby bore hole, Mining depth taken as 46m (Surface Ground Level Above Height 15m & Surface Ground Level Below Depth 31 m). Now, the proposed quarry depth is above the water table. Hence, quarrying may not affect the ground water.

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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 Mattukur, Muthuganapalli village which is 0.77 Km of the project area

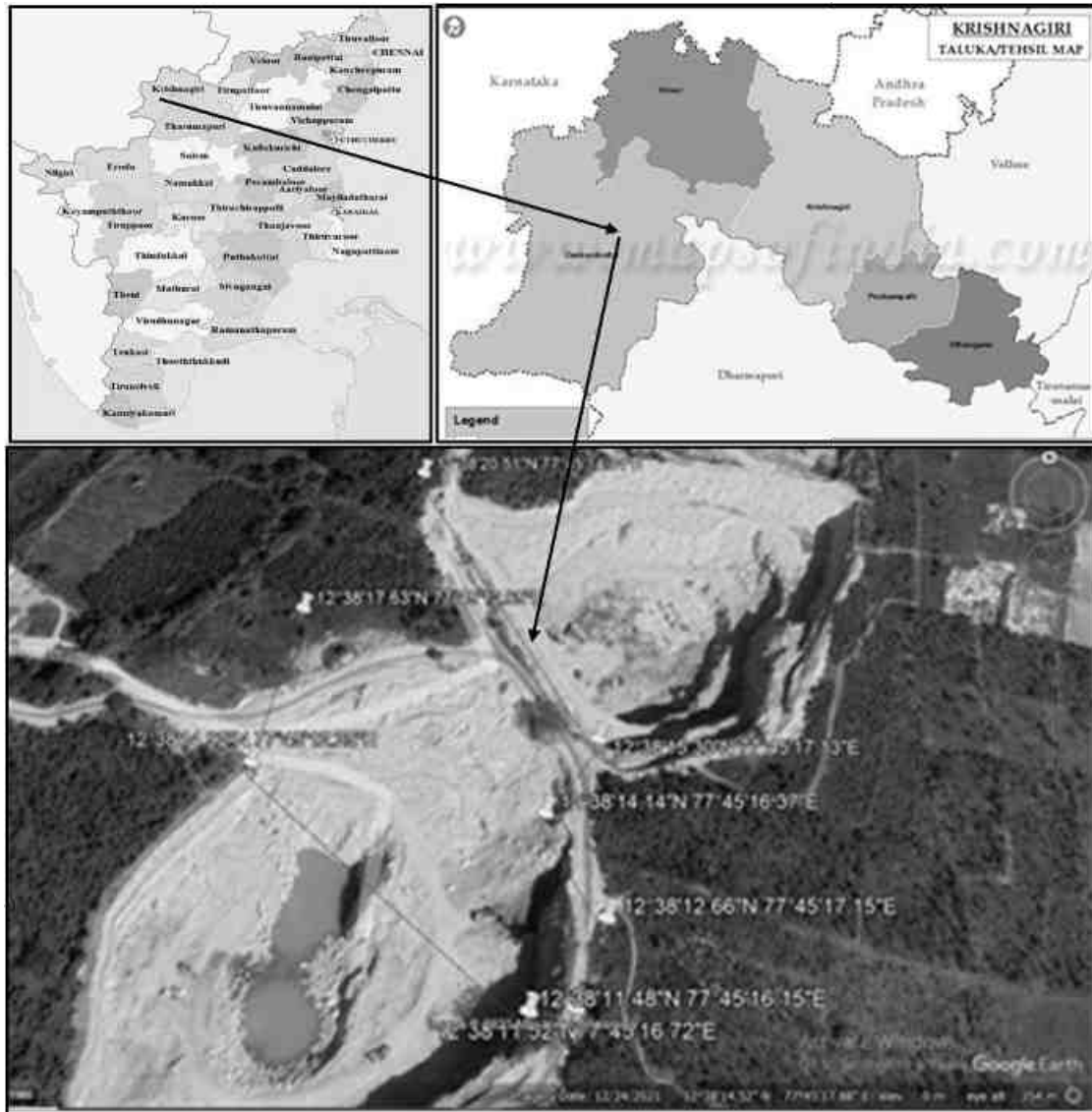


Figure 2.1: Location Map of the Project Site

Project	Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.	Draft EIA Report
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Project Location	Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District	



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

2.2.1 Site Connectivity:

The site is connected to MDR Road.

SH 17 B – Thally to Denkanikottai Road – 2.81 Km - W

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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° 38' 11.49"N To 12° 38' 20.54"N
2.	Longitude	77° 45' 12.26"E To 77° 45' 17.17"E
3.	Site Elevation above MSL	The altitude of the area is 950 m above MSL.
4.	Topography	Hilly terrain
5.	Land use of the site	Government Poramboke land
6.	Extent of lease area	2.50.00 Ha

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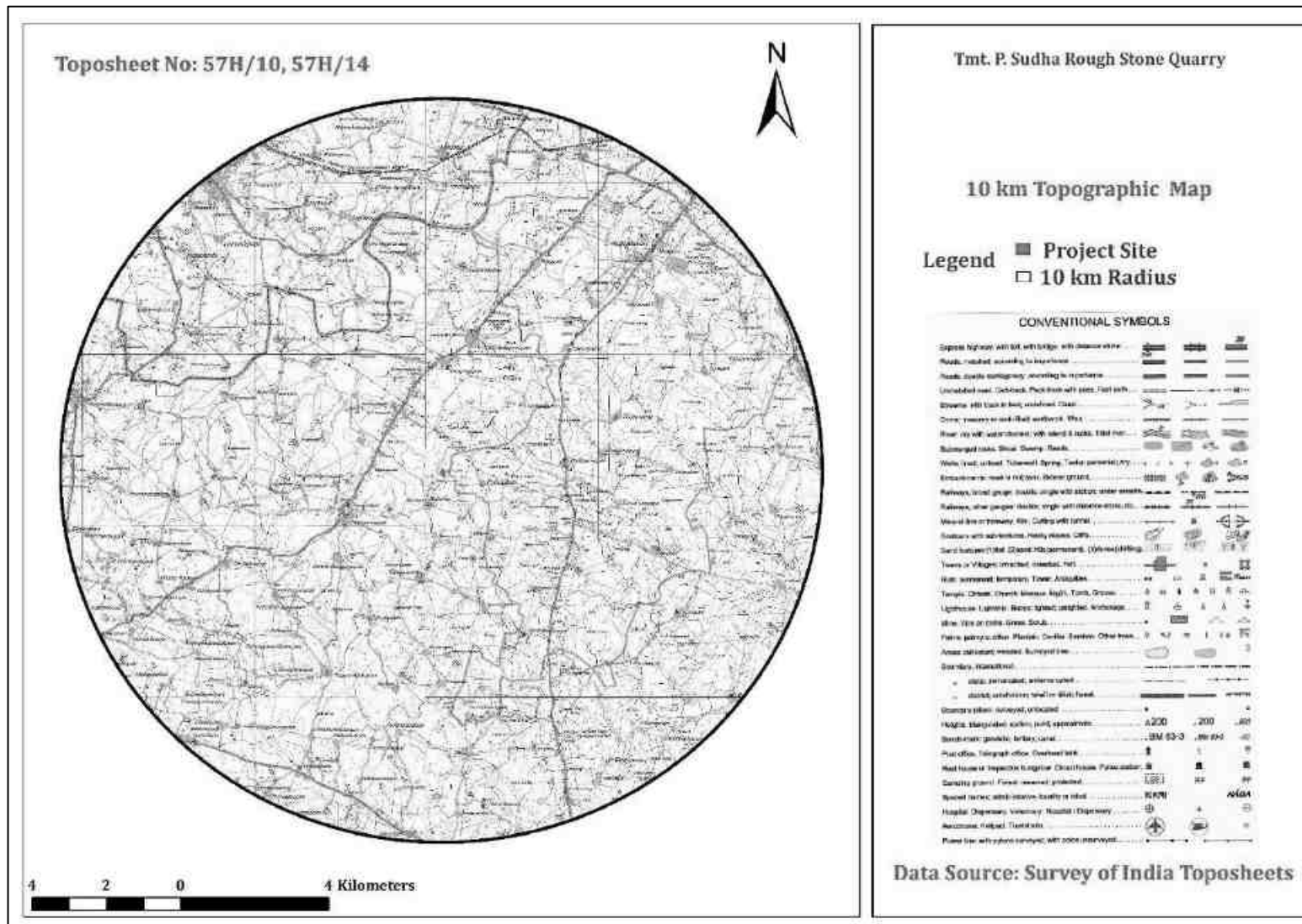


Figure 2.4: Topo Map of Project Site

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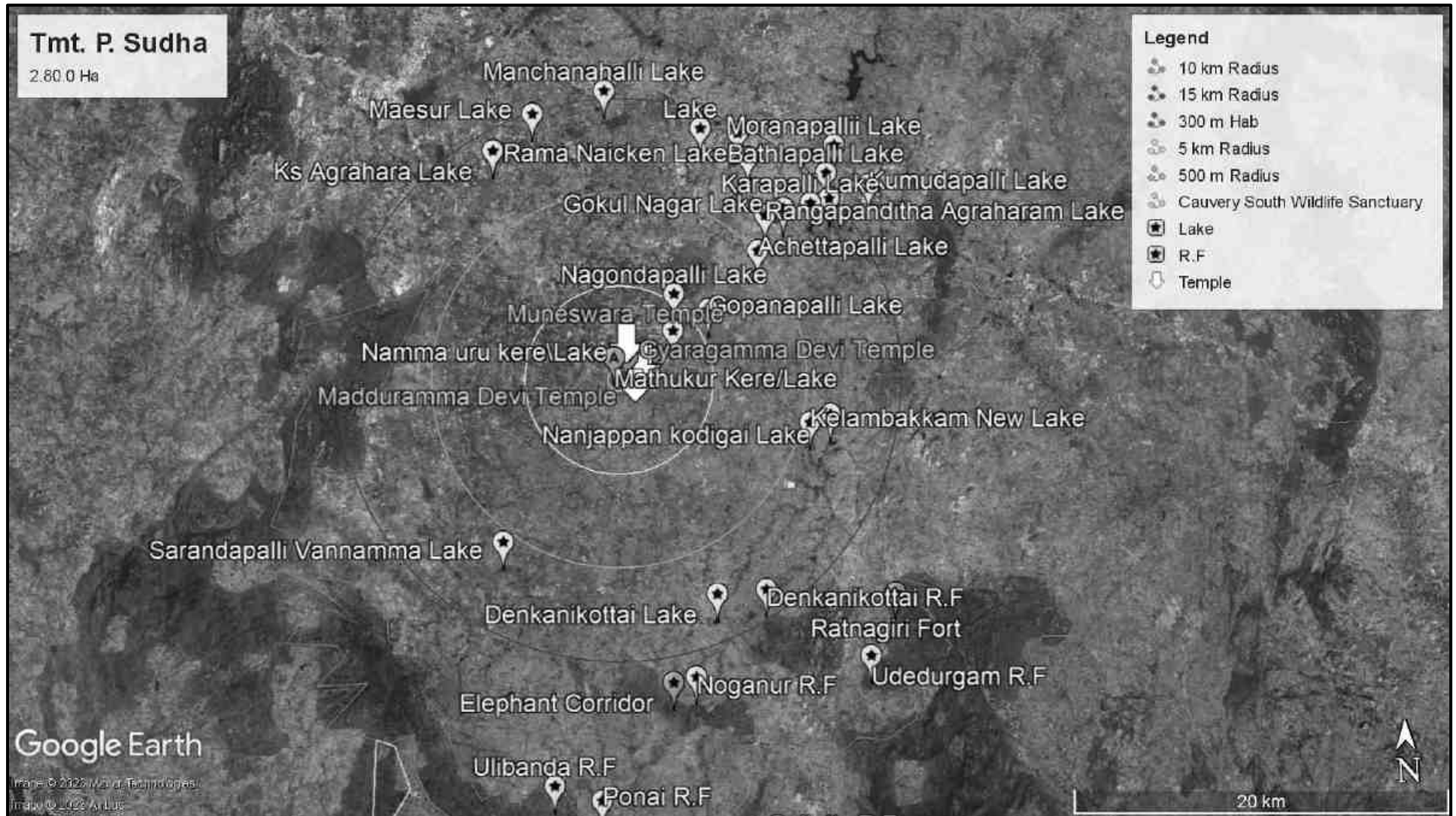


Figure 2.5: Environmental Sensitivity within 15km radius

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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 Elevated terrain. The land use pattern of the mine lease area as follows.

Table 2-4: Land use pattern

S.No	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1	Quarrying Pit	1.10.0	1.73.0
2	Infrastructure	Nil	0.01.0

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3	Roads	0.02.0	0.01.0
4	Green Belt	Nil	0.75.0
5	Unutilized Area	1.38.0	Nil
	Total	2.50.0 Ha	2.50.0 Ha

2.3.3 Human Settlement

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

Table 2-5: Habitation

SL. NO.	DIRECTION	VILLAGE	POPULATION	DISTANCE
1	North	Kalukondahally	3,640	2.70 km
2	South	Muthuganapalli	1,135	3.21 km
3	East	S. Mudugandanahally	765	3.07 km
4	North-West	Anvarthikanpeti	1,000	2.06 km
5	North-East	Kappakollu	350	0.67 km

2.4 LEASEHOLD AREA

The Rough Stone Quarry mine of 2.50.00 Ha is a Government Poramboke land. The lease area falls on S.F No: 265 (Part-II) of Mathakondapalli Village, Denkanikottai 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

Krishnagiri District is underlain by crystalline metamorphic complex in the western parts of district and sedimentary tract in eastern side. An area of 4551 Sq.km is covered by crystalline rocks (63%) and 2671 Sq.km is covered by sediments (37%).

The general geological sequence of formation is given below:

<i>Project</i>	<i>Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.</i>	<i>Draft EIA Report</i>
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- Quaternary - Laterites, Sands and Clays
- Tertiary - Sandstone, Gravels and Clays
- Cretaceous - Limestone,
- Calcareous Sandstone and Clay unconformity.
- Archaean - Charnockites, Gneisses, Granites, Dolerites and Pegmatite

The major part of the area is covered by metamorphic crystalline rocks of charnockite, granitic gneiss of Archaean age intruded by dolerite dykes and pegmatite veins. These rocks are highly metamorphosed and have been subjected to very severe folding, crushing and faulting. Ground Water occurs under phreatic conditions and wherever there are deep seated fractures, it occurs under semi-confined to confined conditions.

The occurrence of Ground Water in hard rock depends upon the intensity and depth of weathering, fractures and fissures present in the rocks. Granites and gneisses yield moderately compared to the yield in Charnockites. The depth of well in hard rock generally ranges between 8 and 15m below ground level. Generally, yield in open wells ranges from 30 to 250m³ /day and in bore well between 260 and 430 m³ /day. The weathered thickness varies from 2.5 m to 42m in general. There are 3 to 5 fracture zones within 100 m and 1 to 4 fracture zones between 100 and 200 m.

The Cretaceous formation is represented by Arenaceous Limestone, Calcareous sand - stone and marl. The Tertiary formation is an argillaceous comprising of Silty clay stones, argillaceous Limestone. The Quaternary deposits represented by the river deposits of Ponnaiyar and Varahanadhi spread over as patches in Villupuram District. The alluvium consists of unconsolidated sands, gravelly sands, clays and clayey sands. The thickness of the sands ranges between 15 and 25 m in the alluvial formation which also form potential aquifers. In some areas, sandstone of tertiary formation are potential groundwater reservoirs.

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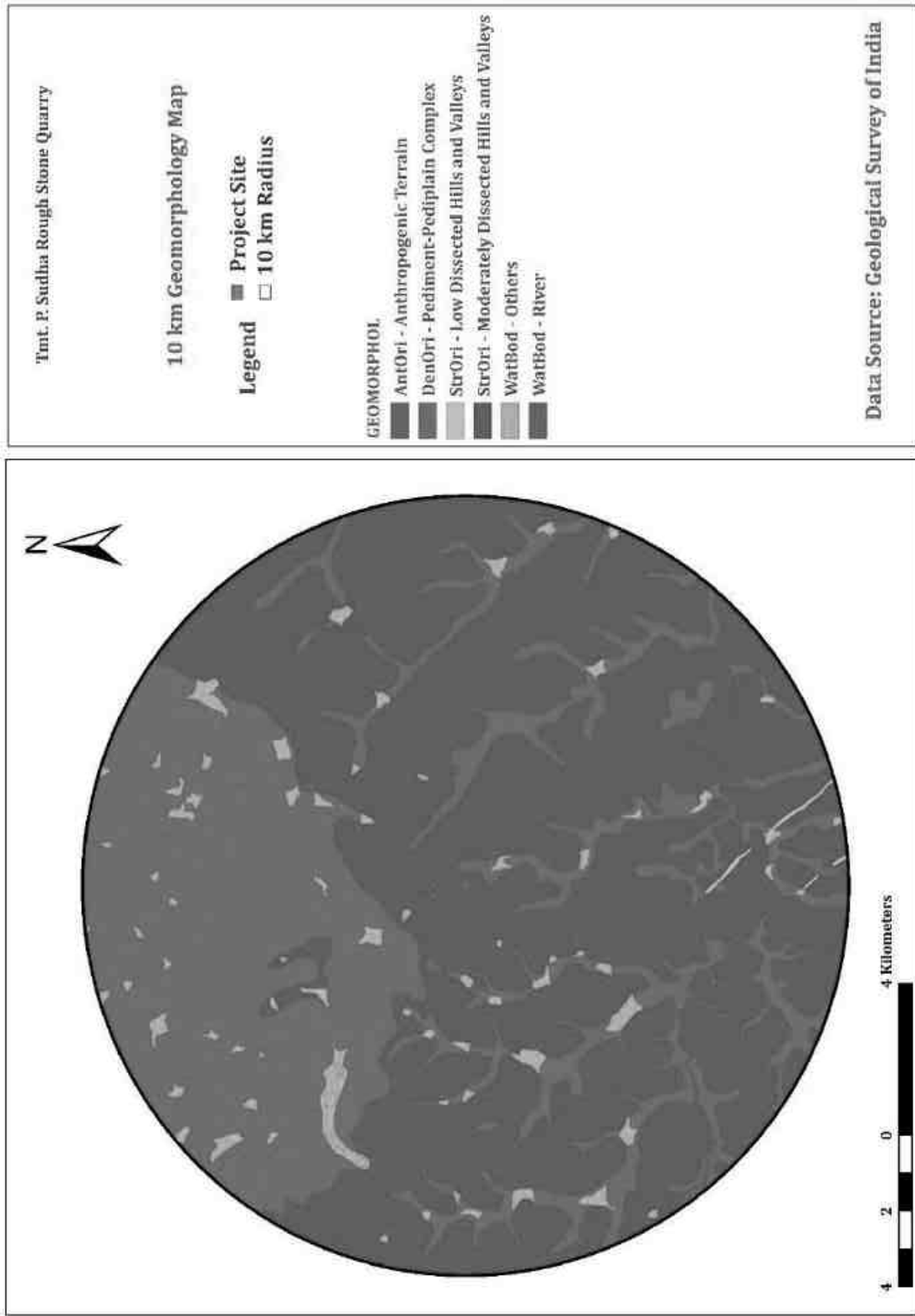


Figure 2.7: Geomorphology

<i>Project</i>	<i>Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.</i>	<i>Draft EIA Report</i>
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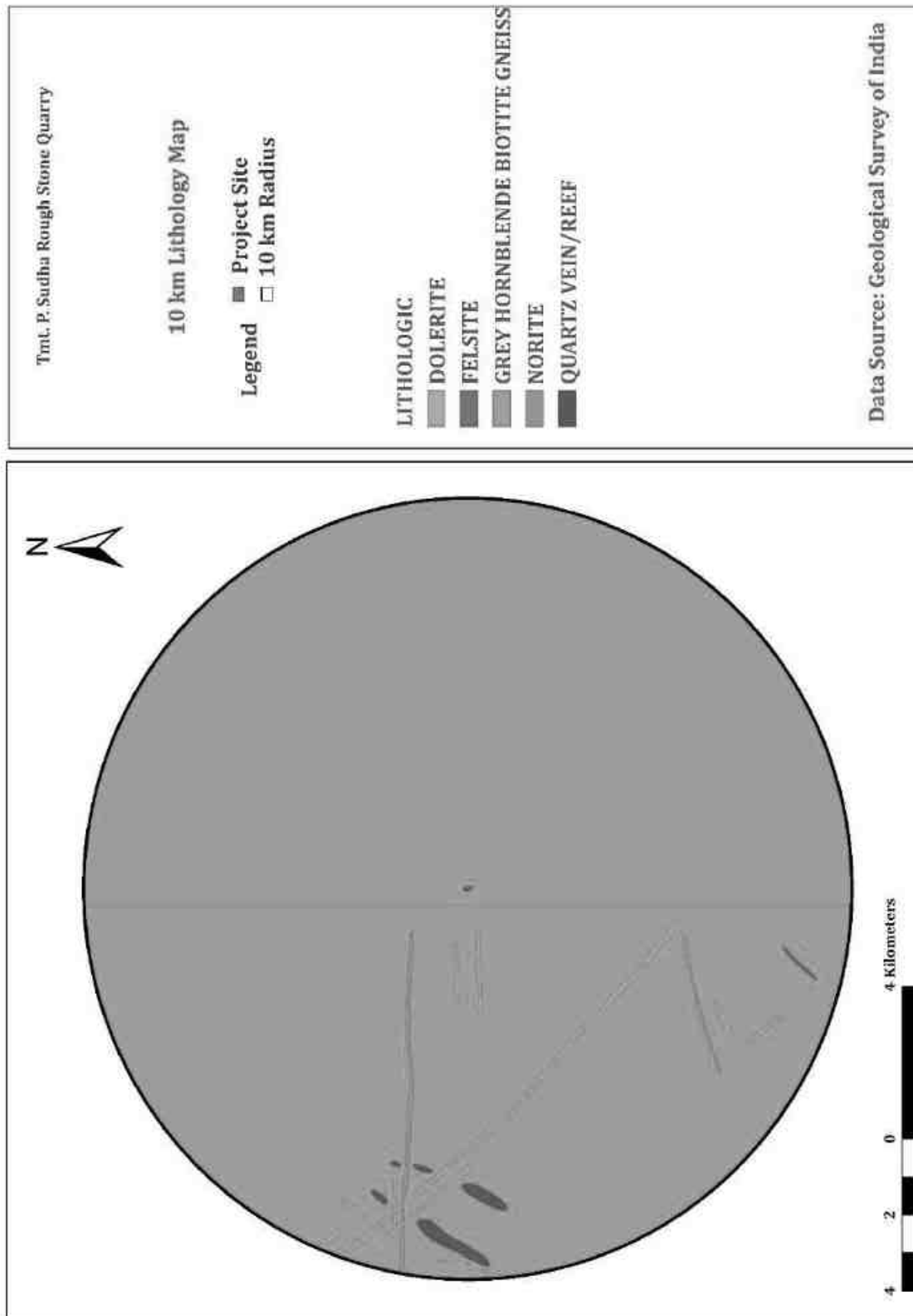


Figure 2.8 Lithology

<i>Project</i>	<i>Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Tmt. P. Sudha</i>	
<i>Project Location</i>	<i>Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District</i>	

2.6 QUALITY OF RESERVES:

The mining lease area is 2.50.00 Ha, with production capacity of 3,02,975 m³ of Rough Stone and 123m³ of Topsoil. Due to its significant role in the domestic as well as infrastructural market, making the mining of Stone 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 resources	6,89,210 m ³ of Rough Stone.
3	Recoverable Reserves	3,02,975 m ³ of Rough Stone.
4	Proposed Production	3,02,975 m ³ of Rough Stone.
5	Elevation Range of the Mine Site	The altitude of the area is 950 m above MSL

2.6.1 *Estimation of Reserves*

The practical method of the systematic geological mapping and delineation of rough stone (Charnockite) within the field was done and careful evaluation of body luster, physical properties, engineering properties, commercial aspects, etc., The Topographical, Geological plan and sections demarcated the commercial marketable rough stone (Charnockite) deposit has been prepared in 1:1000 scale and the estimated balance Geological resources as 3,02,975 m³ of Rough Stone.

2.6.2 *Geological resources*

Rough Stone:

Geological resources is estimated at **6,89,210 m³** of Rough Stone up to a depth of 46.0m - 3m Topsoil + 43m Rough stone (15m AGL + 31m BGL).

Table 2-7: Geological resources.

GEOLOGICAL RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In m³	Geological Reserves in m³ @ 100%	Topsoil in m³

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XY-AB	I	9	52	3			1404
	II	20	86	3	5160	5160	
	III	54	128	5	34560	34560	
	IV	54	144	5	38880	38880	
	V	54	144	5	38880	38880	
	VI	54	144	5	38880	38880	
	VII	54	144	5	38880	38880	
	VIII	54	144	5	38880	38880	
	IX	54	144	5	38880	38880	
	X	54	144	5	38880	38880	
TOTAL					311880	311880	1404
XY-CD	I	1	11	3			33
	II	1	25	5	125	125	
	III	21	79	5	8295	8295	
	IV	37	104	5	19240	19240	
	V	73	104	5	37960	37960	
	VI	73	104	5	37960	37960	
	VII	73	104	5	37960	37960	
	VIII	73	104	5	37960	37960	
	IX	73	124	5	45260	45260	
	X	73	124	5	45260	45260	
TOTAL					270020	270020	33
XY-EF	I	16	12	3			576
	II	16	12	5	960	960	
	III	16	12	5	960	960	
	IV	16	12	5	960	960	
	V	59	59	5	17405	17405	
	VI	59	59	5	17405	17405	
	VII	59	59	5	17405	17405	
	VIII	59	59	5	17405	17405	
	IX	59	59	5	17405	17405	
	X	59	59	5	17405	17405	
TOTAL					107310	107310	576
GRAND TOTAL					689210	689210	2013

<i>Project</i>	<i>Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.</i>	<i>Draft EIA Report</i>
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2.6.3 Mineable Reserves

The available mineable reserves are calculated by deducting 10m Safety distance and bench loss. In this regard, since the adjacent also to be under the new lease area necessary action will be taken to get permission from DGMS in future comply regulation under 111(3) of MMR.1961.

Table 2-8: Mineable Reserves.

MINEABLE RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In m³	Mineable Reserves in m³ @ 100%	Top Soil in m³
XY-AB	I	1	41	3			123
	II	20	72	3	4320	4320	
	III	45	109	5	24525	24525	
	IV	41	110	5	22550	22550	
	V	36	100	5	18000	18000	
	VI	31	90	5	13950	13950	
	VII	26	80	5	10400	10400	
	VIII	21	70	5	7350	7350	
	IX	16	60	5	4800	4800	
	X	11	50	5	2750	2750	
TOTAL					108645	108645	123
XY-CD	II	1	25	5	125	125	
	III	21	68	5	7140	7140	
	IV	37	88	5	16280	16280	
	V	73	83	5	30295	30295	
	VI	73	78	5	28470	28470	
	VII	73	73	5	26645	26645	
	VIII	73	68	5	24820	24820	
	IX	68	73	5	24820	24820	
	X	63	63	5	19845	19845	
TOTAL					178440	178440	
XY-EF	V	43	37	5	7955	7955	
	VI	38	27	5	5130	5130	

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	VII	33	17	5	2805	2805	
TOTAL					15890	15890	
GRAND TOTAL					302975	302975	123

2.6.4 Year wise Production Plan

The year wise production to be carry out 3,02,975 m³ of Rough Stone for the period of five years.

Table 2-9: Year wise Production Plan.

YEARWISE DEVELOPMENT AND PRODUCTION								
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Roughstone Reserves in m3 @ 100%	Top Soil in m3
09.11.2023 TO 08.11.2024	XY-AB	I	1	41	3			123
		II	20	72	3	4320	4320	
		III	45	109	5	24525	24525	
		IV	41	110	5	22550	22550	
	XY-CD	II	1	25	5	125	125	
		III	21	68	5	7140	7140	
		IV	37	88	5	16280	16280	
TOTAL						74940	74940	123
09.11.2024 TO 08.11.2025	XY-AB	V	36	100	5	18000	18000	
	XY-CD	V	73	83	5	30295	30295	
	XY-EF	V	43	37	5	7955	7955	
	TOTAL						56250	56250
09.11.2025 TO 08.11.2026	XY-AB	VI	31	90	5	13950	13950	
	XY-CD	VI	73	78	5	28470	28470	
	XY-EF	VI	38	27	5	5130	5130	
	TOTAL						47550	47550
09.11.2026 TO 08.11.2027	XY-AB	VII	26	80	5	10400	10400	
		VIII	21	70	5	7350	7350	
	XY-CD	VII	73	73	5	26645	26645	
		VIII	73	68	5	24820	24820	
	XY-EF	VII	33	17	5	2805	2805	

<i>Project</i>	<i>Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.</i>	<i>Draft EIA Report</i>
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		TOTAL				72020	72020	
09.11.2027 TO 08.11.2028	XY-AB	IX	16	60	5	4800	4800	
		X	11	50	5	2750	2750	
	XY-CD	IX	68	73	5	24820	24820	
		X	63	63	5	19845	19845	
	TOTAL					52215	52215	
	GRAND TOTAL					302975	302975	123

Project	Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.	Draft EIA Report
Project Proponent	Tmt. P. Sudha	
Project Location	Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District	

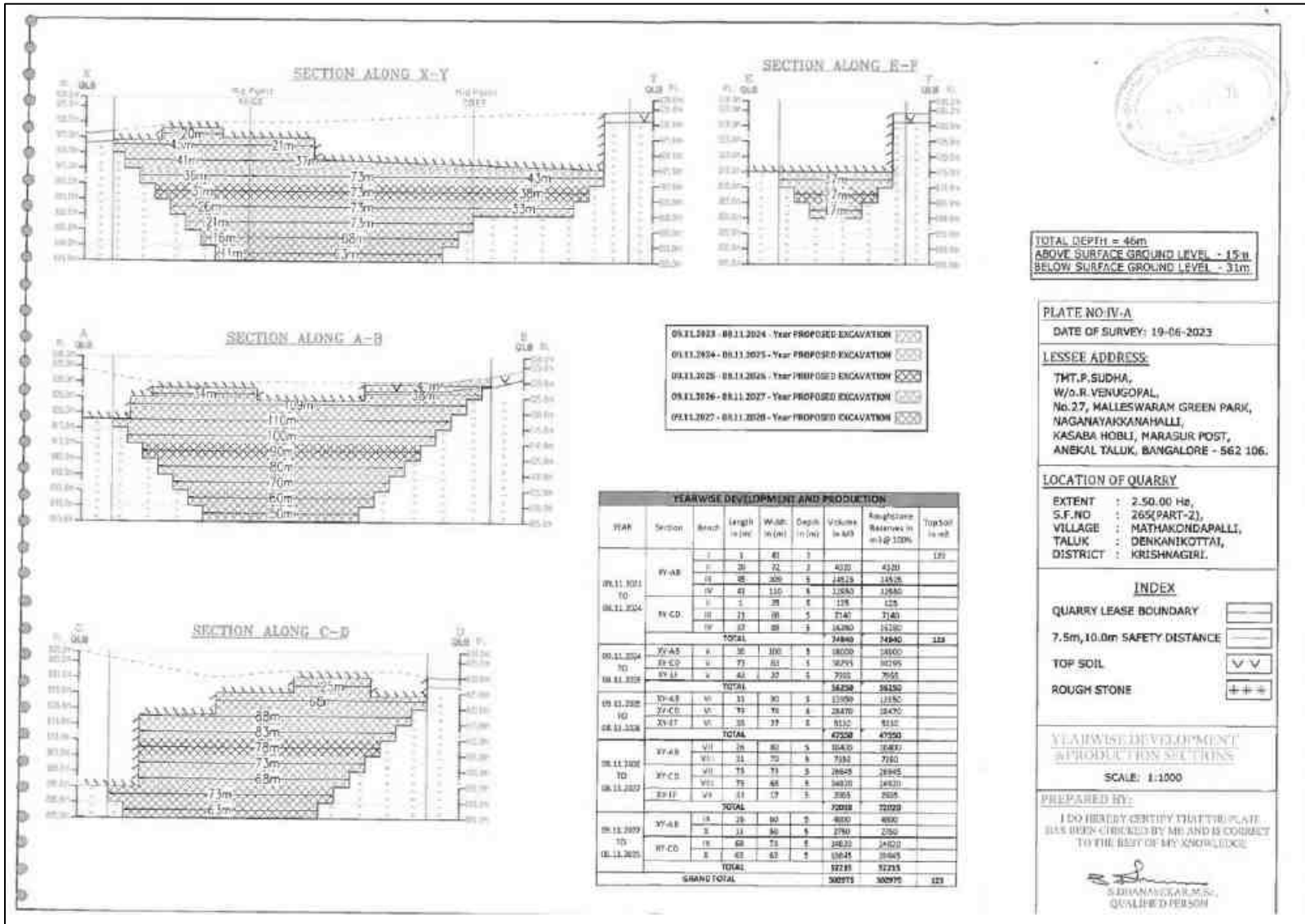


Figure 2.9 Year wise Production Plan.

<i>Project</i>	<i>Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha.</i>	<i>Draft EIA Report</i>
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2.7 TYPE OF MINING

The proposed project is an open cast mechanized mining with one 3.0 m bench for Topsoil followed by a 5.0m vertical bench with a bench width not less than the bench height. 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 are proposed to quarry at 5m bench height & 5m bench width with conventional Open cast mechanized method. The quarry operation involves Shallow jack hammer drilling, Blasting, Loading & transportation of Rough Stone to the nearby crusher units/road formation works. The production of Rough Stone in this quarry involves the following method which is typical for Rough Stone quarrying in contrast to other major mineral mining.

Splitting of rock mass of considerable volume from the parent rocks by jackhammer drilling and blasting by manually braking and loading the Rough Stone from pit head to the needy crushing units/civil works for the needy sectors.

2.7.2 Overburden

The entire lease area covers 3.0m of Topsoil and estimated quantity of Topsoil is 123 m³. Topsoil formation will be removed and transported to the needy users, only after obtaining permission and paying necessary seigniorage fees to the Government.

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
Loading Equipment	Jack Hammer (25.5 mm dia)
	Tractor mounted compressor

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Transportation	Tipper 2 Nos. of 10 M.T capacity
----------------	----------------------------------

2.7.4 *Blasting:*

2.7.4.1 **Blasting Pattern:**

The quarrying operation will be carried out by Mechanized Opencast method in conjunction with conventional method of mining using jack hammer drilling and blasting for shattering effect and loosen the rough stone.

2.7.4.2 **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° from the horizontal.
7	Quantity of rock broken	0.45 MT x 2.6 = 1.17 MT
8	Quantity of rock broken per day	362.8m ³
9	Control Blasting efficiency @90%	1.17 x 90% = 1.05 MT / hole
10	Charge per hole	140 gms of 25mm dia cartridge

2.7.4.3 **Types of Explosives to be used:**

A small diameter of 25 mm Slurry explosives 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.

2.7.4.4 **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 &

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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

Parameters	Details
Diameter of holes	32-36mm
Spacing	60 cms
Powder factor	6 to 7 tons/kg of explosives
Pattern of hole	Zig Zag
Charge/hole	D.Cord with water or 70gms of gun powder Gelatine.
Blasted at daytime	5 to 6 pm

2.7.4.5 Storage & Safety measures taken during blasting:

The project proponent “Tmt. P. Sudha” 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

S.No	Skill Level	Position	Nos.
1.	Skilled	Foreman	1
		Excavator Operator	2
		Co-Operator	2
		Jack Hammer operator	6
		Blaster/mate	1
2.	Semi – skilled	Semi-skilled labour	3

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		Watchman	1
3.	Unskilled	Musdoor	5
Total			21

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 2.0 KLD. Domestic water will be sourced from nearby Mattukur, Muthuganapalli village and other water will be sourced from nearby road tankers supply.

Table 2-14: Water Requirement

Purpose	Quantity	Sources
Drinking Water	1.0 KLD	Packaged Drinking water vendors available in Mattukur, Muthuganapalli village.
Green belt	0.5 KLD	Other domestic activities through road tankers supply
Dust suppression	0.5 KLD	From road tankers supply
Total	2.0 KLD	

2.9 PROJECT IMPLEMENTATION SCHEDULE

The implementation schedule of the proposed Mine Lease of Tmt. P. Sudha (2.50.00 ha) is as follows.

Table 2-15: Mining Schedule

MINING SCHEDULE					
Activity	Dec-23	Dec-24	Dec-25	Dec-26	Dec-27
Site Clearance					

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Excavation - Top Soil Removal/Overburden					
I Year Production – 74,940 Cum - Rough Stone & 123m ³ Topsoil					
II Year Production – 56,250 Cum - Rough Stone					
III Year Production – 47,550 Cum - Rough Stone					
IV Year Production – 72,020 Cum - Rough Stone					
V Year Production – 52,215 Cum - Rough Stone					

2.10 SOLID WASTE MANAGEMENT

Table 2-15: Solid Waste Management

S. No	Type	Quantity	Disposal Method
1	Organic	3.78 kg/day	Municipal bin including food waste
2	Inorganic	5.67 kg/day	TNPNB 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 46 m (15m AGL + 31 m BGL). 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.

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2.13 PROJECT COST

Proposed Financial Estimate / Budget for (EMP) Environment Management:	
Fixed Asset Cost:	
1. Land Cost	: Rs.1,26,99,990/- (Leased Tender Amount for Government Poramboke Land)
2. Labor Shed	: Rs. 1,30,000/-
3. Sanitary Facility	: Rs. 90,000/-
4. Fencing cost	: Rs. 1,00,000/-
Total	= Rs.1,30,19,990/-
Operational Cost:	
Machinery cost	= Rs.40,00,000/-
EMP Cost:	= Rs.86,76,000/-
Total Project Cost	= Rs.2,56,95,990/-

2.14 GREENBELT

1. The development of greenbelt in the peripheral buffer zone of the mine area.
2. The Green belt has been recommended as one of the major components of the Environmental Management plan, which will improve ecology, environment and quality of the surrounding area.
3. Local trees like Neem, Pungam, Naval etc., will be planted along the lease boundary and avenues as well as over non-active dumps at a rate of 250 trees per annum with interval 5m.
4. The rate of survival expected to be 80% in this area

Table. 2-17 Plantation/ Afforestation Program

Name of species proposed	Survival	No of species
Neem, Pungam, Poovarasu, Naval, Mantharai, Arasa Maram, Magizham, Vilvam, vaagai, Marudha maram, Thandri, Poovarasu, Quaker buttons, Thethankottai maram, Manjadi, Usil, Aathi, Panai, Uzha, Illuppai, Eachai, Vanni Maram	80%	1250
Total		1250

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3 Description of the Environment

3.1 GENERAL:

The method of mining for extracting rough stone quarry 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 vide Letter No. SEIAA-TN/F. No. 10386/ ToR-1615/2023 Dated: 06.11.2023. The baseline monitoring is carried out

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from Oct 2023 to Dec 2023 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 Oct 2023 to Dec 2023.

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	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)	7 locations	Once in 7 locations

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<i>Project Location</i>	<i>Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District</i>	

pH, Temperature, Turbidity, Magnesium Hardness, Total Alkalinity, Chloride, Sulphate, Fluoride, Nitrate, Sodium, Potassium, Salinity, Total nitrogen, Total Coliforms, Fecal Coliforms		
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

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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
1.	Project Location	S.F.Nos. 265 (Part-II) Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District.	Field Study
2.	Latitude & Longitude	Latitude: 12° 38' 11.49"N To 12° 38' 20.54"N Longitude: 77° 45' 12.26"E To 77° 45' 17.17"E	Topo Sheet
3.	Topo Sheet No.	57- H/14	Survey of India Toposheet
4.	Mine Lease Area	2.50.00 Ha	--
Demography in the study area (as per Census 2011)			
5.	Total Population	3,460	Census Survey of India
6.	Total Number of Households	862	
7.	Maximum Temperature (°C)	18	IMD
8.	Minimum Temperature (°C)	34	
9.	Ecological Sensitive Areas - Wetlands, watercourses or other waterbodies, coastal zone, biospheres,	Mathukur Kere lake-0.33 km-WSWest Bynakanahalli Kere-0.72 km-SSEast Uliveeranahally Kere lake-1.39 km-NNWest Donna Muniswamy Kere-1.75km-ESE Vasa Kere lake-3.05 km-ENEast	Google Earth/Field Study

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	mountains, forests	<p>Lake-3.52 km-NNWest</p> <p>Nagandahally Lake-4.07 km-NEast</p> <p>Devaganapalli Lake-4.52 km-ENEast</p> <p>Hosur Seasonal lake-5.08 km-ENEast</p> <p>Thandarai Lake-6.45 km-SSEast</p> <p>Mathigiri Lake-7.50 km-NNEast</p> <p>Nanjapuram Lake-8.48 km-NNEast</p> <p>Doddaubbanur Lake-8.57 km-WSWest</p> <p>Achettapalli Lake-8.90 km-ENEast</p> <p>Lake 2-9.52 km-NNEast</p> <p>Rangopanditha Agraharam Lake-10.50 km-NNEast</p> <p>Hosur lake-10.27 km-NEast</p> <p>Lake-11.02 km-NNEast</p> <p>Rama Naicken Lake-11.33 km-NNEast</p> <p>Gokul Nagar Lake-11.34 km-NNEast</p> <p>Thally Lake-11.38 km-WSWest</p> <p>Vannama Lake-11.41 km-SWest</p> <p>Nanjappan Kodigai Eri-11.54 km-ESEast</p> <p>NB Agraharam Lake-11.70 km-NNEast</p> <p>KS Agrahara Lake-12.21 km-NWest</p> <p>Chandramkudi Eri-12.56 km-NNEast</p> <p>Marsur Lake-13.18 km-NNWest</p> <p>Thorapalli Lake-13.16 km-ENEast</p> <p>Pattalamman lake-13.55 km-SSEast</p> <p>Bedarapalli Lake-14.23 km-NNE</p> <p>Dholasetti Cheruvu (Lake)-14.86 km-SEast</p> <p>Karapalli Lake-12.51 km-NNEast</p> <p>Mayasandra Lake (seasonal lake)-12.66 km-North</p>	
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		<p>TheppaKulam-12.96 km-NNEast Chennathur Lake-13.63 km-NNEast Alasanatham Lake-13.73 km-NNEast Kasavugatta Lake-14.08 km-NNEast Bathlapalli lake-14.33 km-NNEast Bedrapalli lake-14.25 km-NNEast Vasanth Nagar Lake-14.28 km-NNEast Tippalam Lake-14.51 km-NNEast Basthi Lake-14.61 km-NNEast Vagganadoddi Lake-14.77 km-SWest</p>																												
10.	Densely Populated area	Muthuganapalli Village - 3.21 Km -SE																												
11.	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	<table border="1"> <thead> <tr> <th>S. No</th> <th>Places</th> <th>Dist. From Project Site</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">Schools & Colleges</td> </tr> <tr> <td>1.</td> <td>Mathigiri Government School</td> <td>8.05 km, NNEast</td> </tr> <tr> <td>2.</td> <td>Government Union Primary School</td> <td>1.90 km, NNWest</td> </tr> <tr> <td>3.</td> <td>Devaganapalli Government School</td> <td>4.14 km, ESEast</td> </tr> <tr> <td>4.</td> <td>Government Polytechnic College, Kelamangalam</td> <td>13.73 km, ESEast</td> </tr> <tr> <td>5.</td> <td>ASB Government Junior College</td> <td>9.93 km, NNWest</td> </tr> <tr> <td>6.</td> <td>Government Arts and Science College, Hosur</td> <td>10.02 km, NNEast</td> </tr> <tr> <td colspan="3" style="text-align: center;">Hospitals</td> </tr> </tbody> </table>	S. No	Places	Dist. From Project Site	Schools & Colleges			1.	Mathigiri Government School	8.05 km, NNEast	2.	Government Union Primary School	1.90 km, NNWest	3.	Devaganapalli Government School	4.14 km, ESEast	4.	Government Polytechnic College, Kelamangalam	13.73 km, ESEast	5.	ASB Government Junior College	9.93 km, NNWest	6.	Government Arts and Science College, Hosur	10.02 km, NNEast	Hospitals			Google Earth/ Field Study
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		1.	Government hospital, Mathakondapalli	2.56 km, WSWest		
		2.	Lourdes Hospital	2.83 km, WSWest		
		3.	Government Primary Health-care Hospital	3.14 km, ENEast		
		TEMPLE				
		1.	Sri Muneshwara swamy temple	0.80 km, ESEast		
		2.	Sollepuram old church	1.58 km, SSWest		
		3.	Sk Rajibul	2.77 km, NNEast		

3.1.7 *Site Connectivity:*

The site is connected to MDR Road.

SH 17 B – Thally to Denkanikottai Road – 2.81 Km - W

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Figure 0.1: 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 the 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

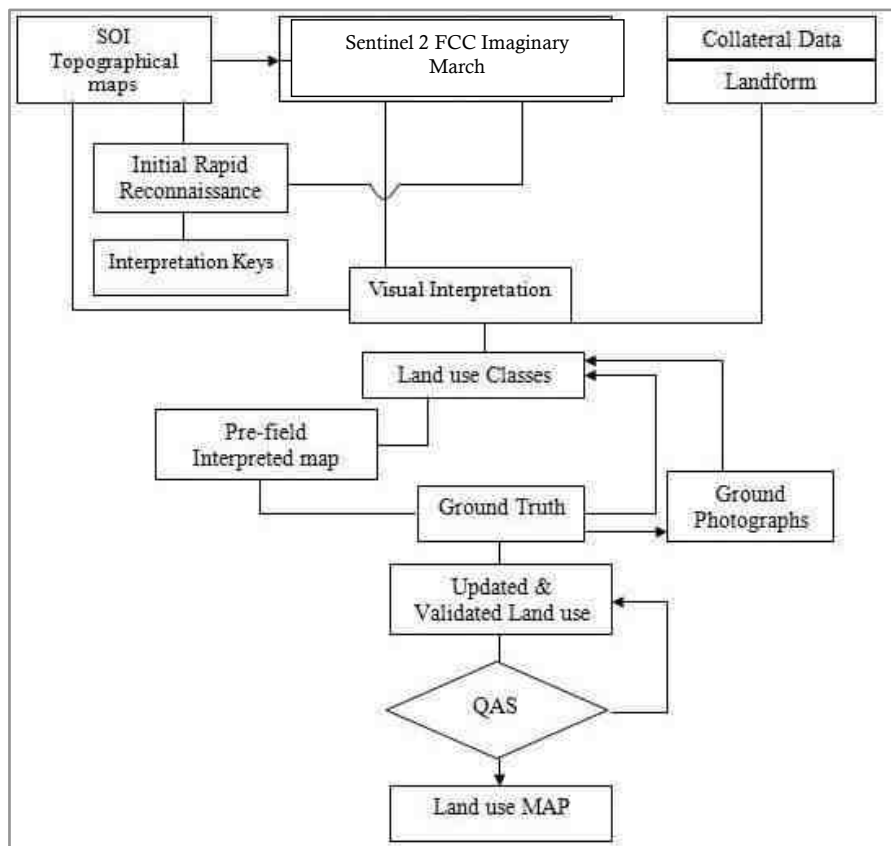
Information of land use and land cover is important for many planning and management activities concerning the surface of the earth (Agarwal and Garg, 2000). Land use refers to man's activities on land, which are directly related to land (Anderson et al., 1976). The land use and the land cover determine 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 proposed project area and the procedure adopted is as below.

Figure 0.2 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 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 proposed 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 proposed site) from the topo maps
2. In the present study the sentinel satellite image and SOI topo sheets of 57-H/14 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, wetlands, and water bodies.

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These are followed by level –II where built-up land is divided into towns/cities as well as 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 7 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

Humans 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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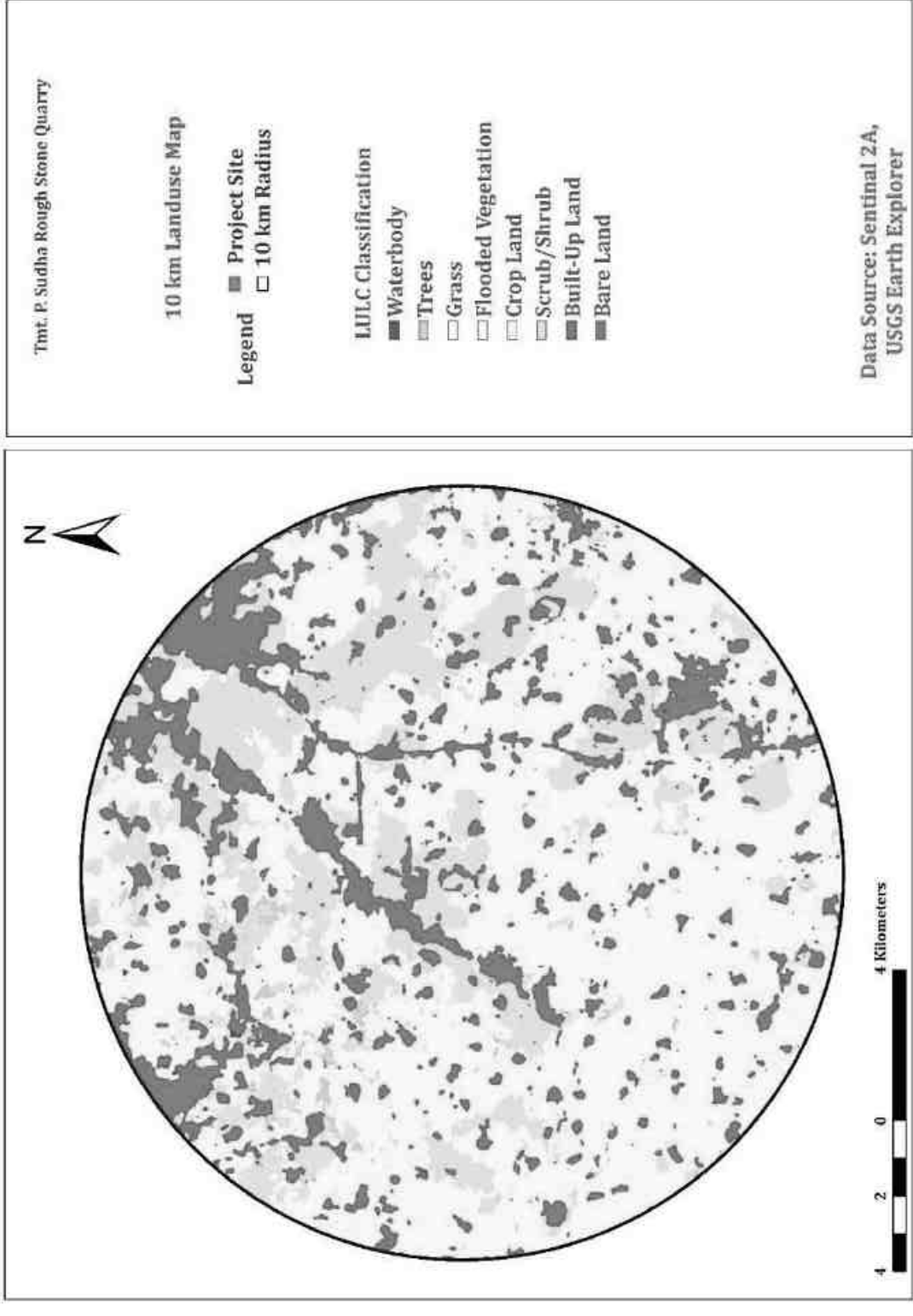


Figure 0.3 Land use classes around 10 km radius from the project site

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

Table 0-1 Land use pattern

Sl.No	Categories	Area in Sq.m	Percentage
1	Water Body	0.28	0.09
2	Trees	2.96	0.94
3	Grass	0.67	0.21
4	Flooded Vegetation	0.0058	0.00
5	Crops	197.1	62.43
6	Scrub/Shrub	59.99	19.00
7	Built-up Area	54.53	17.27

3.3 WATER ENVIRONMENT

3.3.1 *Contour & Drainage*

The altitude of the area is 950 m above MSL.

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 landforms 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 soil and black soils occur in Krishnagiri district.

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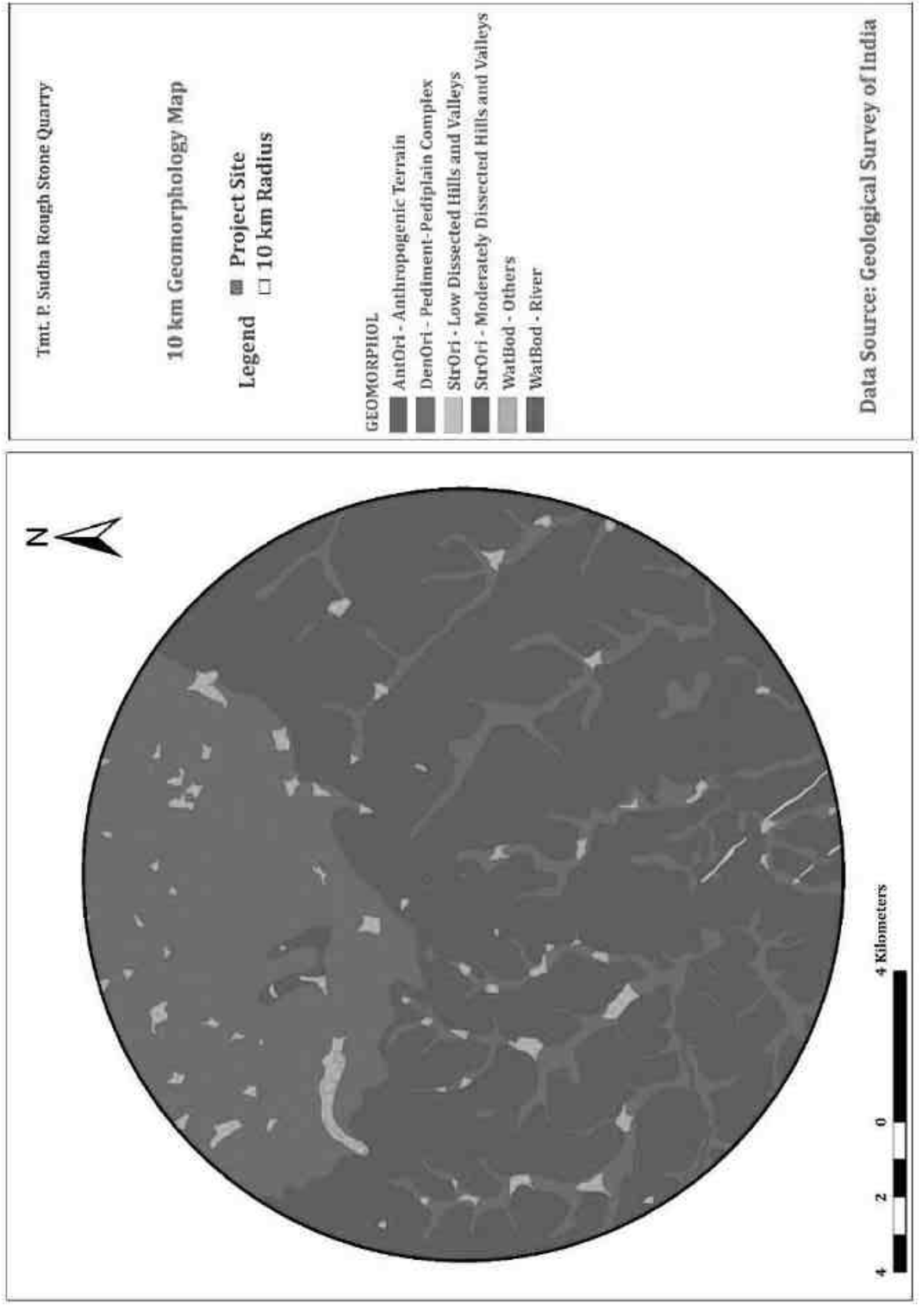


Figure 0.4 Geomorphology within 10km from the project site

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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 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.

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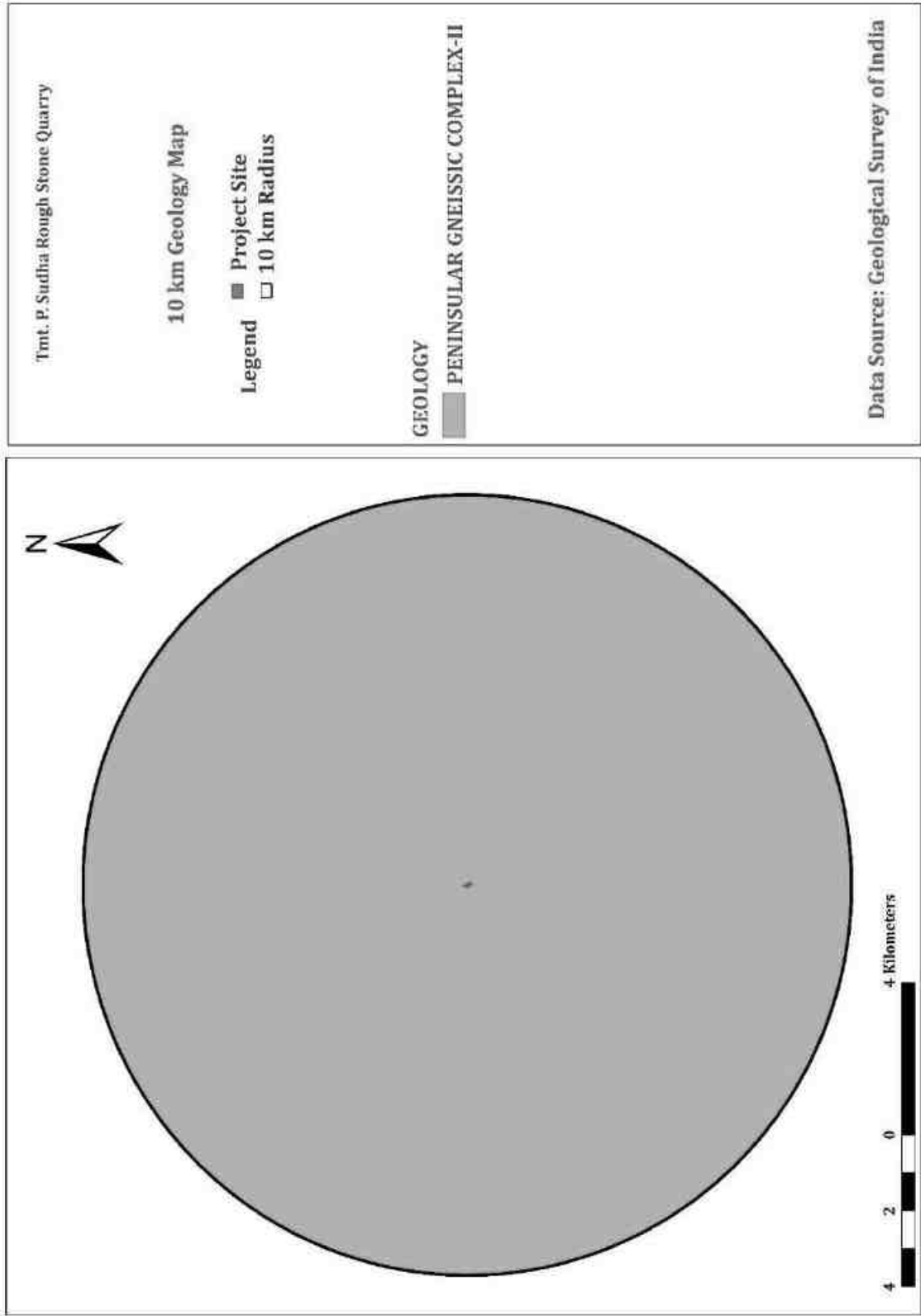


Figure 0.5 Geology within 10km from the project site

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3.3.4 Hydrogeology

Krishnagiri district is underlined 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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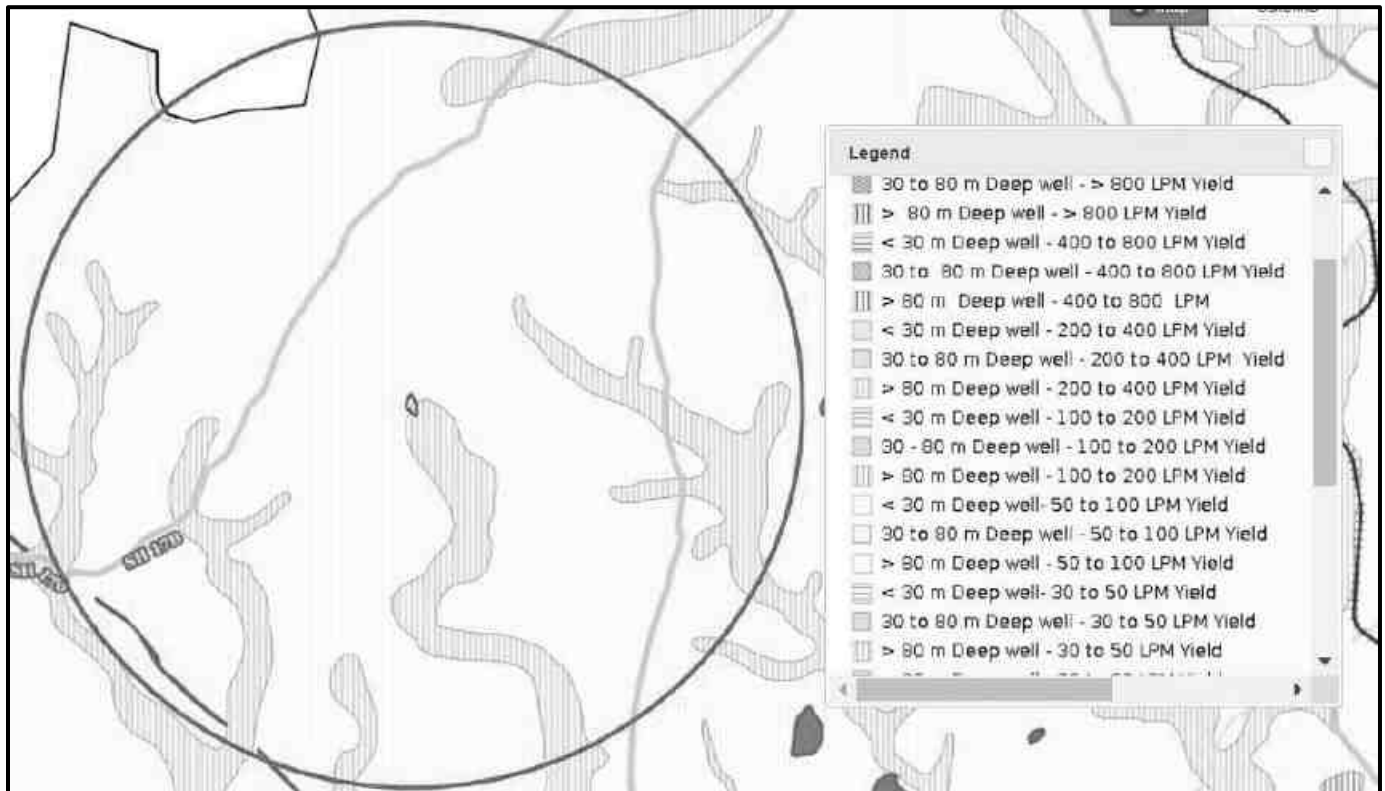


Figure 0.6 Ground water prospects within 5 km radius of the project site

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 0-2 Ground water Quality Analysis

Environmental Parameters: Ground water Quality Analysis	
Monitoring Period	Oct 2023 to Dec 2023
Design Criteria	Based on the Environmental settings in the study area
Monitoring Locations	Project site – GW 1 Govt. Hr. Sec School, Nagondapalli - GW 2 P.U.P School, Manjalagiri – GW 3 Govt. Hr. Sec School, Uliveeranahally – GW 4 Yogi Narayanan Asramam, Binnamangalam – GW 5

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	Jama Masjid, Kalakondapatty - GW 6 P.U.P School, Seerthimanatty - GW 7
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 five 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 0-3: 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 23rd Edn.2017-2540-C
6	Total Suspended Solids	IS:3025(P-17)-1984 RA:2012
7	Total Hardness as CaCO ₃	APHA 23rd Edn.2017-2340-C
8	Calcium Hardness as CaCO ₃	APHA 23rd Edn2017.3500 Ca-B
9	Magnesium Hardness as CaCO ₃	APHA 23rd Edn.2017-3500 Mg-B
10	Calcium as Ca	APHA 23rd Edn2017.3500 Ca-B
11	Magnesium as Mg	APHA 23rd Edn.2017-3500 Mg-B
12	Chloride as Cl	IS:3025(P -32)-1988 RA: 2014
13	Sulphate as SO ₄	APHA 23rd Edn.2017-4500 SO ₄ --E
14	Total Alkalinity as CaCO ₃	APHA 23nd Edn.2017-2320-B
15	Iron as Fe	IS:3025(P -53):2003 RA: 2014
16	Silica as SiO ₂	IS:3025(P -35)1988 RA: 2014
17	Fluoride as F	APHA 23rd Edn.2012-4500-F-D

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18	Nitrate as NO3	IS:3025(P -34):1988 RA: 2014
19	Potassium as K	IS:3025(P -45):1993 RA: 2014
20	Sodium as Na	IS:3025(P -45):1993 RA: 2014

Table 0-4 Ground water sampling results

S. No	Parameters	Units	GW 1	GW2	GW3	GW4	GW5	GW6	GW7
1	pH (at 25°C)	-	7.92	7.2	6.91	7.32	7.95	6.98	80
2	Electrical Conductivity	µS/cm	654	1050	990	1350	830	2040	7.41
3	Colour	Hazen Unit	3	3	4	3	3	5	1440
4	Turbidity	NTU	BQL (LO Q:1)	BQL(L OQ:1)	BQL(LO Q:1)	BQL(LO Q:1)	BQL(L OQ:1)	BQL(L OQ:1)	4
5	Total Dissolved Solids	mg/L	398	615	642	765	502	1222	BQL(L OQ:1)
6	Total Suspended Solids	mg/L	BQL (LO Q:2)	BQL(L OQ:2)	BQL(LO Q:2)	BQL(LO Q:2)	BQL(L OQ:2)	BQL(L OQ:2)	892
7	Total Hardness as CaCO ₃	mg/L	190	396	408	424	315	818	BQL(L OQ:2)
8	Calcium Hardness as CaCO ₃	mg/L	113	307	263	274	186	475	400
9	Magnesium Hardness as CaCO ₃	mg/L	76.7	88.8	145	149	129	343	259
10	Calcium as Ca	mg/L	45.3	123	105	110	74.4	190	141

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11	Magnesium as Mg	mg /L	18.6	21.6	35.3	36.3	31.4	83.5	104
12	Chloride as Cl	mg /L	58.8	83.9	102	162	84.7	294	34.3
13	Sulphate as SO ₄	mg /L	31.7	74.2	76	89.9	42.3	99.5	237
14	Total Alkalinity as CaCO ₃	mg /L	232	329	341	279	246	358	104
15	Iron as Fe	mg /L	BQL (LO Q:0.1)	BQL(L OQ:0.1)	BQL(LO Q:0.1)	BQL(LO Q:0.1)	BQL(L OQ:0.1)	0.12	232
16	Silica as SiO ₂	mg /L	13.7	19.2	12.9	27.6	15.4	41.7	BQL(L OQ:0.1)
17	Fluoride as F	mg /L	0.057	0.399	0.514	0.467	0.217	0.517	25.9
18	Nitrate as NO ₃	mg /L	33.5	17.6	12.4	21.4	26.9	31.2	0.299
19	Potassium as K	mg /L	4.9	9.52	10.2	11.1	1.1	22.3	19.5
20	Sodium as Na	mg /L	48.1	70.8	85.1	142	81.2	254	45.2

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): 3 Hazen unit.

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

Odour & Taste:

The water is odourless. The taste of the water is slightly salty which is due to the presence of hardness in water, which is attributed to the presence of calcium and magnesium in the water. As per the standards, the odour and taste should be agreeable.

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pH:

Value observed in the Project Site: 7.92

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: BQL (LOQ:1)

Acceptable and permissible limits: 1 NTU & 5 NTU respectively. The value of turbidity generally indicates the presence of phytoplankton and other sediments.

Total Dissolved Solids:

Value observed in the Project Site: 398 mg/L.

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

TDS is the presence of 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 topsoil is carried away by the water.

3.3.6.2 Chemical parameters of water:

The chemical parameters of the drinking water include,

Calcium:

Value observed in the Project Site: 45.3 mg/L.

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

Calcium is an 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: 76.7 mg/L.

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

The value of Magnesium in the project site is higher than the 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: 58.8 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: 232 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: 190 mg/L.

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

The value of Hardness in the project site is lesser than acceptable and Permissible. 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.

3.3.7 Surface Water Analysis

Surface water samples were taken from **Nagondapalli and Mathur kera** lake. The results are summarized below.

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Table 0-5 Surface Water Sample Results

S. No	Parameters	Units	Nagondapalli Lake	Mathukur kere / Lake
1	pH (at 25°C)	-	81	82
2	Electrical Conductivity	µS/cm	7.09	8.02
3	Colour	Hazen Unit	210	230
4	Turbidity	NTU	20	10
5	Total Dissolved Solids	mg/L	6.8	15.7
6	Total Suspended Solids	mg/L	125	158
7	Total Hardness as CaCO ₃	mg/L	10.2	32.5
8	Calcium Hardness as CaCO ₃	mg/L	80.8	80.8
9	Magnesium Hardness as CaCO ₃	mg/L	40.4	42.5
10	Calcium as Ca	mg/L	40.4	38.3
11	Magnesium as Mg	mg/L	16.2	17
12	Chloride as Cl	mg/L	9.82	9.33
13	Sulphate as SO ₄	mg/L	28.1	34.7
14	Total Alkalinity as CaCO ₃	mg/L	7.37	21.3
15	Iron as Fe	mg/L	48.4	50.5
16	Silica as SiO ₂	mg/L	0.52	0.21
17	Fluoride as F	mg/l	2.19	5.12
18	Nitrate as NO ₂	mg/l	0.232	0.19
19	Potassium as K	mg/L	2.96	5.14
20	Sodium as Na	mg/L	3.52	3.8
21	Total Kjeldahl Nitrogen as N	mg/L	24.4	29.1
22	Biochemical oxygen Demand @ 27c	mg/L	27.9	23.3
23	Chemical Oxygen Demand	mg/L	8.7	2.48
24	Dissolved Oxygen	mg/L	44.7	12.2

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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 both 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.

3.3.8 *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	:	July 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 the rainy season and between December to February winter prevails with very cold and misty.

ii) **Temperature**

The maximum temperature is around 36⁰C and minimum temperature is 28⁰C.

iii) **Rainfall:**

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).

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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: IMD

Metrological 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 Oct 2023 to Dec 2023.

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Windrose Plot for [VOBG] Bangalore
 Obs Between: 01 Oct 2022 05:30 AM - 31 Dec 2022 10:30 PM Asia/Kolkata

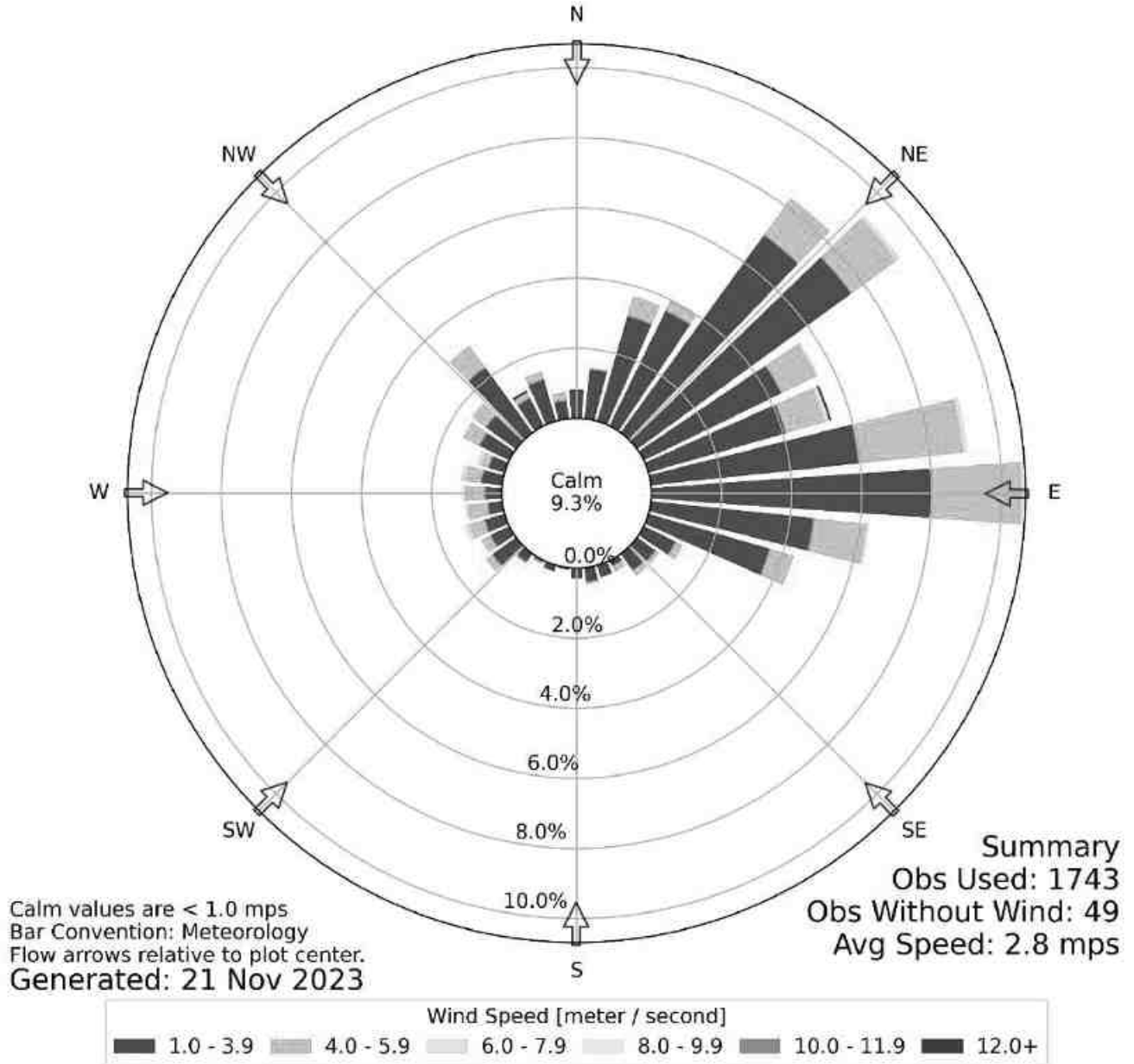


Figure 0.7 Wind rose.

3.3.9 Selection of Sampling Locations:

Four 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.

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3.4 AMBIENT AIR QUALITY

Table 0-6: Selection of Sampling Location

Environmental Parameters: Ambient Air			
Monitoring Period	Oct 2023 to Dec 2023		
Design Criteria	The monitoring stations are selected based on factors like topography/terrain, prevailing meteorological conditions like predominant wind direction (Oct 2023 to Dec 2023), 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 – AAQ 1	-	-
	Govt. Hr. Sec School, Nagondapalli - AAQ 2	3.65 km, E	E-Upwind
	P.U.P School, Manjalagiri - AAQ 3	8.80 km, E	E-Upwind
	Govt. Hr. Sec School, Uliveeranahally - AAQ 4	2.31 km, W	W-Downwind
	Yogi Narayanan Asramam, Binnamangalam - AAQ 5	6.85 km, W	W-Downwind
	Jama Masjid, Kalakondapatty - AAQ 6	2.88 km, N	N-Crosswind
	P.U.P School, Seerthimanatty - AAQ 7	6.82 km, S	S-Crosswind
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.		

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3.4.1 Ambient Air Quality: Results & Discussion

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

Table 0-7 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	98 percentiles	Min	Max	Avg	98 percentiles	Min	Max	Avg	98 percentiles	Min	Max	Avg	98 percentiles
AAQ 1	Project site	42	56	48.1	54.62	16	23	23	23	5	9	7.2	9	10	19	14.4	19
AAQ 2	Govt. Hr. Sec School, Nagondapalli	59	69	63.4	68.08	26	34	28.7	33.08	15	23	19.5	22.54	29	42	35.3	41.54
AAQ 3	P.U.P School, Manjalagiri	44	56	50.5	55.54	18	26	22.3	26	7	13	9	12.08	13	25	17.8	24.54

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AAQ 4	Govt. Hr. Sec School, Uliveeranahally	57	65	61.7	65	25	31	27.7	30.54	12	20	17.5	20	25	38	31	37.54
AAQ 5	Yogi Narayanan Asramam, Binnamangalam	54	66	59.8	65.08	24	34	28.6	33.08	10	17	12.8	17	19	33	24.2	32.54
AAQ 6	Jama Masjid, Kalakondapatty	54	64	63.08	63.08	21	32	26	31.08	8	17	11.7	16.54	14	29	20.6	28.08
AAQ 7	P.U.P School, Seerthimanatty	48	59	58.54	58.54	21	28	24.6	27.54	7	13	9.9	12.54	19	23	17.5	22.54
NAAQ Standards - Residential Area		100 (µg/m ³)				60(µg/m ³)				80 (µg/m ³)				80 (µg/m ³)			

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3.4.2 Interpretation of ambient air quality:

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

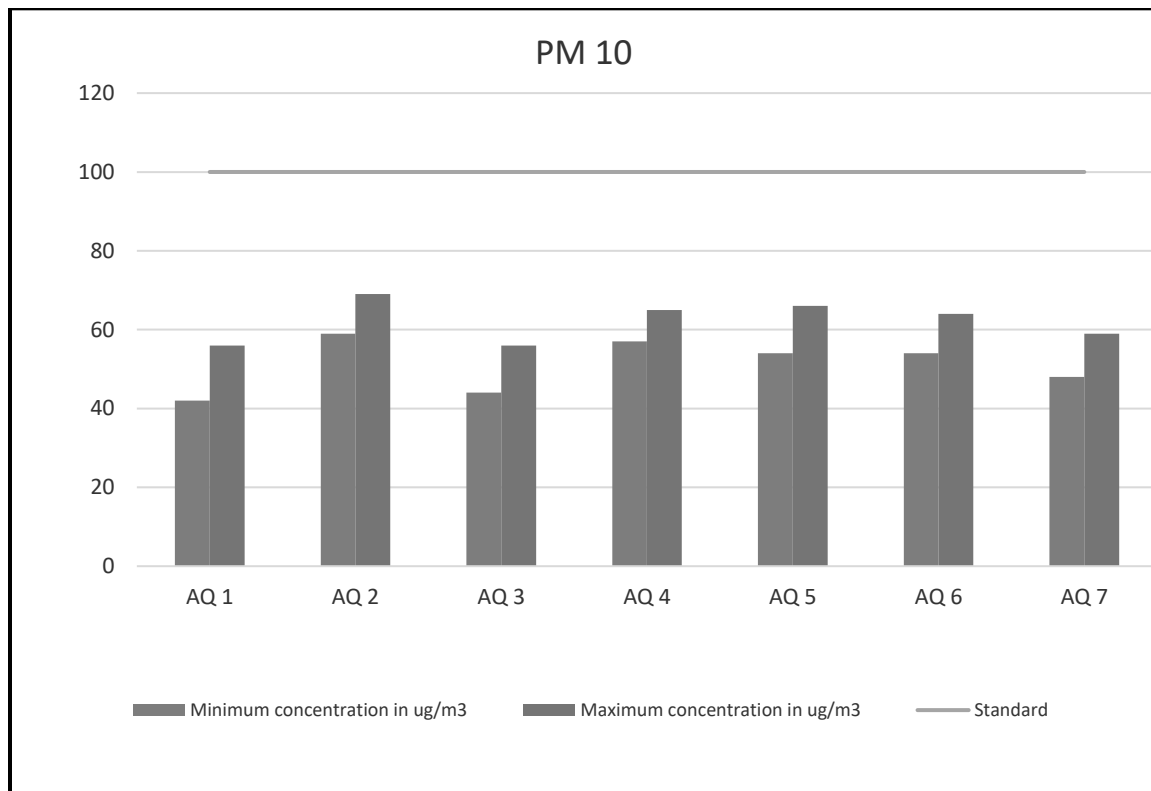
Observation:

The Maximum value of PM₁₀, PM_{2.5}, SO_x, NO_x obtained in different places are 69 µg/m³, 34 µg/m³, 23 µg/m³, 42 µg/m³ respectively.

Inference:

The monitoring results for PM₁₀, PM_{2.5}, Sox, NO_x was found to be high in Govt. Hr. Sec School, Nagondapalli. The observed values are all well within the Standards prescribed by NAAQ.

Figure 0.8 Concentration of PM₁₀ (µg/m³) in Study Area



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Figure 0.9 Concentration of PM2.5 ($\mu\text{g}/\text{m}^3$) in Study Area

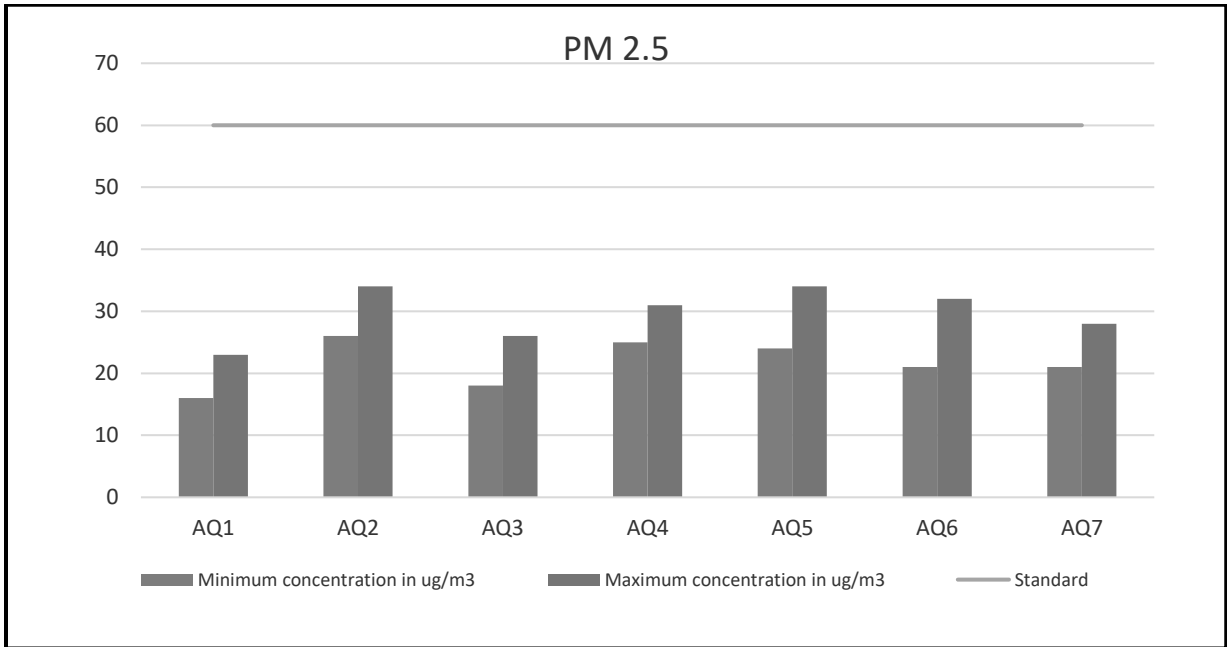
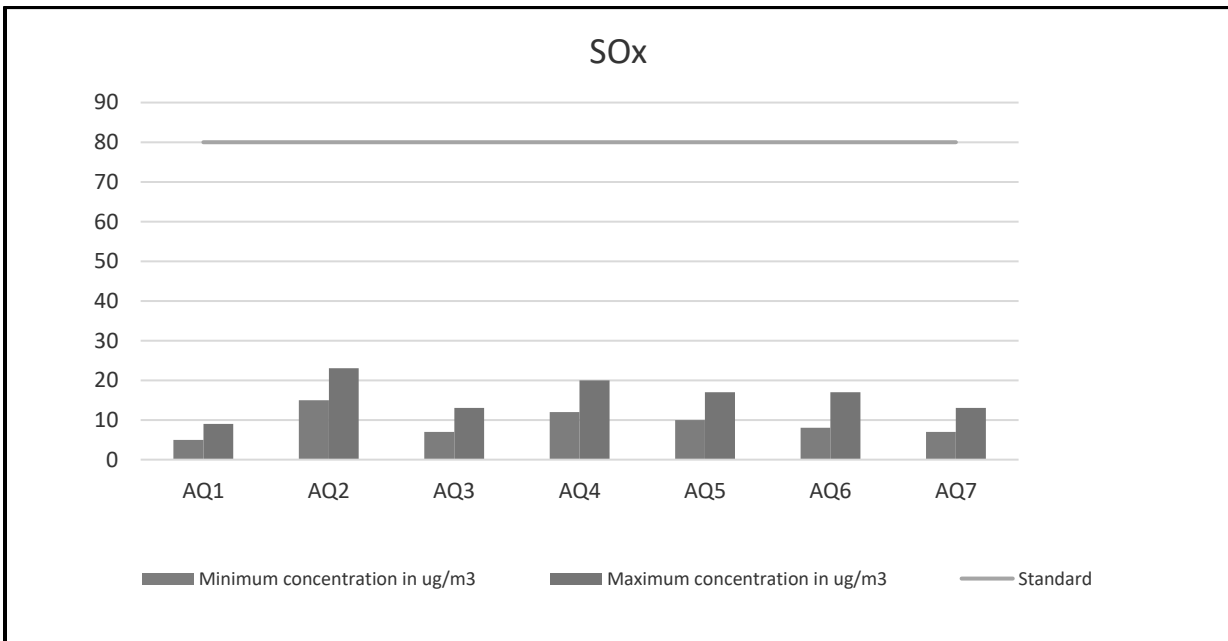
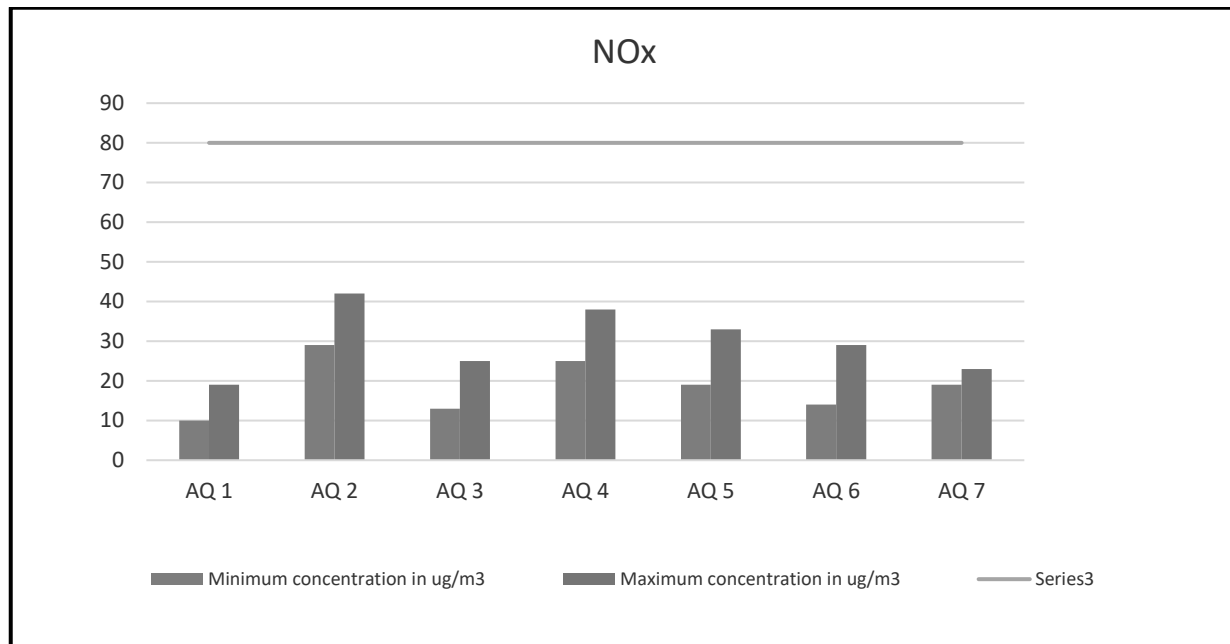


Figure 0.10 Concentration of SOx ($\mu\text{g}/\text{m}^3$) in Study Area



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Figure 0.11 Concentration of NO_x (µg/m³) in Study Area



3.5 NOISE ENVIRONMENT:

Table 0-8 Noise Analysis

Environmental Parameters: <i>Noise Analysis</i>	
Monitoring Period	Oct 2023 to Dec 2023
Design Criteria	Based on the Sensitivity of the area
Monitoring Locations	Project site – N 1 Govt. Hr. Sec School, Nagondapalli - N 2 P.U.P School, Manjalagiri - N 3 Govt. Hr. Sec School, Uliveeranahally - N 4 Yogi Narayanan Asramam, Binnamangalam - N 5 Jama Masjid, Kalakondapatty - N 6 P.U.P School, Seerthimanatty - N 7
Methodology	Noise level measurements were taken at the selected locations using noise level meter both during day and night time. Noise level

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	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

3.5.1 Day Noise Level (Leq day)

Table 0-9 Day Noise Level (Leq day)

Location	Leq day in dB(A)		
	Max	Min	Average
Project site – N 1	48	39	44
Govt. Hr. Sec School, Nagondapalli - N 2	57	46	52
P.U.P School, Manjalagiri - N 3	50	40	46
Govt. Hr. Sec School, Uliveeranahally - N 4	58	46	54
Yogi Narayanan Asramam, Binnamangalam - N 5	55	46	51
Jama Masjid, Kalakondapatty - N 6	53	44	49
P.U.P School, Seerthimanatty - N 7	52	42	48

3.5.2 Night Noise Level (Leq Night)

Table 0-10 Night Noise Level (Leq Night)

Location	Leq Night in dB(A)		
	Max	Min	Average
Project site – N 1	38	32	35
Govt. Hr. Sec School, Nagondapalli - N 2	47	39	43
P.U.P School, Manjalagiri - N 3	40	32	36
Govt. Hr. Sec School, Uliveeranahally - N 4	47	36	40
Yogi Narayanan Asramam, Binnamangalam - N 5	45	38	41
Jama Masjid, Kalakondapatty - N 6	42	32	37

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P.U.P School, Seerthimanatty - N 7	43	35	39
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Observation:

The maximum Day noise and Night noise were found to be 58 dB(A) and 47 dB(A) respectively in Govt School, Nagondapalli. The minimum Day Noise and Night noise were 39dB(A) and 32 dB(A) respectively which was observed in project site. 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 0.12 Soil Erosion pattern within 5 km radius of the project site

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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 proposed project. The sampling locations have been identified with the following objectives:

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

Table 0-11 Soil Quality Analysis

Environmental Parameters: <i>Soil Quality Analysis</i>	
Monitoring Period	Oct 2023 to Dec 2023
Design Criteria	Based on the environmental settings of the study area
Monitoring Locations	Project site – S 1 Govt. Hr. Sec School, Nagondapalli - S 2 P.U.P School, Manjalagiri - S 3 Govt. Hr. Sec School, Uliveeranahally - S 4 Yogi Narayanan Asramam, Binnamangalam - S 5 Jama Masjid, Kalakondapatty - S 6 P.U.P School, Seerthimanatty - S 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.

Table 0-12 Soil Quality Analysis

Parameters	Unit	SQ 1	SQ 2	SQ 3	SQ 4	SQ 5	SQ 6	SQ 7
pH	-	67	71	72	68	69	70	73

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Electrical Conductivity	ms/cm	7.59	7.2	7.49	8.42	7.08	7.35	7.23
Water holding Capacity	ml/L	0.12	0.36	0.23	0.24	0.18	0.15	0.07
Chloride	mg/Kg	26.66	4.4	5.2	4.1	5.36	5.1	3.11
Calcium	mg/Kg	15.1	181	69.4	48.8	11.1	83.4	122
Sodium	mg/Kg	47.8	77.6	42.1	58.5	68.6	42.3	44.1
Potassium	mg/Kg	352	562	525	526	415	459	336
Organic matter	%	364	594	538	538	436	475	344
Magnesium	mg/Kg	0.31	0.34	0.23	1.39	0.26	1.09	0.08
Sulphate	mg/Kg	20	48.6	30.5	28.4	19.7	19.9	23.6
CEC	meq/100g	5.28	63.4	36.1	36.7	17.9	26.8	11.5
Carbonate	mg/Kg	9.5	15.1	14.8	10.4	11.8	12.4	10.2
Bi-Carbonate	mg/Kg	NIL	NIL	NIL	NIL	NIL	NIL	NIL
TKN	%	55.6	136	159	183	29.2	76.4	48.8
Bulk density	g/cm ³	0.09	0.11	0.16	0.08	0.19	0.26	0.13
Phosphorous	mg/Kg	1.27	1.23	1.18	1.26	1.16	1.3	1.22

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Sand	%	191	155	138	205	116	152	131
Clay	%	61.1	68.8	75	56.2	69.2	57.1	61.5
Silt	%	5.55	12.5	6.25	6.25	7.69	14.3	7.69
SAR	meq/ Kg	33.3	18.7	18.8	37.5	23.1	28.6	30.8
silicon	%	10.79	12.33	15.05	14.12	11.37	14.59	10.16

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 1.16 to 1.30 meq/100g which indicates favorable physical condition for plant growth. The water holding capacity was found in the range of 3.11 ml/1 to 26.66 ml/1.

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 7.08 to 8.42, 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 0.08 to 1.39 %, 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 2km 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.

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- 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.
 - 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, a random field survey was done. Field survey was conducted around a 2 km radius from the project site and five 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

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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 parts 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.

Table 0-13 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

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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 0-14 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	5.07	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					

Table 0-15 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
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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	Stachytarpheurticifolia	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 hysterophorous	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

Table 0-16 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

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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 types 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 0-17 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
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

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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
Total		110			-3.02215005

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
Woodfordiafruiticosa	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	Vishapoondur	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

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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
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.

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3.7.6 *Floral study in the Buffer Zone:*

Economically important Flora of the study area

Agricultural crops: Paddy, Maize, Ragi, Banana, Sugarcane, Cotton, Tamarind, Coconut, Mango, Groundnut, Vegetables and Flowers by the local people.

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), *Aegle marmelos* (golden apple), *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).

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Study in the core zone:

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

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 0-18 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

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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
Phragmaticola aedon	Thick billed warbler	IV	Least concern
Pericrocotus cinnamomeus	Small Minivet	IV	Least concern
Eudynamys scolopaceus	Koel	IV	Least concern
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 Cukoo	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

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The population, Household, Sex ratio, Literacy rate, SC, ST details for all the villages in the study area is listed below:

Table 0-19: Demography Survey Study

Source: Census of India, 2011

S. No	Villages	Household	Population	Sex Ratio		Literacy Rate		SC	ST
				Male	Female	Male	Female		
1	Belagundapalli	1018	4,092	2073	2019	86.25	69.54	686	0
2	Bevunutham	823	3,768	1985	1783	66.27	49.71	300	3
3	Binnamangalam	590	2,463	1246	1217	72.41	56.52	641	0
4	Bithireddi	693	3,076	1585	1491	64.41	49.62	419	96
5	Bodichipalli	1176	4,982	2549	2433	71.91	56.48	432	0
6	Chudasandiram	393	1,727	882	845	59.37	45.64	187	487
7	Daravendram	493	2,140	1095	1045	67.2	50.05	435	10
8	Devaganapalli	591	2,937	1516	1421	81.17	69.03	756	7
9	Doddamanchi	1225	5,947	3058	2889	34.52	20.25	146	1183
10	Erudukotta	1190	5,563	2914	2649	61.34	45.96	821	29
11	Hanumanthapuram	1125	5,241	2712	2529	67.26	49.73	652	739
12	Karukkanahalli	1369	6,006	3103	2903	68.38	50.16	414	74
13	Kottaiyur	1493	6,340	3356	2984	55.27	33.79	542	372
14	Natrapalayam	2258	9,687	5184	4503	65.54	49.91	2151	312
15	Pillari Agraharam	1607	6,718	3504	3214	69.62	47.9	842	592
16	Rayakotta	2043	8,593	4282	4311	82.36	69.23	466	15
17	Thaggatti	1116	5,153	2692	2461	49.31	35.15	856	81
18	Thalli	1510	6,915	3438	3477	76.1	65.81	1522	8

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

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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.



Figure 0.14: Site Connectivity

Table 0-20: No. of Vehicles per Day

S. No	Vehicles Distribution	Number of Vehicles Distribution/Day	Passenger Car Unit (PCU)	Total Number of Vehicle in PCU
		MDR-422	-	MDR-422
1	Cars	813	1	813
2	Buses	294	3	882
3	Trucks	325	3	975
4	Two wheelers	967	0.5	483.5

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5	Three wheelers	409	1.5	613.5
Total		2808	-	3767

Table 0-21: Existing Traffic Scenario and LOS

Road	V (Volume in PCU/hr)	C (Capacity in PCU/hr)	Existing V/C Ratio	LOS
MDR-422	3767/24=157	413	0.38	B

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

V/C	LOS	Performance
0.0-0.2	A	Excellent
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 proposed 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</i>	<p>The proposed 2.50.00 Ha mine located in Mathakondapalli Village having 3,02,975 m³ of Rough Stone & 123 m³ of Topsoil respectively. The quarry operation is proposed to carry out with conventional open cast 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> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="5" style="text-align: center;">ULTIMATE PIT DIMENSION</th> </tr> <tr> <th style="text-align: center;">Section</th> <th style="text-align: center;">Bench</th> <th style="text-align: center;">L (m)</th> <th style="text-align: center;">W (m)</th> <th style="text-align: center;">D (m)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">PIT</td> <td style="text-align: center;">I</td> <td style="text-align: center;">169.0 m</td> <td style="text-align: center;">89.0 m</td> <td style="text-align: center;">46.0</td> </tr> </tbody> </table> <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>	ULTIMATE PIT DIMENSION					Section	Bench	L (m)	W (m)	D (m)	PIT	I	169.0 m	89.0 m	46.0	<p>The proposed 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 1250 Nos of native species (Neem, Magizham, Tamarind, Elandhai and Vilvam) 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 entire lease area is covered 3.0m of Topsoil and estimated quantity of Topsoil is 123 m³. Topsoil formation will be removed and Used in Geen Belt areas.</p>
ULTIMATE PIT DIMENSION																	
Section	Bench	L (m)	W (m)	D (m)													
PIT	I	169.0 m	89.0 m	46.0													

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	<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 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 proposed mining activity is carried out in hilly terrain where The altitude of the area is 950 m above MSL.</p> <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>Chemicals consisting of nitrate used for blasting may pollute the surface run off.</p>	<p>The water table will not be intersected during mining, as the ultimate depth is limited upto 46.0m (15m AGL + 31 BGL), 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 90m 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 be used for domestic purposes (other than drinking) after proper treatment.</p> <p>Further, the run-off water will be stored in sumps and after proper treatment; water will be</p>

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	<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>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></p> <p>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. 2 No of Tipper will be used for loading and unloading, 1 No of Excavator (1.20 m³ bucket capacity (with rock breaker attachment) will be used for excavation of the mineral which contributes to the generation of fugitive dust. In addition, blasting will</p>	<p><i>Mitigation Measures during Operation Phase</i></p> <p>It is proposed to plant 1250 Nos of native species (40% inside lease area & 60% outside lease area) 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</p>

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	<p>be done using explosives leading to the generation of dust.</p> <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>mineral, so as to reach the nearest paved roads (an approach road) by shortest route connecting to MDR.</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 20km/hr to avoid generation of dust.</p> <p>The trucks will be covered by tarpaulin.</p> <p>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 in this report. A general description of how each source type was treated is presented below.

The emission Sources from the proposed operation are

Point Sources:

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

1. Hydraulic excavator –1.2 Cum Bucket Capacity (with Rock Breaker Attachment)
2. Jack Hammer 25.5 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 Oct 2023 to Dec 2023 emissions were estimated. Emissions due to haul road and general plant traffic on the unpaved road network were modelled as

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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:

- 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 Oct to Dec 2023 are superimposed on the maximum baseline concentrations obtained during the study period to estimate the post project scenario, which would prevail at the

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post operational phase. The overall scenario with predicted concentrations over the maximum baseline concentrations is shown in the following table along with isopleths.

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) Jose I. Huertas & Dumar A. Camacho & Maria E. Huertas, Standardized emissions inventory methodology for open-pit mining areas, Environmental Science Pollution Research, 2012.	
	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 collide 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 1250 Nos. of native species (Neem, Mandharai, Athi, Tamarind, Ashoka, Casuarinas and Villam) to reduce the

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		<p>impact of noise in the study area. The development of green belts around the periphery of the mine will be implemented to attenuate noise.</p> <ul style="list-style-type: none"> • The trucks will be diverted on two roads viz. MDR and a District Road to avoid traffic congestion. • Health check-up camps will be organized once in six month. • 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 proposed 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.

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Planting of trees	Development of afforestation in the mine lease area will have a positive impact as the land was initially a barren.	10 m safety distance will be provided all along the boundary of the mine lease area and safety. Around 0.75.0 Ha of land is utilized for greenbelt development (1250 Nos – 5 years). This will attract avifauna thus enhancing the existing ecological environment.
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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 proposed project is a Government Poramboke 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 Mattukur, Muthuganapalli village which is 0.77 km from 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 will be limited to 20km/hr to avoid any accidents.

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	movement of the vehicles may affect/injure the animals	
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 proposed project will help in natural resource augmentation & Community resource development.	As a part of CER i.e., 5.0 Lakhs will be allocated. Government High School, Venkatesapuram Provision of School Building Repair and Painting for entire mining period Cabinet for Headmaster room R.O Water Facility Smart Classroom facility Environmental books for library (in Tamil language), Greenbelt facilities and Basic amenities such as safe drinking water, furniture.

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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 Labours	Labours will be checked for health condition before employing them in mining activity	All the labours will be checked and screened for health before employing them. After employing them, periodical medical check-ups 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 worked 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 has been approved by the Deputy Director, Department of Mining and Geology, Krishnagiri District prior to submission of the Form-1 and PFR.

ToR issued by the SEIAA-TN vide Letter No. SEIAA-TN/F. No. 10386/ ToR-1615/2023 Dated: 06.11.2023. 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 proposed 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.

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 mechanized Involving drilling and blasting are preferred. Benefits: Material is hard so to make it

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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 Venkatesapuram 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 Mattukur village which is 0.77 km from site.

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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, a 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	7 locations	24 hourly twice a week 4 hourly. Twice a week, One non monsoon season 8 hourly, twice a week	1. Project site 2. Govt. Hr. Sec School, Nagondapalli

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NO _x		24 hourly, twice a week	<ul style="list-style-type: none"> 3. P.U.P School, Manjalagiri 4. Govt. Hr. Sec School, Uliveeranahally 5. Yogi Narayanan Asramam, Binnamangalam 6. Jama Masjid, Kalakondapatty 7. P.U.P School, Seerthimanatty
Noise	7 locations	24 hourly Once in 7 locations	<ul style="list-style-type: none"> 1. Project site 2. Govt. Hr. Sec School, Nagondapalli 3. P.U.P School, Manjalagiri 4. Govt. Hr. Sec School, Uliveeranahally 5. Yogi Narayanan Asramam, Binnamangalam 6. Jama Masjid, Kalakondapatty 7. P.U.P School, Seerthimanatty
Water (Ground water)	7 locations	Once in 7 locations	<ul style="list-style-type: none"> 1. Project site

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<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 			<p>2. Govt. Hr. Sec School, Nagondapalli</p> <p>3. P.U.P School, Manjalagiri</p> <p>4. Govt. Hr. Sec School, Uliveeranahally</p> <p>5. Yogi Narayanan Asramam, Binnamangalam</p> <p>6. Jama Masjid, Kalakondapatty</p> <p>7. P.U.P School, Seerthimanatty</p>
<p>Water (surface water)</p> <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 	<p>Sample from nearby lakes/river</p>	<p>One time Sampling</p>	<p>1. Mathukur kere / Lake</p> <p>2. Nagondapalli Lake</p>

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Soil (Organic matter, Texture, pH, Electrical Conductivity, Permeability, Water holding capacity, Porosity)	7 locations	Once in 7 locations	3. Project site 4. Govt. Hr. Sec School, Nagondapalli 5. P.U.P School, Manjalagiri 6. Govt. Hr. Sec School, Uliveeranahally 7. Yogi Narayanan Asramam, Binnamangalam 8. Jama Masjid, Kalakondapatty 9. P.U.P School, Seerthimanatty
Ecology and biodiversity Study	Study area covering 5 km radius	One time Sampling	
Socio- Economic study (Population, Literacy Level, employment, Infrastructure like school, hospitals & commercial establishments)	Villages around 5 km radius	One time Sampling	

Table 6-2: Monitoring Schedule during Mining

S. No.	Attributes	Parameters	Frequency	Location
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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 proposed mining project falls under 1(a), Category B1 – Cluster Mining (includes **Existing Quarries** –

1. Tmt. P. Sudha – 2.50.0 Ha
2. Thiru. H. R. Prasath – 2.50.0 Ha
3. Thiru. C. Srinivasamurthy – 1.60.0 Ha

Abandoned / Old quarries:

1. Thiru. S. Krishna Reddy – 1.21.0 Ha

Proposed Quarries:-

1. Thiru. Vinay – 1.46.0 Ha

The Total extent of the Existing / Proposed quarries are 8.06.0 Ha.

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, damage 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 by Opencast Semi Mechanized method 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:

Diameter of Hole	32-36mm
Spacing between holes	60 cms
Depth	1 to 1.5 m
Pattern of hole	Zigzag
Inclination of holes	70° from horizontal
Use of delay detonators	25 milli-second delays
Detonating fuse	“Detonating” Cord

a. Types of explosives to be used:

Small dia of 25mm Slurry explosives 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.

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

The quarry is situated more than 0.77 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	=	32-36mm
Powder factor	=	6 to 7 Tons/Kg of explosives
Depth	=	1 to 1.5 m

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Charge/Hole = D.Cord with water or 70gms of gun powder or Gelatine.

Blasted at day time = 5 to 6 PM

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 (with Rock Breaker attachment), Jack Hammers (25.5 mm Dia) of 4 Nos.
- Loading Equipment – Excavator of 1.2 Cum Bucket Capacity (with Bucket attachment)
- Transportation (includes within the mine and mine to destination) – Tipper 2 Nos. 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.

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7.1.4 General Precautionary measures for the Risk involved in the proposed 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;
- 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 (16 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

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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. 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 center 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 Proposed 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.

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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)

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

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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
- 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 proposed 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 proposed Mine lease area is Government Poramboke 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 proposed 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 500 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 proposed 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 follows:

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Developing Sports facilities and providing Smart board, Library, Environmental books for library (in Tamil language), Greenbelt facilities Basic amenities such as safe drinking water, Hygienic Toilet facilities & Furniture to Government High School, Venkatesapuram.

8.3 PROJECT COST / INVESTMENT DETAILS

Proposed Financial Estimate / Budget for (EMP) Environment Management	:	
Fixed Asset Cost:		
1. Land Cost	:	Rs.1,26,99,990/- (Leased Tender Amount for Government Poramboke Land)
2. Labor Shed	:	Rs. 1,30,000/-
3. Sanitary Facility	:	Rs. 90,000/-
4. Fencing cost	:	Rs. 1,00,000/-
Total	=	Rs.1,30,19,990/-
Operational Cost:		
Machinery cost	=	Rs.40,00,000/-
EMP Cost:	=	Rs.86,76,000/-
Total Project Cost	=	Rs.2,56,95,990/-

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<i>Project Proponent</i>	<i>Tmt. P. Sudha</i>	
<i>Project Location</i>	<i>Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District</i>	

9 Environmental Management Plan

9.1 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.

9.2 SUBSIDENCE

Mining will be carried out by opencast 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 average 5m. 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.

9.3 MINE DRAINAGE

9.3.1 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.,

9.3.2 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

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blockage due to silting or accumulation of loose materials. The drains will also be checked for any damage in lining / stone pitching, etc.

9.3.3 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, Tmt. P. Sudha will work in association with M/s. Ecotech Labs Pvt Ltd.

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Table 9-1: 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 run-off.
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

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				<ul style="list-style-type: none"> ✓ By complying with the safety procedures, norms and guidelines (as applicable) as outlined in the National Building Code of India, Bureau of Indian Standards. ✓ 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. Firefighting 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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Table 9-2: Budgetary Allocation for EMP during Mining

Year	Description	Cost (Rs)
5 Years	Display board in site; Monitoring-Air, Water, Noise; Dust Supression -Water sprinkling by own water tankers; Vehicle Tyres Wash; Green Belt Development; Road Development & Management; Occupational Health And Safety; Solid Waste Management; Strom Water; Renewable Energy, CCTV Installation, Salary for mines manager and blaster	86,76,000/-

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10 Summary & Conclusion

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

10.1 INTRODUCTION

Tmt. P. Sudha site is a cluster of six mining projects. The mine lease area is 2.50.00 Ha of Rough Stone Quarry located at S.F.Nos. 265 (Part-II) of Mathakondapalli Village, Denkanikottai Taluk in Krishnagiri District.

10.2 PROJECT OVERVIEW

Table 10-1: Project Overview

S. No.	Description	Details
1	Project Name	Rough Stone Quarry - 2.50.00 ha
2	Proponent	Tmt. P. Sudha
3	Mining Lease Area Extent	2.50.00 Ha
4	Location	S.F.Nos. 265 (Part-II) Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District.
5	Latitude	12° 38' 11.49"N To 12° 38' 20.54"N
6	Longitude	77° 45' 12.26"E To 77° 45' 17.17"E
7	Topography	Hilly terrain
8	Site Elevation above MSL	The altitude of the area is 950 m above MSL.
9	Topo sheet No.	57- H/14
10	Minerals of Mine	Rough Stone Quarry
11	Proposed production of Mine	3,02,975 m ³ of Rough Stone and 123 m ³ of Topsoil
12	Ultimate depth of Mining	46 m (15 m AGL + 31 m BGL)
13	Method of Mining	Open cast, mechanized mining
14	Water demand	2.0 KLD
15	Source of water	Water will be supplied through tankers supply

<i>Project</i>	<i>Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha</i>	<i>Draft EIA Report</i>
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16	Manpower	21 Nos.
17	Mining Lease	Proceedings Letter received from The District Collector, Krishnagiri District vide letter RC.223/2018/Mines, Dated: 09.11.2018.
18	Mining Plan Approval	1 st Scheme of Mining Plan was approved by the Deputy Director, Dept. of Geology & Mining, Krishnagiri vide letter Rc.No.1393/2023/Mines,Dated:25.08.2023.
19	Production details	Geological resources: 6,89,210 m ³ Proposed year wise recoverable reserves: 3,02,975 m ³ of Rough Stone
20	Boundary Fencing	10 m barrier all along the boundary Fencing will be provided.
21	Disposal of overburden	The entire lease area covers 3.0m of Topsoil and estimated quantity of Topsoil is 123 m ³ . Topsoil formation will be removed and Used for Green belt Purposes.
22	Ground water	The quarry operation is proposed up to a depth of 46m (15m AGL + 31m BGL). The water table is below 90m from ground level which is observed from the nearby open wells and bore wells. Hence the ground water will not be affected in any manner due to the quarrying operation during the entire lease period.
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 Mattukur, Muthuganapalli village which is 0.77 Km – South of the proposed project site.

10.3 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.

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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.

Since Krishnagiri, a city known for its small-scale industries and also the soil in the area near project site is not very fertile making it unsuitable for carrying out agricultural activities. The topography near the lease area is barren dry lands showing only less chance for crop growth and development of vegetation. In addition to that, geological resources of rough stone is abundant in the lease area which is evident from the mine activities carried out in the nearby sites.

Table 10-2: 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 as 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.	No waste water will be generated from the mining activity of minor minerals as the project only involves lifting of over

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	leading to ground water. The mining activity may affect the ground water table	burden from mine site. The wastewater generated from the domestic activity will be disposed off safely through the proposed septic tank. Mining will not intersect ground water table. Hence the water table will not be impacted due to the proposed 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	Periodical monitoring of noise will be done. No other equipments except the transportation vehicles and Excavator (as & when required) for loading will be allowed at site. Noise generated by these equipments shall be intermittent and does not cause much adverse impact. Plantation will be carried out along approach roads. The plantation minimizes propagation of noise and also arrest dust.
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 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.

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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>
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<i>Project</i>	<i>Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District</i>	

11 Disclosure of Consultant

11.1 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.

11.2 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.
- Effective communication of organization's policy and objectives to employees and seeking feedbacks from all our employees and concerned stakeholders for continual improvement.

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<i>Project Proponent</i>	<i>Tmt. P. Sudha</i>	
<i>Project Location</i>	<i>Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District</i>	

Declaration by Experts contributing to the EIA of Rough Stone Quarry- 2.50.00 Ha by Tmt. P. Sudha at S.F.No. 265 (Part-II), Mathakondapalli Village, Denkanikottai 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







Dr. A. DHAMODHARAN
(NABET APPROVED EIA COORDINATOR)
NABET/EIA/2124/SA 0147
Environmental Consultant
Eco Tech Labs Pvt. Ltd
Plot No.48A, 2nd Main Road, Ram Nagar South Extn.
Pallikaranai, Chennai - 600 100.

Signature:





Period of involvement: 01.12.2021 to Till now

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


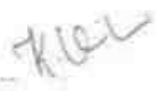

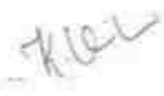
Project	Rough stone Quarry- 2.50.00 Ha by Tmt. P. Sudha	Draft EIA Report
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Project Location	Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District	

S. No.	Functional areas	Name of the experts	Involvement (period and task)	Signature and date
1	AP	Mrs. K. Vijayalakshmi	<ol style="list-style-type: none"> 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. 	
2	WP	Dr. A. Dhamodharan	<ol style="list-style-type: none"> 1. Selection of baseline Monitoring Locations for Ground water analysis and also identifying nearest surface water to be studied. 2. Interpretation of baseline data collected 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 4. Preparation of suitable and appropriate mitigation plan. 	
3	SHW	Dr. A. Dhamodharan	<ol style="list-style-type: none"> 1. Identification of nature of solid waste generated 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 3. Suggesting suitable mitigation measures by recommending appropriate disposal method for each category of waste generated 4. Top soil and refuse management 	
4	SE	Mr. S. Pandian	<ol style="list-style-type: none"> 1. Primary data collection through the census questionnaire 2. Obtaining Secondary data from authenticated sources and incorporating the same in EIA report. 3. Impact assessment & proposing suitable mitigation plan 	

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			4. CSR budget allocation by discussing with the local body and allotting the same for need based activity. <i>*Involves Public Hearing</i>	
5	EB	Dr. A. Dhamodharan	1.Primary data collection through field survey and sheet observation for ecology and biodiversity 2.Secondary Collection through various authenticated sources 3.Prediction of anticipated impacts and suggesting appropriate mitigation measures.	
6	HG	Dr. T. P. Natesan	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 2. Determination of groundwater use pattern, development of rainwater harvesting program. Storm water management through garland drainage system.	
7	GEO	Dr. T. P. Natesan	1. Field survey for assessing regional and local geology, aquifer distribution, Determination of groundwater use pattern, development of rainwater harvesting program.	
8	SC	Dr. A. Dhamodharan	1. Interpretation of baseline report 2. Identification of possible impacts on soil, prediction of soil conservation and suggesting suitable mitigation measures.	

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9	AQ	Mrs. K. Vijayalakshmi	<ol style="list-style-type: none"> 1. Collection of Meteorological data for the baseline study period 2. Plotting wind rose plot and thereby selecting the monitoring locations based on the wind pattern 3. Estimation of sources of air emissions and air quality modeling is done 4. Interpretation of the results obtained 5. Identification of the impacts and suggesting suitable mitigation measures. 	
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 	
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. 	
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 	

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<i>Project Location</i>	<i>Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District</i>	

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 Survey Numbers. 265 (Part-II) Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District. 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/2124/SA 0147

ANNEXURE-I

STANDARD TOR CONDITIONS WITH ADDITIONAL TOR POINTS



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

STATE LEVEL ENVIRONMENT IMPACT
ASSESSMENT AUTHORITY – TAMIL NADU

3rd Floor, Panagal Maaligai,
No.1, Jeenis Road, Saidapet,
Chennai-15.

Phone No. 044-24359973
Fax No. 044-24359975

TERMS OF REFERENCE (ToR)

Lr No. SEIAA-TN/F.No.10386/SEAC/ToR- 1615/2023 dated:06.11.2023

To

Tmt.P. Sudha,
W/o.R.Venugopal
No.27, Malleshwaram green park,
Naganaickanahalli,
Kasaba hobli, Marsur Post,
Anekal Taluk,
Bangalore District -562106


Sir/Madam,

Sub: SEIAA-TN – Terms of Reference with public hearing for the Existing Rough stone quarry project over an extent of 2.50.0Ha (Government Poramboke Land) at S.F.Nos.265(part-2), Mathakondapalli village, Denkanikottai Taluk, Krishnagiri District by Tmt. P. Sudha – under project category – “B1” and Schedule S.No.1 (a) – ToR issued along with Public Hearing - preparation of EIA report – Regarding.

Ref: 1. Online Application No SIA/TN/MIN/443228/2023, dt: 06/09/2023
2. Your application for Terms of Reference dated: 11.09.2023
3. Minutes of the 416th SEAC Meeting held on 13.10.2023
4. Minutes of the 670th authority meeting held on 06.11.2023.

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

The proponent, Tmt.P. Sudha has submitted application for Terms of Reference (ToR) with public Hearing, in Form-I, Pre- Feasibility report for the Existing Rough stone quarry project over an extent


MEMBER SECRETARY
SEIAA-TN

of 2.50.0Ha (Government Poramboke Land) at S.F.Nos.265(part-2), Mathakondapalli village, Denkanikottai Taluk, Krishnagiri District, Tamil Nadu.

Remarks by SEAC:

Existing Rough stone quarry project over an extent of 2.50.0Ha (Government Poramboke Land) at S.F.Nos.265(part-2), Mathakondapalli village, Denkanikottai Taluk, Krishnagiri District by Tmt. P. Sudha - For Terms of Reference.

(SIA/TN/MIN/443228/2023, dt: 06/09/2023)

The proposal was placed in the 416th SEAC Meeting held on 13.10.2023. The details of the minutes are available in the website (parivesh.nic.in). **The SEAC noted the following:**

1. Earlier, the PP has obtained EC from DEIAALr.No.03/DEIAA-KGI/EC No.67/2018 dated: 27.08.2018 (EC Valid up to 26.08.2024) for production of 2772126 m³ of rough stone, & the depth of mining up to 115m BGL under B2 category (<25 Ha).
2. Existing Pit - 39m (15m AGL & 24m BGL).
3. MoEF&CC OM Dt: 28.04.2023
4. The project proponent, **Tmt.P.Sudha** has applied for Terms of Reference for the existing **Rough stone quarry project over an extent of 2.50.0Ha at S.F.Nos.265(part-2), Mathakondapalli village, Denkanikottai Taluk, Krishnagiri District, Tamil Nadu.**
5. The project/activity is covered under Category "B1" of Item 1(a) "Mining of Minerals Projects" of the Schedule to the EIA Notification, 2006.
6. As per the precise area communication the lease period is for 5 years. The mining plan is for 5 Years. The Mineable reserve /production for 5 Years shall not to exceed 302975m³ and the ultimate depth of 48m BGL.

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

1. The PP shall furnish affidavits for stopping quarry operation as per MoEF&CC OM Dt:28.04.2023 and for the non-compliances mentioned in the Certified Compliance Report (CCR) obtained from IRO(SZ), MoEF&CC.
2. The project proponent shall furnish Certified Compliance Report (CCR) obtained from IRO(SZ), MoEF&CC and with mitigation measures for the non-compliance stated therein.


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3. Details of Existing pit dimension, quantity of the mineral quarried and last transport permit for the earlier lease period from Dept. Of Geology & Mining.
4. Copy of 'No Objection Certificate' for the total penalty levied by the concerned AD/DD, Dept of Geology and Mining, and copy of remittance of total penalty by PP.
5. DFO letter regarding proximity of protected areas & reserve forests along with conservation measures.
6. The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc.
7. The Proponent shall provide a Controlled Blast design & Vibration Prediction for the structures located within 500 m from the lease boundary and any other sensitive structures.
8. The project proponent shall furnish details of photographs of adequate barbered fencing, greenbelt and garland drain around the boundary of the proposed quarry.
9. 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.
10. The proponent shall furnish a revised EMP budget for entire life of proposed mining including progressive mine closure plan.
11. The PP shall mark the DGPS reference pillars painted with blue & white colour indicating the safety barrier of 7.5 m to be left under the Rule 13 (1) of MCDR, 1988 within the lease boundary and protective bunds.
12. The PP shall develop Green belt/plantation all along the mining lease boundary in a safety barrier.
13. The PP shall furnish the total manpower required for the proposed mining project including Statutory officials, , Supervisory staff, Skilled, Semi-skilled & Unskilled staff with showing the representation of the local people as per their eligibility and experience.

Annexure I


1. In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following:
 - (i) Original pit dimension
 - (ii) Quantity achieved Vs EC Approved Quantity
 - (iii) Balance Quantity as per Mineable Reserve calculated.


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


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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


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


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


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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	வில்வம்
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>	Aathi	ஆத்தி
7	<i>Bauhinia tomentos</i>	Iruvathi	இருவாத்தி
8	<i>Buchanania axillaris</i>	Kattuma	காட்டுமா
9	<i>Borassus flabellifer</i>	Panai	பனை
10	<i>Butea monosperma</i>	Murukkamaram	முருக்கமரம்
11	<i>Bobax ceiba</i>	Ilavu, Sevvilavu	இலவு
12	<i>Calophyllum inophyllum</i>	Punnai	புன்னை
13	<i>Cassia fistula</i>	Sarakondrai	சரக்கொன்றை
14	<i>Cassia roxburghii</i>	Sengondrai	செங்கொன்றை
15	<i>Chloroxylon sweitenia</i>	Purasamaram	புரக மரம்
16	<i>Cochlospermum religiosum</i>	Kongu, Manjallavu	கோங்கு, மஞ்சள் இலவு
17	<i>Cordia dichotoma</i>	Naruvuli	நருவுளி
18	<i>Creteva adansoni</i>	Mavalingum	மாவிளங்கம்
19	<i>Dillenia indica</i>	Uva, Uzha	உசா
20	<i>Dillenia pentagyna</i>	SiruUva, Sitruzha	சிறு உசா
21	<i>Diospyro sebemum</i>	Karungali	கருங்காலி
22	<i>Diospyro schloroxylon</i>	Vaganai	வாகனை
23	<i>Ficus amplissima</i>	Kalltchi	கல் இச்சி
24	<i>Hibiscus tiliaceou</i>	Aatrupoovarasu	ஆற்றுப்புலவரசு
25	<i>Hardwickia binata</i>	Aacha	ஆச்சா
26	<i>Holoptelia integrifolia</i>	Aayili	ஆயா மரம், ஆயிலி
27	<i>Lannea coromandelica</i>	Odhiam	ஓதியம்
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, பிசின்பட்டை
32	<i>Madhuca longifolia</i>	Illuppai	இலுப்பை
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 piunat</i>	Pungam	புங்கம்


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40	<i>Premna mollissima</i>	Murnai	முன்னை
41	<i>Premna serratifolia</i>	Narumurnai	நறு முன்னை
42	<i>Premna tomentosa</i>	Malaipoovarasu	மலை பூவரசு
43	<i>Prosopis cinerea</i>	Vanni maram	வன்னி மரம்
44	<i>Pterocarpus marsupium</i>	Vengai	வேங்கை
45	<i>Pterospermum canescens</i>	Vemangu, Tada	வெண்ணாங்கு
46	<i>Pterospermum xylocarpium</i>	Polavu	புலவு
47	<i>Putranjiva roxburghii</i>	Karipala	கறிபாலா
48	<i>Salvadora persica</i>	Ugaa Maram	ஊகா மரம்
49	<i>Sapindus emarginatus</i>	Marupungan, Soapukai	மணிப்புங்கன் சோப்புக்காய்
50	<i>Saraca asoca</i>	Asoca	அசோகா
51	<i>Streblus asper</i>	Piray maram	பிராய் மரம்
52	<i>Strychnos nuxvomica</i>	Yetti	எட்டி
53	<i>Strychnos potatorum</i>	Therthang Kottai	தேத்தான் கொட்டை
54	<i>Syzygium cumini</i>	Naval	நாவல்
55	<i>Terminalia belleric</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>	Puvarasu	பூவரசு
59	<i>Walsuratrifoliata</i>	valsura	வால்கரா
60	<i>Wrightia tinctoria</i>	Veppalai	வெட்டாலை
61	<i>Pithecellobium dulce</i>	Kodukkapuli	கொடுக்காப்புளி

Appendix –II

Display Board

(Size 6' x5' with Blue Background and White Letters)

-----சரங்கம்

சரங்கத்தில் குவாரி செயல்பாடுகளுக்கான சுற்றுச்சூழல் அனுமதி கீழ்க்கண்ட நிபந்தனைகளுக்கு உட்பட்டு வழங்கப்பட்டுள்ளது. மேலும், தேதியிடப்பட்டு, சுற்றுச்சூழல் அனுமதி தேதி வரை செல்லத்தக்கதாக உள்ளது.

பகண்ட பகுதி வளர்ச்சி செயல்பாட்டுக்கான சரங்கத் திட்டம்	குவாரியின் எல்லைவளைய சுற்றி வேலி அமைக்க வேண்டும். சரங்கப்பாளையின் ஆழம் தளரமட்டத்திலிருந்து மீட்டர்க்கு மிகாமல் இருக்க வேண்டும். காற்றுநிலம் மாசு ஏற்படாதவாறு சரங்க பணிகளை மேற்கொள்ள வேண்டும்.
நடப்பட்டுள்ள பராமரிக்கப்பட்ட வேண்டிய மரங்கள் எண்ணிக்கை:	வாகனங்கள் செல்லும் பாதையில் மாசு ஏற்படாத அளவிற்கு தண்ணீரை முறையாக தண்ணீர் லாரிகளின் மூலமாக அல்லப்போது தெளிக்க வேண்டும். இனஞ்சல் அளவையும் தூசி மாசுபாட்டையும் குறைப்பதற்காக குவாரியின் எல்லைவளைய சுற்றி அடர்த்தியான பசுமையுடைய ஏற்படுத்த வேண்டும்.
சரங்கத்தில் வெடி வைக்கும்பொழுது நிலஅதிர்வுகள் ஏற்படாதவாறும் மற்றும் சுழலும் பறக்காதவாறும் பாதுகாப்பு நடவடிக்கைகளை உள்வாங்கிய செயல்படுத்தப்பட வேண்டும்.	சரங்கத்தில் இருந்து ஏற்படும் இனஞ்சல் அளவு 85 டி.சி.பி.எஸ் (dBA) அளவிற்கு மேல் ஏற்படாதவாறு தகுந்த கட்டுப்பாடுகளை மேற்கொள்ள வேண்டும்.
சரங்க சட்ட விதிகள் 1956ன் கீழ் சரங்கத்தில் உள்ள பணியாளர்களுக்கு தகுந்த பாதுகாப்பு கருவிகள் வழங்குவதற்கு கவனமுடன் கட்டுப்பாடு வசதிகளை செய்து தர வேண்டும்.	சரங்கம் அல்லது பகுதிசரங்க வட்டியாக வாகனங்கள் செல்லும் சாலைவளைய தொடர்த்து நன்றாக பராமரிக்க வேண்டும்.
சரங்கப்பணிகளால் அருகில் உள்ள விவசாயப் பணிகள் மற்றும் தீர்நிலைகள் பாதிக்கப்படக் கூடாது.	சரங்கப்பணிகளால் அருகில் உள்ள விவசாயப் பணிகள் மற்றும் தீர்நிலைகள் பாதிக்கப்படக் கூடாது.
தீர்நிலைகள் பாதிக்கப்படாமல் இருப்பதை உறுதி செய்யும் வகையில் நிலத்தடி நீரின் தரத்தினை தொடர்ந்து கண்காணிக்க வேண்டும்.	சரங்கத்திலிருந்து கனிம பொருட்களை எடுத்துச் செல்லு கிராம மக்களுக்கு எந்தத் சிரமத்தினையும் ஏற்படுத்தாதவாறு பாதுகாப்பாகவும் மற்றும் சுற்றுச்சூழல் பாதிக்கவாத வண்ணம் வாகனங்களை இயக்க வேண்டும்.
சரங்கப்பணிகள் முடிக்கப்பட்டவுடன் சரங்க மூடல் திட்டத்தில் உள்ளவாறு சரங்கத்தினை மூட வேண்டும்.	சரங்கப் பகுதி மற்றும் சரங்க நடவடிக்கைகளால் இடைபுறு ஏற்படக்கூடிய வேறு எந்தப் பகுதிவளயம் மறுகட்டுமானம் செய்ய தாவுரங்கள் விண்ணகக் ஆகியவற்றின் வளர்ச்சிக்கு ஏற்ற வகையில் பகண்டபகுதியை உருவாக்க வேண்டும்.
முழுமையான நிபந்தனைகளை அறிய பாரிவேஷம் (http://parivesham.in) என்கிற இணையதளத்தைப் பார்க்கப்படும். மேலும் எந்தவித சுற்றுச்சூழல் சார்ந்த புறக்கணக்கு செர்ஸையில் உள்ள சுற்றுச்சூழல் மற்றும் வன அமைச்சகத்தின் முருக்கினிணந்த வட்டாள அலுவலகம்: 044 – 28222325 (அல்லது) தமிழ்நாடு மாசு கட்டுப்பாடு வாரியத்தின் மாவட்ட சுற்றுச்சூழல் பொறியாளரை அணுகவும்.	

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Remarks by SEIAA:

The subject was placed in the 670th authority meeting held on 06.11.2023. The authority after detailed discussion accepts the recommendation of SEAC in its 416th meeting of SEAC held on 13.10.2023. SEAC has furnished its recommendations for granting **Terms of Reference (ToR) along with Public Hearing** subject to the conditions stated therein.

After detailed discussions, the Authority accepts the recommendation of SEAC and decided to grant **Terms of Reference (ToR) along with Public Hearing** under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC & normal conditions in addition to the conditions in '**Annexure B**' of this minutes

1. The proponent shall furnish report on biodiversity study.
2. The proponent shall furnish report impact on agriculture & livelihood , impact free ranging wildlife, impact on water table including data of annual rainfall, drainage pattern, temperatures, & Climate change in regard to the proposed mining activity.
3. The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.

Annexure 'B'**Cluster Management Committee**

1. Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.
2. The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,
3. The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.
4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.
5. The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.
6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail


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

Impact study of mining

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

Agriculture & Agro-Biodiversity

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


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18. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.

Forests

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

Water Environment

23. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.
24. Erosion Control measures.
25. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas.
26. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.
27. The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities.
28. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts.
29. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.
30. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.


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Energy

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

Climate Change

32. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.

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

Mine Closure Plan

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

EMP

35. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued.

36. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.

Risk Assessment

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

Disaster Management Plan

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

Others

39. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.


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40. As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan.
41. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

A. STANDARD TERMS OF REFERENCE

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


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issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.

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


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with cost implications and submitted.

- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
- 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
- 20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
- 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic


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aspects should be discussed in the Report.

- 22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
- 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
- 28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 29) Details of any stream, seasonal or otherwise, passing through the lease area and modification /


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


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- 38) Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed:-
 - a) Executive Summary of the EIA/EMP Report
 - b) All documents to be properly referenced with index and continuous page numbering.
 - c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
 - d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
 - e) Where the documents provided are in a language other than English, an English translation should be provided.
 - f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
 - g) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
 - h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH


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again with the revised documentation.

- i) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
- j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

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

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

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


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14. A study on the geological resources available shall be carried out and reported.
15. A specific study on agriculture & livelihood shall be carried out and reported.
16. Impact of soil erosion, soil physical chemical and biological property changes may be assumed.
17. Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./ private land, status of its acquisition, nearby (in 2-3 km.) water body, population, within 10km other industries, forest, eco-sensitive zones, accessibility, (note - in case of industrial estate this information may not be necessary)
18. Baseline environmental data - air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
19. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
20. Likely impact of the project on air, water, land, flora-fauna and nearby population
21. Emergency preparedness plan in case of natural or in plant emergencies
22. Issues raised during public hearing (if applicable) and response given
23. CER plan with proposed expenditure.
24. Occupational Health Measures
25. Post project monitoring plan
26. The project proponent shall carry out detailed hydro geological study through intuitions/NABET Accredited agencies.
27. A detailed report on the green belt development already undertaken is to be furnished and also submit the proposal for green belt activities.
28. The proponent shall propose the suitable control measure to control the fugitive emissions during the operations of the mines.
29. A specific study should include impact on flora & fauna, disturbance to migratory pattern of animals.
30. Reserve funds should be earmarked for proper closure plan.
31. A detailed plan on plastic waste management shall be furnished. Further, the proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throw away plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986. In this connection, the project proponent has to furnish the action plan.

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


MEMBER SECRETARY
SEIAA-TN

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


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Copy to:

1. The Additional Chief Secretary to Government, Environment & Forests Department, Govt. of Tamil Nadu, Fort St. George, Chennai - 9
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD Cum-Office Complex, East Arjun Nagar, New Delhi 110032.

3. The Member Secretary, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai-600 032.
4. The APCCF (C), Regional Office, MoEF & CC (SZ), 34, HEPC Building, 1st& 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai -34.
5. Monitoring Cell, IA Division, Ministry of Environment, Forests & CC, Paryavaran Bhavan, CGO Complex, New Delhi 110003
6. The District Collector, Krishnagiri District.
7. Stock File.



TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

COMPLIANCE OF TOR CONDITIONS

Point wise compliance of ToR points issued by SEIAA, TN vide letter No. SEIAA-TN/F. No. 10386/SEAC/ToR-1615/2023 Dated: 06.11.2023 for Mining of Minor Minerals in the Mine of “Rough stone Quarry” Lease Over an Extent of 2.50.0 Ha at S.F.No. 265 (Part-II) of Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District, Tamilnadu State.

STANDARD TERMS OF REFERENCE

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>This is a 1st Scheme of mining project of Proposed Rough stone quarry.</p> <p>Proceeding Letter received from The District Collectorate, Department of Geology and Mining, Krishnagiri District vide letter Rc. No. 223/2018/Mines dated 09.03.2018.</p> <p>Mining Plan was approved by The Deputy Director, Geology & Mining, Krishnagiri, vide Rc.No.1393/2023/Mines, dated :25.08.2023.</p> <p>Proposed Production of Rough Stone for five years is proposed in the EIA/EMP in chapter no-2.</p>	<p>Chapter-2</p> <p>Table No.2.2.</p>

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

2.	A copy of document in support of the fact that the Proponent is the rightful lessee of the mine should be given.	The mine lease area of 2.50.0 hectare in Mathakondapalli Village for Rough stone quarry approved by The District Collector, Krishnagiri District vide letter Rc. No. 223/2018/ Mines, dated 09.03.2018	Annexure III
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 mining plan of the project site has been submitted to The Deputy Director, Dept. of Geology & Mining, Krishnagiri District	Annexure-VI Chapter- II
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, Fig no. 2.2
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, Fig no. 2.4

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

6.	<p>Details about the land proposed for mining activities should be given with information as to whether 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>	<p>Details about the land proposed for mining activities should be given Chapter 2.</p>	Chapter-2.
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.	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

	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.
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 Fig no. 2.5
10	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	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-2 of EIA/ EMP Report. There is no wildlife sanctuary and national park, migratory routes of fauna in the study area.	Chapter-2, Table no. 2.4

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

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.	Earth formation will be removed and transported to the needy end user, only after obtaining permission and paying necessary seigniorage fees to the Government.	Chapter-2.
12	<p>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.</p> <p>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.</p>	<p>Complied.</p> <p>The proposed mining lease area is not falling under forest land.</p>	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

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 proposed mining 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 should be indicated.	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 given.	Details of flora have been discussed in Chapter-3 of the EIA/EMP Report.	Chapter-3
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	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

17	<p>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 Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.</p>	<p>There are 3 reserve forest located at a distance of 12.87 kms, W, 13.06 km, ESE and 14.37km, SSE from the project site.</p>	Executive Summary
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</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>	Chapter – 3

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

	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 Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered.	The proposed mining lease area is not falling under critically polluted area.	
20	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	There is no Coastal Zone within 15km radius of the project site.	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

	of the concerned Coastal Zone Management Authority)		
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 & 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>	<p>There is no Rehabilitation and resettlement is involved. Land classified as Government Poramboke land</p>	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

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 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>Baseline data collected during Post Monsoon Season (October to December 2023) has been incorporated in EIA/EMP report.</p> <p>The key plan of monitoring station has been discussed in Chapter-3 Locations of the monitoring stations have been selected keeping in view the pre- dominant downwind direction and location of the sensitive receptors and also that they represent whole of the study area.</p>	Chapter 3
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</p>	<p>Air quality modelling & Impact of Air quality furnished in Final EIA report.</p>	Chapter-4

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

	<p>movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be 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>	<p>Transportation of mineral during operation of mines will be done by road & ODR through dumpers and the impact of movement of vehicles are incorporated in EIA/EMP report.</p> <p>Air quality modelling & Impact of Air quality furnished in Final EIA report.</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: 2.0 KLD Dust Suppression: 0.5 KLD Domestic Purpose: 1.0 KLD Plantation :0.5 KLD Domestic Water will be sourced from nearby Mattukur, Muthuganapalli village which is about 0.77 Km - S of the area.</p>	Chapter-2
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</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>	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

	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.	Impact of the project on the water quality & its mitigation measures has been incorporated in Chapter-4 of EIA/EMP report.	Chapter-4
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.	<p>Maximum working depth: 46 m (3 m Topsoil + 43 m) (15m AGL and 31m BGL)</p> <p>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.</p>	<p>Chapter-2</p> <p>Table No. 2.2</p>
29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.	There is no any stream crossing in the proposed quarry	Executive Summary
30	Information on site elevation, working depth, groundwater table	Highest elevation: 950 m from MSL	<p>Chapter-2</p> <p>Table no. 2.2</p>

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

	etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.	Depth: 46 m (3 m Topsoil + 42 m) (15m AGL and 31 m BGL)	
31	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant pollution	Green Belt Development plan is proved given in Chapter 2.	Chapter-2
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	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 proposed mining activity has been incorporated in EIA/EMP report.	Chapter-3

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

	<p>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</p>		
33	<p>Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA report.</p>	<p>Adequate infrastructure & other facilities shall be provided to the mine workers. Details are given in chapter-2 of EIA/EMP</p>	Chapter-2
34	<p>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.</p>	<p>Conceptual post mining land use and Reclamation and restoration sectional plates are given in Mining Plan followed by 1st Scheme of mining.</p>	Mining plates Annexure VI
35	<p>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</p>	<p>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.</p>	Chapter-10

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

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
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.	Suitable measures have been discussed in Chapter 4	Chapter-4
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-9 of the EIA/EMP Report.	Chapter-9
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	Public Hearing proceedings furnished in Final EIA report	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

	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.	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" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">S · N o</th> <th style="text-align: center;">Description</th> <th style="text-align: center;">Cost</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Fixed Asset Cost</td> <td style="text-align: right;">1,30,19,990/-</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Operational Cost</td> <td style="text-align: right;">40,00,000/-</td> </tr> <tr> <td style="text-align: center;">3</td> <td>EMP Cost (5 Years)</td> <td style="text-align: right;">86,76,000/-</td> </tr> <tr> <td></td> <td style="text-align: center;">Total</td> <td style="text-align: right;">2,56,95,990/-</td> </tr> </tbody> </table>	S · N o	Description	Cost	1	Fixed Asset Cost	1,30,19,990/-	2	Operational Cost	40,00,000/-	3	EMP Cost (5 Years)	86,76,000/-		Total	2,56,95,990/-	Chapter-8
S · N o	Description	Cost																
1	Fixed Asset Cost	1,30,19,990/-																
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3	EMP Cost (5 Years)	86,76,000/-																
	Total	2,56,95,990/-																
42	A 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															
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															
44	Besides the above, the below mentioned general points are also to be followed:																	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

(a)	Executive Summary of the EIA/EMP report	Complied	Executive Summary of EIA Report is given from page No.10
(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 should be indicated.	Complied	
(d)	Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF & CC NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the project.	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	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

(g)	<p>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.</p>	<p>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.</p>	
(h)	<p>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 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>There are no changes in prepared EIA as per submitted Form-1 & PFR</p>	
(i)	<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</p>	<p>Will be complied after grant environment clearance from SEIAA, Tamilnadu</p>	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

	Environment & Forests, if 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 (iii) sections of mine pit and external dumps, if any clearly showing the features of the adjoining area.	All Sectional Plates of Quarry is enclosed in Mining Plan.	Annexure.

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

Additional ToR Compliance - SEAC

S.No.	Condition	Compliance																																						
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> <p>(i) Original pit dimension.</p> <p>(ii) Quantity achieved Vs EC Approved Quantity.</p> <p>(iii) Balance Quantity as per Mineable Reserve calculated.</p> <p>(iv) Mined out Depth as on date Vs EC Permitted depth.</p> <p>(v) Details of illegal/illicit mining</p> <p>(vi) Violation in the quarry during the past working.</p> <p>(vii) Quantity of material mined out outside the mine lease area</p> <p>(viii) Condition of Safety zone/benches</p> <p>(ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">Existing Pit Details</th> </tr> <tr> <th style="width: 10%;">Sl. No.</th> <th style="width: 15%;">Pit.Nos.</th> <th style="width: 15%;">Area in sqm.</th> <th style="width: 15%;">Depth in m.</th> <th style="width: 45%;">Volume in cu.m</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">Pit -I</td> <td style="text-align: center;">2909</td> <td style="text-align: center;">4</td> <td style="text-align: center;">11636</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">Pit -II</td> <td style="text-align: center;">1694</td> <td style="text-align: center;">7</td> <td style="text-align: center;">11858</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">Pit -III</td> <td style="text-align: center;">5257</td> <td style="text-align: center;">20</td> <td style="text-align: center;">105140</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">Pit -IV</td> <td style="text-align: center;">923</td> <td style="text-align: center;">39</td> <td style="text-align: center;">35997</td> </tr> <tr> <td colspan="4" style="text-align: center;">TOTAL</td> <td style="text-align: center;">164631</td> </tr> </tbody> </table>				Existing Pit Details					Sl. No.	Pit.Nos.	Area in sqm.	Depth in m.	Volume in cu.m	1	Pit -I	2909	4	11636	2	Pit -II	1694	7	11858	3	Pit -III	5257	20	105140	4	Pit -IV	923	39	35997	TOTAL				164631
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		<p>Excavated and Approved Quantity of rough stone are 1,44,000 m³ and 27,72,126m³ respectively.</p> <p>Balance quantity of rough stone as per mineable reserve is 26,28,126 m³</p> <p>Mined out depth and Approved depth are 39 m and 115 m respectively.</p> <p>There is No illegal mining take place.</p> <p>There is no Violation take place.</p> <p>1,44,000 m³ of Rough Stone is taken outside of the lease area.</p> <p>Safety zone is provided on the either sides of the lease applied area.</p>																																						

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

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.	Latest VAO Certificate will issues and enclose in Final EIA report including Habitation details.
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.	Will bee submitted in Final Presentation.
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	Hydro geological study report will be submitted in final EIA Report.
5.	The Proponent shall carry out Biodiversity study through reputed Institution and the same shall be included in EIA Report.	The biodiversity has been studied and discussed in chapter 3.
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.	Obtained letter from DFO indicating the nearest reserve forest and attached in Annexure.

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

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 the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research/ Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg. Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.</p>	<p>Noted. Agree to Comply.</p>
8.	<p>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.</p>	<p>Noted. Agree to comply.</p>
9.	<p>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.</p>	<p>Noted. Agree to comply.</p>

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

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.	Noted. Agree to comply.
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 evidence.	Complied. The photographs are attached in EIA report.
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,	AD Letter is enclosed in Annexure.
13.	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?	Period of Operation: (2018-19 to 2023-24) Excavation of mines is stopped before 13.07.2023.
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. 	<p>Total of 1,44,000 m³ of rough stone is mined out.</p> <p>Approved depth of mining is 115 m Actual depth of Excavation is 39 m.</p> <p>Proposed Mining Plan is Said to be 1st Scheme of Mining Plan. Previous EC is obtained from District Collector, Krishnagiri District vide letter</p>

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	<p>✓ Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.</p>	<p>No.03/DEIAA-KGI/EC No.67/2018, Dated:27.08.2018.</p> <p>Mining was carried out as per the approved mining plan</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 buffer zone).</p>	<p>Complied.</p> <p>All corners with coordinates of the mine lease area have attached with EIA report in chapter 2.</p>
16.	<p>The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,</p>	<p>Drone video survey submitted in final EIA report.</p>
17	<p>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.</p>	<p>The photographs will attach in Final Presentation.</p>
18	<p>The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same.</p>	<p>The details of Geological reserves, Mineable reserves and Yearwise production reserves are tabulated in Chapter 2. The mining methodology and impacts are follow as on prescribed norms by Government.</p>

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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.	Complied. Manpower requirements table attached in EIA report chapter 2
20.	The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD/TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.	Hydro geological study report will be submitted in final EIA Report.
21	The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.	The proponent has furnished 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 details attached in EIA report chapter 3

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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.	Noted. Agree to comply.
23.	Rainwater harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	Noted. Agree to comply.
24.	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	Current land use of the study area has attached in EIA report chapter 3. Operational and post operational land use will be submitted.
25.	Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.	There is No Overburden Formation on the lease applied area.
26.	Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations,	Noted.

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	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.	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 be used for domestic purposes (other than drinking) after proper treatment.
28.	Impact on local transport infrastructure due to the Project should be indicated.	Traffic impact assessment has given in EIA report chapter 3.
29.	A tree survey study shall be carried out (nos., name of the species, diameter, etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity.	No tree species were found inside the project site. only few shrubs and thorny bushes were present. Tree survey study details given in EIA report chapter 3.
30.	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.	Noted. The mine plan and mine closure plan has been approved by the Assistant Director, Department of Mining and Geology, Krishnagiri District
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.	Noted. Agree to Comply.

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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-1 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.	Noted. Agree to Comply.
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 uthorities/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.	The green belt plan enclosed with mining plates in Annexure VI.
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 has prepared and enclosed in Chapter 7.
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 has prepared and enclosed in chapter 7.

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36.	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Occupational Health impacts of the project has prepared and incorporated in Environmental management plan.
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.	Suitable measure will be adopted to minimize occupational health impacts of the project.
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.	The socio-economic study has been discussed in chapter 3.
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 in any court.
40.	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate	Benefits of the project has incorporated in EIA report chapter 8

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	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	Certified compliance report is attached in annexure.
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. Agree to comply.
43.	Concealing any factual information or submission of false/fabricated data and failure to comply with any of the Condition mentioned above may result in withdrawal of this Terms of conditions besides attracting penal provisions in the Environment (Protection) Act, 1986	Noted.

Additional ToR Compliance – SEIAA

S.No.	Condition	Compliance
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	Noted and complied. All the proponents in the cluster is discussed in Chapter-2,

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

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.,	Green belt development, water sprinkling, tree plantation is discussed in chapter-2.
3.	The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.	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. It will furnished in final EIA report.
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, page number-135
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. It will be furnished in final EIA report.
7.	The committee shall furnish action plan regarding the restoration strategy with respect	Agreed to comply.

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

	to the individual quarry falling under the cluster in a holistic manner.	It will be furnished in final Presentation.
8.	The committee shall furnish the Emergency Management plan within the cluster.	Emergency management plan is discussed in Chapter-7,
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.
10.	The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation and safety.	Agreed to comply. It will be furnished in final Presentation.
11.	The committee shall furnish the fire safety and evacuation plan in the case of fire accidents	Fire safety and evacuation plan is discussed in chapter 7
Impact Study of Mining		
12.	<p>Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area covering the entire mine lease period as per precise area communication order issued from reputed research institutions on the following.</p> <ol style="list-style-type: none"> a) Soil health & bio-diversity 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. 	<p>The biodiversity has been studied and discussed in chapter 3.</p> <p>The soil erosion map 5km surrounding the project site has been given in chapter 3.</p> <p>The detailed study will be carried out and enclosed in the Final EIA Report.</p>

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	<p>f) Hydrothermal/Geothermal effects due to destruction in the Environment.</p> <p>g) Bio-geochemical processes and its foot prints including environmental stress</p> <p>h) Sediment geochemistry in the surface streams</p> <p>Sediment geochemistry in the surface streams.</p>	
Agriculture & Agro-Biodiversity		
13.	Impact on surrounding agricultural fields around the proposed mining area.	There is no agricultural fields around the proposed mining area
14.	Impact on soil flora & vegetation around the project site	Impact on soil flora & vegetation around the project site discussed in Chapter-4.
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.
16.	The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.	The biodiversity has been studied and discussed in chapter-3
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.

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 2.50.0 Ha

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, we have received letter from DFO indicating the nearest reserve forest and attached with Annexures.
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
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 Wildlife pathways, near project site.	<p>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, we have received letter from DFO indicating the nearest reserve forest and attached with Annexures.</p> <p>There is no protected areas, National Parks, Corridors and Wildlife pathways near project site.</p>
Water Environment		

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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 in final Presentation.
24.	Erosion Control Measures	Complied. Erosion details has been attached in Chapter 3. Greenbelt will be planted to avoid and control erosion.
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 will be carried out and furnished in the Final 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, The seasonal pond located 50m south from the project site. Water gets stagnant only during rainy season. 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 potential fragmentation impact of natural environment, by the activities.	Noted and complied in Final EIA report.
28.	The PP shall study and furnish the impact on aquatic plants and animals in water bodies and	Noted. Agree to comply.

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	possible scars on the landscape, damages to nearby caves, heritage site and archaeological sites possible landform changes visual and aesthetic impacts	
29.	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	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 utilize the energy shall be furnished	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 temperature reduction including control of other emission and climate mitigation activities.	Noted and complied in Final EIA report.
33.	The EIA should study impact on climate change, temperature rise, pollution and above soil & Below soil carbon stock.	Noted and will be complied in Final EIA report.
Mine Closure Plan		

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34.	Detailed mine closure plan covering the entire mine lease period as per precise area communication order issued.	Mine closure plan has been attached along with mining plates as Annexure VI.
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 Final EIA / EMP Report.
36.	The EIA 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 prepared and included in the Final 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 proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.	Disaster Management and Risk Assessment has be incorporated in Chapter-7

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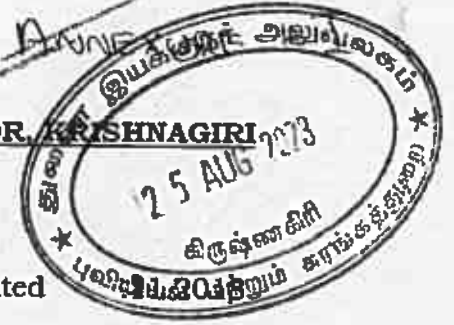
Others		
39.	The project proponent shall furnish VAO Certificate with reference to 300m radius regard to approved habitations, schools, Archaeological structures etc.	Obtained and same has been attached as Annexure.
40.	As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 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 has been included along with final EIA report.
41.	The PP 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 freshwater 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
PROCEEDING LETTER

PROCEEDINGS OF THE DISTRICT COLLECTOR, KRISHNAGIRI

Present: Dr. Prabhakar, I.A.S.,

Dated



Roc.223/2018/Mines

Sub: Mines and Minerals – Minor Mineral – Rough Stone – Krishnagiri District – Denkanikottai Taluk – Mathakondapalli Village- Govt. Land in S.F. No. 265 (part-2) – Over an extent of 2.50.0 Hects. – Precise are for the grant of Quarry lease for rough stone issued to Tmt. P. Sutha, W/o R. Venugopal No. 27 Malleswaram Green Park, Naganayakanahalli Post, Kasaba Hobli Marsur Post, Anekal Taluk, Banalore District under Tender-cum-Auction – DEIAA clearance obtained – order issued - reg.

- Ref:**
1. Krishnagiri District Gazette Extra Ordinary No.1 dated 19.01.2018.
 2. Tmt. P. Sutha, W/o R. Venugopal No. 27 Malleswaram Green Park, Naganayakanahalli Post, Kasaba Hobli Marsur Post, Anekal Taluk, Banalore District tender application dated 07.02.2018 .
 3. The District Collector, Krishnagiri Memorandum in Roc.No.223/2018/Mines dated 09.03.2018.
 4. Mining plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Roc. No. 223/2018/ Mines-1 dated 12.05.2018.
 5. The District Level Environmental Impact Assessment Authority Tamil Nadu Letter No. 03/DEIAA – KGI/EC No. 67/2018 dated 27.08.2018.
 6. Proceedings No. 1878HSR/RS/DEE/TNPCB/HSR/A/2018 dated 10.10.2018 of the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur
 7. Proceedings No. 1878HSR/RS/DEE/TNPCB/HSR/W/2018 dated 10.10.2018 of the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.
 8. The Deputy Director of Town and County Paining Dharmapuri letter No. 2277/2018 Thama dated 26.09.2018.

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ORDER:

Tmt. P. Sutha, W/o R. Venugopal No. 27 Malleswaram Green Park, Naganayakanahalli Post, Kasaba Hobli Marsur Post, Anekal Taluk, Banalore District

had participated in the tender-cum-auction for the grant of quarry lease for rough stone over an extent of 2.50.0 Hects in Government land S.F.No. 265 (part-2) of Mathakondapalli Village of Denkanikottai Taluk Krishnagiri District on 07.02.2018 and he had been declared as the highest bidder and precise area had been given for the grant of rough stone quarry lease in the said area for a period of Ten years from the date of execution of lease deed and he had been directed to submit the approved mining plan, Environmental Clearance from the DEIAA of Krishnagiri and consent of the Tamil Nadu Pollution Control Board vide in the Memorandum 3rd cited.

The applicant had submitted the approved mining plan approved by the Deputy Director of Geology and Mining vide in the reference 4th cited, the Environment clearance given by the District Level Environment Impact Assessment Authority Krishnagiri in the reference 5th cited and consent of the Tamil Nadu Pollution Control Board in the reference 6th and 7th cited.

In view of the above a quarry lease for rough stone is granted to Tmt. P. Sutha, W/o R. Venugopal No. 27 Malleswaram Green Park, Naganayakanahalli Post, Kasaba Hobli Marsur Post, Anekal Taluk, Banalore District over an extent of 2.50.0 Hects in Government land S.F.No. 265 (part-2) of Mathakondapalli village of Denkanikottai Taluk Krishnagiri District under the provisions of Rule 8 (1) 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.

I) The grantee should remit a sum of Rs. 25,39,998/- towards security deposit, Rs 3,750/- towards area assessment in the relevant head of accounts and submit non judicial stamp papers for the value of Rs. 19,88,000/- and to execute the lease deed with 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.) A) சிறப்பு நிபந்தனைகள்:

- i. குவாரி குத்தகை வழங்க உத்தேசிக்கப்பட்டுள்ள குவாரிக்கு அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளியும், அரசு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி செய்யவேண்டும்.
- ii. அருகிலுள்ள கிராம சாலைகளுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும், இதர நெடுஞ்சாலைகளுக்கு 50 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி செய்யவேண்டும்.



III) B) சாதாரண கற்குவாரி பணி செய்வதற்கான நிபந்தனைகள்:

- (1) குத்தகை காலம், குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றும் நாளிலிருந்து பத்து ஆண்டுகளாகும்.
- (2) குவாரி குத்தகை வழங்கப்பட்ட இடத்தில் குவாரி செய்யும் வேலிக்கல்/ குண்டுக்கல்/ கட்டுக்கல்/ சக்கை மற்றும் ஐல்வி ஆகியவற்றை மேற்படி இடத்திலிருந்து வெளியில் எடுத்துச் செல்வதற்கு முன்பு அவை ஒவ்வொன்றிற்கும் அவற்றிற்குரிய வீதத்தில் சீனியரேஜ் தீர்வை செலுத்தி இவ்வலுவலகத்தில் பர்மிட் மற்றும் நடைச்சீட்டு பெற்ற பின்புதான் மேற்படி கனியங்களை 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 இதர தொகைகளையும் குத்தகைதாரர் செலுத்த வேண்டும்.
- (3) குத்தகை இடத்திற்கு அருகிலுள்ள குடியிருப்புகள், கட்டடங்கள், நீர்நிலைகள், குளங்களின் கரைகள், மரங்கள், சாலைகள், வண்டிப்பாதைகள், நடைபாதைகள் மற்றும் இதர பொதுச் சொத்துக்களுக்கு பாதகமில்லாமல் குவாரி செய்ய வேண்டும்.
- (4) குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகாமையில் உள்ள பட்டாதாரர்கள் மற்றும் பொது மக்களுக்கு பாதகமில்லாமல் குவாரி செய்ய வேண்டும்.
- (5) அ) குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகிலுள்ள ரயில்பாதைகள், சாலைகள், மின்சாரம் மற்றும் தொலைபேசி கம்பிகளுக்கு 50 மீட்டரும், குடியிருப்பு பகுதியிலிருந்து 300 மீட்டரும், நடைபாதைகள், கிராம சாலைகளுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரி செய்ய வேண்டும்.
ஆ) அருகிலுள்ள அரசு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு குவாரி பணி செய்ய வேண்டும்.
இ) அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு குவாரி பணி செய்ய வேண்டும்.
- (6) மாவட்ட ஆட்சித்தலைவர் (அல்லது) அரசால் அதிகாரம் வழங்கப்பட்ட அலுவலரை குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிடவும், குவாரி பதிவேடுகள், ஆவணங்கள் மற்றும் கணக்கை சரிபார்க்கவும் அனுமதிக்க வேண்டும். இது சம்மந்தமாக 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, புவியியல் மற்றும் கரங்கத்துறை, ஆகியோரால் 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 சம்மந்தப்பட்ட 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 ஒப்பந்தப்பத்திரத்துடன் இணைத்துள்ள வரைபடத்தில் 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 கையொப்ப

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 செய்யும்போது நடைச்சீட்டினைக் 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 சுரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம், 1957-ன்படி கைப்பற்றப்பட்டு, குத்தகைதாரர் மீது நடவடிக்கை எடுக்கப்படுவதுடன் குவாரிக் குத்தகையையும் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.

- (14) குத்தகை வழங்கப்பட்ட இடத்தை குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லி குவாரி செய்ய மட்டும் பயன்படுத்த வேண்டும். குத்தகை உரிம ஆணை அல்லது குத்தகை ஒப்பந்தப்பத்திரத்தில் தவறுதலாக கனிம விவரம் குறிக்கப்பட்டு இருந்தால் அதனை எந்த நேரத்திலும் திருத்துவதற்கு மாவட்ட ஆட்சியருக்கு அதிகாரம் உண்டு. குத்தகைதாரர் அதனடிப்படையில் எந்த உரிமையும் கோரமுடியாது.
- (15) மெருகேற்றுவதற்கும், அயல் நாட்டிற்கு ஏற்றுமதி செய்வதற்கும் பயன்படும் பெரிய கந்துண்டங்கள் வடிவத்தில் கற்குவாரி செய்யக் கூடாது.
- (16) குத்தகை ஒப்பந்தப்பத்திரத்தில் குறிக்கப்படாத வேறு ஏதாவதொரு கனிமம் கிடைத்தால், அதனை சம்மந்தப்பட்ட அலுவலரின் அனுமதியைப் பெறாமலும், அதற்குரிய சீனியரேஜ் தொகையைச் செலுத்தாமலும் எடுக்கக்கூடாது. புதிய கனிமம் கிடைத்த விவரத்தை 30 தினங்களுக்குள் தெரிவிக்காமல் எடுத்துச் சென்றால் இக்குற்றத்திற்கு அந்த கனிமத்திற்குரிய 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, மெஷின் 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 ஏற்படின் நஷ்டஈடு கேட்கக்கூடாது.
- (21) குவாரியில் வேலை செய்யும் தொழிலாளர்கள் மற்றும் இதர நபர்களுக்கு 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 1864-ன் கீழ் வசூலிக்கப்படும்.
- (24) குத்தகை நிபந்தனைகள், 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், அரசு, ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, மாவட்ட ஆட்சித்தலைவர் ஆகியோரது ஆணைகள் மீறப்படின் மீறலுக்கு அபராதம் விதிப்பதோடு அல்லாமல் குத்தகைதாரருக்கு நேர்முக விசாரணைக்கு வாய்ப்பளித்த பின்பு குத்தகை உரிமம் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.
- (25) அரசின் அவ்வப்போதைய ஆணைகளுக்கேற்ப நிபந்தனைகளை மீற்றி அமைக்கவோ, நீக்கவோ, கூடுதலாக சேர்க்கவோ, மாவட்ட ஆட்சித்தலைவருக்கு முழு அதிகாரம் உண்டு.



- (26) மேற்கூறிய நியந்தனைகளுடன் 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், கரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம் 1957, மாவட்ட ஆட்சித்தலைவர் ஆகியோரால் அவ்வப்போது பிறப்பிக்கப்படும் ஆணைகள் குத்தகைதாரரைக் கட்டுப்படுத்தும்.
- (27) குவாரிகள்/கரங்கங்களுக்கு பொருந்தக்கூடிய தொழிலாளர் சட்டங்களுக்கு கட்டுப்பாட்டு குத்தகைதாரர் குவாரி செய்யவேண்டும். தவறினால் சம்மந்தப்பட்ட அரசின் சட்டப்பூர்வமான நடவடிக்கைகளுக்கு குத்தகைதாரர் உள்ளாக வேண்டி இருக்கும்.
- (28) இந்திய வெடிமருந்து சட்டம் 1884 (Central Act IV of 1884)-ன்படி உரிய வெடிமருந்து உரியம் பெற்று குத்தகைதாரர் பாறைகளை வெடிவைத்து உடைக்க வேண்டும். தவறும் பட்சத்தில் குத்தகைதாரர் கட்டும் தண்டனைக்கு உள்ளாக வேண்டியிருக்கும்.
- (29) குத்தகைதாரர் குவாரியில் குழந்தை தொழிலாளர்களை பணியமர்த்தக்கூடாது.

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 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 2772126 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 =2772126 CBM

(iii) Depth of mining permitted = 115 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 division.

2. A.Conditions to be complied before the commencing of mining operation

(1). The applicant has to obtain land use classification as industrial use before issue/renewal of mining lease.

(2). NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site. !

(3). The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959.

(4). 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.

- (5). 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.
- (6). The proponent shall ensure that First Aid Box is available at site.
- (7). The excavation activity shall not alter the natural drainage pattern of the area.
- (8). The excavated pit shall be restored by the project proponent for useful purposes.
- (9). The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.
- (10). The quarrying operation shall be restricted between 7 AM and 5 PM.
- (11). 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.
- (12). A minimum distance of 15 mts. From any civil structure shall be kept from the periphery of any excavation area.
- (13). 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.
- (14). 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.
- (15). 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.
- (16). Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.
- (17). The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.
- (18). Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.



- (19). 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. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.
- (20). 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)
- (21). 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.
- (22). 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.
- (23). 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.
- (24). Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Assistant Director, Ground Water Division, PWD, Dharamapuri.
- (25) 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.
- (26). Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.

- (27). Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.
- (28). The following measures are to be adopted to control erosion of dumps:-
- (i). Retention/ toe walls shall be provided at the foot of the dumps.
 - (ii). Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.
- (29). Waste oils, used 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 TNPCB.
- (30). Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- (31). Rain water 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.
- (32). 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 Dharmpauri shall monitor.
- (33). No tree-felling shall be done in the leased area, except only with the permission from competent Authority.
- (34). 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 approved by the District Environmental Engineer, TNPCB, Hosur on yearly basis.

- (35). 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 hectares within the mining lease period of this application.
- (36). 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
- (37). Ground water quality monitoring should be conducted once in 3 Months.
- (38). Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.
- (39). Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI once in three months.
- (40). 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.
- (41). Bunds to be provided at the boundary of the project site and it should be properly maintained.
- (42). 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.
- (43). At least 10 Neem trees should be planted around the boundary of the quarry site.
- (44). Floor of excavated pit to be leveled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.
- (45). The Project Proponent shall ensure a minimum of 2.5 of the annual turnover will be utilized for the CSR Activity
- (46). The Project Proponent shall provide solar lighting system to the nearby villages

- (47). The Project Proponent shall comply with the mining and other relevant rules and regulations where ever applicable.
- (48). Rainwater shall be pumped out Via Settling Tank only
- (49). Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.
- (50). 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 10KM from National Park and Sanctuaries.
- (51). 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.
- (52) Safety equipments to be provided to all the employees.
- (53) Safety distance of 50 m has to be provided in case of railway, reservoir, canal/odai
- (54) The Assistant / Deputy Director Department of Geology and 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.
- (55) 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.
- (56) 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.
- (57) The Proponent shall furnish the data obtained from the Public Works Department regarding the details of ground water table in the quarry site.
- (58) The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh case before execution of mining lease.
- (59) 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.



(60) Heavy earth machinery equipments if utilized, after getting approval from the competent authority.

(61) The Environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.

(62) The Assistant Director Public Works Department, Ground water Division Dharmmpauri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.

(63) NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.

(64) Yearly medical examination of the quarry workers should be carried out by the 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.

(65) 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.

(66) Vehicles used for transportation of quarried materials should be fitted with GPS and monitored.

(67) Pit Mouth register should be maintained in online.

(68) Auditor report on the annual turnover amount should be submitted to the District Collector within one month from the end of the financial year.

(69) 02.5% of the turnover 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, Tamil Nadu may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.

(19) The DEIAA, Tamil Nadu 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.KGI 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) Any other conditions stipulated by other Statutory/ Government authorities shall be complied.

VI. The lessee should strictly adhere all the conditions imposed in the environmental clearance issued by The DEIAA 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 2.50.0 hectares in S.F.No. 265 (part-3) of Mathagondapalli Village, Denkanikottai Taluk Krsihnagiri 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.

[Handwritten Signature]
DISTRICT COLLECTOR,
KRISHNAGIRI. 3/23

To

[Handwritten Signature]
Tmt. P. Sutha,
W/o R. Venugopal
No. 27 Malleswaram Green Park,
Naganayakanahalli Post, Kasaba Hobli Marsur Post,
Anekal Taluk, Banalore District Copy to
1. The Revenue Divisional Officer, Hosur.
2. The Tahsildar, Denkanikottai
3. The Village Administrative Officer, Mathagondapalli village.

[Handwritten Signature]
S.DHANASEKAR, M.Sc.(Geo)
Qualified Person

ANNEXURE-III
1ST SCHEME OF
MINING PLAN APPROVED LETTER

From

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

To

Tmt. P. Sudha
W/o. R. Venugopal,
No.27, Malleswaram Green Park,
Naganayakanahalli Post,
Kasaba Hobil Marsur Post,
Anekal Taluk, Bangalore.

Roc.No. 1393/2023/Mines Dated: 25.08.2023.

Sir,

Sub: Mines and Minerals – Minor Mineral – Rough stone -
Quarry lease granted in favour of Tmt. P. Sudha
W/o. R. Venugopal over an extent of 2.50.0 Hects of
Poramboke land in S.F.No. 265 (Part-II) of
Mathakondapalli Village, Denkanikottai Taluk for a
period of 10 years – 1st Scheme of Mining submitted for
the 2nd five year period 2023-2024 to 2027-2028
(09.11.2023 to 08.11.2028) - Approved - Reg.

- Ref:**
1. The District Collector, Krishnagiri Proc. Roc. No.223/2018/ Mines dated: 09.11.2018.
 2. Mining plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Roc.No. 223/2018/ Mines-1 Dated: 17.05.2018.
 3. 1st Scheme of mining for the next five year period from 2023-2024 to 2027-2028 submitted by the lessee at District office on 24.06.2023.
 4. Joint Inspection reported by the Assistant Geologist (Mines) and Sub Inspector of Surveyor (Mines), dated : 09.08.2023.

Kind attention is invited to the references cited.

2) A quarry lease had been granted in favour of Tmt. P. Sudha W/o. R. Venugopal, to quarry Rough stone for a period of 10 years over an extent of 2.50.0 hecets of Poramboke land in S.F.No. 265 (Part-II) of Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District vide the District Collector, Krishnagiri Proc. Roc. No. 223/2018/ Mines dated: 09.11.2018 under TNMMCR Rules 1959.

The lease deed has been executed on 09.11.2018 and the lease period is valid upto 08.11.2028.

3) The Mining plan for the subject Rough stone quarry was approved by the Deputy Director of Geology and Mining, vide letter Rc. No. 223/2018/ Mines-1 Dated: 17.05.2018.

4) In this regard, the lessee has submitted the scheme of mining for the next five years period from 2023-2024 to 2027-2028 (09.11.2023 to 08.11.2028).

5) As per the Scheme of Mining plan submitted for approval, it is mentioned that the total available geological reserves are calculated as 701770 Cbm with 100% recovery and after providing spaces for necessary benches the mineable reserves are calculated as 302975 Cbm @ 100% recovery upto a maximum of depth of 46m.

6) As per the 1st Scheme of Mining the year wise production for the proposed five years are as follows.

Year	Recoverable reserves @ (m ³)	Top Soil
09.11.2023 to 08.11.2024	74940	123
09.11.2024 to 08.11.2025	56250	-
09.11.2025 to 08.11.2026	47550	-
09.11.2026 to 08.11.2027	72020	-
09.11.2027 to 08.11.2028	52215	-
Total	302975	123

7) The lessee had obtained transport permits for a quantity of rough stone 1,44,000 Cbm upto 24.06.2023 & 1,62,600 cbm as on 07.08.2023 as against the proposed production of 27,72,126 Cbm (for the Mining plan period from 2017-18 to 2021-22). Upto 31.08.2021.

8) The lessee has obtained Environment Clearance from DEIAA vide Lr.No. DEIAA-KGI/EC.No. 67/2018 dated: 27.08.2018 for a quantity of 27,72,126 Cbm of rough stone for the first five years.

9) During inspection conducted by Assistant Geologist (Mines) and Sub Inspector of Survey (Mines) Krishnagiri, it has found that the lessee has not maintained safety distance on east and southern side of the lease granted area. Besides this, the lessee has compiled terms and conditions stipulated in the proceedings and lease deed conditions.

10) The draft Scheme of Mining submitted by Tmt. P. Sudha W/o. R. Venugopal has been scrutinized as per the guide lines/ Instructions issued by the Commissioner of Geology and Mining, Chennai-32. The Scheme of mining is prepared in accordance with the guidelines/ instructions issued.

11) Hence, in accordance with the TNMMCR 1959 and instructions issued by the Commissioner of Geology and Mining, Chennai, the said scheme of mining for the next five year 2023-2024 to 2027-2028 (09.11.2023 to 08.11.2028) submitted by the lessee Tmt. P. Sudha W/o. R. Venugopal in respect of the area granted to quarry rough stone in Poramboke land S.F.No 265 (Part-II) over an extent of 2.50.0 Hects is hereby approved in exercise of the powers conferred under Rule 41 (9) (iii) of TNMMCR 1959 subject to the following conditions.

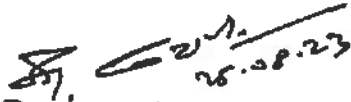
- i. The violations committed by the lessee by non-providing safety distance on east and southern sides of the lease granted area. As per the pit measurements during the inspection conducted by the Assistant Geologist (Mines) and Sub Inspector of Survey (Mines), the lessee has quarried a quantum of 164631 Cbm of rough stone and obtained permits for a quantum of 162600 upto 07.08.2023 as per the office records. Hence for the

violations stated supra, the lessee should adhere the orders to be passed by the Sub Collector, Hosur in this regard. The lessee has submitted affidavit stating that, she will obey the orders passed if any in this regard.


- ii. That the Scheme of mining 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.
- iii. This approval of the Scheme of mining 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, Mineral Conservation and Development Rules 1988 and The Tamil Nadu Minor Mineral Concession rules, 1959.
- iv. This scheme of Mining including progressive mine closure plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.
- v. Provisions of the Mines Act, 1952 and the Rules and Regulations made there under including submission of notice of opening, appointment of manager and other statutory officials as required under Mines Act, 1952 shall be complied with.
- vi. Provisions made under Mines and Minerals (Development and Regulation) Act, 1957, MMDR amendment Act, 2015 made there under shall be complied with.
- vii. This approval of Scheme of Mining is restricted to the mining lease area only. The mining lease area is as shown on the statutory plan under TNMMCR Rules, 1959.
- viii. The lessee should obtain environmental clearance from the appropriate authority.

- ix. The earlier instances of irregular/illegal quarrying, if any shall not be regularized through the approval of this document.
- x. The lessee shall remit the penalty/ cost of mineral/ other dues if any as arrived by the District Collector/ Deputy Director of Geology and Mining, Krishnagiri District.
- xi. Non adherence to any condition set-out above, the approval shall be deemed to have been withdrawn with immediate effect.

Encl: 1. Scheme of Mining 3 Copies.


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
500M Radius letter

From

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

To

Tmt. P. Sudha
W/o. R. Venugopal,
No.27, Malleswaram Green Park,
Naganayakanahalli Post,
Kasaba Hobil Marsur Post,
Anekal Taluk, Bangalore.

Roc.No. 1393/2023/Mines Dated: 29 .08.2023

Sir,

Sub: Mines and Minerals – Minor Mineral – Rough stone -
Quarry lease granted in favour of Tmt. P. Sudha
W/o. R. Venugopal over an extent of 2.50.0 Hects of
Poramboke land in S.F.No. 265 (Part-II) of
Mathakondapalli Village, Denkanikottai Taluk for a
period of 10 years – Scheme of Mining Plan – Approved
- Other quarry situated in 500 mtrs radial distance
requested– Details furnished - reg.

Ref: 1. The District Collector, Krishnagiri Proc. Roc.
No.223/2018/ Mines dated: 09.11.2018.
2. Mining plan approved by the Deputy Director of
Geology and Mining, Krishnagiri in Roc.No.
223/2018/ Mines-1 Dated: 17.05.2018.
3. Scheme of Mining Plan approved by the Deputy
Director of Geology and Mining, Krishnagiri in Roc.No.
1393/2023/ Mines Dated: 25.08.2018.
4. Tmt. P. Sudha W/o. R. Venugopal letter dated
28.08.2023.

Kind attention is invited to the references cited above.

2) A quarry lease had been granted in favour of Tmt. P. Sudha W/o. R. Venugopal, to quarry Rough stone for a period of 10 years over an extent of 2.50.0 hecets of Poramboke land in S.F.No. 265 (Part-II) of Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District vide the District Collector, Krishnagiri Proc. Roc. No. 223/2018/ Mines dated: 09.11.2018 under TNMMCR Rules 1959. The lease deed has been executed on 09.11.2018 and the lease period is valid upto 08.11.2028.

3) The Scheme of Mining Plan for the subject Rough stone quarry was approved by the Deputy Director of Geology and Mining, vide letter Rc. No. 1393/2023/ Mines Dated: 25.08.2023.

4) In this connection, Tmt. P. Sudha, has requested vide letter dated: 28.08.2023 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**

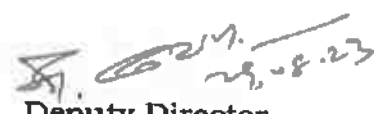
Sl. No	Name of the Lessee and address	Taluk and Village	SF. No	Extent in Hect	Collector's Proc. No and Date	Period of Lease
1	Tmt. P. Sutha R. Venugopal, No. 27, Malleswaram Green Park, Naganahalli Post, Hasaba Hobil Marsur Post, Anekal Taluk, Bangalore Dist	Mathagondapa lli Vill Denkanikottai Taluk	265 (Part-2)	2.50.0	Roc. 223/2018 /Mines/ Dt 09.11.2018	09.11.2018 to 08.11.2028
2.	Thiru H.R. Prasanth, S/o Ravi H.V. Handehahalli, Anekal Taluk, Bangalore 562125	Mathagondapa lli Vill Denkanikottai Taluk	265 (part-1)	2.50.0	Roc. 222/2018/ Mines dated 11.02.2019	11.02.2019 to 10.02.2024
3.	Thiru C. SrinivasaMurthy, S/o Chandrappa D.No. 2/31 Belagondapalli Post, Denkanikottai Taluk, Krishnagiri Dist.	Mathagondapa lli Vill Denkanikottai Taluk	265 (part-3)	1.60.0	Roc. 224/2018 /Mines/ Dt 09.11.2018	09.11.2018 to 08.11.2028

II. **Details of other Proposed/applied 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. Vinay, S/o. Appoji Reddy, D.No. 146, Mugalur Post, Hosur Taluk, Krishnagiri District.	Mathagondapalli Vill Denkanikottai Taluk	265 (part-4)	1.46.0	Roc. 225/2018 /Mines/ Dt 09.03.2018.	Proposed Quarry.

III. 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. Krishna Reddy, No. 2/58, Mathukur Village, Mathakondapalli Post, Denkanikottai Taluk, Krishnagiri District.	Mathagondapalli Vill Denkanikottai Taluk	337/2A1, 337/2B	1.21.0	Roc. 164/2012 /Mines/ Dt 22.05.2017.	29.05.2017 to 28.05.2022


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 – V
EXISTING PIT DIMENSION LETTER &
PERMIT LETTER

From

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

To

Tmt. P. Sudha
W/o. R. Venugopal,
No.27, Malleswaram Green Park,
Naganayakanahalli Post,
Kasaba Hobil Marsur Post,
Anekal Taluk, Bangalore.

Roc.No. 1393/2023/Mines dated: ~~25~~ 28.08.2023.

Sir,

Sub: Mines and Minerals – Minor Mineral – Rough stone -
Quarry lease granted in favour of Tmt. P. Sudha
W/o. R. Venugopal over an extent of 2.50.0 Hects of
Poramboke land in S.F.No. 265 (Part-II) of
Mathakondapalli Village, Denkanikottai Taluk for a
period of 10 years – Scheme of Mining Plan –
Approved - Quarry pit dimension details – Furnished -
reg.

- Ref:**
1. The District Collector, Krishnagiri Proc. Roc. No.223/2018/ Mines dated: 09.11.2018.
 2. Mining plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Roc.No. 223/2018/ Mines-1 Dated: 17.05.2018.
 3. Scheme of Mining Plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Roc.No. 1393/2023/ Mines Dated: 25.08.2018.
 4. Tmt. P. Sudha W/o. R. Venugopal letter dated 28.08.2023.


Kind attention is invited to the reference cited above.


2) A quarry lease had been granted in favour of Tmt. P. Sudha W/o. R. Venugopal, to quarry Rough stone for a period of 10 years over an extent of 2.50.0 hecets of Poramboke land in S.F.No. 265 (Part-II) of Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District vide the District Collector, Krishnagiri Proc. Roc. No. 223/2018/ Mines dated: 09.11.2018 under TNMMCR Rules 1959. The lease deed has been executed on 09.11.2018 and the lease period is valid upto 08.11.2028.

3) The Scheme of Mining Plan for the subject Rough stone quarry was approved by the Deputy Director of Geology and Mining, vide letter Rc. No. 1393/2023/ Mines Dated: 25.08.2023.

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 as per the Scheme of Mining the pit dimension of the subject land is given as under.

Existing Pit Details				
Sl.No.	Pit Nos.	Area in Sqm.	Depth in (m)	Volume in (M ³)
1	Pit - I	2909	4	11636
2	Pit - II	1694	7	11858
3	Pit - III	5257	20	105140
4	Pit - IV	923	39	35997
TOTAL				164631


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.S.Vediappan, M.Sc.,Ph.D.,
Deputy Director,
Dept. of Geology and Mining,
Krishnagiri.

To

Tmt. P. Sudha
W/o. R. Venugopal,
No.27, Malleswaram Green Park,
Naganayakanahalli Post,
Kasaba Hobil Marsur Post,
Anekal Taluk, Bangalore.

Roc. No. 1393/2023/Mines dated: 28.08.2023

Sir,

Sub: Mines and Minerals – Minor Mineral – Rough stone -
Quarry lease granted in favour of Tmt. P. Sudha
W/o. R. Venugopal over an extent of 2.50.0 Hects of
Poramboke land in S.F.No. 265 (Part-II) of
Mathakondapalli Village, Denkanikottai Taluk for a
period of 10 years – Scheme of Mining Plan –
Approved - Details of quantity previous approved and
transported - requested by the applicant to obtain EC
– Details furnished – regarding.

- Ref
1. The District Collector, Krishnagiri Proc. Roc. No.223/2018/ Mines dated: 09.11.2018.
 2. Mining plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Roc.No. 223/2018/ Mines-1 Dated: 17.05.2018.
 3. Scheme of Mining Plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Roc.No. 1393/2023/ Mines Dated: 25.08.2018.
 4. Tmt. P. Sudha W/o. R. Venugopal letter dated 28.08.2023.

-o0o-

Kind attention is invited to the references cited above.

2) A quarry lease had been granted in favour of Tmt. P. Sudha W/o. R. Venugopal, to quarry Rough stone for a period of 10 years over an extent of 2.50.0 hecets of Poramboke land in S.F.No. 265 (Part-II) of Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District vide the District Collector, Krishnagiri Proc. Roc. No. 223/2018/ Mines


dated: 09.11.2018 under TNMMCR Rules 1959. The lease deed has been executed on 09.11.2018 and the lease period is valid upto 08.11.2028.

3) The Scheme of Mining Plan for the subject Rough stone quarry was approved by the Deputy Director of Geology and Mining, vide letter Rc. No. 1393/2023/ Mines Dated: 25.08.2023.

4) The lessee Tmt. P. Sudha has requested vide letter dated: 28.08.2023 to issue the details of permit taken to the subject quarry to furnish the same to apply for Pollution Control Board.

5) In this connection, it is informed that the approved quantity of previous approved mining plan and transported quantity upto 13.07.2023 is furnished below.

As per Environment Clearance approved quantity	:	2772126 Cbm.
Permit Quantity (period 2018-19 to 2023-24) (Up to 13.07.2023)	:	144000 Cbm.


Deputy Director,
Dept of Geology and Mining,
Krishnagiri.


28/8/23

ANNEXURE-VI

1ST SCHEME OF MINING PLAN

**SCHEME OF MINING
WITH
PROGRESSIVE MINE CLOSURE PLAN
FOR
ROUGH STONE QUARRY**



(Prepared Under Rule 12 of MMCDR 1988 (as amended upto 02.08.2011)
& as per the amendments Under Rule 41 & 42 of TNMMCR, 1959)

PERIOD OF SCHEME OF MINING WITH PMCP: 2023-2024 to 2027-2028

EXTENT : 2.50.0HA.
S.F.No. : 265(Part- 2).
VILLAGE : MATHAKONDAPALLI.
TALUK : DENKANIKOTTAL.
DISTRICT : KRISHNAGIRI.
STATE : TAMIL NADU.

LESSEE

TMT.P.SUDHA,

W/o. R.VENUGOPAL,

No.27, MALLESWARAM GREEN PARK,

NAGANAYAKKANAHALLI,

KASABA HOBLI, MARSUR POST,

ANEKAL TALUK,

BANGALORE - 562 106.

PREPARED BY:

S. DHANASEKAR, M.SC.,(GEO).,

QUALIFIED PERSON,

NO. 5/30-7 B, AVVAI NAGAR,

PONKUMAR MINES ROAD,

JAGIR AMMAPALAYAM,

SALEM DISTRICT – 636 302.

E-mail: geodhana@yahoo.co.in

CELL: 98946 28970 & 73733-74702.

P. Sudha,
W/o. R.Venugopal,
No.27, Malleswaram Green Park,
Naganayakkanahalli,
Kasaba Hobli Marsur Post,
Anekal Taluk,
Bangalore - 562 106.



CONSENT LETTER FROM LESSEE

I hereby give my consent for preparing the Scheme of Mining with Progressive Mine Closure Plan in respect of Rough Stone Quarry over an extent of 2.50.0 Ha. in S.F. No.265 (Part- 2) of Mathakondapalli Village, Denkanikottai 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 Scheme of Mining with Progressive Mine Closure 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 Scheme of Mining with Progressive Mine Closure 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.

Place: Bangalore

Date:


(P.SUDHA)

Signature of the Lessee

P. Sudha,
W/o. R. Venugopal,
No.27, Malleswaram Green Park,
Naganayakkanahalli,
Kasaba Hobli Marsur Post,
Anekal Taluk,
Bangalore - 562 106.



DECLARATION OF THE MINE OWNER

I hereby declare that the Scheme of Mining with Progressive Mine Closure Plan in respect of Rough Stone Quarry over an extent of 2.50.0 Ha. in S.F. No.265 (Part- 2) of Mathakondapalli Village, Denkanikottai 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 Laws applicable to mines.

(P.SUDHA)

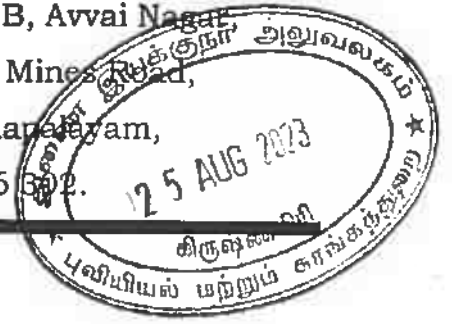
Signature of the Lessee

Place: Bangalore

Date:

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

No.5/30-7B, Avvai Nagar,
Ponkumar Mines Road,
Jagir Ammanayyaram,
Salem- 636 302.



CERTIFICATE

This is to certify that, the provisions of Minor Minerals Conservation and Development Rules, 2010 (MMCDR) have been observed in the Scheme of Mining with Progressive Mine Closure Plan for Mathakondapalli Rough Stone Quarry over an extent of 2.50.0 Ha. in S.F.No.265 (Part- 2) of Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District, Tamil Nadu State prepared for Tmt.P.Sudha W/o. R.Venugopal, No.27, Malleswaram Green Park, Naganayakkanahalli, Kasaba Hobli, Marsur Post, Anekal Taluk, Bangalore - 562 106.

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

It is also certified that the information furnished in the above Scheme of Mining with Progressive Mine Closure 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, Avvai Nagar
Ponkumar Mins Road,
Jagir Ammapalayam,
Salem- 636802.



CERTIFICATE

Certified that provision of Mines Act, Rules and Regulations and orders made there under have been observed in the Scheme of Mining with Progressive Mine Closure Plan for Mathakondapalli Rough Stone Quarry over an extent of 2.50.0 Ha. in S.F. No.265 (Part - 2) of Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District, Tamil Nadu State prepared for Tmt.P.Sudha, W/o. R.Venugopal, D.No.27, Malleswaram Green Park, Naganayakkanahalli, Kasaba Hobli, Marsur Post, Anekal Taluk, Bangalore - 562 106.

Whenever specific permissions, approvals, exemptions or relaxations are required, the lessee will approach the concerned authorities of the Director General of Mines Safety (DGMS), 4th B Block, 100, No.5,14th Main, 100 Feet Road, Koramangala, Bangalore, Karnataka- 560 034, for such permissions, exemptions, relaxations and approvals.

It is also certified that information furnished in the above Scheme of Mining with Progressive Mine Closure 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

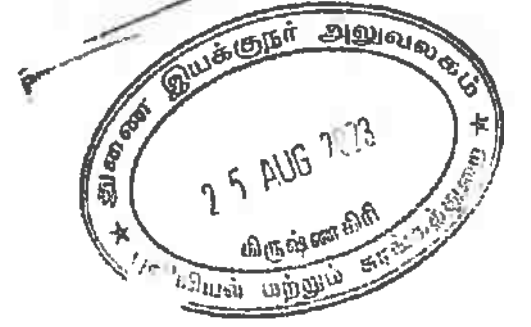


S.NO.	DESCRIPTION	PAGE NO.
1.0	General	01
2.0	Location and accessibility	02
3.0	Details of approved Mining Plan/Scheme of Mining (if any)	04
	Part-A	
1.0	Geology and Exploration	06
2.0	Mining	11
	A. Open Cast Mining	11
	B. Underground Mining	20
3.0	Mine Drainage	20
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5.0	Use of Mineral and Mineral Reject	22
6.0	Processing of ROM and Mineral Reject	23
7.0	Other	23
8.0	Progressive Mine Closure Plan	24
9.0	Any Other Information	31

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 Adangal & 'A' Register	VII
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12.	Copy of Lease Area Photos	XII



LIST OF PLATES

Sl. No.	Description	Plate No.	Scale
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
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6.	Mine Lease Plan	II	1:1000
7.	Surface and Geological Plan	III	1:1000
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14.	Conceptual / Final Mine Closure Sections	VII- A	1:1000
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**SCHEME OF MINING
WITH
PROGRESSIVE MINE CLOSURE PLAN
FOR
MATHAKONDAPALLI ROUGH STONE QUARRY**

(Prepared Under Rule 12 of MCDR, 1988(as amended upto 02.08.2018) & as per the
amendments Under Rule 41 & 42 of TNMMCR, 1959)



1.0 General:

The Scheme of Mining along with Progressive Mine Closure Plan has been prepared in respect of Rough Stone Quarry in Government Land S.F.No.265 (Part-2) over an extent of 2.50.0 Ha. in Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District, prepared for Tmt.P.Sudha, W/o. R.Venugopal, No.27, Malleswaram Green Park, Naganayakkanahalli, Kasaba Hobli, Marsur Post, Anekal Taluk, Bangalore- 562 106.

The Deputy Director, Department of Geology and Mining, Krishnagiri approved the fresh mining plan vide letter Roc. No.223/2018/Mines dated: 17.05.2018 for a period of 2018-2019 to 2022-2023. Please refer Annexure-IX. Copy of Mining plan approval Letter.

Accordingly, the Lessee has obtained Environmental Clearance from DEIAA-KGI vide order Lr.No.03/DEIAA-KGI/EC.No.67/2018 dated 27.08.2018. Please refer Annexure- III.

The Mining Lease was granted vide Proceeding No. Roc.223/2018/Mines dated 09.11.2018 for a period of Ten years.

The lease deed was executed on 09.11.2018. Mining operation commenced on 09.11.2018. The lease will expire on 08.11.2028.

This Scheme of Mining for the period 2023-2024 to 2027-2028 is now being prepared and submitted under Rule 12 of MMCDR, 2010 and 41 & 42 of TMMCR, 1959 for approval.

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.

1.1. Review of Mining Plan:

a) Name of lessee : Tmt. P. Sudha,
Address : W/o. R.Venugopal,
D.No.27, Malleswaram Green Park,
Naganayakkanahalli,
Kasaba Hobli, Marsur Post,
Anekal Taluk,
Bangalore - 562 106.
District : Bangalore
State : Tamil Nadu
Pin code : 562 106


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

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., (Geolo)
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 : Mathakondapalli Rough Stone Quarry
Latitude of boundary point : 12° 38' 15.0651" N to 12 ° 38' 14.5350" N
Longitude of boundary point : 77° 45' 17.0791" E to 77° 45' 12.2052" E
Date of grant of lease : 09.11.2018
Period/Expiry Date : 08.11.2028.
Name of leaseholder : Tmt. P. Sudha,
Postal Address : W/o. R.Venugopal,
No.27, Malleswaram Green Park,
Naganayakkanahalli,
Kasaba Hobli, Marsur Post,
Anekal Taluk,
Bangalore - 562 106.

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, Government Land (specify)	2.50.0Ha.

Total lease area : 2.50.0 Ha
 State : Tamil Nadu
 District : Krishnagiri
 Taluk : Denkanikottai
 Village : Mathakondapalli
 Whether the area is recorded : This is Government Poranboke Land
 to be in forest : No 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 67.0 Km. from quarry site. The area is at a distance of about 4.0 kms. from Upparpelli Village. Hosur – Thally Main Road (NH-948A) is at a distance of about 4.0 kms West from the Quarry area.

Nearest Railhead is Hosur Railway Station that is located about 16.0 kms. from the Quarry. Post office are available in Belagondapalli at a distance of about 5.5Kms. Police Station are available in Mathigiri at a distance of about 11.4Kms. Air Port is available in Bangalore, about 85.0 kms. from the Quarry. Nearest Port is Chennai about 348.0 kms. from the area.

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

Table No:2

Toposheet No	:	No. 57 – H/14
Latitude	:	12° 38' 15.0651" N to 12° 38' 14.5350" N
Longitude	:	77° 45' 17.0791" E to 77° 45' 12.2052" E
North East	:	12° 38' 15.0651" N 77° 45' 17.0791"E
South East	:	12° 38' 12.4346" N 77° 45' 17.1824"E
North West	:	12° 38' 17.2675" N 77° 45' 12.5297"E
South West	:	12° 38' 14.5350" N 77° 45' 12.2052"E

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. : Topo Sheet No.57 H/14
 Latitude : 12° 38' 15.0651" N to 12° 38' 14.5350" N
 Longitude : 77° 45' 17.0791" E to 77° 45' 12.2052" E

f) Land use pattern:

Dry Mineral bearing land.

g) Location of the Area :

The area for quarrying lease of Mathakondapalli Rough Stone Quarry is located in S.F.No.266 (Part-2), over an extent of 2.50.0 Ha. in Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District, Tamil Nadu State.



3.0 DETAILS OF APPROVED MINING PLAN/SCHEME OF MINING:

3.1 Date and reference of earlier approved MP:

The Deputy Director, Department of Geology and Mining, Krishnagiri approved the fresh mining plan vide letter Roc No. 223/2018/Mines dated: 17.05.2018 for a period of 2018-2019 to 2022-2023. Please refer Annexure-IX. Copy of Mining plan approval Letter.

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 39.0m.

There are four working pits available in this area, the dimensions of which is given below:

Table No.3

Existing Pit Details				
S.No	Pit Nos.	Area in sq.m	Depth (m)	Volume in m ³
1.	Pit-I	2909	4	11636
2.	Pit-II	1694	7	11858
3.	Pit-III	5257	20	105140
4.	Pit-IV	923	39	35997
Total				164631

Production was added from the southern side boundary also.

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 39.0m and even more.

ii) Mine Development :

The Mine workings have reached a depth of nearly 39.0m. 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 depth of nearly 39.0m.

There are four working pits, the dimensions of which is given below :

Table No.4

Existing Pit Details				
S.No	Pit Nos.	Area in sq.m	Depth (m)	Volume in m ³
1.	Pit-I	2909	4	11636
2.	Pit-II	1694	7	11858
3.	Pit-III	5257	20	105140
4.	Pit-IV	923	39	35997
Total				164631



The Planned and Actual Production for last approved Mining Plan period figures are given as follows:

Table No.5

YEAR	PLANNED(Cu.m) ROUGH STONE	ACTUAL(Cu.m) ROUGH STONE
2018-2019	504861	40800
2019-2020	465080	28800
2020-2021	618345	-
2021-2022	523215	9600
2022-2023	660625	64800
TOTAL	2772126	144000

iv) Waste Management:

In the Previous approved Mining Plan Period, there is no generation of waste as there is 100% recovery. The entire top soil is of gravel only.

v) Reserves and Resources estimated in the earlier approved mining plan period (2018- 2019 to 2022-2023) with grade:

Geological Reserve (insitu) under Proved category : 5012966 cu.m
Mineable Reserve : 3110366 cu.m
Year wise Production : 2772126 cu.m

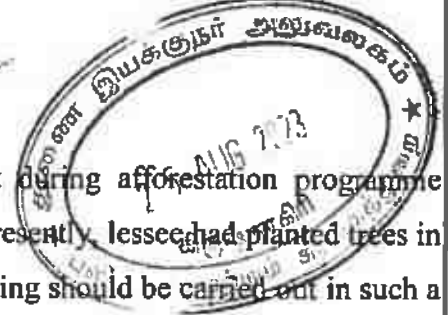
While calculating Mineable Reserve, the boundary barrier and bench width, height and slope are taken into account. Hence, the Mineable Reserve will be always less than the insitu reserve.

vi) Depletion of Reserve:

The actual production of Rough Stone for the last five years (2018-2019 to 2022-2023) is about 144000cu.m of saleable Rough Stone.

vii) Afforestation and Reclamation:

It was clearly stated in the approved Mining Plan that during afforestation programme 40 neem, tamarind trees will be planted yearly, in the lease area. Presently, lessee had planted trees in the lease area in scattered manner. 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, and Rainfall Data of the Area Applied/Mining Lease Area:

a) Topography :

The Mining Lease area is approximately at 12° 38' 15.0651" N to 12° 38' 14.5350" N latitude and 77° 45' 17.0791" E to 77° 45' 12.2052" E longitude and is represented by Topo Sheet No.57 H/14 of Survey of India.

The lease area is in Hilly terrain. The top soil of the area is gravelly in nature. The general trend of formation is NE – SW and dip towards SE-70°. The altitude of the area is about 950 MSL.

Vegetation:

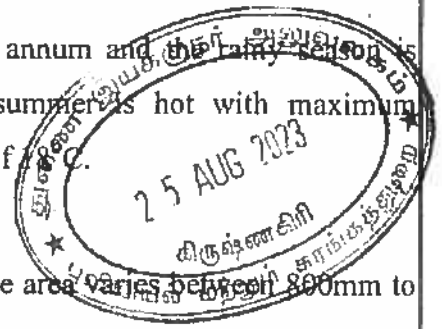
It is a dry Mineral bearing. It is a dry place with a top soil cover of about 3.0m.

Water table and Drainage Pattern:

Water table is touched at a depth of 82m 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 in Hilly topography, the area has been quarrying operation earlier. Rough stone exposures are clearly visible in existing pit within the lease area. The entire top soils are only gravel and noticed at the average thickness of 3m height. The top soil of the area is gravelly in nature. The slope is gentle towards western side. The altitude of the area is above 950m 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 SE-70°.

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. 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 39.0m.

There are four working pits available in this area, the dimensions of which is given below :

Table No.6

Existing Pit Details				
S.No	Pit Nos.	Area in sq.m	Depth (m)	Volume in m ³
1.	Pit-I	2909	4	11636
2.	Pit-II	1694	7	11858
3.	Pit-III	5257	20	105140
4.	Pit-IV	923	39	35997
Total				164631

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 39.0m 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 Scheme of Mining with PMCP.

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 48.0m (3.0m Gravel + 45.0m 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 Top Soil is calculated upto a depth of 48.0m (3.0m Top Soil + 45.0m Rough Stone) Surface Ground Level above-15m and Surface Ground Level below-33m. Total Geological reserve is estimated at 689210 Cu.m by area cross sectional method.

Table No.7

GEOLOGICAL RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Geological Reserves in m3 @ 100%	Soil in m3 @ 100%
XY-AB	I	9	52	3			
	II	20	86	3	5160	5160	
	III	54	128	5	34560	34560	
	IV	54	144	5	38880	38880	
	V	54	144	5	38880	38880	
	VI	54	144	5	38880	38880	
	VII	54	144	5	38880	38880	
	VIII	54	144	5	38880	38880	
	IX	54	144	5	38880	38880	
	X	54	144	5	38880	38880	
TOTAL					311880	311880	1404
XY-CD	I	1	11	3			33
	II	1	25	5	125	125	
	III	21	79	5	8295	8295	
	IV	37	104	5	19240	19240	
	V	73	104	5	37960	37960	
	VI	73	104	5	37960	37960	
	VII	73	104	5	37960	37960	
	VIII	73	104	5	37960	37960	
	IX	73	124	5	45260	45260	
	X	73	124	5	45260	45260	
TOTAL					270020	270020	33
XY-EF	I	16	12	3			576
	II	16	12	5	960	960	
	III	16	12	5	960	960	
	IV	16	12	5	960	960	
	V	59	59	5	17405	17405	
	VI	59	59	5	17405	17405	
	VII	59	59	5	17405	17405	
	VIII	59	59	5	17405	17405	
	IX	59	59	5	17405	17405	
	X	59	59	5	17405	17405	
TOTAL					107310	107310	576
GRAND TOTAL					689210	689210	2013

Top Soil = 2013 cu.m
 Total Geological Reserves in ROM = 689210 cu.m
 Recoverable Reserves @ 100% = 689210 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 46.0m (3.0m Top Soil + 43.0m Rough Stone) Surface Ground Level above-15m and Surface Ground Level below-31m.

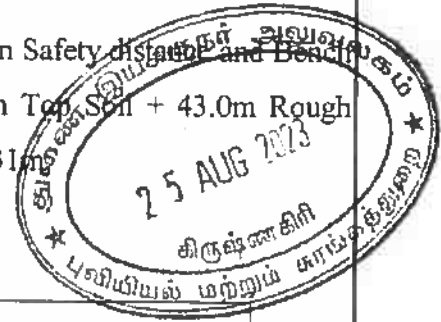


Table No.8

MINEABLE RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Mineable Reserves in m3 @ 100%	Top Soil in m3
XY-AB	I	1	41	3			123
	II	20	72	3	4320	4320	
	III	45	109	5	24525	24525	
	IV	41	110	5	22550	22550	
	V	36	100	5	18000	18000	
	VI	31	90	5	13950	13950	
	VII	26	80	5	10400	10400	
	VIII	21	70	5	7350	7350	
	IX	16	60	5	4800	4800	
	X	11	50	5	2750	2750	
TOTAL					108645	108645	123
XY-CD	II	1	25	5	125	125	
	III	21	68	5	7140	7140	
	IV	37	88	5	16280	16280	
	V	73	83	5	30295	30295	
	VI	73	78	5	28470	28470	
	VII	73	73	5	26645	26645	
	VIII	73	68	5	24820	24820	
	IX	68	73	5	24820	24820	
	X	63	63	5	19845	19845	
	TOTAL					178440	178440
XY-EF	V	43	37	5	7955	7955	
	VI	38	27	5	5130	5130	
	VII	33	17	5	2805	2805	
TOTAL					15890	15890	
GRAND TOTAL					302975	302975	123

Top Soil = 123 cu.m
 Total Mineable Reserves in ROM = 302975 cu.m
 Recoverable Reserves 100% = 302975 cu.m

The geological reserves computed based on the geological cross sections up to the economically workable depth of 48m (3.0m Top Soil + 45.0m Rough Stone) works out to 689210 cu.m (100% recovery) (Table-7) and mineable reserves have been computed as 302975 cu.m (Table-8) at the rate of 100% recovery upto a depth of 46.0m (3.0m Top Soil + 43.0m Rough Stone) Surface Ground Level above-15m and Surface Ground Level below-31m. (Refer plate No. VII & VIII). The above projections are for the Next Five years plan period.

Mineable reserves have been computed as 302975 cu.m at the rate of 100% recovery up to a depth of 46m (3.0m Top Soil + 43.0m Rough Stone). The Mineable reserves are calculated by deducting 7.5m & 10.0m Safety distance & 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 methods with jack hammer drilling and blasting, hydraulic excavators are used for loading the Rough stone from pithead to the needy crushers.

There are four existing working pits, the dimensions of which is given below :

Table No.9

Existing Pit Details				
S.No	Pit Nos.	Area in sq.m	Depth (m)	Volume in m ³
1.	Pit-I	2909	4	11636
2.	Pit-II	1694	7	11858
3.	Pit-III	5257	20	105140
4.	Pit-IV	923	39	35997
Total				164631

Proposed method :

The quarry is proposed to carry out mining operation with semi-mechanized opencast method ("B2" category of small mine). 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 i.e. from 8.00 AM to 4.00 PM with one hour lunch interval between 12.00 PM to 1.00 PM.

The Rough Stone, totally nine benches will be 5.0m height and 5.0m width for next Five 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 Five years. Please refer Plate No.IV.

A bund will be constructed around the pit to prevent accident 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 of the lease area is gravelly in nature. Topsoil formation will be removed and dumped Northwest & Northeastern side boundary barrier of lease area. It will be utilized for low level road laying & afforestation purposes.

Average annual production is about 60595 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 Five 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 Five years is given below :

Top Soil of the lease area is 123m³. Topsoil formation will be removed and dumped Northwest & Northeastern side boundary barrier of lease area. It will be utilized for low level road laying & afforestation purposes.

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

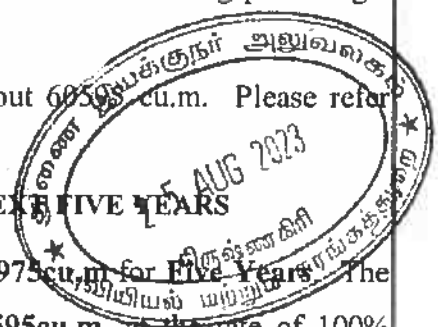
The proposed rate of production of **Rough Stone** is about **302975 cu.m** for **Five Years** at the rate of 100% recovery up to **46m** depth (3m Top Soil + 43m Rough Stone).

Table No.10

Year	ROM Cu.m	Production 100% (cu.m)
09.11.2023 - 08.11.2024	74940	74940
09.11.2024 - 08.11.2025	56250	56250
09.11.2025 - 08.11.2026	47550	47550
09.11.2026 - 08.11.2027	72020	72020
09.11.2027 - 08.11.2028	52215	52215
TOTAL	302975	302975

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 60595 cu.m. Please refer Table No.11 and Plate No.IV.



YEARWISE DEVELOPMENT & PRODUCTION SCHEDULE FOR NEXT FIVE YEARS

The proposed rate of production of Rough Stone is about 302975 cu.m for Five Years. The average proposed rate of production of Rough Stone is about 60595cu.m. at the rate of 100% recovery up to a 46m depth (3m Top Soil + 43m Rough Stone) Surface Ground Level above-15m and Surface Ground Level below-31m.

The proposed Production & development for next Five years 2023-2024 to 2027-2028 are given below :

Table - 11

YEARWISE DEVELOPMENT AND PRODUCTION								
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Roughstone Reserves in m3 @ 100%	Top Soil in m3
09.11.2023 TO 08.11.2024	XY-AB	I	1	41	3			123
		II	20	72	3	4320	4320	
		III	45	109	5	24525	24525	
		IV	41	110	5	22550	22550	
	XY-CD	II	1	25	5	125	125	
		III	21	68	5	7140	7140	
		IV	37	88	5	16280	16280	
TOTAL						74940	74940	123
09.11.2024 TO 08.11.2025	XY-AB	V	36	100	5	18000	18000	
	XY-CD	V	73	83	5	30295	30295	
	XY-EF	V	43	37	5	7955	7955	
	TOTAL						56250	56250
09.11.2025 TO 08.11.2026	XY-AB	VI	31	90	5	13950	13950	
	XY-CD	VI	73	78	5	28470	28470	
	XY-EF	VI	38	27	5	5130	5130	
	TOTAL						47550	47550
09.11.2026 TO 08.11.2027	XY-AB	VII	26	80	5	10400	10400	
		VIII	21	70	5	7350	7350	
	XY-CD	VII	73	73	5	26645	26645	
		VIII	73	68	5	24820	24820	
	XY-EF	VII	33	17	5	2805	2805	
	TOTAL						72020	72020
09.11.2027 TO 08.11.2028	XY-AB	IX	16	60	5	4800	4800	
		X	11	50	5	2750	2750	
	XY-CD	IX	68	73	5	24820	24820	
		X	63	63	5	19845	19845	
	TOTAL						52215	52215
GRAND TOTAL						302975	302975	123

Top Soil	=	123 cu.m
Total Reserves	=	302975 cu.m
Recoverable Reserves @ 100%	=	302975 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	=	302975cu.m
Mineable Reserves @ 100%	=	302975cu.m
Average production (Rough Stone) per year @ 100%	=	60595cu.m
Estimated Life of the Quarry	=	$302975 / 60595 = 5.0$ years

Life = 5 years

The average proposed rate of production of Rough Stone is about 60595cu.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 302975cu.m for next Five years and 60595cu.m per annum. (Table-11) The production schedule for the subsequent five year 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 46.0m (3.0m Top Soil + 43.0m 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.

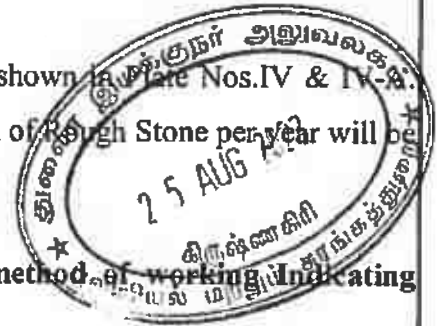
The mineable reserves are calculated by excluding the mining loss due to formation of benches, ultimate depth of mine, the mineral reserve held up within the safety distances all along the boundary of quarry lease area.

The mineable reserves for this Rough stone is thus arrived as 302975cu.m (Table-15) for an assumed depth of 46m from top surface (3.0m Topsoil + 43.0m Rough Stone). The details of estimation of five years development & production plan (plate no.IV) is furnished in Table-19. The average rate of production of Rough Stone from this quarry is 60595cu.m per year and mineable recoverable reserves 302975cu.m.

Based on the above, and taking into consideration of the available Mineable Reserves, the life of mine will be about 5 years, if the quarry is being worked continuously with prevailing market conditions and according to this Scheme of mining period.

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 60595 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 ("B2" category of small mine). 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 0.60m from the preface. Details of drilling equipments are given below.

Table No.12

Type	Nos	Dia of hole	Size / Capacity	Make	Motive power	H.P.
Jack Hammer	5	25.5 mm	Hand held	Atlas copco 2Nos	Diesel	60

Loading Equipment:

Loading of rough stone shall be carried out by 10 tonne capacity tippers by Hydraulic Excavator from the working place periodically. Details of loading equipment are given as under.

Table No.13

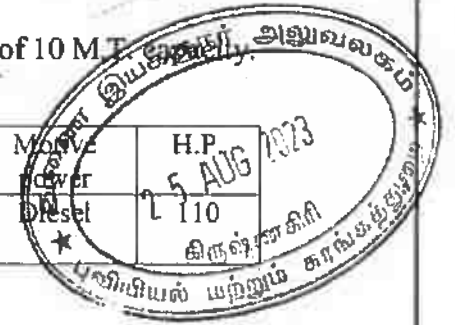
Type	Nos	Bucket Capacity (MT)	Make	Motive power	H.P.
Hydraulic excavator	2	1.2 M ³	L&T or Ex200	Diesel	120

Transportation:

Transport of raw materials and waste shall be done by Tipper of 10 M.T

Table No.14

Type	Nos	Size / Capacity	Make	Motor Power Diesel	H.P L 110
Tipper	3	10 M.T	Ashok Leyland		

**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 along North, West & Eastern side lease boundary has been identified to be utilized for afforestation purpose. Yearly 100 Neem, Panai, Illuppai & Pungai 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 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 Five years is 0.75.0 Ha. interval between trees – 5m, survival rate – 70%. A retaining wall will be constructed around the dumping yard.

The Afforestation programme for the next Five years are described as follows :

Table No. 15

Year	Name of the species	No. of species	Interval	Area in Ha.	Survival rate
2023-2024	Neem, Panai, Illuppai & Pungai	100	5m	0.15.0	70%
2024-2025	Neem, Panai, Illuppai & Pungai	100	5m	0.15.0	70%
2025-2026	Neem, Panai, Illuppai & Pungai	100	5m	0.15.0	70%
2026-2027	Neem, Panai, Illuppai & Pungai	100	5m	0.15.0	70%
2027-2028	Neem, Panai, Illuppai & Pungai	100	5m	0.15.0	70%
TOTAL		500		0.75.0	

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 of 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 ("B2" category of small mine). 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 4.00 PM with one hour lunch interval between 12.00 PM to 1.00 PM.

In Top Soil, a bench will be 3.0m height and width with 45° slope.

The Rough Stone, totally nine benches will be 5.0m height and 5.0m width for next Five 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 Five 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 of the lease area is gravelly in nature. Topsoil formation will be removed and dumped Northeast & Northwestern side boundary barrier of lease area. It will be utilized for low level road laying & afforestation purposes.

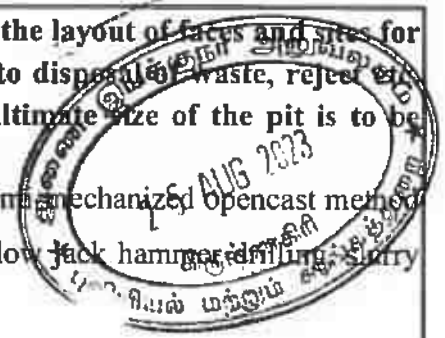
Average annual production is about 60595 cum of Rough Stone with 300 working days in a year. Considering the nature of the deposit and the anticipated daily production level, semi-mechanized mining is proposed.

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 Five 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.,

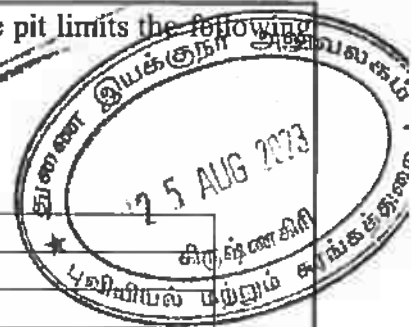


While making the Conceptual Mining Plan and deciding the ultimate pit limits the following factors are considered.

i) Pit dimension :

a. Table No:16

	PIT
Length(m)	169.0
Width (m)Avg	89.0
Depth (m)	46.0m (3.0m Top Soil + 43.0m Rough Stone) Surface Ground Level above-15m and Surface Ground Level below-31m.



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 46.0m (3.0m Top Soil + 43.0m Rough Stone).

03. **No. of benches :**

The no. of benches will be ten including the Top Soil bench.

04. **Size and slope of benches :**

In Top Soil, the bench height will be 3.0m with 45° slope.

In Rough Stone, the bench 5.0m height and width 5.0m for next Five years.

05. **Nature of Topsoil :**

The nature of the topsoil in this area is gravelly soil, thickness of topsoil is about 3.0m.

06. **The size of the lease hold :**

The lease area has an extent of 2.50.0Ha.

07. **Nature of ore body :**

In the area Rough Stone is of massive Deposit and without much of geological disturbances.

i) **The ultimate pit limits will be :**

Ultimate pit limits have been marked in the Conceptual Mining Plan.

Table No. 17

	PIT
Length(M)	169.0
Width (m)	89.0
Depth (m)	46.0m (3.0m Top Soil + 43.0m Rough Stone) Surface Ground Level above-15m and Surface Ground Level below-31m.

01. Area already worked out – Plate No.III : 1.10.0 Ha.

02. The outline of the area to be worked out in the next Five years : 1.73.0 Ha.

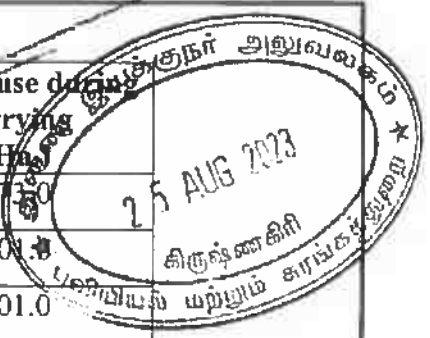
Plate No. IV.

03. Yearwise area to be planted for next Five years –Plate No.IV. : 0.75.0 Ha.

04. Extent of areas occupied by roads, site services, etc., - Plate No.V. : 0.02.0 Ha.

Table No. 18

Sl. No.	Description	Present Area (Ha.)	Area in use during the quarrying period (Ha.)
01.	Area under Quarrying	1.10.0	1.10.0
02.	Infrastructure	Nil	0.01.0
03.	Roads	0.02.0	0.01.0
04.	Green Belt & Dump	Nil	0.75.0
05.	Unutilized Area	1.38.0	Nil
	TOTAL	2.50.0	2.50.0



Ultimate pit boundaries:

Ultimate pit limits have been marked in the Conceptual Plan in Plate Nos.VII.

ii) 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. Power 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.19

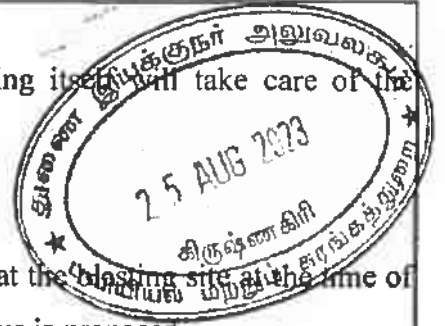
Diameter of the hole	:	32-36 mm
Spacing	:	60 Cms
Depth	:	1 to 1.5m
Charge / Hole	:	D.Cord with water or 70 gms of gun powder or Gelatine.
Pattern of hole	:	Zig Zag
Inclination of hole	:	70 ⁰ from the horizontal.
Quantity of rock broken	:	0.45 MT x 2.6 = 1.17 MT
Control Blasting efficiency @ 90%	:	1.17 x 90% = 1.05MT / hole
Charge per hole	:	140 gms of 25mm dia cartridge
Quantity of rock broken per day	:	201.98M 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 an hilly topography. Rain water finds its natural coarse. The water table is touched at a depth of 90m in summer and at 82m 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 western boundary.

a. Depth of Mining:

The working in Rough Stone will reach a depth of 46.0m (3.0m Top Soil + 43.0m Rough Stone) in the next Five years.

b. Quantity and quality of water likely to be encountered:

In the next Five 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 proposed.

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 82m 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 Gravel soil. It occurs to a depth of 3.0m. The generation of Top Soil for next Five years is about 123m³.

Sub-grade Mineral:

There is no Sub-grade Mineral produced in the next Five years.

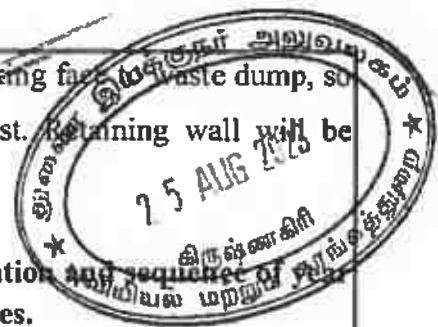
Mineral reject:

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 prevent 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 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, export, Associated industrial use etc:

Not Applicable.

d) Physical specifications:

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.

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	:	2
Co- operator	:	2
Jack hammer operator	:	6
Blaster/mate	:	1

ii) Semi-skilled:

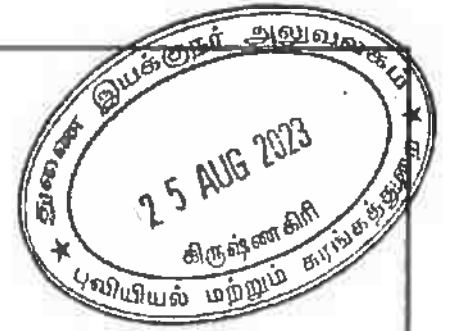
watchman	:	1
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iii) Unskilled helper Muzdoor

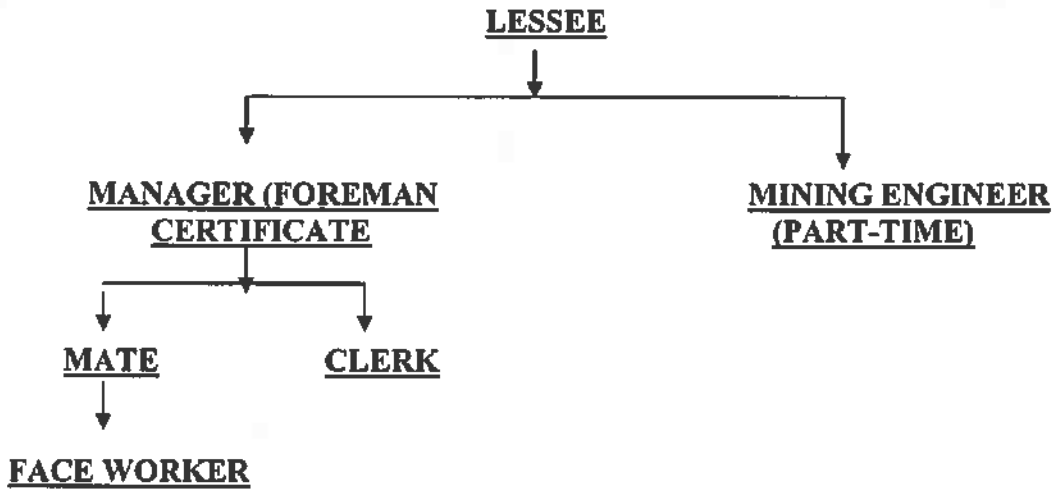
: 5

Total

: 21 Nos.



The proposed organization chart :



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 : Mathakondapalli Rough Stone Quarry
Lessee : Tmt.P.Sudha,
Address : Tmt.P.Sudha,
W/o. R.Venugopal,
No.27, Malleswaram Green Park,
Naganayakkanahalli,
Kasaba Hobli, Marsur Post,
Anekal Taluk,
Bangalore - 562 106.

Location :

Extent : 2.50.0 Ha.
S.F.Nos : 265 (Part- 2)
Village : Mathakondapalli
Taluk : Denkanikottai
District : Krishnagiri



Type of Lease Area : Government Land- Non-Forest area
Present land use pattern : Quarrying of Rough Stone
Method of Mining : Semi-mechanized
Mineral processing operation : Nil

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:20**

Sl. No.	Description	Present Area (Ha.)	Area in use during the quarrying period (Ha.)
01.	Area under Quarrying	1.10.0	1.73.0
02.	Infrastructure	Nil	0.01.0
03.	Roads	0.02.0	0.01.0
04.	Green Belt & Dump	Nil	0.75.0
06.	Unutilized Area	1.38.0	Nil
	TOTAL	2.50.0	2.50.0

Water Regime

Ground water is touched at a depth of 90m in summer and at 82m 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 38⁰C and winter encounters a minimum temperature of 18⁰C.

Human Settlement

The hamlets near the area are: Table No:21

Name of Hamlet	Population	Direction from the area	Distance
Kappakal	200	N	1.0 kms.
Papireddy Matham	350	E	1.0 kms.
Upparpelli	400	W	1.8 km.
Mathakur	220	N	1.0 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. The dumps will be vegetated to prevent sliding. 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.

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 100 Neem, Panai, Illuppai & Pungai 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 Five years are described as follows :

Table No. 22

Year	Name of the species	No. Of species	Interval	Area in Ha.	Survival rate
2023-2024	Neem, Panai, Illuppai & Pungai	100	5m	0.15.0	70%
2024-2025	Neem, Panai, Illuppai & Pungai	100	5m	0.15.0	70%
2025-2026	Neem, Panai, Illuppai & Pungai	100	5m	0.15.0	70%
2026-2027	Neem, Panai, Illuppai & Pungai	100	5m	0.15.0	70%
2027-2028	Neem, Panai, Illuppai & Pungai	100	5m	0.15.0	70%
TOTAL		500		0.75.0	

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 : 1.73.0Ha.
02. The area covered by waste dumps & Afforestation : 0.75.0Ha.
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, Topsoil formation will be removed and dumped Northwest & Northeastern side boundary barrier of lease area. It will be utilized for low level road laying & 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 instruction 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 Hosur which is at a distance of 15.5 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 Upparpelli. 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 : P. Sudha
Postal Address : P. Sudha,
W/o. R. Venugopal
No.27, Malleswaram Green Park,
Naganayakkanahalli,
Kasaba Hobli Marsur Post,
Anekal Taluk,
Bangalore - 562 106.

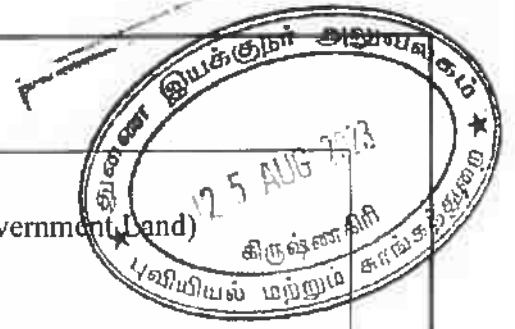
8.5 Care and maintenance during temporary discontinuance:

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.

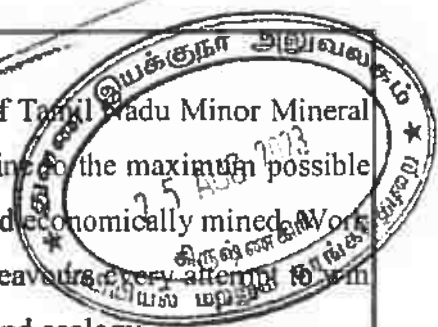
8.6 .Project Cost:**Table No.23**

<u>A. Fixed Asset Cost:</u>		
1. Land Cost	:	Rs. 1,26,99,990/- (Government Land)
2. Labour Shed	:	Rs. 1,30,000/-
3. Sanitary Facility	:	Rs. 90,000/-
4. Fencing cost	:	Rs. 1,00,000/-
Total=	:	Rs. 1,30,19,990/-
<u>B. Operational Cost:</u>		
<u>Machinery cost</u>	:	Rs.40,00,000/-
<u>C. EMP Cost:</u>		
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. 1,74,49,990/-



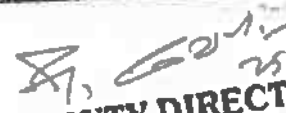

9.0 Any Other Information:

The Scheme of Mining 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 Lessee endeavours every attempt to win mineral economically without wastage and to improve the environment and ecology.




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. 1393/2023 Dated 25.08.2023 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.

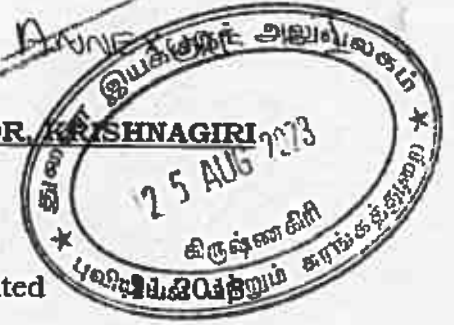

DEPUTY DIRECTOR
Geology and Mining,
Collectorate, Krishnagiri.

25/8/23

This Mining Plan is approved subject to the conditions / Stipulation indicated in the Mining Plan Approval
Letter Roc. No. 1393/2023 Dated 25.08.2023

PROCEEDINGS OF THE DISTRICT COLLECTOR, KRISHNAGIRI

Present: Dr. Prabhakar, I.A.S.,

Dated



Roc.223/2018/Mines

Sub: Mines and Minerals – Minor Mineral – Rough Stone – Krishnagiri District – Denkanikottai Taluk – Mathakondapalli Village- Govt. Land in S.F. No. 265 (part-2) – Over an extent of 2.50.0 Hects. – Precise are for the grant of Quarry lease for rough stone issued to Tmt. P. Sutha, W/o R. Venugopal No. 27 Malleswaram Green Park, Naganayakanahalli Post, Kasaba Hobli Marsur Post, Anekal Taluk, Banalore District under Tender-cum-Auction – DEIAA clearance obtained – order issued - reg.

- Ref:**
1. Krishnagiri District Gazette Extra Ordinary No.1 dated 19.01.2018.
 2. Tmt. P. Sutha, W/o R. Venugopal No. 27 Malleswaram Green Park, Naganayakanahalli Post, Kasaba Hobli Marsur Post, Anekal Taluk, Banalore District tender application dated 07.02.2018 .
 3. The District Collector, Krishnagiri Memorandum in Roc.No.223/2018/Mines dated 09.03.2018.
 4. Mining plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Roc. No. 223/2018/ Mines-1 dated 12.05.2018.
 5. The District Level Environmental Impact Assessment Authority Tamil Nadu Letter No. 03/ DEIAA – KGI/EC No. 67/2018 dated 27.08.2018.
 6. Proceedings No. 1878HSR/RS/DEE/TNPCB/HSR/A/2018 dated 10.10.2018 of the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur
 7. Proceedings No. 1878HSR/RS/DEE/TNPCB/HSR/W/2018 dated 10.10.2018 of the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.
 8. The Deputy Director of Town and County Paining Dharmapuri letter No. 2277/2018 Thama dated 26.09.2018.

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ORDER:

Tmt. P. Sutha, W/o R. Venugopal No. 27 Malleswaram Green Park, Naganayakanahalli Post, Kasaba Hobli Marsur Post, Anekal Taluk, Banalore District

had participated in the tender-cum-auction for the grant of quarry lease for rough stone over an extent of 2.50.0 Hects in Government land S.F.No. 265 (part-2) of Mathakondapalli Village of Denkanikottai Taluk Krishnagiri District on 07.02.2018 and he had been declared as the highest bidder and precise area had been given for the grant of rough stone quarry lease in the said area for a period of Ten years from the date of execution of lease deed and he had been directed to submit the approved mining plan, Environmental Clearance from the DEIAA of Krishnagiri and consent of the Tamil Nadu Pollution Control Board vide in the Memorandum 3rd cited.

The applicant had submitted the approved mining plan approved by the Deputy Director of Geology and Mining vide in the reference 4th cited, the Environment clearance given by the District Level Environment Impact Assessment Authority Krishnagiri in the reference 5th cited and consent of the Tamil Nadu Pollution Control Board in the reference 6th and 7th cited.

In view of the above a quarry lease for rough stone is granted to Tmt. P. Sutha, W/o R. Venugopal No. 27 Malleswaram Green Park, Naganayakanahalli Post, Kasaba Hobli Marsur Post, Anekal Taluk, Banalore District over an extent of 2.50.0 Hects in Government land S.F.No. 265 (part-2) of Mathakondapalli village of Denkanikottai Taluk Krishnagiri District under the provisions of Rule 8 (1) 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.

I) The grantee should remit a sum of Rs. 25,39,998/- towards security deposit, Rs 3,750/- towards area assessment in the relevant head of accounts and submit non judicial stamp papers for the value of Rs. 19,88,000/- and to execute the lease deed with 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.) A) சிறப்பு நிபந்தனைகள்:

- i. குவாரி குத்தகை வழங்க உத்தேசிக்கப்பட்டுள்ள குவாரிக்கு அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளியும், அரசு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி செய்யவேண்டும்.
- ii. அருகிலுள்ள கிராம சாலைகளுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும், இதர நெடுஞ்சாலைகளுக்கு 50 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி செய்யவேண்டும்.



III) B) சாதாரண கற்குவாரி பணி செய்வதற்கான நிபந்தனைகள்:

- (1) குத்தகை காலம், குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றும் நாளிலிருந்து பத்து ஆண்டுகளாகும்.
- (2) குவாரி குத்தகை வழங்கப்பட்ட இடத்தில் குவாரி செய்யும் வேலிக்கல்/ குண்டுக்கல்/ கட்டுக்கல்/ சக்கை மற்றும் ஐல்வி ஆகியவற்றை மேற்படி இடத்திலிருந்து வெளியில் எடுத்துச் செல்வதற்கு முன்பு அவை ஒவ்வொன்றிற்கும் அவற்றிற்குரிய வீதத்தில் சீனியரேஜ் தீர்வை செலுத்தி இவ்வலுவலகத்தில் பர்மிட் மற்றும் நடைச்சீட்டு பெற்ற பின்புதான் மேற்படி கனியங்களை 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 இதர தொகைகளையும் குத்தகைதாரர் செலுத்த வேண்டும்.
- (3) குத்தகை இடத்திற்கு அருகிலுள்ள குடியிருப்புகள், கட்டடங்கள், நீர்நிலைகள், குளங்களின் கரைகள், மரங்கள், சாலைகள், வண்டிப்பாதைகள், நடைபாதைகள் மற்றும் இதர பொதுச் சொத்துக்களுக்கு பாதகமில்லாமல் குவாரி செய்ய வேண்டும்.
- (4) குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகாமையில் உள்ள பட்டாதாரர்கள் மற்றும் பொது மக்களுக்கு பாதகமில்லாமல் குவாரி செய்ய வேண்டும்.
- (5) அ) குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகிலுள்ள ரயில்பாதைகள், சாலைகள், மின்சாரம் மற்றும் தொலைபேசி கம்பிகளுக்கு 50 மீட்டரும், குடியிருப்பு பகுதியிலிருந்து 300 மீட்டரும், நடைபாதைகள், கிராம சாலைகளுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரி செய்ய வேண்டும்.
ஆ) அருகிலுள்ள அரசு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு குவாரி பணி செய்ய வேண்டும்.
இ) அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு குவாரி பணி செய்ய வேண்டும்.
- (6) மாவட்ட ஆட்சித்தலைவர் (அல்லது) அரசால் அதிகாரம் வழங்கப்பட்ட அலுவலரை குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிடவும், குவாரி பதிவேடுகள், ஆவணங்கள் மற்றும் கணக்கை சரிபார்க்கவும் அனுமதிக்க வேண்டும். இது சம்மந்தமாக 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, புவியியல் மற்றும் கரங்கத்துறை, ஆகியோரால் 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 சம்மந்தப்பட்ட 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 ஒப்பந்தப்பத்திரத்துடன் இணைத்துள்ள வரைபடத்தில் 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 கையொப்ப

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 செய்யும்போது நடைச்சீட்டினைக் 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 சுரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம், 1957-ன்படி கைப்பற்றப்பட்டு, குத்தகைதாரர் மீது நடவடிக்கை எடுக்கப்படுவதுடன் குவாரிக் குத்தகையையும் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.

- (14) குத்தகை வழங்கப்பட்ட இடத்தை குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லி குவாரி செய்ய மட்டும் பயன்படுத்த வேண்டும். குத்தகை உரிம ஆணை அல்லது குத்தகை ஒப்பந்தப்பத்திரத்தில் தவறுதலாக கனிம விவரம் குறிக்கப்பட்டு இருந்தால் அதனை எந்த நேரத்திலும் திருத்துவதற்கு மாவட்ட ஆட்சியருக்கு அதிகாரம் உண்டு. குத்தகைதாரர் அதனடிப்படையில் எந்த உரிமையும் கோரமுடியாது.
- (15) மெருகேற்றுவதற்கும், அயல் நாட்டிற்கு ஏற்றுமதி செய்வதற்கும் பயன்படும் பெரிய கந்துண்டங்கள் வடிவத்தில் கற்குவாரி செய்யக் கூடாது.
- (16) குத்தகை ஒப்பந்தப்பத்திரத்தில் குறிக்கப்படாத வேறு ஏதாவதொரு கனிமம் கிடைத்தால், அதனை சம்பந்தப்பட்ட அலுவலரின் அனுமதியைப் பெறாமலும், அதற்குரிய சீனியரேஜ் தொகையைச் செலுத்தாமலும் எடுக்கக்கூடாது. புதிய கனிமம் கிடைத்த விவரத்தை 30 தினங்களுக்குள் தெரிவிக்காமல் எடுத்துச் சென்றால் இக்குற்றத்திற்கு அந்த கனிமத்திற்குரிய 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, மெஷின் 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 ஏற்படின் நஷ்டஈடு கேட்கக்கூடாது.
- (21) குவாரியில் வேலை செய்யும் தொழிலாளர்கள் மற்றும் இதர நபர்களுக்கு 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 1864-ன் கீழ் வசூலிக்கப்படும்.
- (24) குத்தகை நிபந்தனைகள், 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், அரசு, ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, மாவட்ட ஆட்சித்தலைவர் ஆகியோரது ஆணைகள் மீறப்படின் மீறலுக்கு அபராதம் விதிப்பதோடு அல்லாமல் குத்தகைதாரருக்கு நேர்முக விசாரணைக்கு வாய்ப்பளித்த பின்பு குத்தகை உரிமம் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.
- (25) அரசின் அவ்வப்போதைய ஆணைகளுக்கேற்ப நிபந்தனைகளை மீற்றி அமைக்கவோ, நீக்கவோ, கூடுதலாக சேர்க்கவோ, மாவட்ட ஆட்சித்தலைவருக்கு முழு அதிகாரம் உண்டு.



- (26) மேற்கூறிய நியந்தனைகளுடன் 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், கரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம் 1957, மாவட்ட ஆட்சித்தலைவர் ஆகியோரால் அவ்வப்போது பிறப்பிக்கப்படும் ஆணைகள் குத்தகைதாரரைக் கட்டுப்படுத்தும்.
- (27) குவாரிகள்/கரங்கங்களுக்கு பொருந்தக்கூடிய தொழிலாளர் சட்டங்களுக்கு கட்டுப்பாட்டு குத்தகைதாரர் குவாரி செய்யவேண்டும். தவறினால் சம்மந்தப்பட்ட அரசின் சட்டப்பூர்வமான நடவடிக்கைகளுக்கு குத்தகைதாரர் உள்ளாக வேண்டி இருக்கும்.
- (28) இந்திய வெடிமருந்து சட்டம் 1884 (Central Act IV of 1884)-ன்படி உரிய வெடிமருந்து உரியம் பெற்று குத்தகைதாரர் பாறைகளை வெடிவைத்து உடைக்க வேண்டும். தவறும் பட்சத்தில் குத்தகைதாரர் கட்டும் தண்டனைக்கு உள்ளாக வேண்டியிருக்கும்.
- (29) குத்தகைதாரர் குவாரியில் குழந்தை தொழிலாளர்களை பணியமர்த்தக்கூடாது.

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 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 2772126 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 =2772126 CBM

(iii) Depth of mining permitted = 115 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 division.

2. A.Conditions to be complied before the commencing of mining operation

(1). The applicant has to obtain land use classification as industrial use before issue/renewal of mining lease.

(2). NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site. !

(3). The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959.

(4). 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.

- (5). 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.
- (6). The proponent shall ensure that First Aid Box is available at site.
- (7). The excavation activity shall not alter the natural drainage pattern of the area.
- (8). The excavated pit shall be restored by the project proponent for useful purposes.
- (9). The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.
- (10). The quarrying operation shall be restricted between 7 AM and 5 PM.
- (11). 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.
- (12). A minimum distance of 15 mts. From any civil structure shall be kept from the periphery of any excavation area.
- (13). 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.
- (14). 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.
- (15). 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.
- (16). Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.
- (17). The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.
- (18). Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.



- (19). 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. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.
- (20). 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)
- (21). 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.
- (22). 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.
- (23). 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.
- (24). Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Assistant Director, Ground Water Division, PWD, Dharamapuri.
- (25) 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.
- (26). Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.

- (27). Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.
- (28). The following measures are to be adopted to control erosion of dumps:-
- (i). Retention/ toe walls shall be provided at the foot of the dumps.
 - (ii). Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.
- (29). Waste oils, used 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 TNPCB.
- (30). Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- (31). Rain water 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.
- (32). 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 Dharmpauri shall monitor.
- (33). No tree-felling shall be done in the leased area, except only with the permission from competent Authority.
- (34). 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 approved by the District Environmental Engineer, TNPCB, Hosur on yearly basis.

- (35). 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 hectares within the mining lease period of this application.
- (36). 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
- (37). Ground water quality monitoring should be conducted once in 3 Months.
- (38). Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.
- (39). Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI once in three months.
- (40). 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.
- (41). Bunds to be provided at the boundary of the project site and it should be properly maintained.
- (42). 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.
- (43). At least 10 Neem trees should be planted around the boundary of the quarry site.
- (44). Floor of excavated pit to be leveled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.
- (45). The Project Proponent shall ensure a minimum of 2.5 of the annual turnover will be utilized for the CSR Activity
- (46). The Project Proponent shall provide solar lighting system to the nearby villages

- (47). The Project Proponent shall comply with the mining and other relevant rules and regulations where ever applicable.
- (48). Rainwater shall be pumped out Via Settling Tank only
- (49). Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.
- (50). 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 10KM from National Park and Sanctuaries.
- (51). 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.
- (52) Safety equipments to be provided to all the employees.
- (53) Safety distance of 50 m has to be provided in case of railway, reservoir, canal/odai
- (54) The Assistant / Deputy Director Department of Geology and 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.
- (55) 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.
- (56) 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.
- (57) The Proponent shall furnish the data obtained from the Public Works Department regarding the details of ground water table in the quarry site.
- (58) The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh case before execution of mining lease.
- (59) 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.



- (60) Heavy earth machinery equipments if utilized, after getting approval from the competent authority.
- (61) The Environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.
- (62) The Assistant Director Public Works Department, Ground water Division Dharmapauri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.
- (63) NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.
- (64) Yearly medical examination of the quarry workers should be carried out by the 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.
- (65) 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.
- (66) Vehicles used for transportation of quarried materials should be fitted with GPS and monitored.
- (67) Pit Mouth register should be maintained in online.
- (68) Auditor report on the annual turnover amount should be submitted to the District Collector within one month from the end of the financial year.
- (69) 02.5% of the turnover 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, Tamil Nadu may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.

(19) The DEIAA, Tamil Nadu 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.KGI 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) Any other conditions stipulated by other Statutory/ Government authorities shall be complied.

VI. The lessee should strictly adhere all the conditions imposed in the environmental clearance issued by The DEIAA 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 2.50.0 hectares in S.F.No. 265 (part-3) of Mathagondapalli Village, Denkanikottai Taluk Krsihnagiri 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.

[Handwritten Signature]
DISTRICT COLLECTOR,
KRISHNAGIRI. 3/23

To

[Handwritten Signature]
Tmt. P. Sutha,
W/o R. Venugopal
No. 27 Malleswaram Green Park,
Naganayakanahalli Post, Kasaba Hobli Marsur Post,
Anekal Taluk, Banalore District Copy to
1. The Revenue Divisional Officer, Hosur.
2. The Tahsildar, Denkanikottai
3. The Village Administrative Officer, Mathagondapalli village.

[Handwritten Signature]
S.DHANASEKAR, M.Sc.(Geo)
Qualified Person

9503/2018



भारतीय गैर न्यायिक INDIA NON JUDICIAL

भारत

ANNEXURE

एक हजार रुपये

ONE THOUSAND RUPEES

रु. 1000

Rs. 1000

INDIA

தமிழ்நாடு தமிழ்நாடு TAMILNADU

Sudha Venugopal

AP 897613

Malleswaram Green park Bangalore

Handwritten details including R.R. No. 19745 and date 8.10.2018

Handwritten signature of V. Ramesh

V. RAMESH Stamp Vender L.No:1/2009/KCM KELAMANGALAM - 635 113

LEASE DEED FOR QUARRYING AND CARRYING AWAY MINOR MINERALS BY PRIVATE PERSONS (APPENDIX - I)

(See Rule 8 of Tamil Nadu Minor Mineral Concession Rules 1959 and Krishnagiri District Collector's Proc. No. 223/2018 (Mines) dated 09.11.2018.

THIS INDENTURE MADE THIS 9th day of November-2018 between the Governor of Tamil Nadu (hereinafter referred to as "the Lessor" which expression shall, where the context so admits include his successors in office and assigns) on the one part, and Tmt. P. Sudha, W/o. R. Venugopal, No. 27 Malleswaram Green Park, Naganayakalahalli, Kasaba Hobli, Marsur Post, Anekal Taluk, Bangalore District (hereinafter called "the lessee" which expression shall where the context so admits include his heirs, executors, administrators, legal representatives and assigns) of the other part.

Handwritten signature of the Lessee

LESSEE

DISTRICT COLLECTOR

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Registering Officer Kelamangalam.



3/23



WHEREAS the lessee has been the successful bidder in a sealed tender in public auction conducted by the Government of Tamil Nadu (hereinafter "the Government") for the lease of land in Krishnagiri district for the purpose of quarrying rough stone, jelly and sized stone and has deposited with the Collector of Krishnagiri a sum of Rs. 25,39,998 (Rupees twenty five lakhs thirty nine thousand nine hundred ninty eight only) at State Bank of India, Krishnagiri on 24.10.2018 as security for the due and faithful performance by the lessee of the covenants and conditions on the part of the lessee hereinafter contained.

AND WHEREAS the lessor has agreed to grant the lessee, a lease of the lands and premises hereinafter described, as per Tamil Nadu Minor Mineral Concession Rules, 1959 (herein after called "The Rules").

AND WHEREAS the lessee had paid to the credit of the Government a sum of Rs. 1,26,99,990/- (Rupees one Crore twenty six lakhs ninty nine thousand nine hundred eighty only) as one time lease amount for Ten years of lease.

NOW THESE PRESENTS WITNESS AS FOLLOWS:-

1. The lessor hereby demises to the lessee all those several pieces or parcels of land situate in the village of Mathagondapalli in the Sub Registrar of Kelamangalam in the State of Tamil Nadu being more particularly described in the Schedule hereunder written and delineated in the map or plan hereunto annexed and there in coloured.

2. There are included in the said demise and for the purposes thereof the liberties following:-

(1) To get rough stone, jelly and sized stones from the said demised pieces of land.

(2) For the purpose aforesaid to use any water in or under the said demised pieces of land and to divert the same and to make or construct any water courses or ponds so, however, that nothing shall be done in the exercise of this authority which shall interfere with the rights of any adjoining owners or tenants of the lessor in respect of such water.

(3) Generally to do all things which shall be convenient or necessary for getting the rough stone, jelly etc. hereby authorised to be got and for removing and disposing thereof as aforesaid.

3. There are excepted from and reserved to the lessor out of this demise:-

(1) All earth, minerals and other substances not hereinbefore expressly authorised to be got from the demised lands by the lessee.

P. H. P.
LESSEE

[Signature]
DISTRICT COLLECTOR

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[Signature]
Registering Officer
Kelamangalam.





(2) Liberty for the lessor or other persons authorised by ~~him~~ search for work, get, carry away and dispose of the excepted minerals and other substances and for such purposes to have the right of ingress, egress and regress over the said demised pieces of land and to make, erect and use all pits, machinery, buildings, roads and other necessary works and conveniences provided that the rights hereby reserved shall be exercised in such a way as to cause as little obstruction as possible to the lessee in the use and enjoyment of his rights hereunder and that reasonable compensation for damages caused by any such obstruction shall be paid to the lessee the amount thereof and in case of difference to be settled by arbitration as hereinafter provided.

4. The said premises shall be held by the lessee for the term of TEN YEARS from the ~~Ninth~~ (9th) day of November-2018 to the ~~Eighth~~ day of November-2028 which shall however be determinable as hereinafter provided.

5. The lessee shall pay during the said term the area assessment the cess and seigniorage fee or dead rent which ever is greater, for the minerals removed or consumed at the rates prescribed from time to time in appendix II of the rules.

(1) The said seigniorage fee as prescribed in appendix II from time to time shall be paid before the same is removed from the demised pieces of land. The mode of payment of the same shall be indicated by the District Collector from time to time.

(2) The lessee hereby covenants that any fee, cess, rent, rates or any other sum due to the Government if not paid within the stipulated period will pay with interest as envisaged in the rules.

6. The lessee hereby covenants with the lessor as follows:-

(1) To pay the assessment, cess and seigniorage fee or dead rent which ever is greater and other amounts due to the Government, on the days and in the manner aforesaid.

(2) To bear, pay and discharge all existing and future rates, taxes, assessment, duties, impositions, outgoings and burdens whatsoever imposed or charged upon the demised premises or the produce thereof or the land assessment, the cess and the seigniorage fee or dead rent hereby reserved or upon the owner or occupier in respect thereof or payable by either in respect thereof except such charges or impositions as the lessee is or may hereby be by law exempted from.

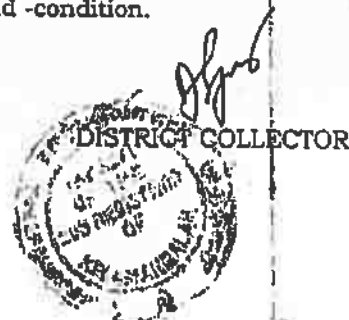
(3) Before digging or opening any part of the said demised pieces of land for rough stone, jelly etc. carefully remove the surface soil and lay aside and store the same in some convenient part of the said demised piece of land until the land from which it has been removed is again restored to a state, fit for cultivation as hereinafter provided.

(4) To effectually fence off the same demised pieces of land from the adjoining lands and to keep the fences in good repairs and -condition.

PL ILP
LESSEE

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Registering Officer
Kalamangalam.



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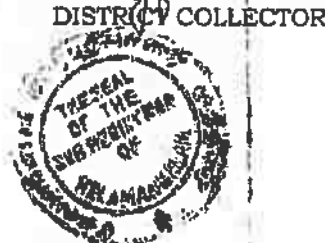


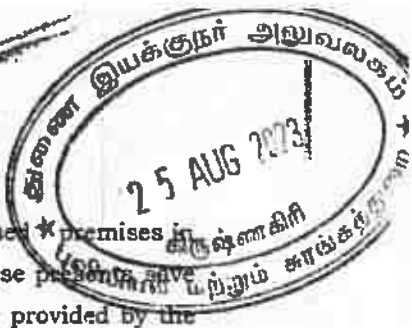
- (5) Not to assign, underlet or part with the possession of the premises or any part thereof without the written consent of the lessor first obtained.
- (6) After working out any part of the said demised pieces of land forthwith to level the same and replace the surface soil thereof and slope the edges where necessary so as to afford convenient connection with the adjoining land.
- (7) That the lessee shall keep correct accounts in such form as the Collector shall from time to time require and direct showing the quantities and other particulars of the mineral obtained by the lessee from the said lands and also the number of persons employed in carrying on the said quarrying operations therein and shall from time to time when so directed by the Collector prepare and maintain complete and correct plans of all mines and workings in the said lands and shall allow any officer thereunto authorized by the Government from time to time and at any time, to examine such accounts and any such plans and shall when so required supply and furnish to the Government all such information and returns regarding all or any of the matters aforesaid, the Government shall from time to time require and direct.
- (8) That the lessor's agents, servants and workmen shall be at liberty at all reasonable times during the said term to inspect and examine the works carried on by the lessee under the liberties herein before granted and the lessee shall and will from time to time and at all times during the said term hereby granted confirm to and observe all orders and regulations which the lessor or his authorised agents as the result of such inspection may from time to time see fit to impose to keep the premises in good and substantial repair, order and condition or in the interest of public health and safety.
- (9) That the lessee shall not without the express sanction in writing of the Collector cut down or injure any timber or trees on the said lands but he may clear away brush wood or undergrowth which interferes with any operations authorized by these presents.
- (10) That if the lands shall be used for any purpose other than quarrying for rough stone, jelly etc. or if they are not under or at any time cease to be used for the said purpose the lessor shall be at liberty to terminate the lease without notice.
- (11) That this lease may be terminated in respect of the whole or any part of the premises by six months notice in writing on either side.
- (12) That on such determination the lessee shall have no right to compensation of any kind.
- (13) That the land assessment, cess and seigniorage, rents or other amounts payable under these presents, shall be recoverable under the provisions of Tamil Nadu Revenue Recovery Act 1864 (Tamil Nadu Act II of 1864) or any subsisting statutory modification thereof.

P. L. P.
LESSEE

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[Signature]
Registering Officer
Keramangalam.





(14) At the determination of the lease to deliver up the demised premises in such condition as shall be in accordance with the provisions of these presents, that the lessee shall, if so required by the lessor, restore in manner provided by the foregoing covenant in that behalf the surface of any part of the land which has been occupied by the lessee for the purpose of the works hereby authorized and has not been so restored.

(15) That the lessee shall abide by the conditions laid down in the payment of Wages Act 1936, the Mines Act 1952 (Central Act XXXV of 1952) and the Indian Explosives Act, 1884 (Central Act IV of 1884). Metalliferous Mines Regulations, 1961, Mines and Minerals (Development and Regulation) Act, 1957 and rules made there under.

(16) The lessee shall comply with the provision of labour laws applicable to quarries and any contravention of the provisions shall attract legal proceedings of the appropriate Government.

(17) After signing this agreement and in the sketch of FMB, the lessee has no rights to question about the measurement of the area leased out, lease conditions and other related matters.

(18) On any account neither the lease period can be extended nor renewed for a further period.

(19) (a) On execution of these presents, the lessee has to take possession of the leasehold area immediately by giving proper acknowledgement.

(b) On the date of expiry of the lease period, the lessee shall hand over the leased out area to the Village Administrative Officer concerned through an affidavit, and the acknowledgement obtained from the Village Administrative Officer for having done so shall be handed over to the Taluk Tahsildar concerned under intimation to the concerned Revenue Divisional Officer and the District Collector.

(20) The lessee hereby covenants to get the lease agreement registered at his expenses under clause (d) of sub section (1) of section 17 of Registration Act 1908.

(21) The lessee shall remove, or allow removal and transportation of the mineral prescribed from the area where quarrying is permitted only after obtaining bulk transport permit and authenticated despatch slips in the forms prescribed in Appendices XII and XIII to these rules, from the Deputy Director (Geology and Mining) Krishnagiri. The lessee or his men shall issue the fascimiled despatch slips to the vehicles used for removal or transportation of the mineral furnishing all the particulars in the despatch slips specifically indicating the vehicle number, the quantity of the mineral allowed to be transported by the vehicle by using that despatch slip and the date and time of issue of the despatch slip to the vehicle. All the vehicles used for


LESSEE


DISTRICT COLLECTOR

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Registering Officer
Kalamangalam.





transporting minor mineral from the leased out area shall accompany individual despatch slips for the quantity of the minerals available in the times of transportation of the mineral by the vehicles and produce them for check and verification by the competent authorities.

(22) Any violation of the above condition will lead to penal action under Tamil Nadu Minor Mineral Concession Rules 1959 read with Mines and Minerals (Development and Regulation) Act 1957 (hereinafter called the Act).

(23) (a) Only rough stone, jelly and sized stone must be quarried and the lessee should not quarry big granite blocks or ornamental stone of export worthy blocks to be used for cutting and polishing.

(b) If it is found that the lessee is producing granite blocks for cutting and polishing and for export, the lease granted in these presents will be cancelled, with forfeiture of security deposit to the Government and penal action will be initiated as per Mines and Minerals (Development & Regulation) Act 1957.

(24) The lessee has to form approach road at his own cost and the Government will not be responsible for dispute if any with or nearby Pattadars or other third parties.

(25) The lessee has to quarry according to the provisions of Mines and Minerals (Development and Regulation) Act 1957, Metalliferrous Mines Regulations 1961 and the rules made thereunder.

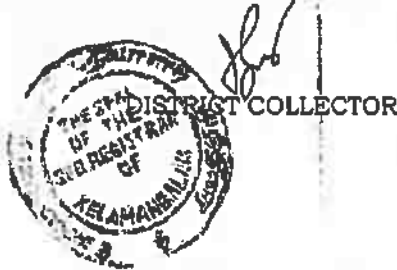
26) The lessee should maintain at his cost boundary pillars, proper sign board indicating the survey number and extent, period of lease, name of the lessee and maintain the sign board during the lease period.

7. The lessor hereby covenants with the lessee that the lessee paying the land assessment, the cess and the seigniorage fee hereby reserved and observing and performing the several covenants and stipulations on the part of the lessee herein contained shall peacefully hold and enjoy the premises, liberties and powers hereby demised and granted during the said term without any interruption by the lessor or any persons rightfully claiming under or in trust for him.

8. It is hereby further agreed between the parties as follows:-

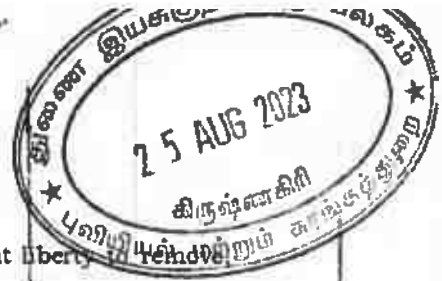
(1) If any part of the land assessment, cess or seigniorage hereby reserved shall be unpaid for thirty days after becoming payable (whether formally demanded or not) or if the lessee which the demised premises or any part thereof remain vested in him, shall become insolvent or if any covenant on the lessee's part herein contained shall not be performed or observed, then and in any of the said cases it shall be lawful for the lessor at any time thereafter to declare the whole or any part of the said security deposit of Rs. 25,39,998/- to be forfeited and also to re-enter upon the demised premises or any part thereof in the name of the whole and thereupon the demise shall absolutely determine but without prejudice to the rights of action of the lessor in respect of any breach or non-observance of the lessee's covenants herein contained.

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Registering Officer Kalamangalam.

8/23



(2) At the determination of the lease, the lessee shall be at liberty to carry away and dispose off all the stock of rough stone, jelly etc ready for delivery and all engines, machinery, and all plant, articles and things whatsoever (not being building or brick or stones), the lessee first paying any land assessment, cess and seigniorage and other sums which may be due and performing and observing the covenants on his part herein before reserved and contained and also making good any damage done by such removal but any buildings which shall be erected on the said demised pieces of lands by the lessee and left there on at the determination of lease shall be the absolute property of the lessor who shall not be bound to pay any price for the same.

(3) If the lessee shall have paid the land assessment, cess and seigniorage due to the Government and duly observed and performed the covenants and conditions on his part herein contained, the said deposit of Rs. 25,39,998/- (Rupees twenty five lakhs thirty nine thousand nine hundred ninety eight only) shall be returned to him at the expiration of the said term of Ten years.

(4) Should any question or dispute arise regarding this agreement executed in pursuance of these Rules or any other matter or thing connected therewith or the powers of the lessee thereunder the amount or payment of the seigniorage fee or area assessment made payable thereby, the matter in issue shall be decided by the Director of Geology and Mining, Chennai. In case the lessee is not satisfied with the decision of the Director of Geology and Mining, Chennai the matter shall be referred to the State Government for decision.

9. If the lessee is in occupation of the lease-hold area after the expiry of the period for which the lease has been granted or after the determination of the lease, the lessee shall be deemed to be in unlawful possession of the said area and he shall be liable for eviction from the lease-hold area in addition to being liable to be charged at double the rate of the lease amount or bid amount as the case may be, for the period of such occupation.

10. All land assessment, cess and seigniorage payable under these presents shall be recoverable under the provisions of the Tamil Nadu Revenue Recovery Act, 1864, as if they were arrears of land revenue.

11. In the event of any breach by the lessee by any of the conditions of this agreement, it shall be lawful for the Government to levy enhanced seigniorage or for the Collector to give notice in writing to the lessee of his intention to cancel these presents whereupon the same shall stand canceled 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.

12. The lessee 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).

S L L P
LESSEE

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Registering Officer
Kelamangalam

DISTRICT COLLECTOR
CHENNAI
REGISTERED
25 AUG 2023



13. No hindrance should be caused to, the surrounding poramboke lands.

14. The lessee should strictly adhere to the conditions and rules stipulated by the Government for Minor Minerals from time to time and he should remit seignorage for the Minerals removed as per the rates stipulated by Government from time to time.

15. The lessee should maintain a safety zone of 7.5 metres on the boundary of the patta lands and 10 metre from the poramboke lands in and around the lease hold area.

16. The lessee should demarcate the leasehold area at his own cost and should quarry stone only within that area.

17. The lessee should not assign, underlet or sublet any part of the lease area.

18. The lessee should obtain the permit, and the despatch slips for the transport of Rough stone/Jelly, etc from the Assistant Director/Deputy Director of Geology and Mining, Krishnagiri. The despatch slips should be kept in the quarry site and be issued to all the vehicle while transporting the stone, Jelly etc from the quarry.

19. The lessee should leave a safety distance of 50 metres from the railway line, National Highways roads, low tension and high tension and Telephone lines, transformers, temples, or historical importance etc. 10 metre from the village road and 300 metre from the approved layout and habitations.

20. The lessee should strictly adhere to the conditions stipulated in Krishnagiri District Gazette Extra Ordinary issued No. 01 dated 19.01.2018 and rules stipulated by the Government from time to time.

21. In the event of any breach of rules or the condition of lease deed or the conditions of the lease order and the Gazette condition, the lease would become liable for automatic termination without any prior notice.

22. The lessee should adhere the terms and conditions laid down in Krishnagiri District Collector, Proceedings Roc. No. 223/2018 (Mines-1) dated 09.10.2018.

23. The lease period starts from the ~~ninth~~ ^{10th} day of November-2018 and ends on the ~~eight~~ ^{10th} day of November-2028.

24. For the purpose of calculation of Stamp duty one time lease amount of Rs. 1,26,99,990/- +Anticipated seignorage fee of Rs. 18,35,11,594/- Security Deposit of Rs. 25,39,998/- +Area Assessment Rs. 3,750/- were taken in to account.

25) 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.

S. L. U. P.
LESSEE

[Signature]
DISTRICT COLLECTOR

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[Signature]
Registering Officer
Kelaingalam.



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.

26. I) சிறப்பு நிபந்தனைகள்:

- குவாரி குத்தகை வழங்க உத்தேசிக்கப்பட்டுள்ள குவாரிக்கு அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளியும், அரசு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி செய்யவேண்டும்.
- அருகிலுள்ள கிராம சாலைகளுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும், இதர நெடுஞ்சாலைகளுக்கு 50 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி செய்யவேண்டும்.

II) சாதாரண கற்குவாரி பணி செய்வதற்கான நிபந்தனைகள்:

- குத்தகை காலம், குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றும் நாளிலிருந்து பத்து ஆண்டுகளாகும்.
- குவாரி குத்தகை வழங்கப்பட்ட இடத்தில் குவாரி செய்யும் வேலிக்கல்/ குண்டுக்கல்/ கட்டுக்கல்/ சக்கை மற்றும் ஐஸ்லி ஆகியவற்றை மேற்படி இடத்திலிருந்து வெளியில் எடுத்துச் செல்வதற்கு முன்பு அவை ஒவ்வொன்றிற்கும் அவற்றிற்குரிய வீதத்தில் சீனியரேஜ் தீர்வை செலுத்தி கிருஷ்ணகிரி, ஸ்டீட் மற்றும் நடைச்சீட்டு பெற்ற பின்புதான் மேற்படி கனிமங்களை குவாரியிலிருந்து வெளியில் எடுத்துச் செல்ல வேண்டும். 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், இணைப்பு II-ல் அடங்கியபோது அரசால் நிர்ணயிக்கப்படும் வீதத்தில் பரப்பு தீர்வை செலுத்த வேண்டும். மேற்கண்ட தொகையைத் தவிர அரசால் அடங்கியபோது நிர்ணயிக்கப்படும் இதர தொகைகளையும் குத்தகைதாரர் செலுத்த வேண்டும்.
- குத்தகை இடத்திற்கு அருகிலுள்ள குடியிருப்புகள், கட்டடங்கள், நீர்நிலைகள், குளங்களின் கரைகள், மரங்கள், சாலைகள், வண்டிப்பாதைகள், நடைபாதைகள் மற்றும் இதர பொதுச் சொத்துக்களுக்கு பாதுகாப்பில்லாமல் குவாரி செய்ய வேண்டும்.
- குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகாமையில் உள்ள பட்டாதாரர்கள் மற்றும் பொது மக்களுக்கு பாதுகாப்பில்லாமல் குவாரி செய்ய வேண்டும்.
- அ) குத்தகை வழங்கப்பட்ட இடத்திற்கு அருகிலுள்ள ரயில்பாதைகள், சாலைகள், மின்சாரம் மற்றும் தொலைபேசி கம்பிகளுக்கு 50 மீட்டரும், குடியிருப்பு பகுதியிலிருந்து 300 மீட்டரும், நடைபாதைகள், கிராம சாலைகளுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளி விட்டு குவாரி செய்ய வேண்டும்.
ஆ) அருகிலுள்ள அரசு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு குவாரி பணி செய்ய வேண்டும்.
இ) அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளி விட்டு குவாரி பணி செய்ய வேண்டும்.
- மாவட்ட ஆட்சித்தலைவர் (அல்லது) அரசால் அதிகாரம் வழங்கப்பட்ட அலுவலரை குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிடவும், குவாரி பதிவேடுகள், ஆவணங்கள் மற்றும் கணக்கை சரிபார்க்கவும் அனுமதிக்க வேண்டும். இது சம்பந்தமாக அவர்கள் கோரும் அனைத்து விவரங்களுக்கும் வழங்க வேண்டும்.
- சுற்றுப்புற சூழ்நிலை பாதுகாப்பு, கனிம பாதுகாப்பு, தொழிலாளர் பாதுகாப்பு முதலியவற்றைக் கருத்தில் கொண்டு விஞ்ஞான அடிப்படையில் திறமையுடன் முறையாகக் குவாரி செய்ய வேண்டும்.
- மாவட்ட ஆட்சித்தலைவர் மற்றும் ஆணையர், புவியியல் மற்றும் கரங்கத்தறை, ஆகியோரால் அதிகாரம் வழங்கப்பட்ட அலுவலரை மேலே பத்தி (5)-ல் குறிப்பிட்டுள்ள நிபந்தனைகள் தொடர்பாகவும், மேற்கண்ட அலுவலர்களின் ஆணையை நிறைவேற்றவும் குத்தகை வழங்கப்பட்ட இடத்தைப் பார்வையிட அனுமதிக்க வேண்டும்.
- குத்தகைதாரரின் செலவில் குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றி அதனை பதிவு செய்வதற்கு முன்பு குத்தகை இடத்தில் குவாரி மற்றும் இது சம்பந்தப்பட்ட வேலைகளைத் தொடங்கக்கூடாது.
- குத்தகை வழங்கப்பட்டுள்ள இடத்திற்குள் எல்லையிலிருந்து 7.5 மீட்டர் தூரத்திற்குள் குவாரி செய்யக் கூடாது.

LESSEE

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Registering Officer
Kalamangalam.





- (11) பொது சாலைகளிலிருந்து குத்தகை வழங்கப்பட்ட இடத்திற்குச் சொந்த உரிமை வசதி இல்லாதவர்களுக்கு குத்தகைதாரர் சொந்த பொறுப்பில் செய்து கொள்ள வேண்டும்.
- (12) குத்தகை ஒப்பந்தப்பத்திரத்தின் இணைத்துள்ள வரைபடத்தில் காட்டிய 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 நடைச்சீட்டினைத் தயார் செய்து அவற்றில் மாவட்ட ஆட்சித்தலைவரால் அதிகாரம் வழங்கப்பட்ட அலுவலரின் கையொப்ப முத்திரை மற்றும் அலுவலக முத்திரைகள் பெற்று குவாரியிலிருந்து குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லி ஆகியவற்றை வெளியில் எடுத்துச் செல்லும் ஒவ்வொரு வாகனத்திற்கும் ஒவ்வொரு நடைக்கும் வழங்கப்படவேண்டும். குண்டுக்கல், கட்டுக்கல், சக்கைகள், ஜல்லி ஆகியவற்றை ஏற்றிச் செல்லும் ஒவ்வொரு வாகனமும் அதனைச் சோதனைச் செய்வதற்கு அதிகாரம் பெற்ற அலுவலர் சோதனைச் செய்யும்போது நடைச்சீட்டினைக் 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 சரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம், 1957-ன்படி கைப்பற்றப்பட்டு, குத்தகைதாரர் மீது நடவடிக்கை எடுக்கப்படுவதுடன் குவாரிக் குத்தகையையும் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.
- (14) குத்தகை வழங்கப்பட்ட இடத்தை குண்டுக்கல், கட்டுக்கல், சக்கை மற்றும் ஜல்லி குவாரி செய்ய மட்டும் பயன்படுத்த வேண்டும். குத்தகை உரிய ஆணை அல்லது குத்தகை ஒப்பந்தப்பத்திரத்தில் தவறுதலாக கனிம விவரம் குறிக்கப்பட்டு இருந்தால் அதனை எந்த நேரத்திலும் திருத்துவதற்கு மாவட்ட ஆட்சியருக்கு அதிகாரம் உண்டு. குத்தகைதாரர் அதளப்படையில் எந்த உரிமையும் கோரமுடியாது.
- (15) மெருகேற்றுவதற்கும், அபல் நாட்டிற்கு ஏற்றுமதி செய்வதற்கும் பயன்படும் பெரிய கந்துண்டங்கள் வடிவத்தில் கற்குவாரி செய்யக் கூடாது.
- (16) குத்தகை ஒப்பந்தப்பத்திரத்தில் குறிக்கப்படாத வேறு ஏதாவதொரு கனிமம் கிடைத்தால், அதனை சம்பந்தப்பட்ட அலுவலரின் அனுமதியைப் பெறாமலும், அதற்குரிய சீனியரேஜ் தொகையைச் செலுத்தாமலும் எடுக்கக்கூடாது. புதிய கனிமம் கிடைத்த விவரத்தை 30 தினங்களுக்குள் தெரிவிக்காமல் எடுத்துச் சென்றால் இக்குற்றத்திற்கு அந்த கனிமத்திற்குரிய 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, மெஷின் போன்ற எந்தவிதமான தளவாட பொருட்களையும் வைத்திருக்கக்கூடாது. அவற்றை குத்தகை காலத்தில் கண்டசி நாளன்று குத்தகைதாரர் எடுத்துச் சென்றுவிட 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 குத்தகைதாரரைச்சேரும். இதற்கு அரசு பொறுப்பில்லை.
- (22) அரசுக்கு செலுத்த வேண்டிய தொகையை உரிய காலத்திற்குள் செலுத்தவில்லை என்றால் அத்தொகை 24 % அல்லது அரசால் அல்லப்போது நிர்ணயிக்கப்படும் விகிதத்தில் வட்டியுடன் குத்தகைதாரரிடமிருந்து வசூலிக்கப்படும்.
- (23) அரசுக்கு செலுத்த வேண்டிய பாக்கித் தொகை தமிழ்நாடு வருவாய் வசூல் சட்டம் 1964-ன் கீழ் வசூலிக்கப்படும்.
- (24) குத்தகை நிபந்தனைகள், 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள், அரசு, ஆணையர், புலியேரி மற்றும் சரங்கத்துறை, மாவட்ட ஆட்சித்தலைவர் ஆகியோரது ஆணைகள் மீறப்படின் மீறலுக்கு அபராதம் விதிப்பதோடு அல்லாமல் குத்தகைதாரருக்கு நேர்முக விராரணைக்கு வாய்ப்பளித்த பின்பு குத்தகை உரிமம் ரத்து செய்ய நடவடிக்கை எடுக்கப்படும்.

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- (25) அரசின் அவ்வப்போதைய ஆணைகளுக்கேற்ப நிபந்தனைகளை நீக்கவோ, கூடுதலாக சேர்க்கவோ, மாவட்ட அபிவிருத்திக்கு முழு அனுமதி வழங்கவோ, (26) மேற்கூறிய நிபந்தனைகளுடன் 1959-ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சட்டம் கீழ்க் கிணற்று மற்றும் கரங்கங்கள் மற்றும் கனிமங்கள் (ஒழுங்குமுறை மற்றும் அபிவிருத்தி) சட்டம் 1957, மாவட்ட அபிவிருத்தி ஆகியோரால் அவ்வப்போது பிறப்பிக்கப்படும் ஆணைகள் குத்தகைதாரரைக் கட்டுப்படுத்தும்.
- (27) குவாரிகள்/கரங்கங்களுக்கு பொருந்தக்கூடிய தொழிலாளர் சட்டங்களுக்கு கட்டுப்பட்டு குத்தகைதாரர் குவாரி செய்வேண்டும். தவறினால் சம்மந்தப்பட்ட 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 கட்டும் தண்டனைக்கு உள்ளாக வேண்டியிருக்கும்.
- (29) குத்தகைதாரர் குவாரியில் குழந்தை தொழிலாளர்களை பணியமர்த்தக்கூடாது.

27) a) The lessee should get the consent for operation from the Tamil Nadu Pollution Control Board before the commencement of quarrying operation.

b) 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.

c) The Environment Clearance issued by the DEIAA, Tamil Nadu should be renewed within the prescribed time limit.

28) Conditions imposed by the DEIAA.

1. (i) The Environmental Clearance is granted to Mining of Rough Stone for the production quantity of 2772126 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 = 2772126 CBM

(iii) Depth of mining permitted = 115 mts. Bgl Depth, Further quarry should be carried out, after obtaining NOC from PWD Ground water division.

2. A. Conditions to be complied before the commencing of mining operation

(1). The applicant has to obtain land use classification as industrial use before issue/renewal of mining lease.

(2). NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site.

(3). The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959.

(4). 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.

(5). 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.

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Kolanangalam.

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- (6). The proponent shall ensure that First Aid Box is available at site.
- (7). The excavation activity shall not alter the natural drainage pattern.
- (8). The excavated pit shall be restored by the project proponent for useful purposes.
- (9). The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.
- (10). The quarrying operation shall be restricted between 7 AM and 5 PM.
- (11). 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.
- (12). A minimum distance of 15 mts. From any civil structure shall be kept from the periphery of any excavation area.
- (13). 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.
- (14). 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.
- (15). 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.
- (16). Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.
- (17). The explosives shall be stored at site as per the conditions stipulated in the permits issued by the licensing Authority.
- (18). Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.
- (19). 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.
- (20). 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)

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(21). 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.

(22). 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.

(23). 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.

(24). Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Assistant Director, Ground Water Division, PWD, Dharamapuri.

(25) 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.

(26). Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.

(27). Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.

(28). The following measures are to be adopted to control erosion of dumps:-

- (i). Retention/ toe walls shall be provided at the foot of the dumps.
- (ii). Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.

(29). Waste oils, used 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.

(30). Concealing the factual data or failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

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(31). 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.

(32). 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 Dharmapauri shall monitor.

(33). No tree-felling shall be done in the leased area, except only with the permission from competent Authority.

(34). 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 monitored by the District Environmental Engineer, TNPCB, Hosur on yearly basis.

(35). 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 hectares within the mining lease period of this application.

(36). 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

(37). Ground water quality monitoring should be conducted once in 3 Months.

(38). Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.

(39). Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI once in three months.

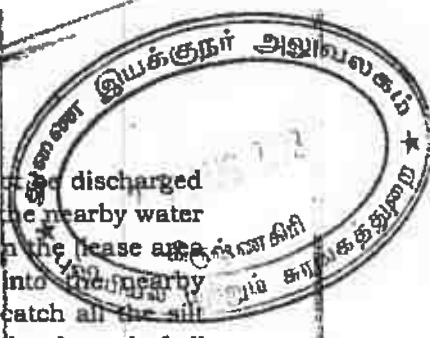
(40). Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF, GOI. Periodically once in six months.

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(41). Bunds to be provided at the boundary of the project site and it should be properly maintained.

(42). 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/Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place.

(43). At least 10 Neem trees should be planted around the boundary of the quarry site.

(44). Floor of excavated pit to be leveled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.

(45). The Project Proponent shall ensure a minimum of 2.5 of the annual turnover will be utilized for the CSR Activity

(46). The Project Proponent shall provide solar lighting system to the nearby villages

(47). The Project Proponent shall comply with the mining and other relevant rules and regulations where ever applicable.

(48). Rainwater shall be pumped out Via Settling Tank only

(49). Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.

(50). 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 10KM from National Park and Sanctuaries.

(51). 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.

(52) Safety equipments to be provided to all the employees.

(53) Safety distance of 50 m has to be provided in case of railway, reservoir, canal/odai

(54) The Assistant / Deputy Director Department of Geology and 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.

(55) 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.

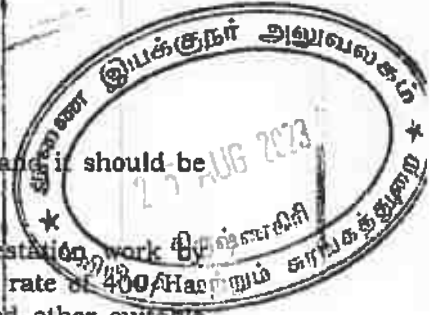
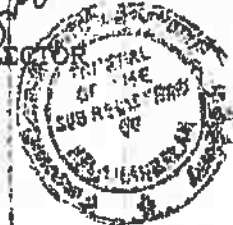
(56) The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked boundary of the quarry site to monitor electronically before execution of mining.

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(57) The Proponent shall furnish the data obtained from the Public Works Department regarding the details of ground water table in the quarry site.

(58) The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh case before execution of mining lease.

(59) 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.

(60) Heavy earth machinery equipments if utilized, after getting approval from the competent authority.

(61) The Environmental norms shall be monitored by the District Environmental Engineer, Tamil Nadu Pollution Control Board, Hosur.

(62) The Assistant Director Public Works Department, Ground water Division Dharmapuri shall monitor whether the quarrying activity is carried out above the ground water level on yearly basis.

(63) NOC for sanitary certificate shall be obtained from the Deputy Director of Health Services, Krishnagiri.

(64) Yearly medical examination of the quarry workers should be carried out by the 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.

(65) 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.

(66) Vehicles used for transportation of quarried materials should be fitted with GPS and monitored.

(67) Pit Mouth register should be maintained in online.

(68) Auditor report on the annual turnover amount should be submitted to the District Collector within one month from the end of the financial year.

(69) 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.

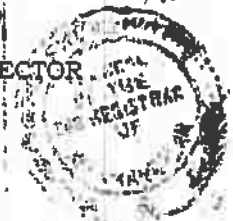
(3) No change in mining technology and scope of working should be made without prior approval of the SEIAA, Tamil Nadu.

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- (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.


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(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, Tamil Nadu may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.

(19) The DEIAA, Tamil Nadu 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.KGI 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) Any other conditions stipulated by other Statutory/ Government authorities shall be complied.

29. The lessee should strictly adhere all the conditions imposed in the environmental clearance issued by The DEIAA Tamil Nadu and consent order of the Tamil Nadu Pollution Control Board.

30. The lessee should periodically renew the environmental clearance and the consent orders of the Tamil Nadu Pollution Control Board without any lapse.

31. If any illicit quarrying is found in the area over an extent of 2.50.0 hectares in S.F.No. 265 (Part-2) of Mathagondapalli Village, Denkanikottai 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.

32. 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.

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Registering Officer
Kelamangalam.

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In Witness whereof Dr. S. Prabhakar I.A.S the Collector of Krishnagiri District acting for and on behalf of and by the order and direction of the Government of TamilNadu, "The Lessor" and Tmt. P. Sutha, W/o. R. Vengopal, No. 27 Malleswaram Green Park, Naganayakanahalli Post, Kasaba Hobli, Marsur Post, Anekal Taluk, Bangalore District " The lessee" hereunto set their respective hands.

[Signature]
LESSEE

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DISTRICT COLLECTOR

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Signed by the above named in the presence of the following witnesses

P. Huk
P. Muldikasun S/o
X. Parthasarthi
Naganayakanahalli
Bengaluru - 562106

Signed by the above named in the presence of the following witnesses.

B. Manjuresh G
Badathya
Kempasay
Mutua
D. Kota

[Signature]
DEPUTY DIRECTOR
Department of Geology and Mining,
Collectorate, Krishnagiri.

[Signature]
H. SURESH

[Signature]
ASSISTANT GEOLOGIST
Of the Dept. of Geology and Mining,
Collectorate, Krishnagiri.
(R. SATHIYASEELAN)

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[Signature]
Registering Officer
Kalamangalam.

Government of India

ಶಿವರು
P Sudha

ಜನ್ಮ ದಿನಾಂಕ / DOB 07/10/1988
ಲಿಂಗ / Female

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ನಾಗನಾಯಕನವರೇ, ಕೆ.ಎಂ.ಎಂ.ಎಸ್, ಮದರಾಸು
ತುಮಕೂರು, ಬೆಂಗಳೂರು, ಕರ್ನಾಟಕ. 562108



Address: W/O. A. Venugopal
maleshwaram green
Park, naganayaknagar
Kannada Mall, Madras
Mysuru, Bengaluru, Karnataka
562108

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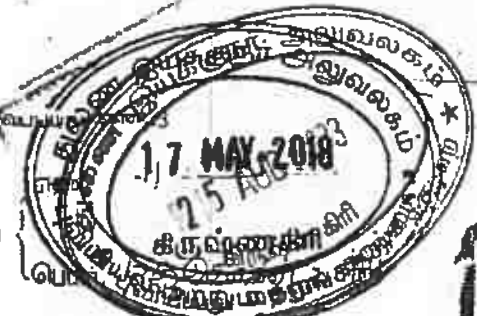
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Document No. 9503 of 2018 of Book/.....
Contains: 26 Sheets: 22 Sheet

Registering Officer
Kelamangalam.





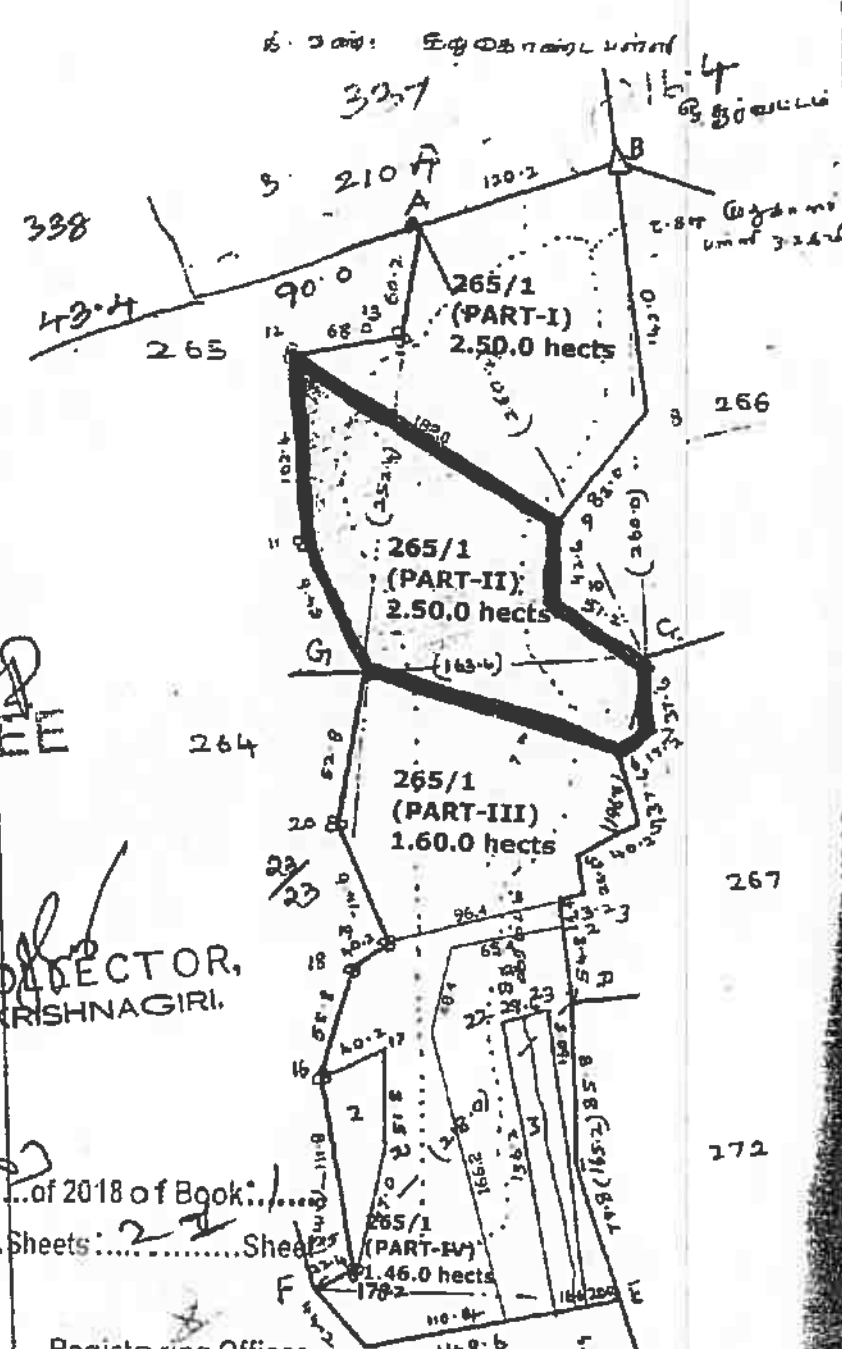
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LESSEE

COLLECTOR, KRISHNAGIRI.

Registering Officer Kelamangalam.

LEASE APPLIED AREA

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15
Administrative Office
Madhagondapalli
Mankankottal TK.



ಭಾರತ ಸರ್ಕಾರ
Government of India

ಮಲ್ಲಿಕಾರ್ಜುನ
MALLIKARJUNA
ಜನ್ಮ ದಿನಾಂಕ / DOB : 26/06/1983
ಪುರುಷ / Male



5765 7530 6425

ಅಧಿಕಾರಿ - ಶ್ರೀನಿವಾಸಮೂರ್ತಿ ಅಧಿಕಾರಿ



ಭಾರತೀಯ ಏಕೈಕ ಗುರುತಿಸುವಿಕೆ ಅಧಿಕಾರಿ
Unique Identification Authority of India

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೯/೦: ಪಾರ್ಥಸಾರಥಿ, 12,
ನಾಗನಾಯಕನಹಳ್ಳಿ, ಅನೇಕಲ್,
ನಾಗನಾಯಕನಹಳ್ಳಿ, ಮಾರಸುರು,
ಬೆಂಗಳೂರು, ಕರ್ನಾಟಕ, 562106



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Document No: 9503 of 2018 of Book: 1
Contains 24 Sheets: 23 Sheet

Registering Officer
Kelamangalam.



Kumar.K.P

ಕುಮಾರ್.ಕೆ.ಪಿ

जन्म तिथि/DOB:

23-11-1983

पुरुष / MALE



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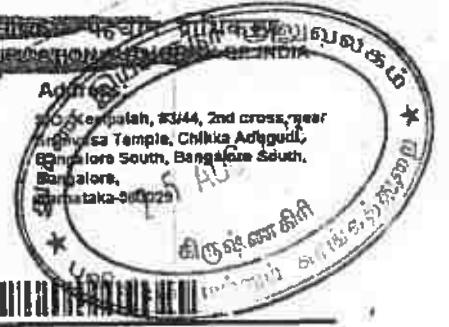


पता

S/O: Keshava, #3/44, 2nd cross,
Chikka Temple, Chikka Adiguadi,
Bangalore South, Bangalore South,
Karnataka-560029
98455-560029

Address

S/O: Keshava, #3/44, 2nd cross, near
Chikka Temple, Chikka Adiguadi,
Bangalore South, Bangalore South,
Karnataka-560029



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Bengaluru-560 001

Document No. ⁹⁵⁰³.....of 2018 of Book:.....
Contains:.....²⁶ Sheets:.....²⁴ Sheet


Registering Officer
Kelamangalam



CERTIFICATE UNDER SECTION 42 OF THE INDIAN STAMP ACT



S No 6132 of 2018

I hereby certify that a sum of ₹ 19,87,000/- (Rupees Nineteen Lakh Eighty Seven Thousand only) on account of deficit stamp duty has been levied under section 41 of the Stamp Act in respect of this instrument from Mrs. [Name] residing at No.27, Maleshvaram Green Park, Narganayakanahalli, Kasaba Hobli, Marasur Post, Anekal Taluk, Bangalore, Karnataka, India, 562106.

Sub Registrar, Kelamangalam
Date: 14/11/2018

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



presented in the office of the Sub Registrar of Kelamangalam and fee of ₹ 20,360/- paid at 11:16 AM on the 14/11/2018 by

Left Thumb



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Additions as per recitals of document

Execution admitted by Left Thumb



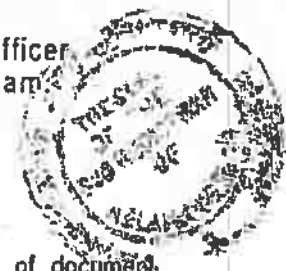
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Admission admitted by Left Thumb



Registering Officer
Kelamangalam
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Additions as per recitals of document

Document No. 50 of 2018 of Book: 1
Contains: 26 Sheets: 26 Sheet

R/Kelamangalam/Book-1/9503/2018



Identified By

[Handwritten signatures]

Mr. MALLIKARJUNA Son of PARTHASARTHI No.12, Nagarkota, Bahari, Taluk, Bangalore, Karnataka, India, 562106.

Mr. KUMAR.K.P Son of KEMPAIAH PAPANNA Ganesh Colony, KELAMANGALAM, Denkanikottai, Krishnagiri, Tamil Nadu, India, 635113.

14th day of November 2018

[Handwritten signature]

SEETHARAMU C
Sub Registrar
Kelamangalam

Registered as Number R/Kelamangalam/Book-1/9503/2018.

[Handwritten signature]

SEETHARAMU C
Sub Registrar

Date: 14/11/2018
Kelamangalam



Document No. ⁹⁵⁰³.....of 2018 of Book:.....
Contains:.....²⁶ Sheets:.....²⁶ Sheet

[Handwritten signature]
Registering Officer
Kelamangalam.



From
Dr. S. Prabhakar, I.A.S.,
District Collector,
Krishnagiri

To
The Sub Registrar,
Kelamangalam



Roc.223/2018/Mines dated. 11.11.2018.

Sir,

Sub: Mines and Minerals - Minor Minerals - Rough stone - Krishnagiri District - Denkanikottai Taluk - Mathakondapalli Village - quarry lease for Rough Stone granted in Government land SF.Nos. 265 (part-2) over an extent of 2.50.0 Hect. to Tmt. P. Sutha W/o R. Venugopal No. 27 Malleswaram Green Park, Naganayakanahalli Post, Kasaba Hobli Marsur Post, Anekal Taluk, Bangalore District- Lease agreement sent for registration - regarding.

Ref: The District Collector, Krishnagiri Proceedings Roc. 223/2018/Mines dated 09.11.2018.

In the order cited, the District Collector had granted a quarry lease for Rough Stone over an extent of 2.50.0 Hect. in Government land S.F.No. 265 (part-2) of Mathagondapalli Village of Denkanikottai Taluk Krishnagiri District for a period of Ten years from the date of execution of lease deed under provisions of Rule 8 (1) of the Tamil Nadu Minor Mineral Concession Rules 1959 to Tmt. P. Sutha W/o R. Venugopal No. 27 Malleswaram Green Park, Naganayakanahalli Post, Kasaba Hobli Marsur Post, Anekal Taluk, Bangalore District. The lease agreement was executed on 09.11.2018 and the lease period is 10 years from 09.11.2018 to 08.11.2028.

The lessee to Tmt. P. Sutha W/o R. Venugopal No. 27 Malleswaram Green Park, Naganayakanahalli Post, Kasaba Hobli Marsur Post, Anekal Taluk, Bangalore District has been instructed to register the lease agreement at the Sub Registrar Kelamangalam.

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 3110366 cbm of Rough Stone during the entire lease period of 10 years and security deposit remitted by the lessee is as detailed below.

Tender amount of Ten years	: Rs. 1,26,99,990/-
Seigniorage fee for 3110366 cum of Rough Stone@ Rs.59/- per cbm of Rough Stone	: Rs. 18,35,11,594/-
Security Deposit	: Rs. 25,39,998/-
Area Assessment	: Rs. 3,750/-
Total	: Rs 19,87,55,332/-
Stamp duty at the rate of 1%	: Rs. 19,87,553/- (or) 19,88,000/-
Total value of Stamp papers.	: Rs. 19,88,000/-

The lessee deed executed in Rs. 1,000/- stamp paper is enclosed for registration along with a demand draft of Rs. 19,87,000/- bearing No. 2391203 dated 25.10.2018, drawn at Syndicate Bank, Marsur, Bangalore drawn in favour of Sub Registrar Kalamangalam towards the remaining portion of stamp duty. The lease deed may be registered at the cost of lease holder.

Further, I wish to inform that the District Collector is exempted from the personal appearance for the Registration under section 88 (1) of the Indian Registration Act, 1908.

Encl : 1. Executed lease deed and
2. D.D No.2391203 dt, 25.10.2018
Drawn at Syndicate Bank, Marsur, Bangalore.

For Collector
Krishnagiri.

Copy to Tmt. P. Sutha
W/o R. Venugopal
No. 27 Malleswaram Green Park,
Naganayakanahalli Post,
Kasaba Hobli Marsur Post, Anekal Taluk,
Bangalore District

(with a direction to registered the lease deed and the submit the executed lease deed)

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

ANNEXURE

THIRU C.KATHIRAVAN, I.A.S.,
CHAIRMAN/
DISTRICT COLLECTOR.

Krishnagiri District
Environment Impact
Assessment Authority,
Room No.30,
Collectorate,
Krishnagiri.



ENVIRONMENTAL CLEARANCE

Lr.No.03/DEIAA-KGI/EC No.67/2018 dated: 27.08.2018

To

Tmt: P.SUDHA
W/o.R.Venugopal ,
No.27, Malleshwaram Green Park ,
Naganaickanahalli, Kasaba Hobli,
Marsur post, Anekkal Taluk,
Bangalore - 562 106

Sir,

Sub: DEIAA - Application for Environment Clearance for the Proposed quarrying and transportation of 2772126 cbm of Rough Stone generated from quarry over an extent of 2.50.0 Hects. in Government Poramboke land S.F.No.265(Part-2) of Mathakondapalli village of Denkanikottai Taluk Krishnagiri District preferred by Tmt:P.SUDHA W/o.R.Venugopal, No.27, Malleshwaram Green Park, Naganaickanahalli, Kasaba Hobli, Marsur post, Anekkal Taluk, Bangalore - 562 106 - Issue of Environmental Clearance - Reg.

Ref: 1. Tmt. P.SUDHA Application for Environment Clearance dated 17.05.2018
2. Minutes of the DEAC meeting conducted on.25.08.2018
3. Minutes of the DEIAA meeting held on 27.08.2018

-oOo-

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:

1.	Name of Project Proponent and address	Tmt: P.SUDHA W/o.R.Venugopal , No.27, Malleshwaram Green Park , Naganaickanahalli, Kasaba Hobli, Marsur post, Anekkal Taluk, Bangalore - 562 106
----	---------------------------------------	--

2.	Location of the Proposed Activity		
	Survey Number and Extent		265 (Part-2) Extent :2.50.0 hec
	Latitude and Longitude		12° 38' 11.49" N to 12° 38' 20.54" N 77° 45' 12.26" E to 77° 45' 17.17" E
	Topo Sheet No.		57 H /14
	Village		Mathakondapalli
	Taluk		Denkanikottai
	District		Krishnagiri District
3.	Proposed Activity		
	i.	Minor mineral	Rough Stone
	ii.	Mining Lease Area	2.50.0 Hec.
	iii.	Approved quantity	2772126 cbm of Rough Stone
	iv.	Depth of Mining	115 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 division
	v.	Type of mining	Rough Stone Quarrying by open cast shallow mining method
	vi.	Category (B1/B2)	B2
	vii.	Precise Communication Area	The District Collector Roc.No.223 /2018 /Mines dated:09.03.2018
	viii.	Mining Plan approval	Mining Plan approved by the Deputy Director of Geology of Mining Krishnagiri Lr.No.223/2018/Mines dated: 17.05.2018
	ix.	Mining lease period	10 years Environment Clearance for 5 years
4.	Whether Project area attracts any general conditions specified in the EIA notification, 2006 as amended:-		Not attracted Affidavit furnished
5.	Man Power requirement per day		18 Employees
6.	Utilities		
	i.	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	2.5 kilo litre
	b. Industrial	
	c. Green Belt & Dust Suppression	1.600 kilo litre
iii.	Power requirement	
	a. Domestic purpose	TNEB
	b. Industrial purpose	Fuels is used for operating machineries and vehicles during the quarrying process and transportation and the fuel required for the entire project life is 2236575.8 Lts. of HSD.
7.	Cost	
	i. Project Cost	Rs.1,49,59,990/-
	ii. EMP Cost	Rs.3,70,000/-
8.	Public Consultation:-	Not required as per O.M. dated 24.12.2013 of MoEF, GOI
9.	Date of Appraisal by DEAC: Agenda No.	Agenda No.40 of 3 rd 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 3 rd meeting on 27.08.2018 as agenda No.40 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 2772126 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 11.00 kms away from The Cauvery north Wild Life Sanctuary and it does not Attract NBWL clearance.
13	Special Condition:	<ul style="list-style-type: none"> i) Ground Water Quality test should 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 Compiled 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 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 useful 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 7 AM 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 level /approved depth of mining whichever is lesser to be considered as safety 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, Dharmapuri.

(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 TNPCB.

(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 safeguarding 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 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 Dharmapuri 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 monitored by the District Environmental Engineer, TNPCE, 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 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 any hindrance to the Village people/Existing Village road.

(40). Free Silica test should be conducted and reported to TNPCE, 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 TNPCE, Department of Geology and Mining and Regional Director, MoEF, GOI periodically once in six months.

(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 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 10KM 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

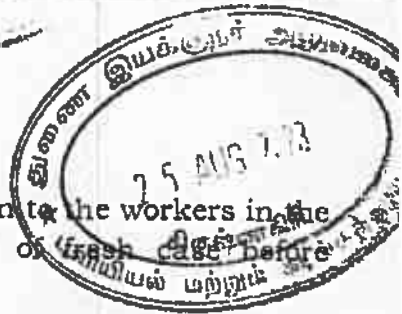
(54) Safety distance of 50 m has to be provided in case of railway, reservoir, canal/odai

(55) The Assistant / Deputy Director Department of Geology and 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.

(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 case 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 Dharmapuri 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 one month from the end of the financial year.

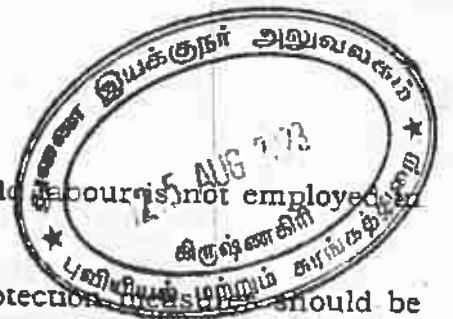
(70) 02.5% of the turn over amount should be utilized for the CSR activity after consultation with the District Collector.

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 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. 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 purposes 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.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) Adequate green belt area shall be developed as proposed.

(23) Establishment of Greenbelt with suitable native tree. And ground water table has to be assured.

(24) Any other conditions stipulated by other Statutory/ Government authorities shall be complied.

(25) Any appeal against this environmental Clearance shall lie with the Hon'ble National Green Tribunal, if preferred within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act 2010.

Sd/-C.Kathiravan
CHAIRMAN DEIAA-KGI/
DISTRICT COLLECTOR,
KRISHNAGIRI.

//True Copy//By Order//


For CHAIRMAN DEIAA-KGI/
DISTRICT COLLECTOR,
KRISHNAGIRI.

Copy to

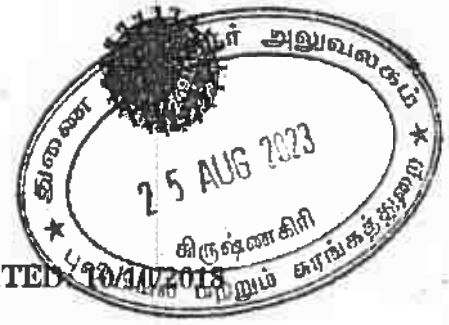
- 3.9.18 3/9/18
1. The Secretary, Ministry of Mines, Government of India , Shastri Bhawan, New Delhi
 2. The Principal Secretary, Environment and Forest Department, Government of Tamil Nadu, Tamil Nadu.
 3. The Principal Secretary to Government, Industries Department, Government of Tamil Nadu, Tamil Nadu.
 4. The Additional Principal Chief Conservator of Forests, Regional Office (SZ), 34, HEPC Building 1st & 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai-34.
 5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex East Arjun Nagar, New Delhi 110 032.
 6. The Member Secretary, State Level Environmental Impact Assessment Authority Tamil Nadu Panagal Building Saidapet, Chennai
 7. The Chairman Tamil Nadu Pollution Control Board, 76 Mount Salai (Guindy, Chennai-32)
 8. The Commissioner of Geology and Mining, Guindy, Chennai-32
 9. E1 Division, Ministry of Environment and Forests Paryavaran Bhawan, New Delhi.
 10. File No.38/ DEIAA/KGI/2018.


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



TAMILNADU POLLUTION CONTROL BOARD

ANNEXURE -W



CONSENT ORDER NO. 1805117664149

DATED: 10/10/2018.

PROCEEDINGS NO.F.1878HSR/RS/DEE/TNPCB/HSR/W/2018 DATED 10/10/2018

SUB: Tamil Nadu Pollution Control Board -CONSENT TO OPERATE - DIRECT -M/s. P SUDHA ROUGH STONE QUARRY , S.F.No. 265 (Part-2), MATHAGONDAPALLI village Denkanikottai 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.17664149 for CTO - Direct, Dated: 06.10.2018.
2. IR.No: F. 1878 HSR / RS / AE / HSR / 2018, Dated: 10.10.2018.
3. Minutes of the 171st DLCCC Meeting held on 10.10.2018 (Item No:HSR-171- 11).

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 Proprietrix,
M/s . P SUDHA ROUGH STONE QUARRY
S.F No.265 (Part-2),
MATHAGONDAPALLI Village,
Denkanikottai 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 PALANISAMY
Digitally signed by S. PALANISAMY
Date: 2018.10.11 11:10:12 +05'30'
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

To
The Proprietrix,
M/s.P SUDHA ROUGH STONE QUARRY,
No.265 (Part-2), Mathagondapalli Village, Denkanikottai Taluk, Krishnagiri District.
Pin: 635114

Copy to:

- 1.The Commissioner, THALI-Panchayat Union, Denkanikottai 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 JCEE-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 2.50 Hect. located at S.F.No. 265 (Part-2), Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District for a period of Five years	2772126	Cu.M/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	2.1	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 SO ₄)	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 NH ₃)	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 C ₆ H ₅ OH)	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.

POLLUTION PREVENTION PAYS



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.67 / 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. PALANISAMY
Date: 2023.10.11 11:15:58 +05'30'

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR



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



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: 2023.08.11 11:11:53 +05'30'

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR



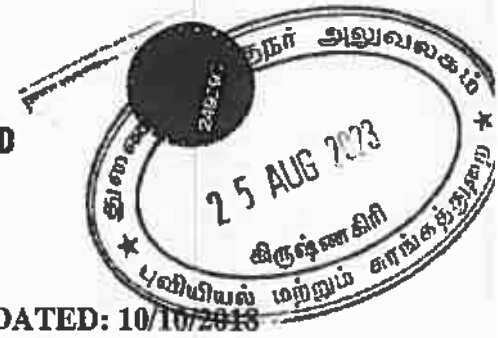
TAMILNADU POLLUTION CONTROL BOARD

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.



TAMILNADU POLLUTION CONTROL BOARD



CONSENT ORDER NO. 1805217664149

DATED: 10/10/2018.

PROCEEDINGS NO.F.1878HSR/RS/DEE/TNPCB/HSR/A/2018 DATED: 10/10/2018

SUB: Tamil Nadu Pollution Control Board –CONSENT TO OPERATE –DIRECT –M/s. P SUDHA ROUGH STONE QUARRY , S.F.No. 265 (Part-2), MATHAGONDAPALLI village Denkanikottai Taluk and Krishnagiri District - Consent for operation of the plant and discharge of emissions under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) –Issued- Reg.

- Ref: 1. Unit's OCMMS application No.17664149 for CTO – Direct, Dated: 06.10.2018.
2. IR.No: F. 1878 HSR / RS / AE / HSR / 2018, Dated: 10.10.2018.
3. Minutes of the 171st DLCCC Meeting held on 10.10.2018 (Item No:HSR-171– 11).

CONSENT TO OPERATE is hereby granted under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) (hereinafter referred to as "The Act") and the rules and orders made there under to

The Proprietrix,
M/s . P SUDHA ROUGH STONE QUARRY
S.F No.265 (Part-2),
MATHAGONDAPALLI Village,
Denkanikottai 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 CONSENT is valid for the period ending March 31, 2023

S. PALANISAMY
District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

To
The Proprietrix,
M/s.P SUDHA ROUGH STONE QUARRY,
No.265 (Part-2), Mathagondapalli Village, Denkanikottai Taluk, Krishnagiri District,
Pin: 635114

Copy to:

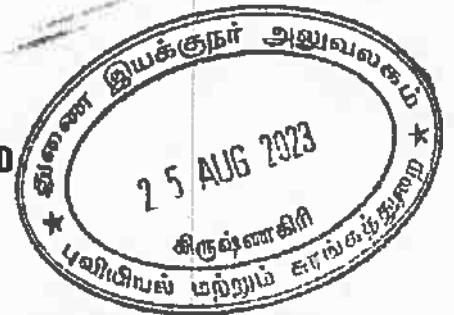
- 1.The Commissioner, THALI-Panchayat Union, Denkanikottai Taluk, Krishnagiri District .
2. Copy submitted to the Member Secretary, Tamil Nadu Pollution Control Board, Chennai for favour of kind information.
3. Copy submitted to the JCEB-Monitoring, Tamil Nadu Pollution Control Board, Vellore for favour of kind information.
4. File



TAMILNADU POLLUTION CONTROL BOARD



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 2.50 Hect. located at S.F.No. 265 (Part-2), Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District for a period of Five years	2772126	Cu.M/Five years

2. This consent to operate is valid for operating the facility with the below mentioned emission/noise sources along with the control measures and/or stack. Any change in the emission source/control measures/change in stack height has to be brought to the notice of the Board and fresh consent/Amendment has to be obtained.

I Point source emission with stack :				
Stack No.	Point Emission Source	Air pollution Control measures	Stack height from Ground Level in m	Gaseous Discharge in Nm ³ /hr
II Fugitive/Noise emission :				
Sl. No.	Fugitive or Noise Emission sources	Type of emission	Control measures	
1.	Vehicle Movement	Fugitive	Water sprinkler system	
2.	Mining Area	Fugitive	Water sprinkler system	

- 3(a). The emission shall not contain constituents in excess of the tolerance limits as laid down hereunder :

Sl.	Parameter	Unit	Tolerance limits	Stacks
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Annexure enclosed if applicable. :-

- 3.(b) The Ambient Air in the industrial plant area shall not contain constituents in excess of the tolerance limits prescribed below.



TAMILNADU POLLUTION CONTROL BOARD

Sl. No.	Pollutant	Time Weighted Average	Unit	Tolerance Limits	
				Industrial, Residential, Rural and other area	Ecologically Sensitive Area (notified by Central Govt.)
1.	Sulphur Dioxide (SO ₂)	Annual 24 hours	microgram/m ³ microgram/m ³	50 80	20 80
2.	Nitrogen Dioxide (NO ₂)	Annual 24 hours	microgram/m ³ microgram/m ³	40 80	30 80
3.	Particulate Matter (Size Less than 10 micro M) or PM ₁₀	Annual 24 hours	microgram/m ³ microgram/m ³	60 100	60 100
4.	Particulate Matter (Size Less than 2.5 micro M) or PM _{2.5}	Annual 24 hours	microgram/m ³ microgram/m ³	40 60	40 60
5.	Ozone (O ₃)	Annual 24 hours	8 Hours 1 Hour	100 180	100 180
Sl. No.	Pollutant	Time Weighted Average	Unit	Tolerance Limits	
				Industrial, Residential, Rural and other area	Ecologically Sensitive Area (notified by Central Govt.)
6.	Lead (Pb)	Annual 24 hours	microgram/m ³ microgram/m ³	0.5 1.0	0.5 1.0
7.	Carbon Monoxide (CO)	8 Hours 1 Hour	miligram/m ³ miligram/m ³	02 04	02 04
8.	Ammonia (NH ₃)	Annual 24 hours	microgram/m ³ microgram/m ³	100 400	100 400
9.	Benzene (C ₆ H ₆)	Annual	microgram/m ³	5	5
10.	Benzo(O) Pyrene (BaP) -particulate phase only	Annual	nanogram/m ³	01	01
11.	Arsenic (As)	Annual	nanogram/m ³	06	06
12.	Nickel (Ni)	Annual	nanogram/m ³	20	20

3(c) The Ambient Noise Level in the industrial plant area shall not exceed the limits prescribed below:

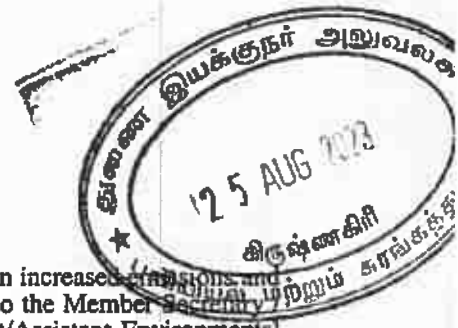
Limits in L _{eq} -dB(A)	Day Time	Night Time
Residential Area	55	45

4. All units of the Air pollution control measures shall be operated efficiently and continuously so as to achieve the standards prescribed in Sl. No.3 above.
5. The occupier shall not change or alter quality or quantity or the rate of emission or replace or alter the air pollution control equipment or change the raw material or manufacturing process resulting in change in quality and/or quantity of emissions without the previous written permission of the Board.
6. The occupier shall maintain log book regarding the stack monitoring system or operation of the plant or any other particulars for each of the unit operations of air pollution control systems to reflect the working condition which shall be furnished for verification of the Board officials during inspection.
7. The occupier shall at his own cost get the samples of emission/air/noise levels collected and analyzed by the TNPC Board Laboratory once in every 6 months/once in a year/periodically for the parameters as prescribed.

POLLUTION PREVENTION PAYS



TAMILNADU POLLUTION CONTROL BOARD



8. Any upset condition in any of the plants of the factory which is likely to result in increased emissions and result in violation of the standards mentioned in SI.No.3 shall be reported to the Member Secretary, Joint Chief Environmental Engineer-Monitoring and the concerned District/Assistant Environmental Engineer of the Board by e-mail immediately and subsequently by Post with full details of such upset condition.
9. The occupier shall always comply and carryout the order/directions issued by the Board in this Consent Order and from time to time without any negligence. The occupier shall be liable for action as per provisions of the Act in case of non compliance of any order/directions issued.

Additional Conditions:

1. The unit shall comply all the conditions prescribed in the Environmental Clearance issued by the DEIAA, Krishnagiri District vide Letter No. 03 / DEIAA-KGI / EC.No.67 / 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 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.
4. The unit shall adhere to the ANL standards as prescribed by the Board.
5. The unit shall continue to develop more green belt with trees having thick canopy cover in the unit's premises.
6. The unit's operation / activity for the mining shall not disturb the nearby agricultural land if any at any circumstances.
7. The unit shall take necessary precautionary measures to prevent any adverse impact on the nearby habitation.
8. The consent issued is subject to the final outcome of National Green Tribunal (South Zone) in application No. 165/2013.
9. 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 flags irrespective of thickness, within the industry premises. Instead unit shall encourage use of eco friendly alternative such as banana leaf, arecanut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.,
10. In case of revision of consent fee by the Government, the unit shall remit the difference in amount within one month from the date of notification, failing 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. PALANISAMY
Date: 2018.08.11 11:12:57 +0530

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 emission.
2. This Consent is given by the Board in consideration of the particulars given in the application. Any change or alteration or deviation made in actual practice from the particulars furnished, in the application will also be ground for review/variation/revocation of the Consent Order under Section 21 of the Act.
3. The conditions imposed shall continue in force until revoked under Section 21 of the Act.
4. After the issue of this order, all the 'Consent to Operate' orders issued previously under Air (Prevention and Control of Pollution) Act, 1981 as amended stands defunct.
5. The occupier shall maintain an Inspection Register in the factory so that the inspecting officer shall record the details of the observations and instructions issued to the unit at the time of inspection for adherence.
6. The occupier shall provide and maintain an alternate power supply along with separate energy meter for the Air Pollution Control measures sufficient to ensure continuous operation of all pollution control equipments to ensure compliance.
7. The occupier shall provide all facilities to the Board officials for collection of samples in and around the factory at any time.
8. The applicant shall display the flow diagram of the sources of emission and pollution control systems provided at the site.
9. The liquid effluent arising out of the operation of the air pollution control equipment shall also be treated in a manner and to the satisfaction of standards prescribed by the Board in accordance with the provisions of Water (Prevention and Control of Pollution) Act, 1974 as amended.
10. The air pollution control equipments, location of inspection chambers and sampling port holes shall be made easily accessible at all time.
11. In case of any episodal discharge of emission, the industry shall take immediate action to bring down the emission within the limits prescribed by the Board.
12. If applicable, the occupier has to comply with the provisions of Public Liability Insurance Act, 1991 to provide immediate relief in the event of any hazard to human beings, other living creatures/plants and properties while handling and storage of hazardous substances.
13. The issuance of this consent does not authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any natural watercourse or in Government Poramboke lands.
14. The issuance of this Consent does not convey any property right in either real personal property or any exclusive privileges, nor does it authorize any injury to private property or Government property or any invasion of personal rights nor any infringement of Central, State laws or regulation.
15. The occupier shall forth with keep the Board informed of any accident of unforeseen act or event of any poisonous, noxious or polluting matter or emissions are being discharged into stream or well or air as a result of such discharge, water or air is being polluted.
16. If due to any technological improvements or otherwise the Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any treatment system, either in whole or in part) the Board shall, after giving the applicant an opportunity of being heard, vary all or any of such conditions and thereupon the applicant shall be bound to comply with the conditions as so varied.
17. In case there is any change in the constitution of the management, the occupier of the new management shall file fresh application under Air (Prevention and Control of Pollution) Act, 1981, as amended in Form-I alongwith relevant documents of change of management immediately and get the necessary amendment with renewal of consent order.
18. In case there is any change in the name of the company alone, the occupier shall inform the same with relevant documents immediately and get the necessary amendments for the change of name from the Board.



TAMILNADU POLLUTION CONTROL BOARD



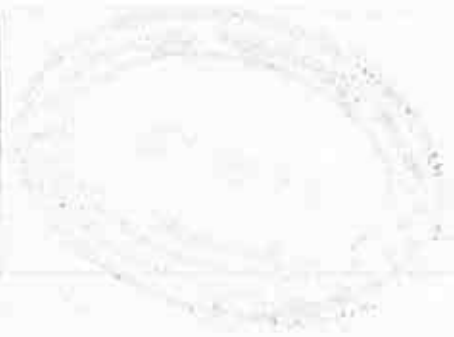
19. The occupier shall display this consent order granted to him in a prominent place for perusal of the inspecting Officers of this Board.

S. PALANISAMY Digitally signed by S. PALANISAMY

Date: 2018.08.21 11:14:42 +0530'

District Environmental Engineer,
Tamil Nadu Pollution Control Board,
HOSUR

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



TAMILNADU POLLUTION CONTROL BOARD

[Faint, illegible text, possibly a stamp or signature]

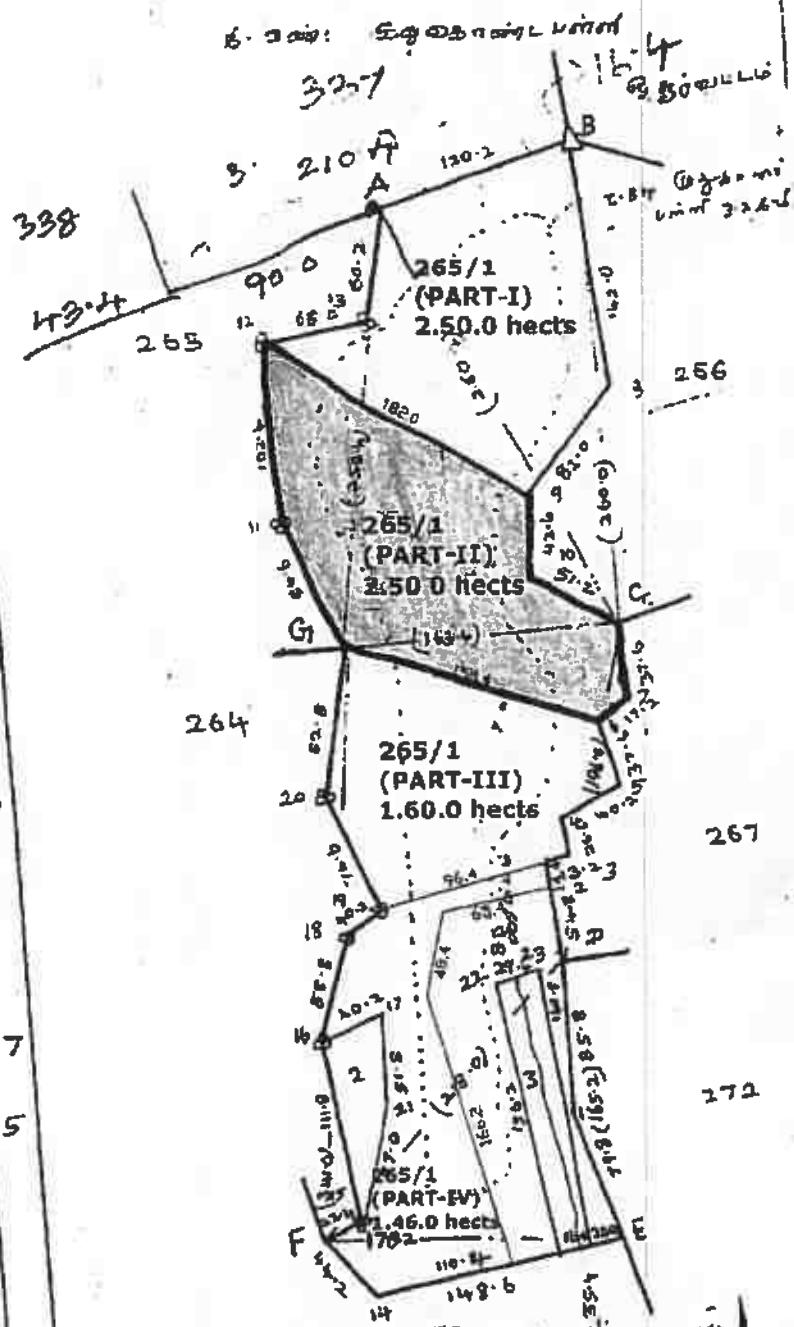
POLLUTION PREVENTION PAYS



பெட்டி ~~591~~ கிராமத்தின்
 பெட்டி ஒன்றின் கடைபட்டி
 எண் 265

பெட்டி எண் 9 ன். 58 5

23	4.8	252.0		
22	12.6	176.6		
21	19.2	87.4		
		F		
		321.0		
20	15.8	255.0		
		127.0	24.0	19
		178.0	7.0	18
		136.0	27.2	17
16	4.6	120.6		
		10.8	19.4	15
		E		
		178.2		
14	32.4	147.2		
		E		
		A		
		252.4		
		102.2	1.0	13
12	64.2	172.6		
11	43.6	71.8		
		G		
		C		
		260.0		
		246.0	49.0	10
		324.0	49.4	9
8	6.8	142.2		
		B		
		C		
		176.4		
		161.8	12.4	7
6	3.4	155.0		
		109.2	21.2	5
4	10.8	84.0		
3	6.4	57.6		
2	18.4	51.4		
		D		
		164.2		
1	12.6	79.4		
		E		



Den. அலுவலர்
 கிராமத்தின்

எண். 15-B: 5000 Village Administration Office
 No.11, Madhagondapani
 Denkanikottal Tk
 District.

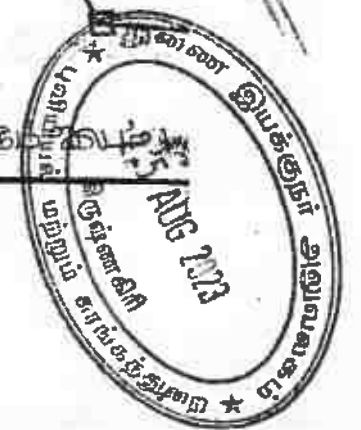
S. DHANASEKAR, M.Sc., (Geo)

பெரிய : 20 சென்ட் 11 மீ மீ



No. 54
MUTHUGANAPALLI

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

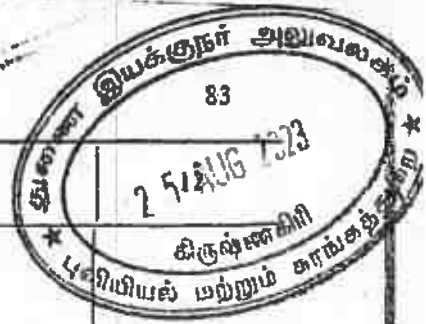


(1) பசுவியின் பெயர்	(2) பசுவியின் கட்டிடம்	(3) பரப்பு	(4) தரவர	(5) தரவரின் பெயர்	(6) வைப்பற்ற தரவரின் பெயரும் உள்ளூர் அல்லது அனுமதி பெற்ற தரவரின் பெயர்	(7) மாகாண அரசின் மூலம் கைப்பற்றப்பட்ட பணத்தின் விவரம்	(8) கைப்பற்றப்பட்ட பணத்தின் விவரம்	(9) பசுவியின் பெயர்	(10) பசுவியின் பெயர்	(11) உண்மையான பாய்ச்சல் ஆதாரம்	(12) விவர விவரம்
265	1.50-0	2.50-0									
265	1.60-0										
265	1.40-0										

Village Administrative Officer
No.11, Madhaganadapalli
Denkanikottai Tk
Kanniyakudi Dist.

(13) கைப்பற்றப்பட்ட பணத்தின் விவரம்	(14) பசுவியின் பெயர்	(15) பசுவியின் பெயர்	(16) உண்மையான பாய்ச்சல் ஆதாரம்	(17) விவர விவரம்	(18) கைப்பற்றப்பட்ட பணத்தின் விவரம்	(19) கைப்பற்றப்பட்ட பணத்தின் விவரம்
					2.50-0	
					1.60-0	
					1.40-0	

கிராம அதிகாரி
சென்னை
12-11-2016



1	2	3	4	5	6	7	8	9	10	11
264-6 பா	ர	பு	...	7-3	4	2	77	0 12.5	0 35	463 க. நாராயணப்பா.
-6பா	ர	பு	...	7-3	4	2	77	0 14.5	0 40	721 ர. முனியப்பா.
6பா	ர	பு	...	7-3	4	2	77	0 25.0	0 69	733 ர. ரங்கசாமி.
-6பா	ர	பு	...	7-3	4	2	77	0 23.0	0 64	25 ர. அனுமந்தப்பா.
-6பா	ர	பு	...	7-3	4	2	77	0 05.5	0 15	463 க. நாராயணப்பா.
								3 98.5	10 92	
265-1	அ	தி.ஏ.சு	...	...	...	...	...	8 73.0	...	...
-2	ர	பு	...	7-3	4	2	77	0 28.5	0 78	443 மு. நாராயண ரெட்டி.
-3	அ	புற	...	...	...	...	...	0 34.5	...	...
								9 36.0	0 78	
266-1	ர	பு	...	7-2	3	3	38	0 92.5	3 15	464 எ. நாராயண ரெட்டி.
-2	ர	பு	...	7-2	3	3	38	0 58.5	1 97	122 பி. எல்லா ரெட்டி.
-3	ர	பு	...	7-2	3	3	38	0 50.0	1 69	734 எ. ராம ரெட்டி.
								2 01.0	6 81	
267-1	ர	பு	...	7-2	3	3	38	0 43.5	1 64	122 பி. எல்லா ரெட்டி.
-2	ர	பு	...	7-2	3	3	38	0 85.5	2 90	830 ந. ரமேஷ் ரெட்டி.
-3	ர	பு	...	7-2	3	3	38	0 36.5	1 23	734 எ. ராம ரெட்டி.
-4	ர	பு	...	7-2	3	3	38	0 36.5	1 23	122 பி. எல்லா ரெட்டி.
-5	ர	பு	...	7-2	3	3	38	0 36.5	1 23	756 சி. ராம ரெட்டி.
								2 43.5	8 23	
268-1 பா	ர	பு	...	7-2	3	3	38	1 23.5	4 19	830 ந. ரமேஷ் ரெட்டி.

பாறை.
வாரி.

Village Administrative Officer
No. 11, Madhagondapalli
Denkanikottai Tk
Krishnagiri Dist.

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



ಅನುಭವಿ
P Sudha

ಜನ್ಮ ದಿನಾಂಕ / DOB 07/10/1988
ಲಿಂಗ / Female

2557 7877 2996



ಆಧಾರ್ - ಶ್ರೀಸಾಮಾನ್ಯನ ಅಧಿಕಾರ

ಆಯಕರ ವಿಭಾಗ
INCOME TAX DEPARTMENT



ಭಾರತ ಸರ್ಕಾರ
GOVT. OF INDIA



ಸ್ಥಾಯಿ ಲೇಖಾ ಸಂಖ್ಯಾ ಕಾರ್ಡ್
Permanent Account Number Card
JMIPS7252D



ಹೆಸರು / Name
SUDHA P

ಪಿತೃ ಹೆಸರು / Father's Name
PARTHASARATHY

ಜನ್ಮ ದಿನಾಂಕ / Date of Birth
07/10/1988

ಹಸ್ತಾಕ್ಷರ / Signature



ANNEXURE VIII



ಭಾರತೀಯ ಏಕೈಕ ಗುರುತು ಪ್ರಾಧಿಕಾರ
Unique Identification Authority of India

ಅಧಿಕಾರಿ ಹೆಸರು: ಆರ್ ವೆನುಗೋಪ್ಪ
27 ಮೇಶ್ವರನ್ ಗ್ರೀನ್ ಪಾರ್ಕ್
ನಾಗರಾಜಕಾನಹಳ್ಳಿ, ಕಾಸಬೆ-ನೊಬ್ಲಿ, ಮಾತುರ,
ಮಂಸೂರು, ಬೆಂಗಳೂರು, ಆಂಧ್ರಪ್ರದೇಶ,
ಕರ್ನಾಟಕ, 582186

Address: W/O: R Venugopal,
#27 maleshwaran green
park, nagarajakanahalli,
kasabennobli, Matapur,
Mansur, Bengaluru, Andhra,
Karnataka, 582186

2557 7877 2996

1947
1800 300 1947

help@uidai.gov.in

www.uidai.gov.in

इस कार्ड के खोने / घाने पर कृपया सूचित करें। लोस्ट/ः
आयकर पैन सेवा इकाई, एनएसडीएस
3 वीं मंजिल, पंजी स्थलिंग, प्लॉट नं. 341, सर्वे नं. 997/8,
नीलस कॉलोनी, दीप बंगला चौक के पास,
पुणे-411 016.

If this card is lost / someone's lost card is found,
please inform / return to:-
Income Tax PAN Services Unit, NSDL
3rd Floor, Minto Building,
Plot No. 341 - Survey No: 997/8,
Model Colony, Near Deep Banglow Chowk,
Pune - 411 016.

Tel: 020-26194747, 26194748, 26194749, 26194750
e-mail: help@uidai.gov.in

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

From
Thiru L. Suresh, M.Sc.,
Deputy Director,
Geology and Mining,
Collectorate, Krishnagiri.

To
Tmt.P.Sudha
W/o.R.Venugopal,
No.27, Malleshwaram Green Park,
Naganaickanahalli ,
Kasaba Hobli, Marsur post,
Anekal Taluk,
Bangalore District.
dated 05.05.2018



Roc.223/2018/Mines

Sir,

Sub: Mines and Minerals - Krishnagiri District - Denkanikottai Taluk -Madakondapalli- Government Land in S.F.No.265 (part-2) - Over an extent of 2.50.0 Hectares - Precise area given for the proposed grant of Quarry lease for Rough Stone for a period of 10 years from the date of execution of lease deed to Tmt.P.Sudha W/o.R.Venugopal - Draft Mining Plan submitted - Mining Plan approved - reg.

- Ref: 1. The Krishnagiri District Gazette (Extraordinary) No.01 dated 19.01.2018.
2. The District Collector Krishnagiri Memorandum in Rc.No.223/2018/Mines dated 09.03.2018.
3. Tmt.P.Sudha W/o.R.Venugopal, No.27, Malleshwaram Green Park, , Naganaickanahalli post, Kasaba Hobli, Marsur post, Anekal Taluk, Bangalore District letter dated -----

-oOo-

Tmt.P.Sudha W/o.R.Venugopal, No.27, Malleshwaram Green Park, , Naganaickanahalli post, Kasaba Hobli, Marsur post, Anekal Taluk, Bangalore District had been given precise area over an extent of 2.50.0 hectares in Government Poramboke land in S.F.No.265(part-2) of Madakondapalli village, Denkanikottai Taluk, Krishnagiri District for a period of **Ten 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 3rd cited Tmt.P.Sudha W/o.R.Venugopal has submitted draft Mining Plan for approval for the proposed rough stone quarry lease over an extent of 2.50.0 hectares in Government Poramboke land in S.F.No.265(part-2) of Madakondapalli village, Denkanikottai Taluk, Krishnagiri District for a period **Ten years** from the date of execution of lease deed.

3. The Mining Plan submitted by Tmt.P.Sudha W/o.R.Venugopal 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 Roc.No.223/2018/ Mines dated 09.03.2018 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 Applicant/Lessee	Taluk / Village	S.F.No.	Extent in Hect	Collector's Proceedings No. & date	Lease period
1	THIRU.H.R.PRASHANTH, S/o. H.V.RAVI, HANDENAHALLI VILLAGE, ANEKAL TALUK, BANGALORE - 562 125.	DENKANIKOTTAI / MATHAKONDAPALLI	265 (PART-I)	2.50.0	Rc.222/2018/ Mines dated 09.03.2018	Instant Proposa
2	TMT. P. SUDHA, W/o. R.VENUGOPAL, NO.27, MALLESHWARAM GREEN PARK, NAGA NAYAKKANAHALLI, KASABA HOBLI, MARSUR POST, ANEKKAL TALUK, BANGALORE - 562106.	DENKANIKOTTAI / MATHAKONDAPALLI	265 (PART-II)	2.50.0	Rc.223/2018/ Mines dated 09.03.2018	Instant Proposal

3	THIRU.C.SRINIVASAMOORTHY, S/o. CHANDRAPPA, DOOR NO.2/31, BELAGONDAPALLI POST, DENKANIKOTTAI TALUK, KRISHNAGIRI DISTRICT - 635 114.	DENKANIKOTTAI / MATHAKONDAPALLI	265 (PART-III)	1.60.0	Rc.224/2018/ Mines dated 09.03.2018	Instant Proposal
4	THIRU.A.VINAY, S/o. APPOJI REDDY, DOOR NO. 146, MUGALUR POST,HOSUR TALUK, KRISHNAGIRI DISTRICT.	DENKANIKOTTAI / MATHAKONDAPALLI	265 (PART-IV)	1.46.0	Rc.225/2018/ Mines dated 09.03.2018	Instant Proposal
5	THIRU.S.KRISHNAREDDY, No.2/58, MATHUKUR VILLAGE, MADHAKONDAPALLI POST, DENKANIKOTTI TALUK, KRISHNAGIRI DIST.	DENKANIKOTTAI / KALUKONDAPALLI	337/2A1, 337/2B	1.21.0	Rc.164/2012/ Mines-2 dated 22.05.2017	29.05.2017 to 28.05.2022
Total =				9.27.0		



Deputy Director,
Geology and Mining,
Krishnagiri.

- 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.

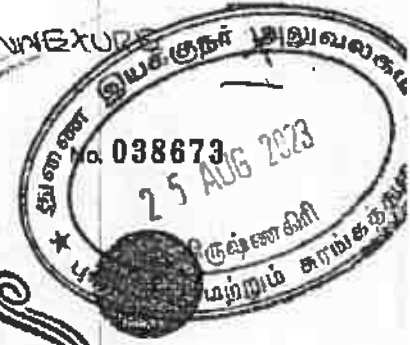
[Signature]
J.DHANASEKAR, M.Sc. (Geo)
Qualified Person

Reg. No 01BBB1005
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

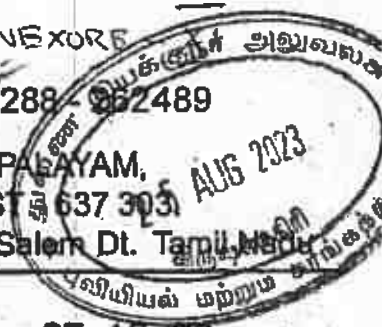
PRITHVI MINERALS,



ANNEXURE

04288-22489

VARANALLAMPALAYAM,
ALATHUR POST 637 303
SANKARI Tk, Salem Dt. Tamil Nadu



Date : ...27.12.08.

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, Omalur 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

PHOTO SHOWN LEASE AREA VIEW-1



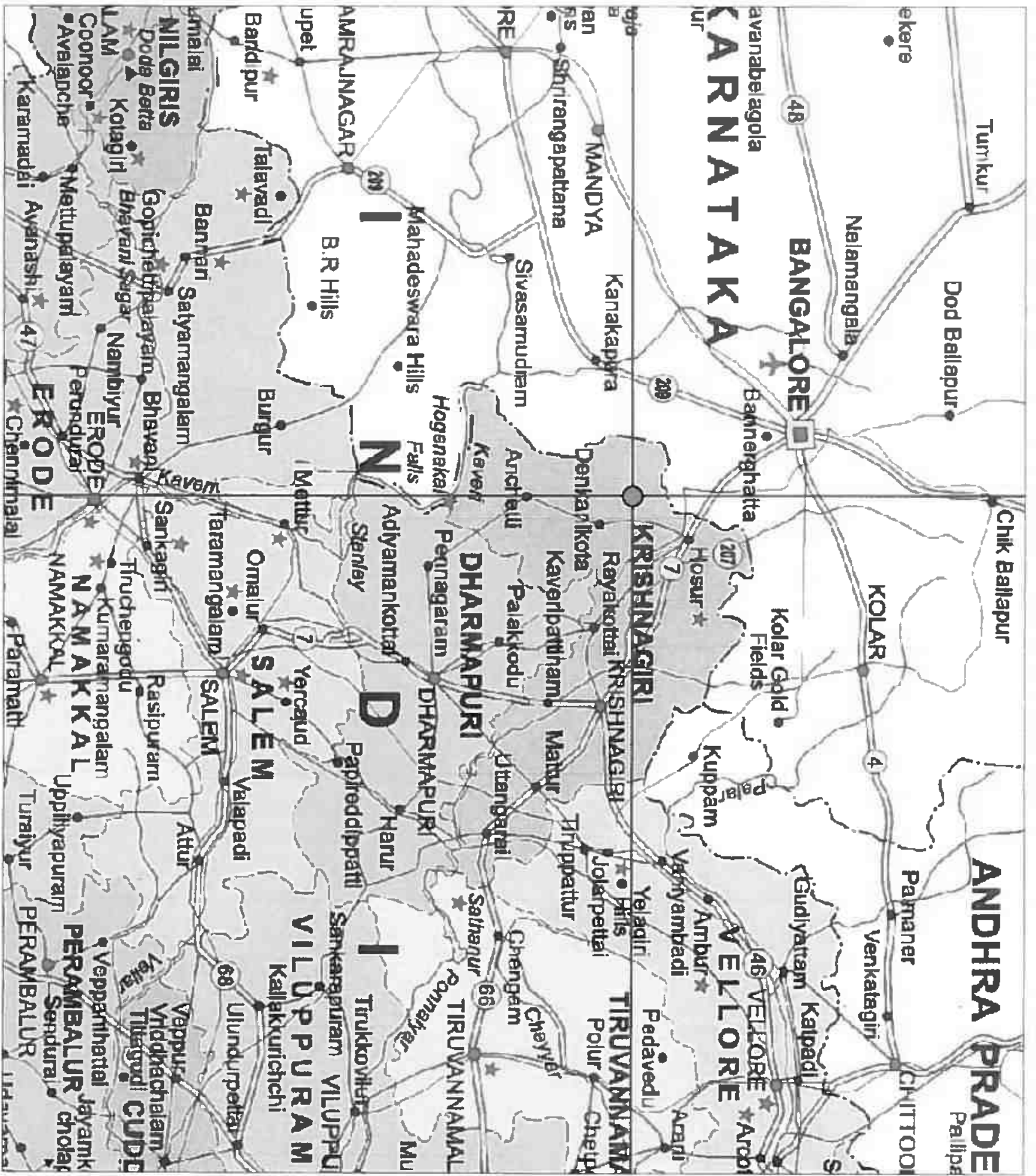
PHOTO SHOWN LEASE AREA VIEW-2



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

77° 45' 12.2052" E

12° 38' 15.0651" N



77° 45' 17.0791" E

12° 38' 14.5350" N

ANDHRA PRADE

KARNATAKA

BANGALORE

KRISHNAGIRI

DHARMAPURI

VILUPPURAM

SALEM

NILGIRIS

ERODE

NAMAKKAL

PERAMBALUR

PLATE NO.:	DATE OF SURVEY: 19-06-2023
LESSEE ADDRESS:	TMT.P.SUDHA, W/O.R.VENUGOPAL, NO.27, MALLESWARAM GREEN PARK, NAGANAYAKKANAHALLI, KASABA HOBLI, MARASUR POST, ANEKAL TALUK, BANGALORE - 562 106.
LOCATION OF QUARRY	
EXTENT : 2.50.00 Ha,	
S.F.NO : 265(PART-2),	
VILLAGE : MATHAKONDAPALLI,	
TALUK : DENKANIKOTTAI,	
DISTRICT : KRISHNAGIRI.	
INDEX	
QUARRY LEASE AREA :	●
TOPO SHEET NO.: 57-H/14,	
LATITUDE : 12° 38' 15.0651" N to 12° 38' 14.5350" N	
LONGITUDE: 77° 45' 17.0791" E to 77° 45' 12.2052" 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.	
S. DHYANASEKAR, M.Sc. QUALIFIED PERSON	

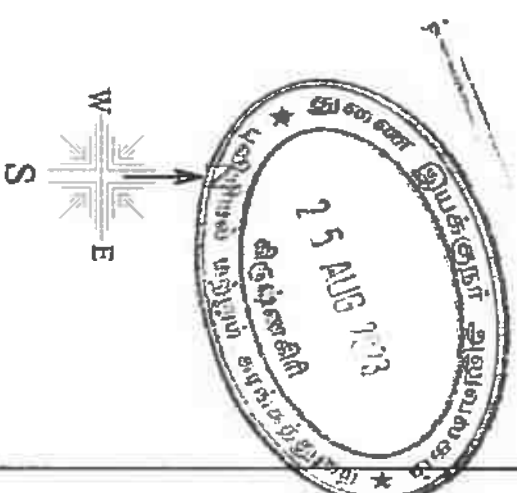


PLATE NO:1A

DATE OF SURVEY: 19-06-2023

LESSEE ADDRESS:

TMT.P.SUDHA,
W/o.R.VENUGOPAL,
NO.27, MALLESWARAM GREEN PARK,
NAGANAYAKKANAHALLI,
KASABA HOBLI, MARASUR POST,
ANEKAL TALUK, BANGALORE - 562 106.

LOCATION OF QUARRY

EXTENT : 2.50.00 Ha,
S.F.NO : 265(PART-2),
VILLAGE : MATHAKONDAPALLI,
TALUK : DENKANIKOTTAI,
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


S.DIWANSEKAR.M.Sc.,
QUALIFIED PERSON



PILLAR NO	LATITUDE	LONGITUDE
1	12° 38' 14.5350" N	77° 45' 12.2052" E
2	12° 38' 17.2675" N	77° 45' 12.5297" E
3	12° 38' 20.2119" N	77° 45' 14.1135" E
4	12° 38' 15.0651" N	77° 45' 17.0791" E
5	12° 38' 13.8822" N	77° 45' 16.3449" E
6	12° 38' 12.4346" N	77° 45' 17.1824" E
7	12° 38' 11.2759" N	77° 45' 16.7848" E
8	12° 38' 11.2168" N	77° 45' 16.2185" E



PLATE NO:1C

DATE OF SURVEY: 19-06-2023

LESSEE ADDRESS:

TMT. P.SUDHA,
 W/o. R.VENUGOPAL,
 No.27, MALLESWARAM GREEN PARK,
 NAGANAYAKKANAHALLI,
 KASABA HOBLI, MARASUR POST,
 ANEKAL TALUK, BANGALORE - 562 106.

LOCATION OF QUARRY

EXTENT : 2.50.00 Ha,
 S.F.NO : 265(PART-2),
 VILLAGE : MATHAKONDAPALLI,
 TALUK : DENKANIKOTTAI,
 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

S.D.HANASEKAR, M.Sc.,
 QUALIFIED PERSON

12° 38' 20.2119" N
77° 45' 14.1135" E



12° 38' 14.5350" N
77° 45' 12.2052" E

12° 38' 15.0651" N
77° 45' 17.0791" E

12° 38' 11.2168" N
77° 45' 16.2185" E



PLATE NO:ID

DATE OF SURVEY : 19-06-2023




LESSEE ADDRESS:

TMT.P.SUDHA,
W/o.R.VENUGOPAL,
No.27, MALLESWARAM GREEN PARK,
NAGA NAYAKKANAHALLI,
KASABA HOBLI, MARASUR POST,
ANEKAL TALUK, BANGALORE - 562 106.

LOCATION OF QUARRY

EXTENT : 2.50.00 Ha,
S.F.NO : 265(PART-2),
VILLAGE : MATHAKONDAPALLI,
TALUK : DENKANIKOTTAI,
DISTRICT : KRISHNAGIRI.

INDEX

- QUARRY LEASE BOUNDARY 
- 500M RADIUS 
- 300M RADIUS 

SATELLITE IMAGE

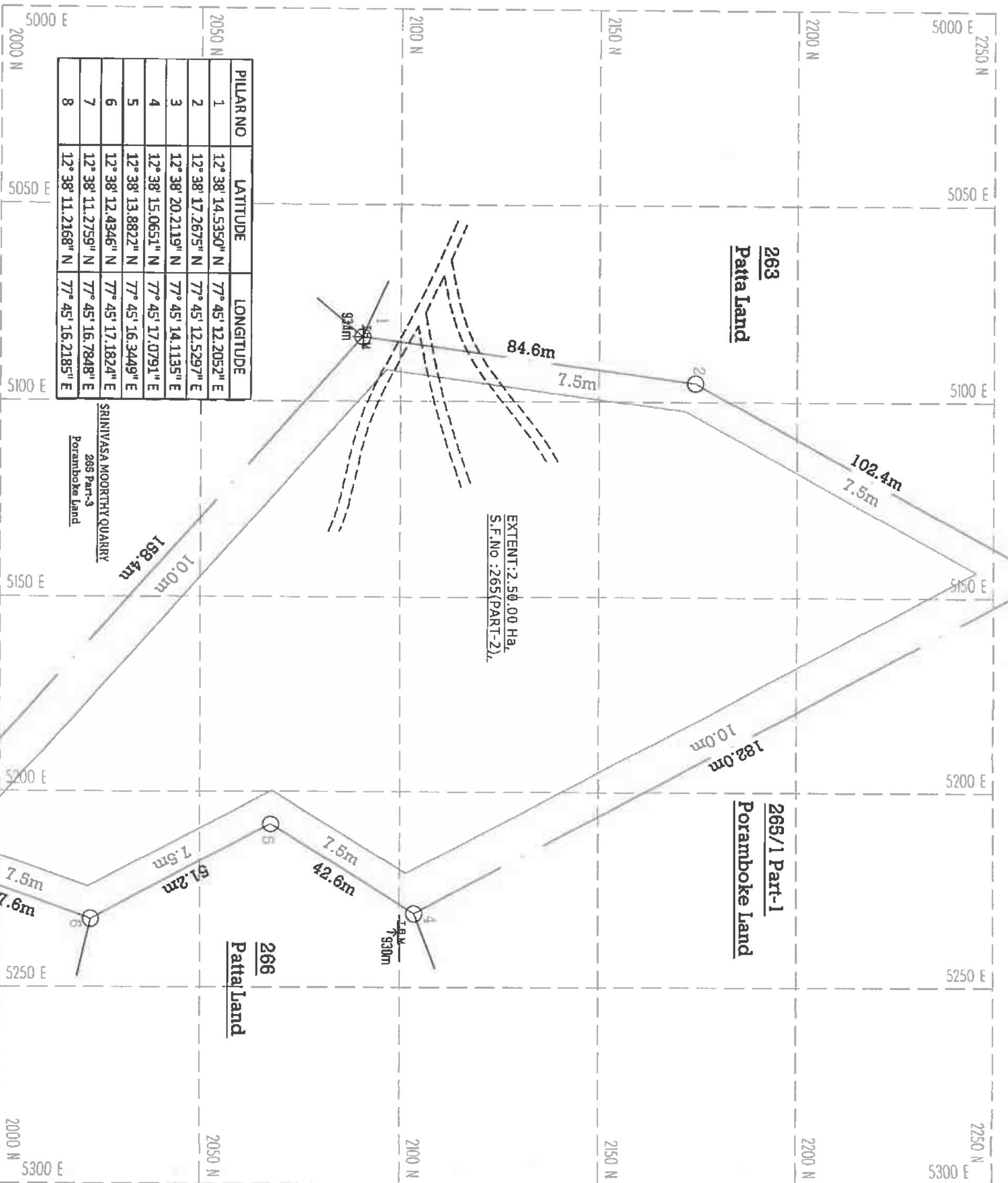
(500m RADIUS)

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:


S.DILANASEKAR M.Sc.,
QUALIFIED PERSON



PILLAR NO	LATITUDE	LONGITUDE
1	12° 38' 14.5350" N	77° 45' 12.2052" E
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8	12° 38' 11.2168" N	77° 45' 16.2185" E

EXTENT: 2.50.00 Ha,
S.F.No.: 265(PART-2).

SRINIVASA MOORTHY QUARRY
265 Part-3
Poramboke Land

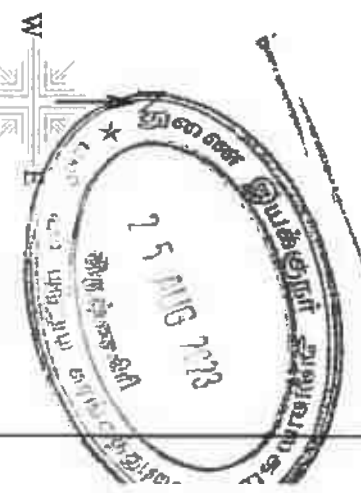


PLATE NO: II
DATE OF SURVEY: 19-06-2023

LESSEE ADDRESS:
TMT. P. SUDHA,
W/o. R. VENUGOPAL,
NO. 27, MALLESWARAM GREEN PARK,
NAGANAYAKKANAHALLI,
KASABA HOBLI, MARASUR POST,
ANEKAL TALUK, BANGALORE - 562 106.

LOCATION OF QUARRY
EXTENT : 2.50.00 Ha,
S.F.NO : 265(PART-2),
VILLAGE : MATHAKONDAPALLI,
TALUK : DENKANIKOTTAI,
DISTRICT : KRISHNAGIRI.

- INDEX**
- QUARRY LEASE BOUNDARY
 - 7.5m, 10.0m SAFETY DISTANCE
 - BOUNDARY PILLARS
 - TEMPORARY BENCH MARK
 - APPROACH ROAD

MINE LEASE PLAN
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
S. DHANASEKAR M.Sc.,
QUALIFIED PERSON

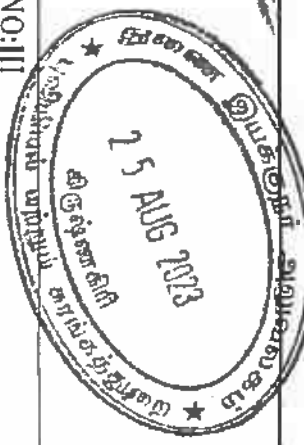


PLATE NO: III

DATE OF SURVEY: 19-06-2023

LESSEE ADDRESS:

TMT. P. SUDHA,
W/O. R. VENUGOPAL,
No. 27, MALLESWARAM GREEN PARK,
NAGANAYAKKANAHALLI,
KASABA HOBLI, MARASUR POST,
ANEKAL TALUK, BANGALORE - 562 106.

LOCATION OF QUARRY

EXTENT : 2.50.00 Ha,
S.F. NO : 265(PART-2),
VILLAGE : MATHAKONDAPALLI,
TALUK : DENKANIKOTTAI,
DISTRICT : KRISHNAGIRI.

INDEX

- QUARRY LEASE BOUNDARY
- 7.5m, 10.0m SAFETY DISTANCE
- BOUNDARY PILLARS
- TEMPORARY BENCH MARK
- TOP SOIL
- ROUGH STONE
- EXISTING PIT
- STRIKE AND DIP
- CONTOUR LINE
- QUARRY ROAD
- SHRUB

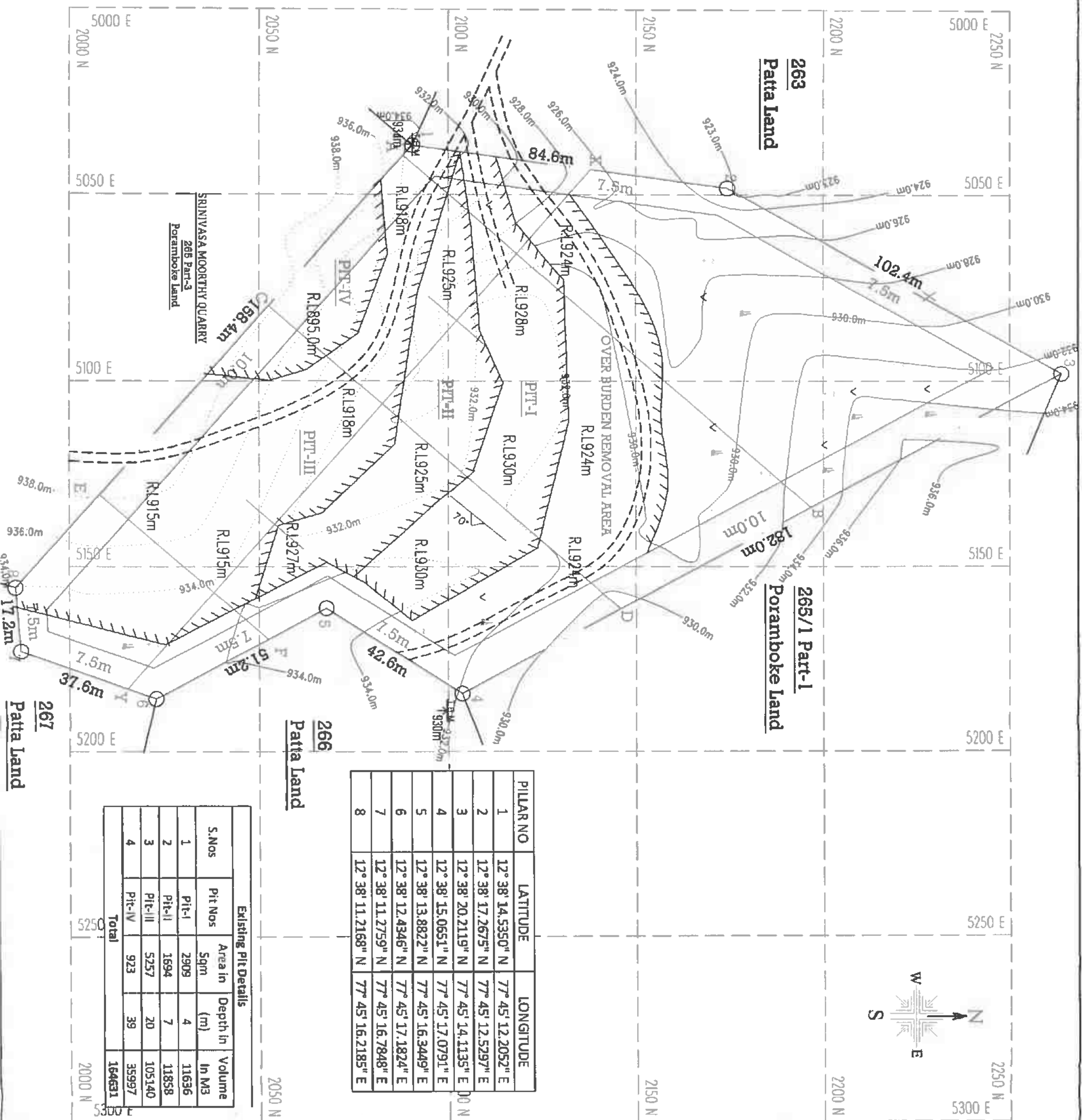
SURFACE AND GEOLOGICAL PLAN

SCALE: 1:1000

PREPARED BY:

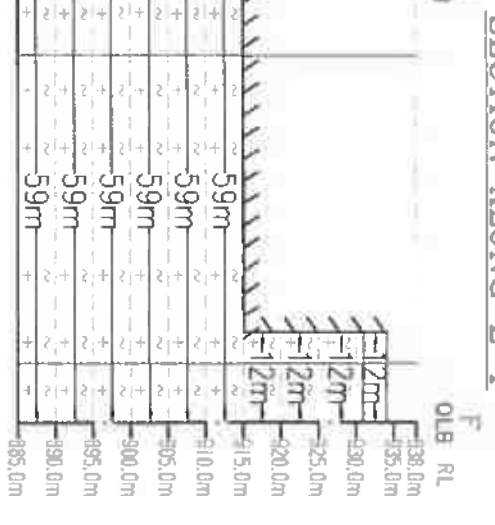
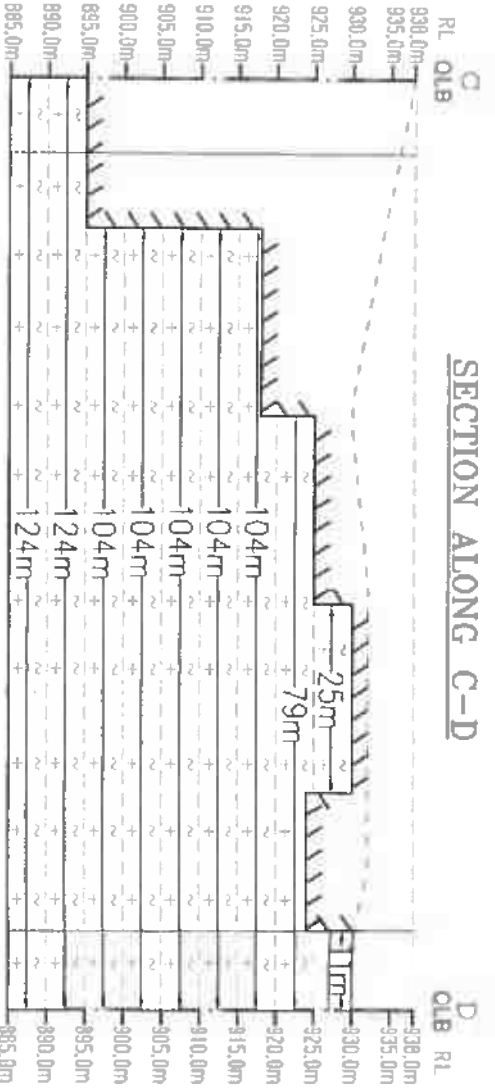
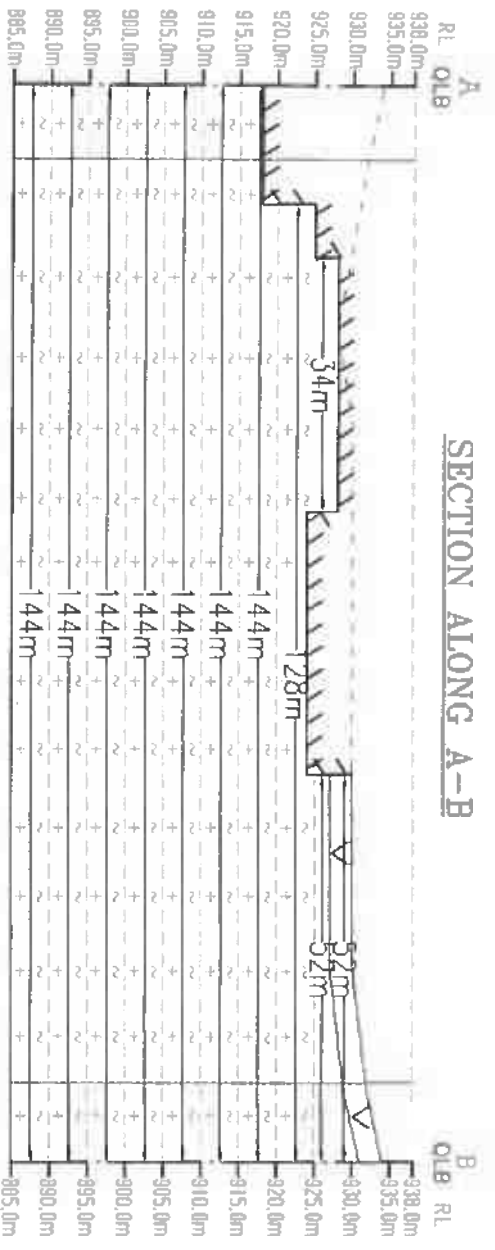
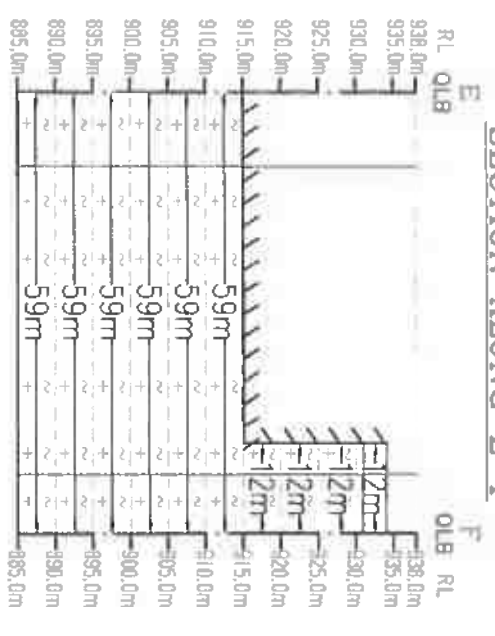
I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.

S. DHANASEKAR, M.Sc.,
QUALIFIED PERSON



PILLAR NO	LATITUDE	LONGITUDE
1	12° 38' 14.5350" N	77° 45' 12.2052" E
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7	12° 38' 11.2759" N	77° 45' 16.7848" E
8	12° 38' 11.2168" N	77° 45' 16.2185" E

Existing Pit Details				
S. Nos	Pit Nos	Area in Sqm	Depth in (m)	Volume in M3
1	Pit-I	2909	4	11636
2	Pit-II	1694	7	11858
3	Pit-III	5257	20	105140
4	Pit-IV	923	39	35997
Total				164631



25 AUG 2023

ಶಿಕ್ಷಣ ಮತ್ತು ಅಧ್ಯಯನ ಇಲಾಖೆ
ಬೆಂಗಳೂರು ನಗರ ಪಾಲಿಕೆ

25 AUG 2023

ಶಿಕ್ಷಣ ಮತ್ತು ಅಧ್ಯಯನ ಇಲಾಖೆ
ಬೆಂಗಳೂರು ನಗರ ಪಾಲಿಕೆ

TOTAL DEPTH = 48m
ABOVE SURFACE GROUND LEVEL - 15m
BELOW SURFACE GROUND LEVEL - 33m

PLATE NO: III-A
DATE OF SURVEY: 19-06-2023

LESSEE ADDRESS:
TMT.P.SUDHA,
W/O.R.VENUGOPAL,
NO.27, MALLESWARAM GREEN PARK,
NAGANAYAKKANAHALLI,
KASABA HOBLI, MARASUR POST,
ANEKAL TALUK, BANGALORE - 562 106.

LOCATION OF QUARRY
EXTENT : 2.50.00 Ha,
S.F.NO : 265(PART-2),
VILLAGE : MATHAKONDAPALLI,
TALUK : DENKANIKOTTAI,
DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY ————

7.5m, 10.0m SAFETY DISTANCE ————

TOP SOIL ∨ ∨

ROUGH STONE ***

EXISTING PIT - - - - -

GEOLOGICAL SECTIONS

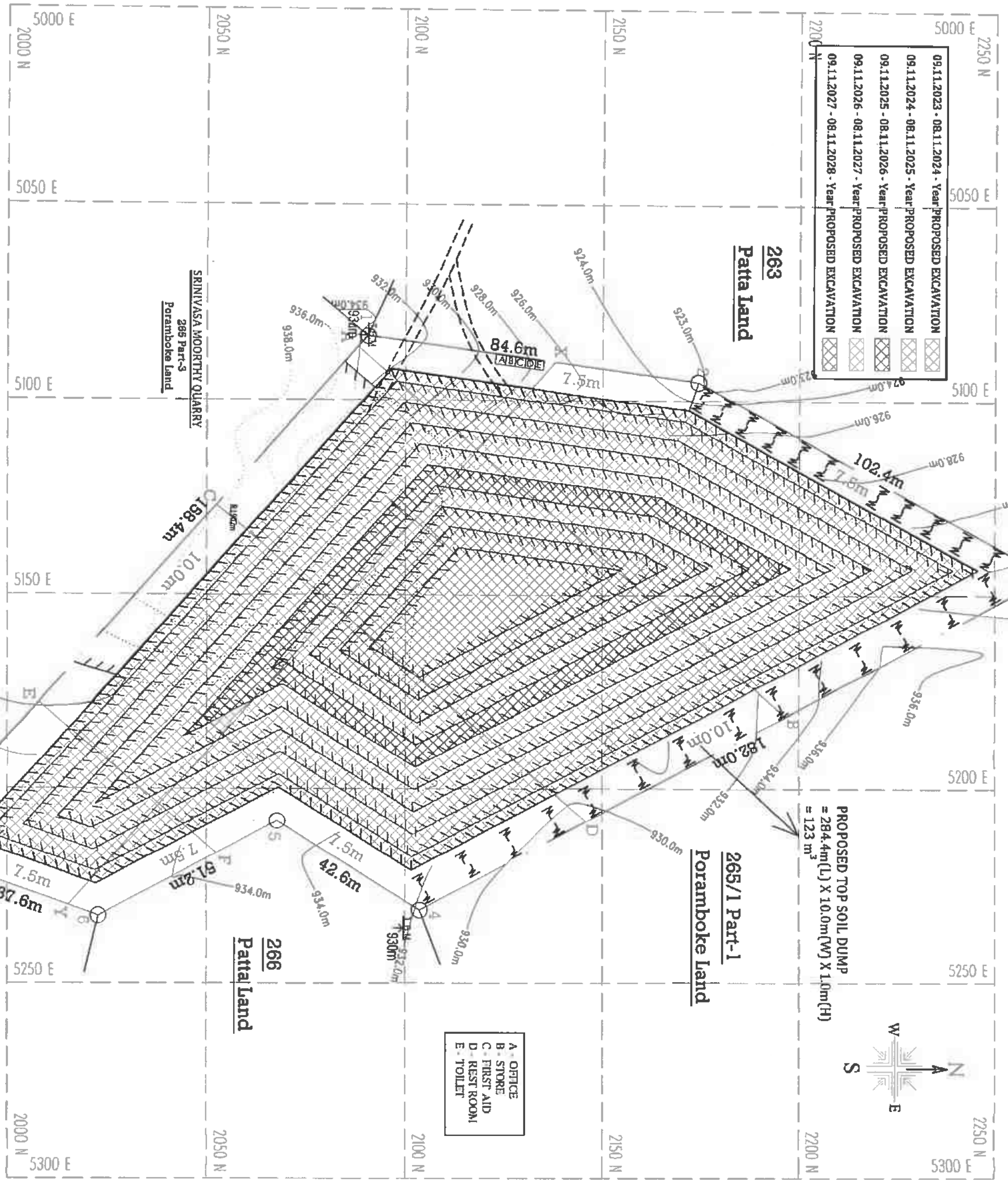
SCALE: 1:1000

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

Section		Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in M3	Geol ological Reserves in m3 @ 100%	Top Soil in m3
XY-AB	I	9	52	3	5160	5160	1404	
	II	20	86	3	34560	34560		
	III	54	128	5	38880	38880		
	IV	54	144	5	38880	38880		
	V	54	144	5	38880	38880		
	VI	54	144	5	38880	38880		
	VII	54	144	5	38880	38880		
	VIII	54	144	5	38880	38880		
	IX	54	144	5	38880	38880		
TOTAL		54	144	5	38880	38880	1404	
XY-CD	I	1	11	3	125	125	33	
	II	1	25	5	8295	8295		
	III	21	79	5	19240	19240		
	IV	37	104	5	37960	37960		
	V	73	104	5	37960	37960		
	VI	73	104	5	37960	37960		
	VII	73	104	5	37960	37960		
	VIII	73	104	5	37960	37960		
	IX	73	124	5	45260	45260		
TOTAL		73	124	5	45260	45260	33	
XY-EF	I	16	12	3	960	960	576	
	II	16	12	5	960	960		
	III	16	12	5	960	960		
	IV	16	12	5	960	960		
	V	59	59	5	17405	17405		
	VI	59	59	5	17405	17405		
	VII	59	59	5	17405	17405		
	VIII	59	59	5	17405	17405		
	IX	59	59	5	17405	17405		
TOTAL		59	59	5	17405	17405	576	
GRAND TOTAL					689210	689210	2013	

09.11.2023 - 08.11.2024 - Year PROPOSED EXCAVATION	
09.11.2024 - 08.11.2025 - Year PROPOSED EXCAVATION	
09.11.2025 - 08.11.2026 - Year PROPOSED EXCAVATION	
09.11.2026 - 08.11.2027 - Year PROPOSED EXCAVATION	
09.11.2027 - 08.11.2028 - Year PROPOSED EXCAVATION	



PROPOSED TOP SOIL DUMP
 = 284.4m(L) X 10.0m(W) X 1.0m(H)
 = 123 m³



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

PLATE NO: IV
 DATE OF SURVEY: 19-06-2023

LESSEE ADDRESS:

T.M.T. P. SUDHA,
 W/O. R. VENUGOPAL,
 NO. 27, MALLESWARAM GREEN PARK,
 NAGANAYAKKANAHALLI,
 KASABA HOBLI, MARASUR POST,
 ANEKAL TALUK, BANGALORE - 562 106.

LOCATION OF QUARRY

EXTENT : 2.50.00 Ha,
 S.F. NO : 265(PART-2),
 VILLAGE : MATHAKONDAPALLI,
 TALUK : DENKANIKOTTAI,
 DISTRICT : KRISHNAGIRI.

INDEX

- QUARRY LEASE BOUNDARY
- 7.5m, 10.0m SAFETY DISTANCE
- BOUNDARY PILLARS
- TEMPORARY BENCH MARK
- TOP SOIL
- ROUGH STONE
- QUARRY PIT
- CONTOUR LINE
- QUARRY ROAD
- PROPOSED TOP SOIL DUMP

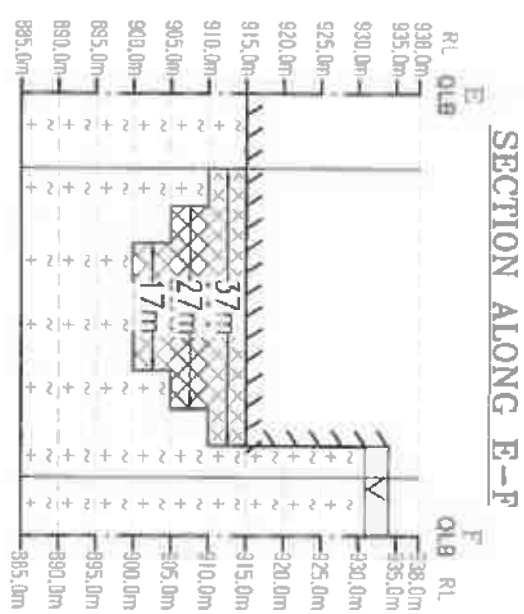
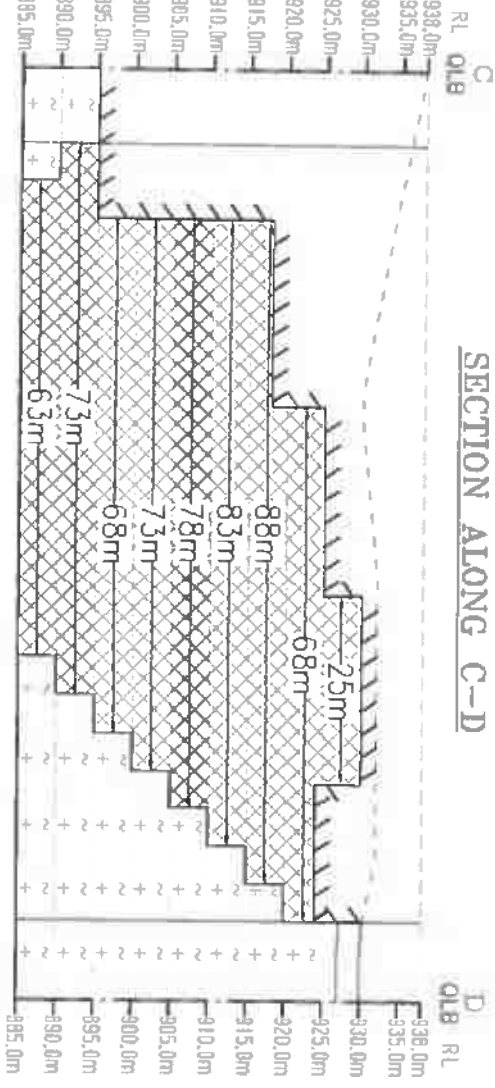
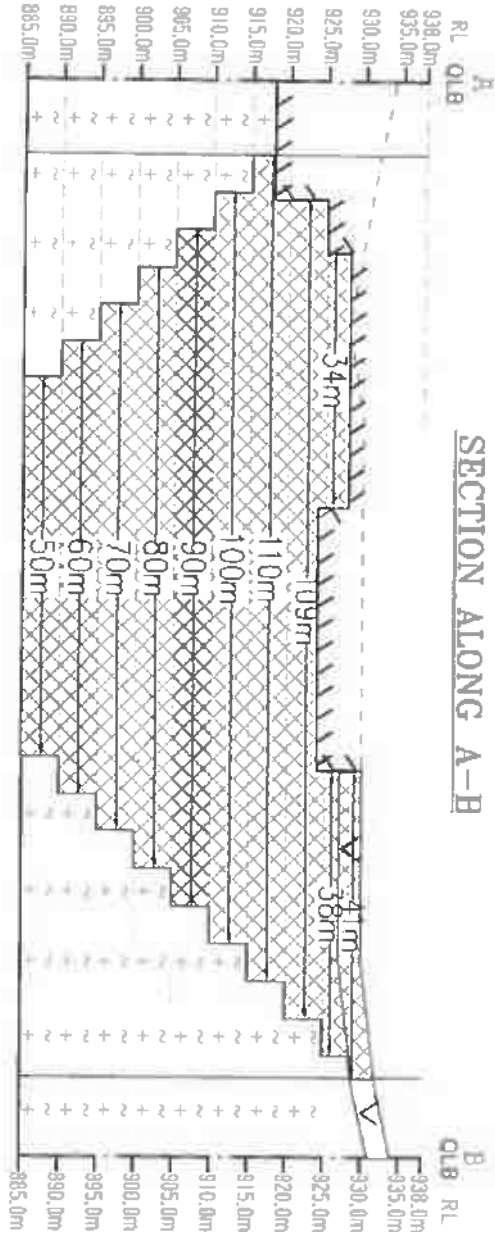
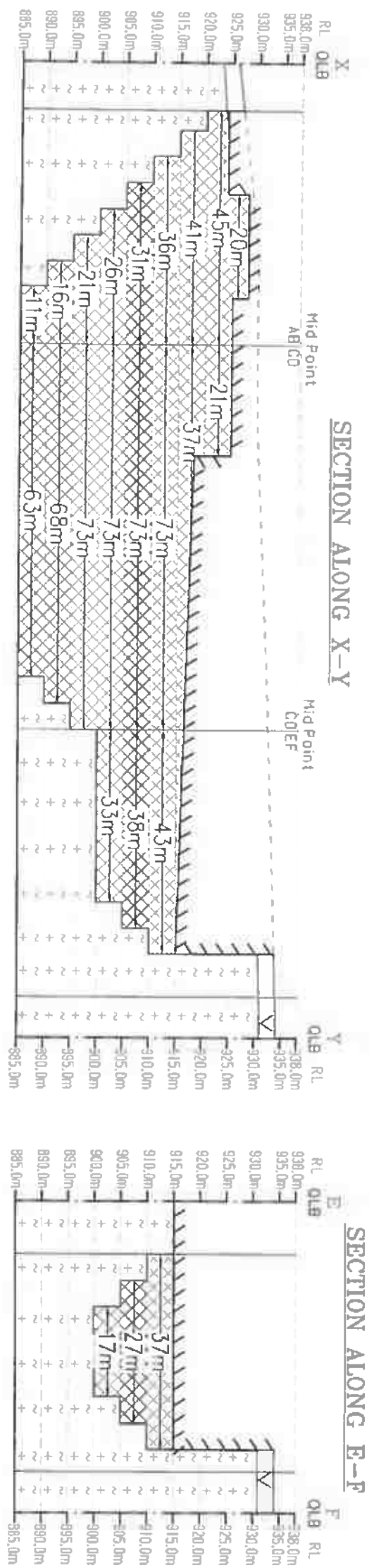
YEARWISE DEVELOPMENT
 AND PRODUCTION PLAN

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



09.11.2023 - 08.11.2024 - Year PROPOSED EXCAVATION **123**
09.11.2024 - 08.11.2025 - Year PROPOSED EXCAVATION
09.11.2025 - 08.11.2026 - Year PROPOSED EXCAVATION
09.11.2026 - 08.11.2027 - Year PROPOSED EXCAVATION
09.11.2027 - 08.11.2028 - Year PROPOSED EXCAVATION

YEARWISE DEVELOPMENT AND PRODUCTION									
YEAR	Section	Bench	Length In (m)	Width In (m)	Depth In (m)	Volume In M3	Roughstone Reserves in m3 @ 100%	Top Soil In m3	
09.11.2023	XY-AB	I	1	41	3	4320	4320		123
		II	20	72	3	24525	24525		
		III	45	109	5	22550	22550		
		IV	41	110	5	125	125		
08.11.2024	XY-CD	III	1	25	5	7140	7140		123
		III	21	68	5	16280	16280		
		IV	37	88	5	74940	74940		
		TOTAL				18000	18000		
09.11.2024	XY-AB	V	36	100	5	30295	30295		123
		V	73	83	5	7955	7955		
		V	43	37	5	56250	56250		
		TOTAL				13950	13950		
08.11.2025	XY-CD	VI	31	90	5	28470	28470		123
		VI	73	78	5	5130	5130		
		VI	38	27	5	10400	10400		
		TOTAL				7350	7350		
09.11.2025	XY-AB	VII	26	80	5	26645	26645		123
		VII	21	70	5	24820	24820		
		VIII	73	73	5	2805	2805		
		TOTAL				47550	47550		
08.11.2026	XY-CD	VIII	73	68	5	10400	10400		123
		VIII	33	17	5	7350	7350		
		VIII	33	17	5	26645	26645		
		TOTAL				24820	24820		
09.11.2026	XY-AB	IX	15	60	5	2805	2805		123
		IX	11	50	5	72020	72020		
		IX	68	73	5	4800	4800		
		TOTAL				2750	2750		
08.11.2027	XY-CD	X	63	63	5	24820	24820		123
		X	63	63	5	19845	19845		
		X	63	63	5	52215	52215		
		TOTAL				302975	302975		
09.11.2027	XY-AB	IX	15	60	5	4800	4800		123
		IX	11	50	5	2750	2750		
		IX	68	73	5	24820	24820		
		TOTAL				19845	19845		
08.11.2028	XY-CD	X	63	63	5	52215	52215		123
		X	63	63	5	302975	302975		
		X	63	63	5	302975	302975		
		TOTAL				123	123		

TOTAL DEPTH = 46m
ABOVE SURFACE GROUND LEVEL - 15m
BELOW SURFACE GROUND LEVEL - 31m



PLATE NO: IV-A
 DATE OF SURVEY: 19-06-2023

LESSEE ADDRESS:
 TMT.P.SUDHA,
 W/o.R.VENUGOPAL,
 No.27, MALLESWARAM GREEN PARK,
 NAGANAYAKKANAHALLI,
 KASABA HOBLI, MARASUR POST,
 ANEKAL TALUK, BANGALORE - 562 106.

LOCATION OF QUARRY
 EXTENT : 2.50.00 Ha,
 S.F.NO : 265(PART-2),
 VILLAGE : MATHAKONDAPALLI,
 TALUK : DENKANIKOTTAI,
 DISTRICT : KRISHNAGIRI.

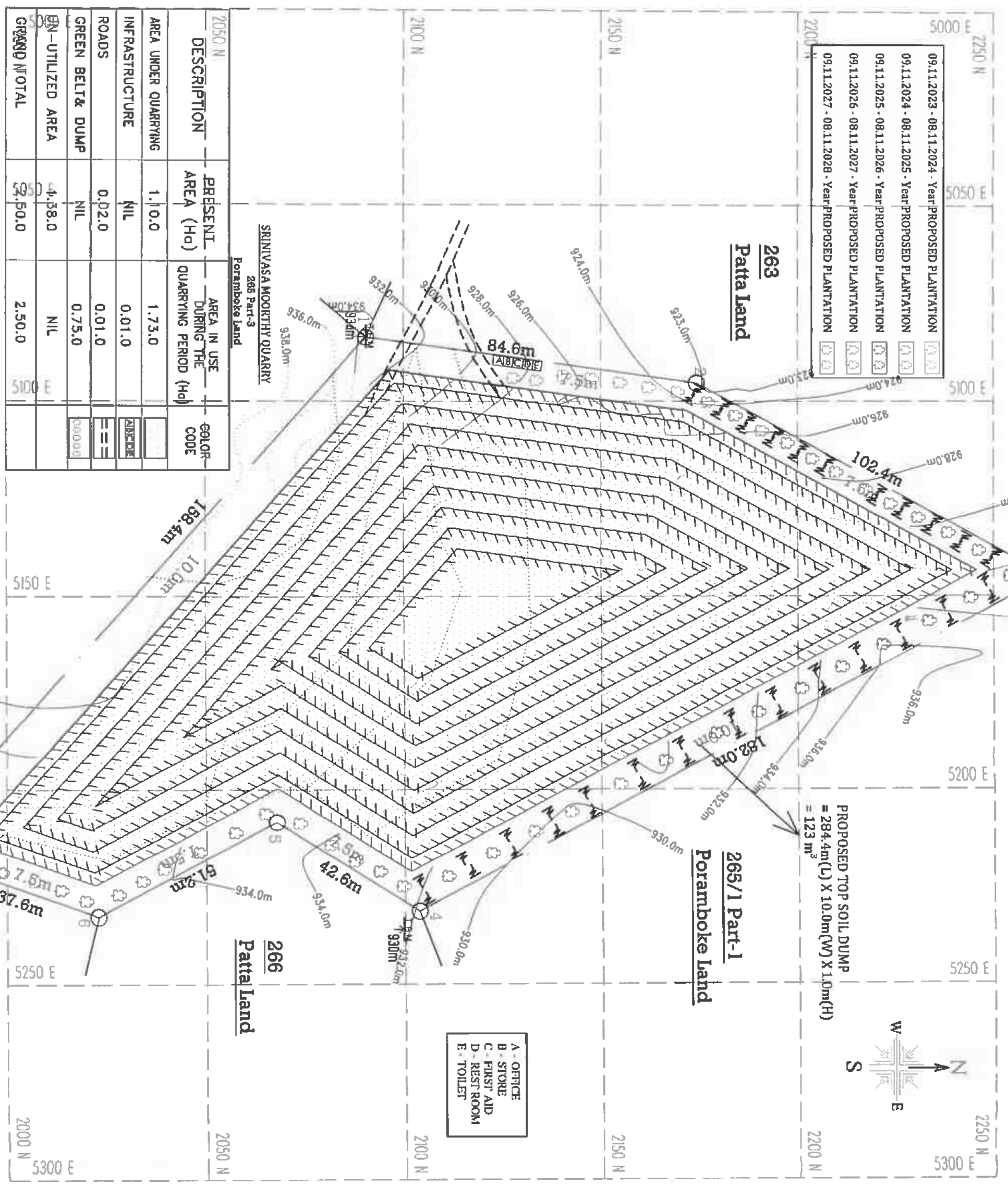
INDEX
 QUARRY LEASE BOUNDARY
 7.5m, 10.0m SAFETY DISTANCE
 TOP SOIL
 ROUGH STONE

YEARWISE DEVELOPMENT
 & 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. DIYANASEKAR, M.Sc.,
 QUALIFIED PERSON

09.11.2023 - 08.11.2024	Year PROPOSED PLANTATION	
09.11.2024 - 08.11.2025	Year PROPOSED PLANTATION	
09.11.2025 - 08.11.2026	Year PROPOSED PLANTATION	
09.11.2026 - 08.11.2027	Year PROPOSED PLANTATION	
09.11.2027 - 08.11.2028	Year PROPOSED PLANTATION	



2050 N	DESCRIPTION	PRESENT AREA (Ha)	AREA IN USE DURING THE QUARRYING PERIOD (Ha)	COLOR CODE
	AREA UNDER QUARRYING	1.0	1.73.0	
	INFRASTRUCTURE	NIL	0.01.0	
	ROADS	0.02.0	0.01.0	
	GREEN BELT & DUMP	NIL	0.75.0	
	UN-UTILIZED AREA	4.58.0	NIL	
	GRAND TOTAL	5.50.0	2.50.0	

PLATE NO: V
DATE OF SURVEY: 19-06-2023
LESSEE ADDRESS:
 TMT. P. SUDHA,
 W/o. R. VENUGOPAL,
 NO. 27, MALLESWARAM GREEN PARK,
 NAGANAYAKKANAHALLI,
 KASABA HOBLI, MARASUR POST,
 ANEKAL TALUK, BANGALORE - 562 106.

LOCATION OF QUARRY
 EXTENT : 2.50.00 Ha,
 S.F. NO : 265(PART-2),
 VILLAGE : MATHAKONDAPALLI,
 TALUK : DENKANIKOTTAI,
 DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY	
7.5m, 10.0m SAFETY DISTANCE	
BOUNDARY PILLARS	
TEMPORARY BENCH MARK	
TOP SOIL	
ROUGH STONE	
QUARRY PIT	
CONTOUR LINE	
QUARRY ROAD	
PROPOSED TOP SOIL DUMP	
MINE LAYOUT	

MINE LAYOUT LAND USE PATTERN & AFFORESTATION PLAN
 SCALE: 1:1000

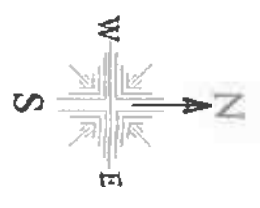
PREPARED BY:
 I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.

S. DHANASEKAR, M.Sc.,
 QUALIFIED PERSON

Towards
Malugundapalli

12° 38' 20.2119" N
77° 45' 14.1135" E

OCTOBER TO DECEMBER



12° 38' 14.5350" N
77° 45' 12.2052" E

Towards
Matukur



12° 38' 15.0651" N
77° 45' 17.0791" E

JULY TO SEPTEMBER

12° 38' 11.2168" N
77° 45' 16.2185" E

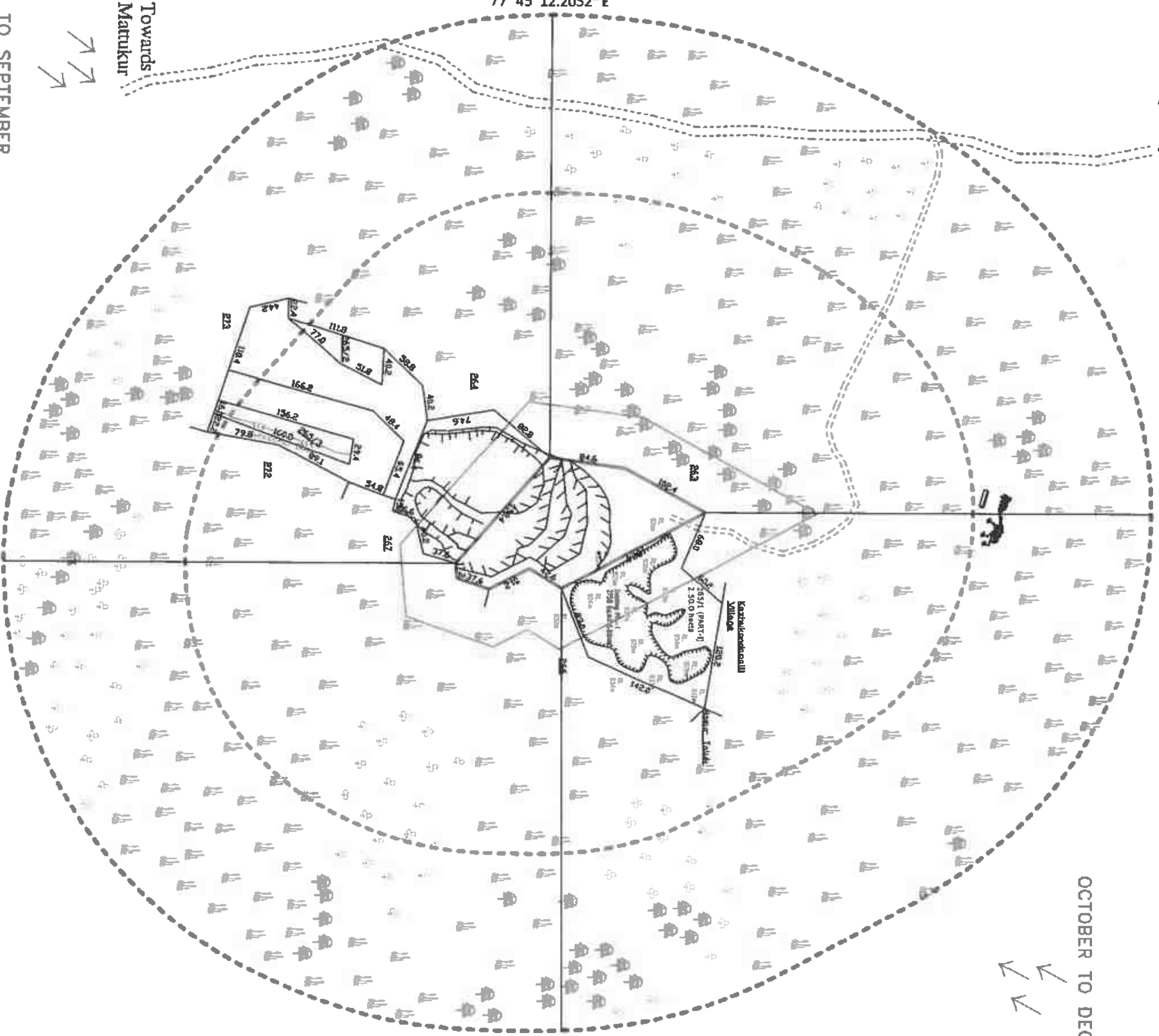


PLATE NO: M...
DATE OF SURVEY: 19.06.2023

LESSEE ADDRESS:
TMT. P. SUDHA,
W/o. R. VENUGOPAL,
NO. 27, MALLESWARAM GREEN PARK,
NAGANAYAKKANAHALLI,
KASABA HOBLI, MARASUR POST,
ANEKAL TALUK, BANGALORE - 562 106.

LOCATION OF QUARRY
EXTENT : 2.50.00 Ha,
S.F. NO : 265(PART-2),
VILLAGE : MATHAKONDAPALLI,
TALUK : DENKANIKOTTAI,
DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY	
500M RADIUS	
300M RADIUS	
60M RADIUS	
VILLAGE ROAD	
QUARRY ROAD	
TREES	
CRUSHER UNIT	
DRY AGRICULTURAL LAND	
WIND DIRECTION	
ADJACENT QUARRY	

ENVIRONMENT PLAN

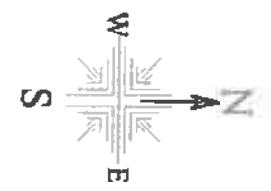
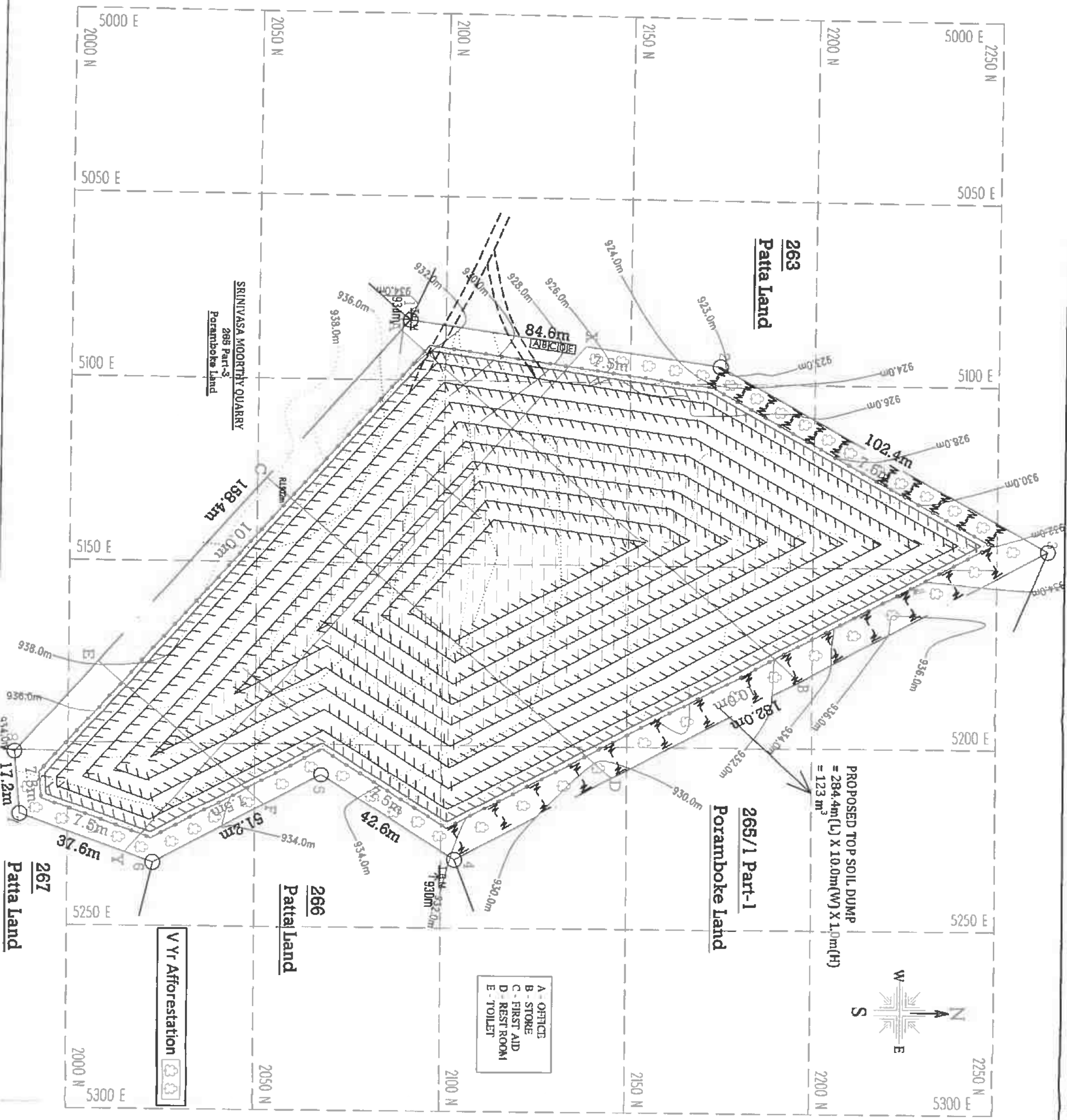
SCALE: 1:5000

PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

S. DHANASEKAR, M.Sc.,
QUALIFIED PERSON





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

V Vr Afforestation

PLATE NO: VII
 DATE OF SURVEY: 25 AUG 2023
 LESSEE ADDRESS:
 TMT. P. SUDHA,
 W/o. R. VENUGOPAL,
 No. 27, MALLESWARAM GREEN PARK,
 NAGANAYAKKAN KHALI,
 KASABA HOBLI, MATASUR POST,
 ANEKAL TALUK, BANGALORE - 562 106.

INDEX

QUARRY LEASE BOUNDARY	
7.5m, 10.0m SAFETY DISTANCE	
BOUNDARY PILLARS	
TEMPORARY BENCH MARK	
TOP SOIL	
ROUGH STONE	
QUARRY PIT	
CONTOUR LINE	
QUARRY ROAD	
FENCING	
PARAPET WALL	
ULTIMATE PIT LIMIT	
PROPOSED WATER STORAGE	
PROPOSED TOP SOIL DUMP	

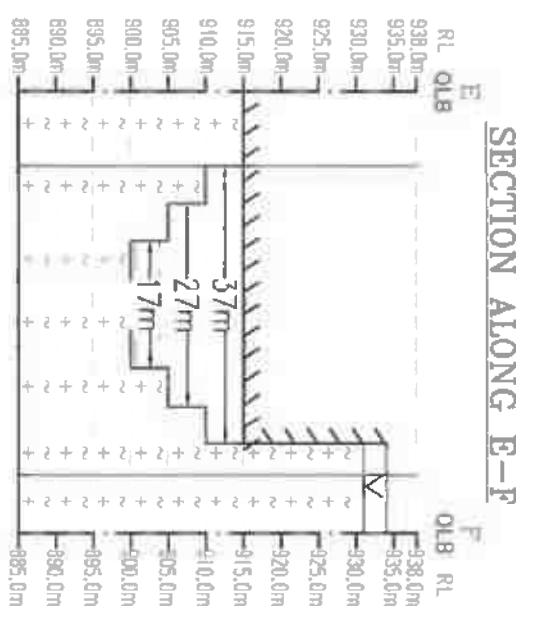
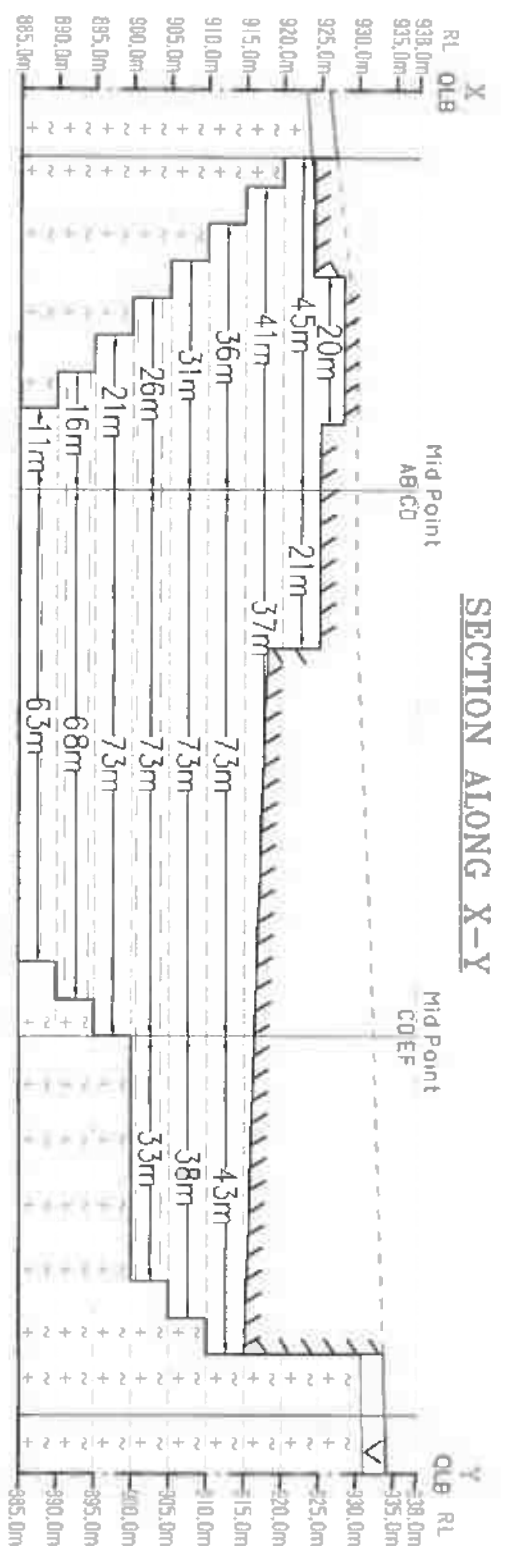
**CONCEPTUAL & FINAL
 MINE CLOSURE PLAN**

SCALE: 1:1000

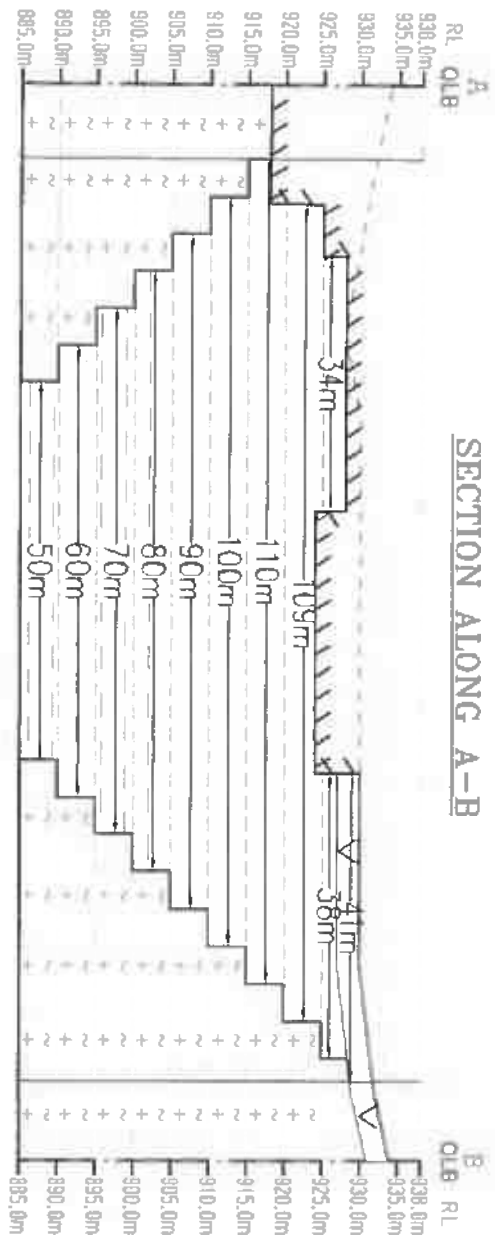
PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

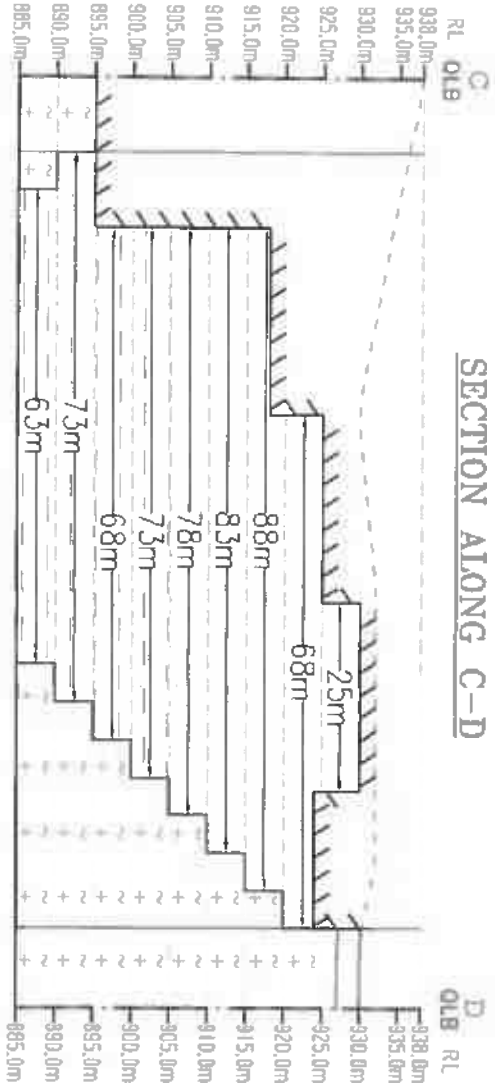
S. DHANASEKAR, M.Sc.,
 QUALIFIED PERSON



SECTION ALONG A-B



SECTION ALONG C-D



ULTIMATE PIT DIMENSION
 = 169.0m(L) X 89.0m(W) Avg X 46.0m(D)

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in M3	Mineable Reserves in m3 @ 100%	Top Soil in m3	MINEABLE RESERVES		
								Volume	Reserves	
XY-AB	I	1	41	3	4320	4320	123			
	II	20	72	3	24525	24525				
	III	45	109	5	22550	22550				
	IV	41	110	5	18000	18000				
	V	36	100	5	13950	13950				
	VI	31	90	5	10400	10400				
	VII	26	80	5	7350	7350				
	VIII	21	70	5	4800	4800				
	IX	16	60	5	2750	2750				
	X	11	50	5	108645	108645	123			
TOTAL					108645	108645	123			
XY-CD	II	1	25	5	7140	7140				
	III	21	68	5	16280	16280				
	IV	37	88	5	30295	30295				
	V	73	83	5	26470	26470				
	VI	73	78	5	24820	24820				
VII	73	68	5	19845	19845					
VIII	73	68	5	178440	178440					
IX	68	73	5	7955	7955					
X	63	63	5	5130	5130					
TOTAL					178440	178440	123			
XY-EF	V	43	37	5	2805	2805				
	VI	38	27	5	15890	15890				
	VII	33	17	5	302975	302975				
TOTAL					302975	302975	123			
GRAND TOTAL								302975	302975	123



TOTAL DEPTH = 46m
 ABOVE SURFACE GROUND LEVEL - 15m
 BELOW SURFACE GROUND LEVEL - 31m

PLATE NO: VII-A
 DATE OF SURVEY: 19-06-2023

LESSEE ADDRESS:

TMT.P.SUDHA,
 W/O.R.VENUGOPAL,
 NO.27, MALLESWARAM GREEN PARK,
 NAGANAYAKKANAHALLI,
 KASABA HOBLI, MARASUR POST,
 ANEKAL TALUK, BANGALORE - 562 106.

LOCATION OF QUARRY

EXTENT : 2.50.00 Ha,
 S.F.NO : 265(PART-2),
 VILLAGE : MATHAKONDAPALLI,
 TALUK : DENKANIKOTTAI,
 DISTRICT : KRISHNAGIRI.

INDEX

- QUARRY LEASE BOUNDARY
- 7.5m, 10.0m SAFETY DISTANCE
- TOP SOIL
- ROUGH STONE
- ULTIMATE PIT SLOPE
- PROPOSED WATER STORAGE

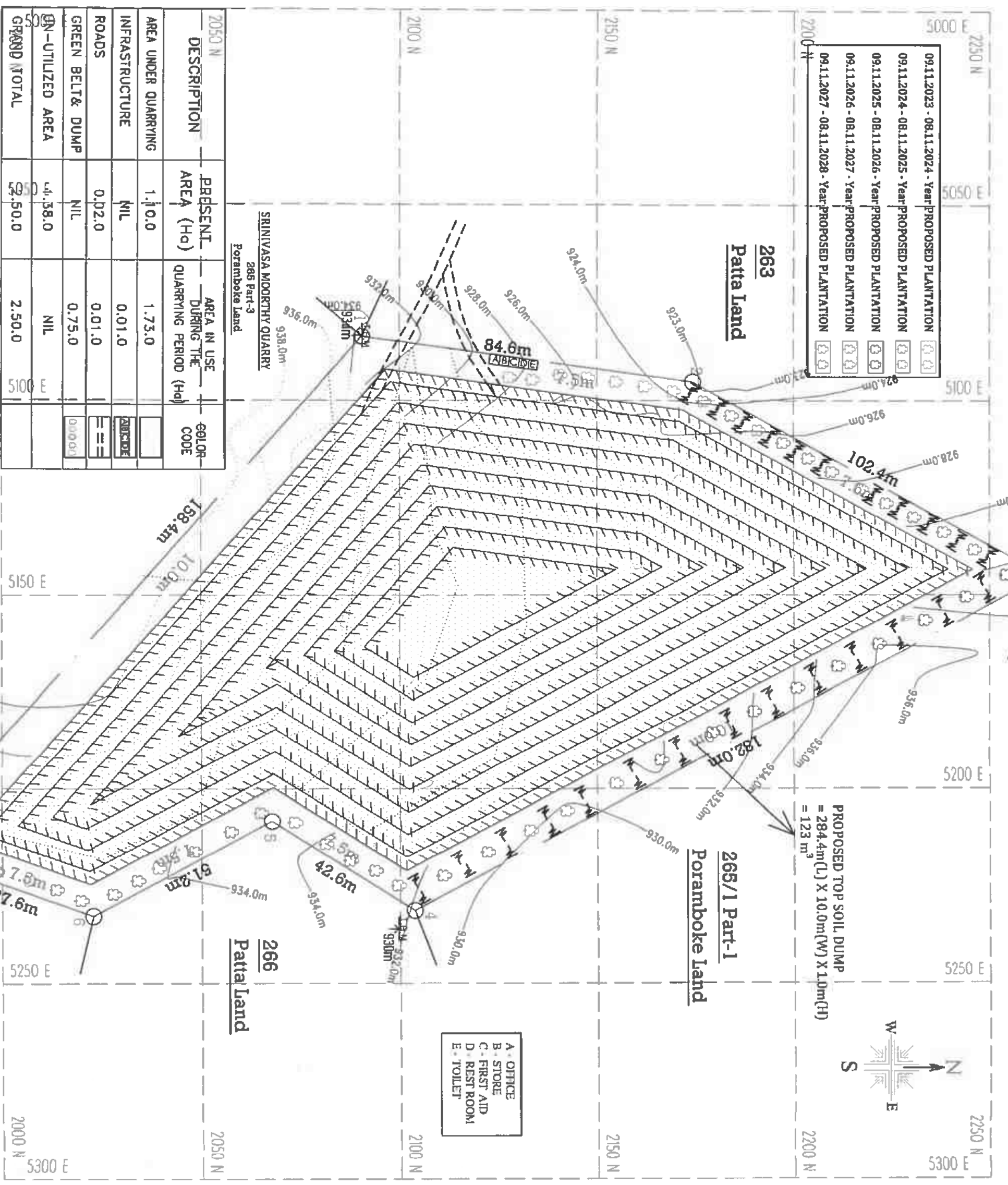
CONCEPTUAL & FINAL,
 MINE CLOSURE SECTIONS

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

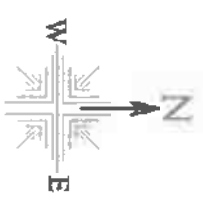
S. DHANASEKAR, M.Sc.,
 QUALIFIED PERSON



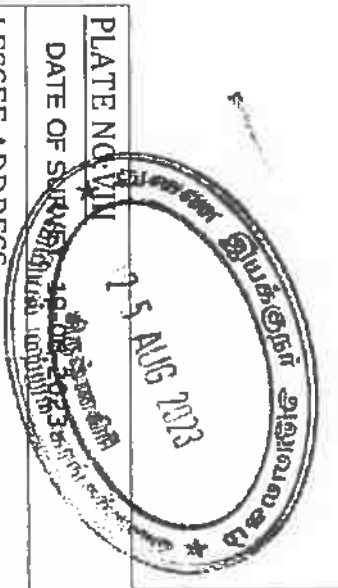
DESCRIPTION	PRESENT AREA (Ha)	AREA IN USE DURING THE QUARRING PERIOD (Ha)	GEOL. CODE
AREA UNDER QUARRING	1.10.0	1.73.0	
INFRASTRUCTURE	NIL	0.01.0	
ROADS	0.02.0	0.01.0	
GREEN BELT & DUMP	NIL	0.75.0	
UN-UTILIZED AREA	41.38.0	NIL	
GRAND TOTAL	52.50.0	2.50.0	

Year	Proposed Plantation Area (Ha)
09.11.2023 - 08.11.2024	0.01.0
09.11.2024 - 08.11.2025	0.01.0
09.11.2025 - 08.11.2026	0.01.0
09.11.2026 - 08.11.2027	0.01.0
09.11.2027 - 08.11.2028	0.01.0

PROPOSED TOP SOIL DUMP
 = 284.4m(L) X 10.0m(W) X 1.0m(H)
 = 123 m³



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



LESSEE ADDRESS:
 TMT. P. SUDHA,
 W/o. R. VENUGOPAL,
 No. 27, MALLESWARAM GREEN PARK,
 NAGANAYAKKANAHALLI,
 KASABA HOBLI, MARASUR POST,
 ANEKAL TALUK, BANGALORE - 562 106.

LOCATION OF QUARRY
 EXTENT : 2.50.00 Ha,
 S.F. NO : 265(PART-2),
 VILLAGE : MATHAKONDAPALLI,
 TALUK : DENKANIKOTTAI,
 DISTRICT : KRISHNAGIRI.

INDEX	Symbol
QUARRY LEASE BOUNDARY	---
7.5m, 10.0m SAFETY DISTANCE	---
BOUNDARY PILLARS	⊙
TEMPORARY BENCH MARK	▲
TOP SOIL	∇∇
ROUGH STONE	** ** *
QUARRY PIT	////
CONTOUR LINE	~ (930m)
QUARRY ROAD	---
PROPOSED TOP SOIL DUMP	||||
MINE LAYOUT	||||

PROGRESSIVE MINE CLOSURE
 PLAN
 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


ANNEXURE-VII
VAO CERTIFICATE

TMT. P. SUDHA, Rough stone quarry in the S.F.No. 265(Part-2) over an extent of 2.50.0ha in Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District.

GENERAL VIEW OF THE LEASE AREA



P. Sudha
(Deponent)


Village Administrative Officer
No. 1 B Mathakondapalli
Denkanikottai TK
Krishnagiri Dist.

ANNEXURE-VIII
BLASTING CERTIFICATE

SSBM. old



தமிழ்நாடு தமிழ்நாடு TAMILNADU

Date: 17.8.19
Rs. 50/-

S. Rathinavel Explosives
- Dharmapuri

AP 286121
K. SELVARANI
STAMP VENDOR
LICENCE No 868/1994
HOSUR-635 109

DEED OF AGREEMENT

This agreement executed at Mathakondapalli Village on day of 18th Aug, 2019.

Between M/s S. RATHINAVAL EXPLOSIVES

Prop: Shri S.Rathinavel s/o Subramani, Mallapuram Village, Somenahalli Post, Nallampalli Taluk, Dharmapuri District.

Hereinafter called in **FIRST PARTY**.

And

SRI SANJEEVINI BLUE METALS || PAN: ADOF56795B || GST: 33AD0F56795B1ZP

Lessee Holder Address:	Site Address:
Smt Sudha. P W/O R. Venugopal, # 27, Malleshwaram Green Park, Naga Nayakkanahalli, Kasaba Hobli, Marsur, Anekal Taluk, Bangalore – 562 106 Mobile: 99806 80100	SF.No 265 (Part-2) Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri Dist

Hereinafter referred to as party of the **SECOND PART**



Whereas, the above terms and conditions **first party** and **second party** shall mean and include wherever the content so permits their Legal heir, Successors, Representatives, administrators and assigns etc.

Whereas the **First party** is the holder for contract for Drilling/Blasting and excavation works, obtained from **Lease Holder Smt. Sudha. P** contractor who have in-turn obtained Quarry lessee for carrying out Quarrying away of Minor Minerals in lands, referred in **The SF.No. 265 (Part-2), Mathakondapalli Village, in the Sub Registration District Krishnagiri, of Krishnagiri Dt from Government of TN, under lease agreement registered with the sub-register in Kelamangalam. Lease Holder Smt. Sudha. P contractors for Rough stone, and Jelly. Quarry Lease Valid Upto 08.11.2028**

Whereas for extracting Boulder Blocks from the said Quarries, on Certain Occasions rocks have to be blasted with explosives Materials and for possession of the Explosives Materials and for using them, a license under the Indian Explosives Rules 2008, issued by the competent Authority is necessary and the First Party the holder of Explosive License bearing no. **E/HQ/TN/22/406(E77451)** issued by the Chief Controller of Explosives Nagpur and they are authorized and entitled to make Supply and use of Explosives for blasting rocks in Quarries mentioned, by DGMS approved Blasters having valid license.

The Second Party approached the Party of First of assist him in extraction of boulders from the Leased Quarries as mentioned above by using blasting Materials as and when required under the license issued to him by the competent authority and the first party having agreed to do so.

This deed valid upto the lease period ends **08.11.2028**.

Now this agreement witnesses as follows:

1. It is agreed that the first party shall Supply the explosives to the party of the second party, under his license for the blasting of rocks in the aforesaid licensed quarry, as per the provisions of Mines Act 1952.

2.The Second party shall place the requirement of Explosives and accessories, depending of the site requirement, Holes drilled, etc and the Explosives will be used by Competent Mining Personnel's/authority Like Mine Managers, Mines Mates, etc., appointed by the Mines Owner, as per the provisions of Mines Act of 1952. After Completion of the blasting operations by the competent personnel's, left out or unused Explosives will be returned to the Magazine on the same day, form where the supply was affected.

3. The Party of the second is Solely Responsible for using the Explosives and accessories in the leased areas and survey Nos., where mining lease has been obtained. The Responsibility of the First party ceases once the Explosives are delivered at the site and thereafter plays a



-2-



Supportive role, in assisting in the blasting operations of the Quarry, under the Directions and guidance of competent Personnel's appointed by the Quarry owner, as per the provisions of the Mines Act. The Mine owner shall appoint competent Mining Personnel's, for carrying our Mining & Quarrying operations, including blasting operations in the quarry, as per the provisions of Mines Act of 1952. The Explosives will be used and handled by Blasters and Mining personnel's appointed by the Mine Owner and all safety aspects will be scrupulously followed by the competent authorities, as per the Provisions of Mines Act 1952 and Explosives Rules 2008.

4. This agreement shall be in force until the expiry of the license of the first party from the date of his agreement and is subjected to renewal of such terms and conditions, as may be mutually agreed upon

In witnesses the parties herein have set their hands to this agreement on this day month and year first mentioned above in presence of the following

Place: Mathakondapalli

Party of First

[Explosives licence Holder]


Date: 18/08/2019

Party of Second


[Quarry Lessee Holder]


Witness:

- ①  S/o Kompaiah, Bangalore
- ② R. Maniurath E/o Rasthala Kempaly

ANNEXURE-IX
AFFIDAVIT AND CER DETAILS



30 AUG 2023 तमिलनाडु TAMILNADU 30 AUG 2023

P. Sudha
Naganakanahalli

BH 487911
K. SELVARANI
STAMP VENDOR
LICENCE No. 868, 199-1
HOSUR-635 109

AFFIDAVIT TO SEIAA, TAMIL NADU

I, P. Sudha, W/o. R. Venugopal, residing at No.27, Malleswaram Green Park, Naga Nayakkanahalli, Kasaba Hobli, Marsur Post, Anekal Taluk, Bangalore - 562 106, do hereby solemnly declare and sincerely affirm that, I have applied for getting environment clearance to SEIAA, Tamil Nadu, for quarry lease for Rough Stone quarry over an extent of 2.50.00Ha with Survey No.265/1 (Part- 2) in Mathakondapalli Village, Denkanikottai Taluk, Krishnagiri District, Tamil Nadu.

- I swear to state and confirm that none of the following is situated within 10km radius of the quarry site for which, I have applied for environmental clearance,
 - Notified Protected areas under the wild life (Protection) Act, 1972 (NBWL).
 - Critically polluted areas as notified by the central pollution control board constituted under water (Prevention and control of Pollution) Act 1974.
 - Eco sensitive area as notified.



K. MANJUNATHA, B.Com., LL.B.,
Advocate Enrol. No. 558(a)/1987,
Notary Public GOMS No. 300 / 2002
No. 34, 4th Cross, Shanthi Nagar (West),
Hosur - 635 109, Krishnagiri Dt. TN
Call : 94432 19439

→ 2014

2. The following Corporate Environment Responsibility (CER) activities will be completed before commencement of the quarrying activities.

CER Activity	Project cost (Rs)	CER cost (Rs)
Carrying out various developmental works in the nearby region based on the need of the locals.	Rs.1,74,49,990/-	Rs.8,00,000/-
Total cost Allocation	Rs. 1,74,49,990/-	Rs.8,00,000/-

3. Details of quarry within 500m radius from the applied area:

Existing Quarries						
S.No	Name of the lessee and address	Village & Taluk	SF.No.	Extent in Hectare	Collector's Proc. No. & date	Period of Lease
1	Tmt. P. Sutha, S/o. R. Venugopal, No.27, Malleswaram Green Park, Naganahalli Post, Hasaba Hobli, Marsur Post, Anekal Taluk, Bangalore District.	Mathagondapalli Village & Denkanikottai Taluk	265 (Part-2)	2.50.0	Roc.No.223/2018/ Mines dt:09.11.2018	09.11.2018 to 08.11.2028
2	Thiru.H.R.Prasanth, S/o. Ravi H.V, Handehahalli, Anekal Taluk, Bangalore- 562 125.	Mathagondapalli Village & Denkanikottai Taluk	265 (Part-1)	2.50.0	Roc.No.222/2018/ Mines dt:11.02.2019	11.02.2019 to 11.02.2024
3	Thiru.C.Srinivasamurthy S/o.Chandrappa, No.2/31, Belagondapalli Post, Denkanikottai Taluk, Krishnagiri District.	Mathagondapalli Village & Denkanikottai Taluk	265 (Part-3)	1.60.0	Roc.No.224/2018/ Mines dt:09.11.2018	09.11.2018 to 08.11.2028

Proposed/ applied Quarries						
S.No	Name of the lessee and address	Village & Taluk	SF.No.	Extent in Hectare	Collector's Proc. No. & date	Lease Period
1.	Thiru. Vinay, S/o. Appoji Reddy, D.No. 146, Mugalur Post, Hosur Taluk, Krishnagiri District.	Mathagondapalli Village & Denkanikottai Taluk	265 (Part-4)	1.46.0	Roc.No.225/2018/ Mines dt:09.03.2018	Proposed Quarry



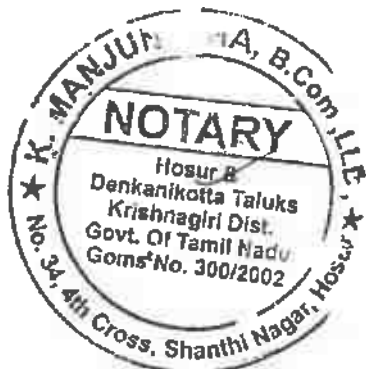
Sub
[Signature]
K. MANJUNATHA, B.Com., LL.B.,
Advocate Enrol. No. 558(a)/1987,
Notary Public GOMS No. 300 / 2002
No. 34, 4th Cross, Shanthi Nagar (West),
Hosur - 635 109, Krishnagiri Dt. TN
Cell : 94432 19408


[Signature]


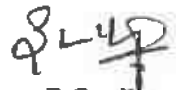
Abandoned/ Old Quarries						
S.No	Name of the lessee and address	Village & Taluk	SF.No.	Extent in Hectare	Collector's Proc. No. & date	Lease Period
1	Thiru S. Krishna Reddy, No. 2/58, Mathukur Village, Mathakondapalli Post, Denkanikottai Taluk, Krishnagiri District.	Mathagondapalli Village & Denkanikottai Taluk	337/2A, 337/2B	1.21.0	Roc.No.164/2012 /Mines dt:22.05.2017	29.05.2017 To 28.05.2022

4. There will not be hindrance or disturbance to the people living on enrooted/ nearby my quarry site while transporting the mineral and due to quarrying activities.
5. There is no approved habitation within 300m radius from the periphery of my applied quarry.
6. I swear that afforestation will be carried out during the course of quarrying operation and maintained.
7. Insurance coverage will be arranged for the laborers working in my quarry site.
8. The existing road from the main road to quarry is in good condition and the same will be maintained and utilized for Transportation of Rough Stone.
9. I will not engage any child labor in my quarry site and I am aware that engaging child labor is punishable under the law.
10. All types of safety / protective equipment will be provided and used by all the laborers working in my quarry.
11. No permanent structures, temple etc., are located within 500m radius from the periphery of my quarry.

I ensure to do the social and Environment commitment as mentioned in the Mining plan to the best of my knowledge.



Subra

K. MANJUNATHA, B.Com., LL.B.,
Advocate Enrol. No. 558(a)/1987,
Notary Public GOMS No. 300 / 2002
No. 34, 4th Cross, Shanthi Nagar (West),
Hosur - 635 103, Krishnagiri Dist. TN
Cell : 94492 12604



P.Sudha
(Deponent)

ANNEXURE- X
NABET CERTIFICATE



QUALITY COUNCIL
OF INDIA
Creating an Ecosystem for Quality



National Accreditation Board for Education and Training



Certificate of Accreditation

Eco Tech Labs Pvt Ltd.,

48, 2nd Main Road, Ram Nagar South Extension, Pallikaranai, Chennai- 600100, T.N.

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 Open cast only	1	1 (a) (i)	B
2	Thermal power plants	4	1(d)	A
3	Coal washeries	6	2 (a)	B
4	Metallurgical industries - Ferrous only	8	3 (a)	B
5	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
6	Airports	29	7 (a)	A
7	Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes	31	7 (c)	A
8	Building and construction projects	38	8 (a)	B
9	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 Apr. 20, 2021 and supplementary minutes dated Oct.19, 2021 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/22/2217 dated Jan. 19, 2022. The accreditation needs to be renewed before the expiry date by Eco Tech Labs Pvt. Ltd., Chennai following due process of assessment.

NABET

Sr. Director, NABET
Dated: Jan. 19, 2022

Certificate No.
NABET/EIA/2124/SA 0147

Valid up to
Sep. 15, 2023

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





QCI/NABET/ENV/ACO/23/3062

December 11, 2023

To,

Eco Tech Labs Pvt Ltd.,
48, 2nd main road, Ram Nagar South Extn,
Pallikaranai, Chennai-600100, Tamil Nadu
(**Kind Attention:** Mr. A Dhamodharan)

Sub.: Extension of Validity of Accreditation till March 10, 2024– regarding
Ref.: 1. Certificate no. NABET/EIA/2124/SA 0147
2. Request e-mail dated December 08, 2023

Dear Sir,

This has reference to the Accreditation of your organization under the QCI-NABET EIA Scheme and your request email dated December 08, 2023. It is to inform your good self that the validity of **Eco Tech Labs Pvt Ltd.,** is hereby extended till **March 10, 2024,** or the completion of the accreditation process, whichever is earlier.

2. The above extension is subject to the submission of required documents/information concerning your existing application, timely submission/closure of NC/Obs (if any), and applicable fee (pending if any) during the application process.
3. You are requested not to use this letter after the expiry of the above-stated date.

With best regards.

(A K Jha)
Senior Director
QCI-NABET