

September 2023

Application Form (Draft EIA Report)

For

Proposed Rough Stone and Gravel Quarry – 1.86.50 Ha

at

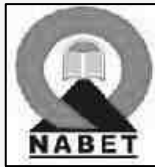
**S. F Nos. 79 in Midithepalli Village of Shoolagiri
Taluk, Krishnagiri District, Tamil Nadu State**

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

Category of the Project: B1 Cluster Mining

Baseline Period: June 2023 - August 2023

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



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

Proponent details:

Thiru.B. Srikar,

S/o. Bharathy,

D.No: 25, Shanthi

Nagar (West),

2nd Cross,

Hosur Taluk,

Krishnagiri

635 109

Date:

From

Thiru.B. Srikar,
S/o. Bharathy
D. No: 25 Shanthi nagar (West),
2nd cross, Hosur Taluk,
Krishnagiri – 635 109

To

The District Environmental Engineer

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

Sir,

Sub: Request to conduct Public Hearing – Environmental Clearance for the “Thiru.B.Srikar Rough Stone and Gravel Quarry” over a total extent of 1.86.50 Ha at S. F. Nos. 79 in Midithepalli Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu – Reg

Ref: Letter No. SEIAA-TN/F. No. 9962/ ToR-1486/2023 Dated: 22.06.2023

Please find enclosed herewith the application of Draft EIA Report along with necessary enclosures towards seeking environmental clearance for the Thiru.B.Srikar Rough Stone and Gravel Quarry” over a total extent of 1.86.50 Ha at S. F. Nos. 79 in Midithepalli Village, Shoolagiri 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 Sincerely

Authorized Signatory

Enclosures: Draft EIA report

Thiru.B. Srikar,
S/o. Bharathy
D. No: 25 Shanthi nagar (West),
2nd cross, Hosur Taluk,
Krishnagiri – 635 109.

UNDERTAKING

We, Thiru.B.Srikar, undertaking that the Draft Environmental Impact Assessment (EIA) Report for Rough Stone and Gravel Quarry over an extent of 1.86.50 Ha at S.F.No. 79 of Midithepalli Village, Shoolagiri 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. 9962/ ToR-1486/2023 Dated: 22.06.2023.

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.

Place: Krishnagiri

Date:

Yours faithfully

Thiru.B.Srikar

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 and Gravel Quarry over an extent of 1.86.50 Ha at S.F.No. 79 of Midithepalli Village, Shoolagiri 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



Date:

Place: Chennai

Declaration of Experts contributing to the EIA




Declaration by experts contributing to the EIA report for Rough Stone and Gravel Quarry (minor mineral) mining project of Thiru.B. Srikar Rough Stone and Gravel Quarry over a total extent of 1.86.50 Ha at S.F.No. 79 of Midithepalli Village, Shoolagiri 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.



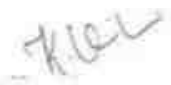

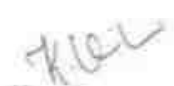
Project	New Rough Stone and Gravel Quarry – 1.86.50 Ha
Type & Category	1 (a) Mining of Minerals
Project Proponent	Thiru.B. Srikar
Environment Consultant with their Accreditation Status	M/s. Eco Tech Labs Pvt. Ltd., QCI Accredited
NABET Certificate No.	NABET/ EIA/2124/ SA 0147
EIA Coordinator Name Signature	Dr. A. Dhamodharan (Mining of Minerals)  
Period of Involvement	June 2023 to August 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	<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. <p><i>Period: March 2022 – Till now</i></p>	
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 collected3. Identification of impacts based on the baseline study conducted and also to the ground water and nearby surface water due to the proposed project4. Preparation of suitable and appropriate mitigation plan. <p><i>Period: March 2022 – Till now</i></p>	
3	SHW	Dr. A. Dhamodharan	<ol style="list-style-type: none">1. Identification of nature of solid waste generated2. 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 Environment3. Suggesting suitable mitigation measures by recommending appropriate disposal method for each category of waste generated4. Top soil and refuse management <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>Period: March 2022 – Till now</p> <p>*INVOLVES PUBLIC HEARING</p>	
5	EB	Dr. A. Dhamodharan	<p>1. Primary data collection through field survey and sheet observation for ecology and biodiversity</p> <p>2. Secondary Collection through various authenticated sources</p> <p>3. Prediction of anticipated impacts and suggesting appropriate mitigation measures.</p> <p>Period: March 2022 – Till now</p>	
6	HG	Dr. T. P. Natesan	<p>1. Study of existing surface drainage arrangements in the core and buffer zone, impact due to mining on these drainage courses and suggestion of mitigative measures</p> <p>2. Determination of groundwater use pattern, development of rainwater harvesting program. Storm water management through garland drainage system.</p> <p>Period: March 2022 – Till now</p>	
7	GEO	Dr. T. P. Natesan	<p>1. Field survey for assessing regional and local geology, aquifer distribution, Determination of groundwater use pattern, development of rainwater harvesting program.</p> <p>Period: March 2022 – Till now</p>	

8	SC	Dr. A. Dhamodharan	<p>1. Interpretation of baseline report</p> <p>2. Identification of possible impacts on soil, prediction of soil conservation and suggesting suitable mitigation measures.</p> <p>Period: 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. 79 of Midithepalli Village, Shoolagiri 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

Draft EIA Report

Project	Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar	Draft EIA Report
Project Proponent	Thiru.B.Srikar	
Project Location	Midithepalli Village, Shoolagiri Taluk, Krishnagiri District	

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ABBREVIATION

LU –Land use

AP – Air Pollution monitoring, prevention and control

AQ- Meteorology, Air quality modeling and prediction

WP – Water pollution monitoring, prevention and control

EB- Ecology and Biodiversity

NV- Noise & Vibration

SE- Socio-economics

HG- Hydrology, ground water and water conservation

GEO –Geology

RH – Risk assessment and hazards management

SHW –Solid and Hazardous waste management

SC- Soil conservation

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.B.Srikar</i>	
<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

EXECUTIVE SUMMARY

1. Project Background:

The Proposed project is in Patta land having total extent area of 1.86.50 Ha, located at S.F.No.79 of Midithepalli Village of Shoolagiri Taluk, Krishnagiri District and Tamil Nadu. The category of project is B1, it is a fresh rough stone and gravel quarry in Midithepalli village. The area is situated on gently sloping terrain towards the Southeast covered with Rough Stone and Gravel which does not sustain any type of vegetation.

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

The quarry operation is proposed up to depth for 39.0m (2.0m Gravel + 37.0m Rough stone). The Total Geological reserve is about 44,200m³ of Gravel and 7,65,140m³ of Rough Stone. The Mineable Reserves are 33,210m³ of Gravel and 3,33,729m³ of Rough stone. Production schedule is proposed an average production of 33,210m³ of Gravel and 3,33,729m³ of Rough stone for Ten years only.

The Mining Plan was approved by the Deputy Director, Geology & Mining, Krishnagiri vide letter Rc.No.646/2021 Mines dated 17.02.2023. There is no CRZ zone, Western Ghats, notified Bird sanctuaries, wild life sanctuaries as per Wild life protection Act 1972, within the radius of 15Km..

2. Nature & Size of the Project

The Rough Stone and Gravel Quarry over an extent of 1.86.50 Hectares land is located Midithepalli Village of Shoolagiri Taluk, Krishnagiri District.

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Project Location	Midithepalli Village, Shoolagiri Taluk, Krishnagiri District	

Mineral intends to quarry : Rough stone and Gravel
District : Krishnagiri
Taluk : Shoolagiri
Village : Midithepalli
S. F. Nos. : 79
Extent : 1.86.50 Hectares

Table 1: Brief Description of the Project

S. No	Particulars	Details
1	Latitude	12° 46' 01.9743"N to 12° 45' 52.1189"N
2	Longitude	77° 57' 03.0289"E to 77° 56' 59.2536"E
3	Site Elevation above MSL	The altitude of the area is 869m above MSL.
4	Topography	Gently Sloping Terrain
5	Land use of the site	Patta land (Consent registered)
6	Extent of lease area	1.86.50 Ha
7	Nearest highway	MDR 422 – Berigai to Shoolagiri Road – 3.18 Km - SE NH 48 – Hosur to Krishnagiri Road – 9.37 Km - S
8	Nearest railway station	Hosur Railway Station – 14.82 km - SW
9	Nearest airport	Kempagowda International Airport – 54.02 Km - NW
10	Nearest town / city	Town - Shoolagiri – 11.67 km - SE City - Hosur – 13.02 km - W District - Krishnagiri – 37.30 km - SE
11	Rivers / Canal	<ul style="list-style-type: none"> • Ponnaniyar River – 6.09Km - SW
12	Lake	<ul style="list-style-type: none"> • Muthali lake – 4.67Km – W • Bukkasagaram Lake – 4.76Km- S • Berikai Lake – 5.12Km – N • Peddakullu Lake – 5.86Km – SW • Lake 1 – 5.25Km – SW • Doripalli Lake – 6.28Km – S

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		<ul style="list-style-type: none"> • Thummanapalli Lake – 6.89Km – SSW • Kelavarapalli Reservoir – 7.14Km – W • Kamandoddi Lake – 8.56Km – S • Kumudapalli Lake – 9.57Km – SW • Moranapalli Lake – 9.89Km - SW
13	Hills / valleys	Nil in 15 km radius
14	Archaeologically places	Nil in 15 km radius
15	National parks / Wildlife Sanctuaries	<ul style="list-style-type: none"> • Cauvery North Wildlife Sanctuary – 25.35 Km – S • Cauvery South Wildlife Sanctuary – 47.26 Km - SW
16	Reserved / Protected Forests	<ul style="list-style-type: none"> • Meditepalli RF – 1.29Km – N • Berigai RF – 1.73Km – SE • Berigai Extension RF – 2.17Km – NE • Sanamavu RF – 5.91Km – SW • Settipalli RF – 7.37Km – SE
17	Seismicity	Proposed Lease area come under Seismic zone-II (low risk area)
18	Defense Installations	Nil in 15 Km radius

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 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 colour, medium to coarse grained, composed quartz, feldspar and orthopyroxene. At places, metamorphic gneissic banding (alternate dark and black colour) in charnockite is noticed. Top portion, it gives gneissic appearance but 1-5m depth below it is typical charnockite of grey colour.

5. Geological resources

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

Table 2. Geological resources

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GEOLOGICAL RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In M³	Geological Reserves in m³ @ 100%	Gravel in m³
XY-AB	I	160	80	2			25600
	II	160	32	2	10240	10240	
	III	160	80	5	64000	64000	
	IV	160	80	5	64000	64000	
	V	160	80	5	64000	64000	
	VI	160	80	5	64000	64000	
	VII	160	80	5	64000	64000	
	VIII	160	80	5	64000	64000	
	IX	160	80	5	64000	64000	
TOTAL					458240	458240	25600
XY-CD	I	155	60	2			18600
	III	155	60	3	27900	27900	
	IV	155	60	5	46500	46500	
	V	155	60	5	46500	46500	
	VI	155	60	5	46500	46500	
	VII	155	60	5	46500	46500	
	VIII	155	60	5	46500	46500	
	IX	155	60	5	46500	46500	
TOTAL					306900	306900	18600
GRAND TOTAL					765140	765140	44200

Mineable reserves:

The Mineable reserves are calculated by deducting 7.5m & 10m Safety distance and bench loss. In this regard, since the adjacent area also to be under new lease area, necessary action will be taken to get permission from DGMS in future to comply regulation under (111)3 of MMR.1961.

Table 3. Mineable Reserves

MINEABLE RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In M³	Mineable Reserves in m³ @ 100%	Gravel in m³
XY-AB	I	153	65	2			19890
	II	153	25	2	7650	7650	

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	III	153	65	5	49725	49725	
	IV	153	65	5	49725	49725	
	V	148	55	5	40700	40700	
	VI	143	45	5	32175	32175	
	VII	138	35	5	24150	24150	
	VIII	133	25	5	16625	16625	
	IX	123	15	5	9225	9225	
TOTAL					229975	229975	19890
XY-CD	I	148	45	2			13320
	II	148	41	3	18204	18204	
	III	148	45	5	33300	33300	
	IV	143	35	5	25025	25025	
	V	138	25	5	17250	17250	
	VI	133	15	5	9975	9975	
TOTAL					103754	103754	13320
GRAND TOTAL					333729	333729	33210

Table 4. Year wise Production Plan

YEARWISE DEVELOPMENT AND PRODUCTION (First Five (I-V)Years)								
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume in (Cu.m.)	Recoverable Reserve in Cu.m(100%)	Gravel in m³
I-YEAR	XY-AB	I	153	65	2			19890
		II	153	25	2	7650	7650	
		III	153	65	5	49725	49725	
	XY-CD	I	148	45	2			13320
		II	148	41	3	18204	18204	
II-YEAR	XY-AB	IV	153	65	5	49725	49725	
III-YEAR	XY-CD	III	148	45	5	33300	33300	
IV-YEAR	XY-AB	V	148	55	5	40700	40700	
V-YEAR	XY-CD	IV	143	35	5	25025	25025	
Total (First Five (I-V)Years)						224329	224329	33210

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YEARWISE DEVELOPMENT AND PRODUCTION (Second Five (VI-X)Years)							
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume in (Cu.m.)	Recoverable Reserve in Cu.m(100%)
VI-YEAR	XY-AB	VI	143	45	5	32175	32175
VII-YEAR	XY-CD	V	138	25	5	17250	17250
VIII-YEAR	XY-AB	VII	138	35	5	24150	24150
IX-YEAR	XY-CD	VI	133	15	5	9975	9975
X-YEAR	XY-AB	VIII	133	25	5	16625	16625
	XY-CD	IX	123	15	5	9225	9225
Total (Second Five (VI-X)Years)						109400	109400

6. Mining

Opencast mining

The quarry operation is proposed to carry 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 resource 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 Midithepalli Village and other water will be sourced from nearby road tankers supply.

Table 5. Water Balance

Project	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	Draft EIA Report
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Purpose	Quantity	Source
Drinking Water	1.0 KLD	Mineral water purchased from approved water vendors available Midithepalli village which is about 1.70 km NE from the project site.
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 18 persons. Workers will be from nearby villages.

Table 6. Man Power

1.	Skilled	Operators	2 Nos
		Mechanic	1 No
		Blaster / Mat	1 No
2.	Semi – skilled	Drivers	2 Nos
3.	Unskilled	Musdoor / Labors	5 Nos
		Cleaners	2 Nos
		Office Boy	1 No
4.	Management & Supervisory staff		2 Nos
Total			16 Nos

9. Solid Waste Management

Table 7 Solid Waste Management

S. No	Type	Quantity	Disposal Method
1	Organic	2.88 kg/day	Municipal bin including food waste
2	Inorganic	4.32 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 lessee	Village & Taluk	Mineral	S.F. No	Extent	Rc. No & Date	Lease Period
1.	Thiru.D.Sreenivasalu, S/o. Vekateshwarlu, No. Radha lakshmi Nilayam, Devachandra Main road, Bangalore	Shoolagiri & Midithepalli	Rough stone	80/1 80/2	3.17.08	Rc.No. 1305/2018/ Mines dated: 20.12.22	20.12.22 to 19.12.32
2.	Thiru.Venkat reddy, S/o. (Late) Uthama Reddy, Kolar Taluk, Uddanahalli, Chakkarasanahalli, Karnataka	Shoolagiri & Midithepalli	Rough stone	81/2 82/1	2.05.92	Rc.No. 1308/2018/ Mines dated: 31.10.2022	31.10.20 22 to 30.10.20 32

2) Details of Expired/Old Quarries:

S.No.	Name of the lessee	Village	S.F.No	Extent	GO No. & Date	Lease period
1.	M/s. Sarva Infra Pvt. Ltd, 540, 3 rd floor, CMH Road, Indira Nagar, Bangalore.	Shoolagiri & Midithepalli	70/1B, 70/1C	4.05.0	Rc.No. 09/2014/ Mines Dated:26.10.2015	28.10.2015 to 27.10.2020

3) Details of Proposed Quarries

S. No.	Name of the lessee	Village & Taluk	Mineral	S.F. No	Extent	GO No. & Date	Lease period
1.	Thiru.B.Srikar, S/o. Bharathy, No.25, Shanthi Nagar (West), 2 nd Cross, Hosur Tk, Krishnagiri - 635109	Shoolagiri, Midithepalli	Rough stone	79	1.86.50	-	Instant proposal

The Total extent of the Existing / Lease expired / Proposed quarries are 11.14.50 Ha.

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10. Land Requirement

The total extent area of the project is 1.86.50 Ha, Patta land in Midithepalli Village of Shoolagiri Taluk, Krishnagiri District.

Table 9 Land Use Breakup

S. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)
1.	Area under Quarrying	Nil	1.45.0
2.	Infrastructure	Nil	0.01.0
3.	Roads	Nil	0.01.0
4.	Green Belt	Nil	0.39.5
5.	Unutilized Area	1.86.5	Nil
	Total	1.86.50 Ha	1.86.50 Ha

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	NW	Alnatham	327	1.50 Km
2	E	Athetti	180	1.50 Km
3	SE	Mensandoddi	310	1.81 Km
4	SW	Venkatesapuram	2873	1.60 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.

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13. Scope of the Baseline Study

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

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

13.1 Micro – Meteorology

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

- i) Average Minimum Temperature : 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, air quality survey has been conducted at 5 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 (67-41 µg/m³), PM_{2.5} (33-14 µg/m³), SO₂ (21-6 µg/m³), NO₂ (34 -11 µg/m³), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from June 2023 to August 2023.

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13.3 Noise Environment

The maximum Day noise and Night noise were found to be 65 dB(A) and 54 dB(A) respectively in Government High School, Muthali. The minimum Day Noise and Night noise were 44 dB(A) and 39 dB(A) 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 6.74 – 8.53.
- TDS value varied from 405 mg/l to 1003 mg/l
- Hardness varied from 227 to 630 mg/l
- Chloride varied from 34.7 to 223 mg/l

13.5 Land Environment

The analysis results shows that the majority of soil in the project and surrounding area is slightly alkaline in nature and pH value ranges from 6.90 to 8.96 with organic matter 0.11 to 0.83%. 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, 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 100 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%	1000
Total		1000

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

17. Responsibilities for Environmental Management Cell (EMC)

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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 51,00,000/-** for deployment of machinery and creation of infrastructural facilities like approach road, mine office / Workers Shed, First Aid Room etc., including electrifications and water supply.

Table 12 Project Cost details

S. No.	Description	Cost
1	Fixed Asset Cost	Rs.21,00,000/-
2	Operational and Fencing Cost	Rs. 30,00,000/-
	Total	Rs. 51,00,000/-

Environmental Management Cost for the period of 10 years Rs.1,32,48,533/-

20. Corporate Environmental Responsibility

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

Table 13 CER Cost

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S.No.	CER Activity	CER value (Rs)
1.	Government High School, Venkatesapuram – Provision of <ul style="list-style-type: none"> ➤ To construct Toilet and Auditorium, ➤ To provide Sports equipments, ➤ Wire fence to playground and Basic amenities such as ➤ Environmental awareness books (Tamil) in Library for students, Green Belt development, Hygienic Toilet and maintenance of toilet 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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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

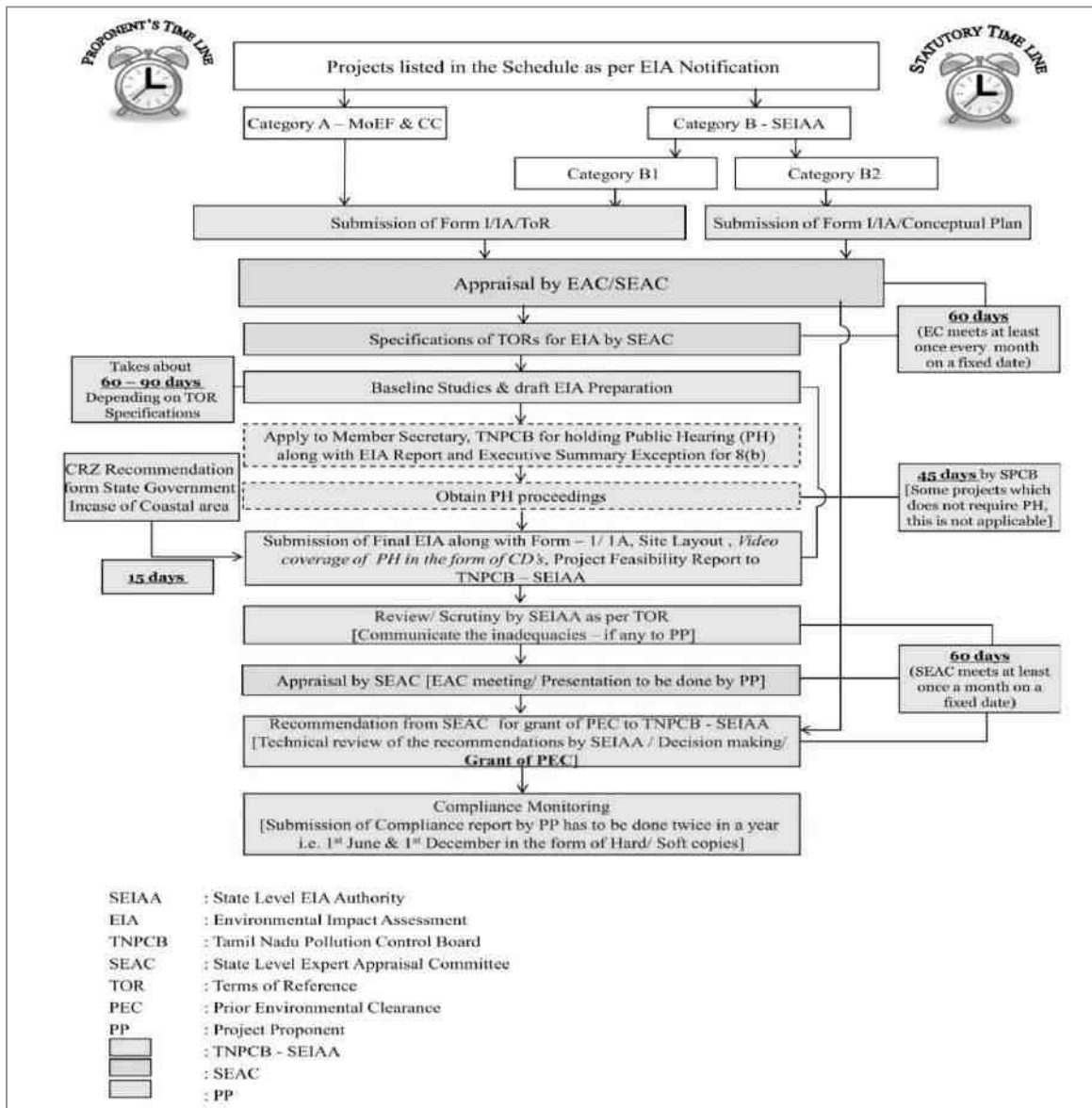
The Entire district is underlain by the rocks belonging to hard crystalline rock masses of Archaean age. The Archaean rocks in this area are represented by rocks of eastern Ghat complex comprising charnockites, Migmatite complex of composite gneiss. The district is covered by metamorphic crystalline rocks of charnockite, composite gneiss of Archaean age. These rocks are highly metamorphosed and have been subjected to sever 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 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.

Project	Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar	Draft EIA Report
Project Proponent	Thiru.B.Srikar	
Project Location	Midithepalli Village, Shoolagiri Taluk, Krishnagiri District	

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.



<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.B.Srikar</i>	
<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

1.4 TERMS OF REFERENCE (TOR)

The terms of Reference have been issued by SEAC TN vide Letter No. SEIAA-TN/F. No. 9962/ToR-1486/2023 Dated: 22.06.2023. 41 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 the general information on the mining of minerals, major sources of environmental impacts in respect of mining projects and details of environmental clearance process.

Chapter 2: Project Description. In this chapter the proponent should also furnish detailed description of the 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 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.

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.B.Srikar</i>	
<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

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 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.

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.B.Srikar</i>	
<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

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 : Thiru.B.Srikar
Status of the Proponent : Individual
Proponent's Name & Address : Thiru.B.Srikar,
D.No: 25, Shanthi Nagar,
West, 2nd Cross, Hosur Taluk,
Krishnagiri – 635 109.

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 Midithepalli Village, Shoolagiri Taluk of Krishnagiri District, Tamil Nadu. It is an elevated terrain. The total allotted mine lease for the proposed project is 1.86.50 Ha with their maximum production capacity i.e., 33,210m³ of Gravel and 3,33,729m³ of rough stone for the period of Ten years only.

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.B.Srikar</i>	
<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri 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 Midithepalli Village, Shoolagiri Taluk of Krishnagiri District, Tamil Nadu. It is a gently sloping terrain. We have obtained a fresh mining plan from the Department of Geology and Mining, Krishnagiri District for 1.86.50 Ha land area in the S.F.Nos. 79 for a proposed mining depth of 39.0m Gravel 2.0m + Rough stone 37.0m and ten years production of 3,33,729 m³ of Rough Stone and 33,210m³ of Gravel.

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.

Table 2-1: Quarry within 500m Radius

Project	Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar	Draft EIA Report
Project Proponent	Thiru.B.Srikar	
Project Location	Midithepalli Village, Shoologiri Taluk, Krishnagiri District	

1) Details of Existing quarries:

S. No.	Name of the lessee	Village & Taluk	Mineral	S.F. No	Extent	Rc. No & Date	Lease Period
1.	Thiru.D.Sreenivasalu, S/o. Vekateshwarlu, No. Radha lakshmi Nilayam, Devachandra Main road, Bangalore	Shoologiri & Midithepalli	Rough stone	80/1 80/2	3.17.08	Rc.No. 1305/2018/ Mines dated: 20.12.22	20.12.22 to 19.12.32
2.	Thiru.Venkat reddy, S/o. (Late) Uthama Reddy, Kolar Taluk, Uddanahalli, Chakkarasanahalli, Karnataka	Shoologiri & Midithepalli	Rough stone	81/2 82/1	2.05.92	Rc.No. 1308/2018/ Mines dated: 31.10.2022	31.10.2022 to 30.10.2032

2) Details of Expired/Old Quarries:

S.No.	Name of the lessee	Village	S.F.No	Extent	GO No. & Date	Lease period
1.	M/s. Sarva Infra Pvt. Ltd, 540, 3 rd floor, CMH Road, Indira Nagar, Bangalore.	Shoologiri & Midithepalli	70/1B, 70/1C	4.05.0	Rc.No. 09/2014/ Mines Dated:26.10.2015	28.10.2015 to 27.10.2020

3) Details of Proposed Quarries

S. No.	Name of the lessee	Village & Taluk	Mineral	S.F. No	Extent	GO No. & Date	Lease period
1.	Thiru.B.Srikar, S/o. Bharathy, No.25, Shanthi Nagar (West), 2 nd Cross, Hosur Tk, Krishnagiri - 635109	Shoologiri, Midithepalli	Rough stone	79	1.86.50	-	Instant proposal

The Total extent of the Existing / Lease expired / Proposed quarries are 11.14.50 Ha

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.B.Srikar</i>	
<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

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 sever folding, crushing and faulting. Charnockites 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.

2.2 BRIEF DESCRIPTION OF THE PROJECT

Table 2-2 Salient Features of the Project

S. No.	Description	Details
1	Project Name	Rough Stone and Gravel Quarry-1.86.50 ha
2	Proponent	Thiru.B.Srikar
3	Mining Lease Area Extent	1.86.50 Ha
4	Location	S.F.Nos. 79 of Midithepalli Village, Shoolagiri Taluk, Krishnagiri District.
5	Latitude	12° 46' 01.9743"N to 12° 45' 52.1189"N
6	Longitude	77° 57' 03.0289"E to 77° 56' 59.2536"E

Project	Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar	Draft EIA Report
Project Proponent	Thiru.B.Srikar	
Project Location	Midithepalli Village, Shoologiri Taluk, Krishnagiri District	

7	Topography	Gently sloping terrain
8	Site Elevation above MSL	The altitude of the area is 869m above MSL.
9	Topo sheet No.	57- H/13
10	Minerals of Mine	Rough Stone and Gravel Quarry
11	Proposed production of Mine	4,06,265 m ³ of Rough Stone & 38,740 m ³ of Topsoil
12	Ultimate depth of Mining	39 m (2m Gravel + 37m Rough stone)
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	16 Nos.
17	Mining Lease	Precise Area Communication Letter received from Deputy Director, Dept. of Geology & Mining, Krishnagiri vide letter Rc.No.646/2021 Mines Dated 31.01.2023.
18	Mining Plan Approval	Mining Plan was approved by the Deputy Director, Dept. of Geology & Mining, Krishnagiri vide letter Rc.No.646/2021 Mines Dated 17.02.2023
19	Production details	Geological resources: 7,65,140m ³ of Rough stone and 44,200m ³ of Gravel & Proposed year wise recoverable reserves: 3,33,729 m ³ of Rough Stone and 33,210m ³ of Gravel.
20	Boundary Fencing	10 m barrier all along the boundary Fencing will be provided.
21	Disposal of overburden	The entire lease area is covered 2.0m of Gravel and the estimated quantity of Gravel is 33210m ³ . Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.B.Srikar</i>	
<i>Project Location</i>	<i>Midithepalli Village, Shoologiri Taluk, Krishnagiri District</i>	

		permission and paying necessary seigniorage fees to the Government.
22	Ground water	The ground water table is reported as 66m below ground level in nearby wells of this area. Mining depth taken as 39m. Now, proposed quarry depth is above the water table. Hence, quarrying may not affect the ground water. Now, the proposed quarry depth is above the water table. Hence, quarrying may not affect the ground water.
23	Habitations within 300m radius of the Project Site	There is no Habitation within 300m radius of the project site.
24	Drinking water	Water will be supplied through tankers from Midithepalli village which is about 1.70 km NE from the project site.

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Project Proponent	<i>Thiru.B.Srikar</i>	
Project Location	<i>Midithepalli Village, Shoologiri Taluk, Krishnagiri District</i>	

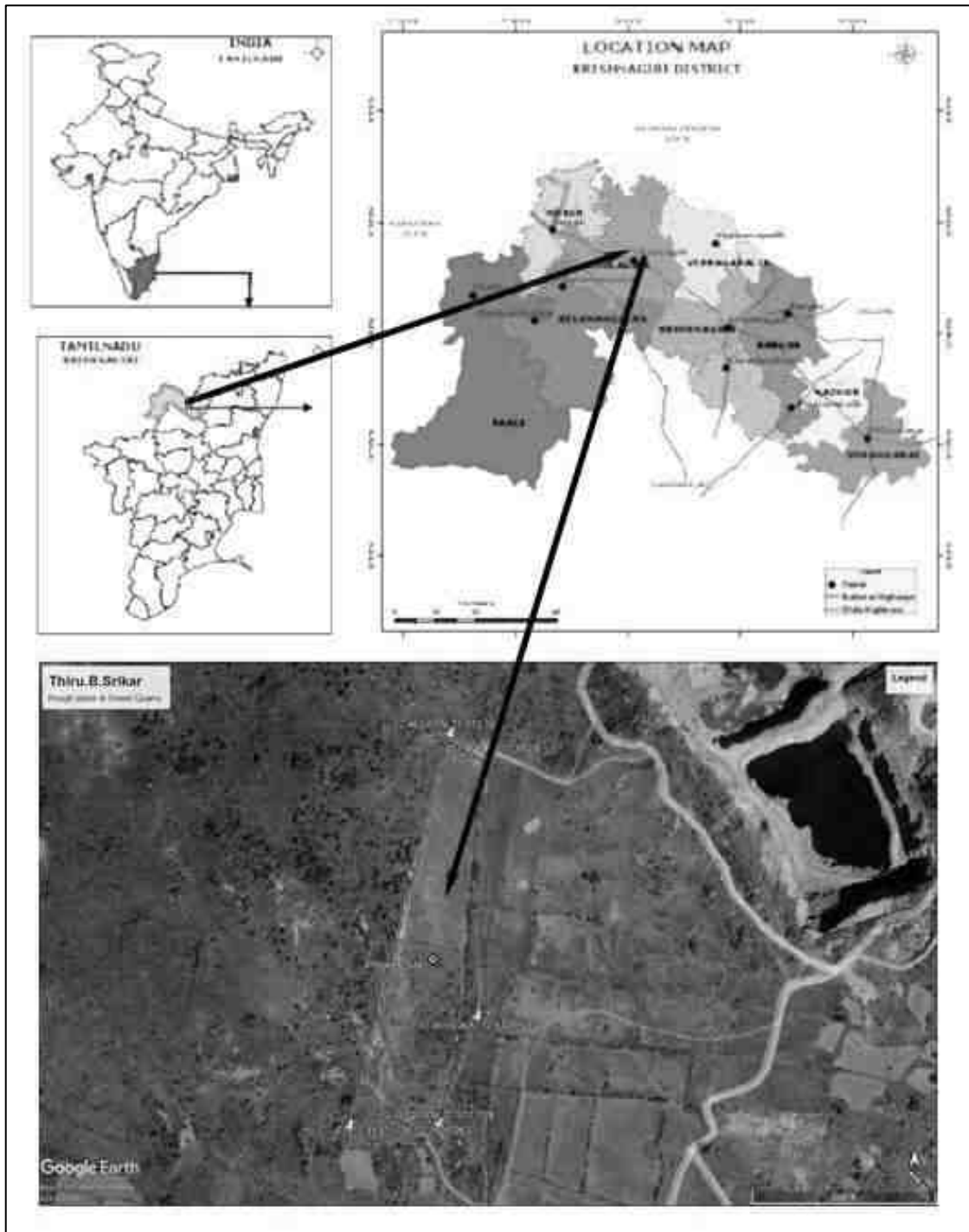


Figure 2.1: Location Map of the Project Site

Project	Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar	Draft EIA Report
Project Proponent	Thiru.B.Srikar	
Project Location	Midithepalli Village, Shoologiri 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 Venkatesapuram village road which is about 0.43 km – South.

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Project Location	Midithepalli Village, Shoologiri Taluk, Krishnagiri District	



Figure 2.3: Site Connectivity

2.3 LOCATION DETAILS:

Table 2-3: Location Details

S. No	Particulars	Details
1.	Latitude	12° 46' 01.9743" N to 12° 45' 52.1189" N
2.	Longitude	77° 57' 03.0289" E to 77° 56' 59.2536" E
3.	Site Elevation above MSL	The altitude of the area is 869m above MSL.
4.	Topography	Gently Sloping Terrain
5.	Land use of the site	Patta land (Consent registered)
6.	Extent of lease area	1.86.50 Ha

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Figure 2.5: Environmental Sensitivity within 15km radius

Project	Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar	Draft EIA Report
Project Proponent	Thiru.B.Srikar	
Project Location	Midithepalli Village, Shoolagiri Taluk, Krishnagiri District	

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 (Hect)	Area in use during the quarrying period (Hect)
1.	Area under Quarrying	Nil	1.45.0
2.	Infrastructure	Nil	0.01.0
3.	Roads	Nil	0.01.0
4.	Green Belt	Nil	0.39.5
5.	Unutilized Area	1.86.5	Nil
	Total	1.86.50 Ha	1.86.50 Ha

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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	NW	Alnatham	327	1.50 Km
2	E	Athetti	180	1.50 Km
3	SE	Mensandoddi	310	1.81 Km
4	SW	Venkatesapuram	2873	1.60 Km

2.4 LEASEHOLD AREA

The Rough Stone Quarry mine of 1.86.50 Ha is a Government Poramboke land. The lease area falls in S.F No: 79 of Midithepalli Village, Shoolagiri Taluk, Krishnagiri District. There is no reserve forest or protected forest land within the lease area. There is neither human settlement within 300m radius from the lease area.

2.5 GEOLOGY

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:

- 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.

Project	Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar	Draft EIA Report
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Project Location	Midithepalli Village, Shoologiri Taluk, Krishnagiri District	

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.

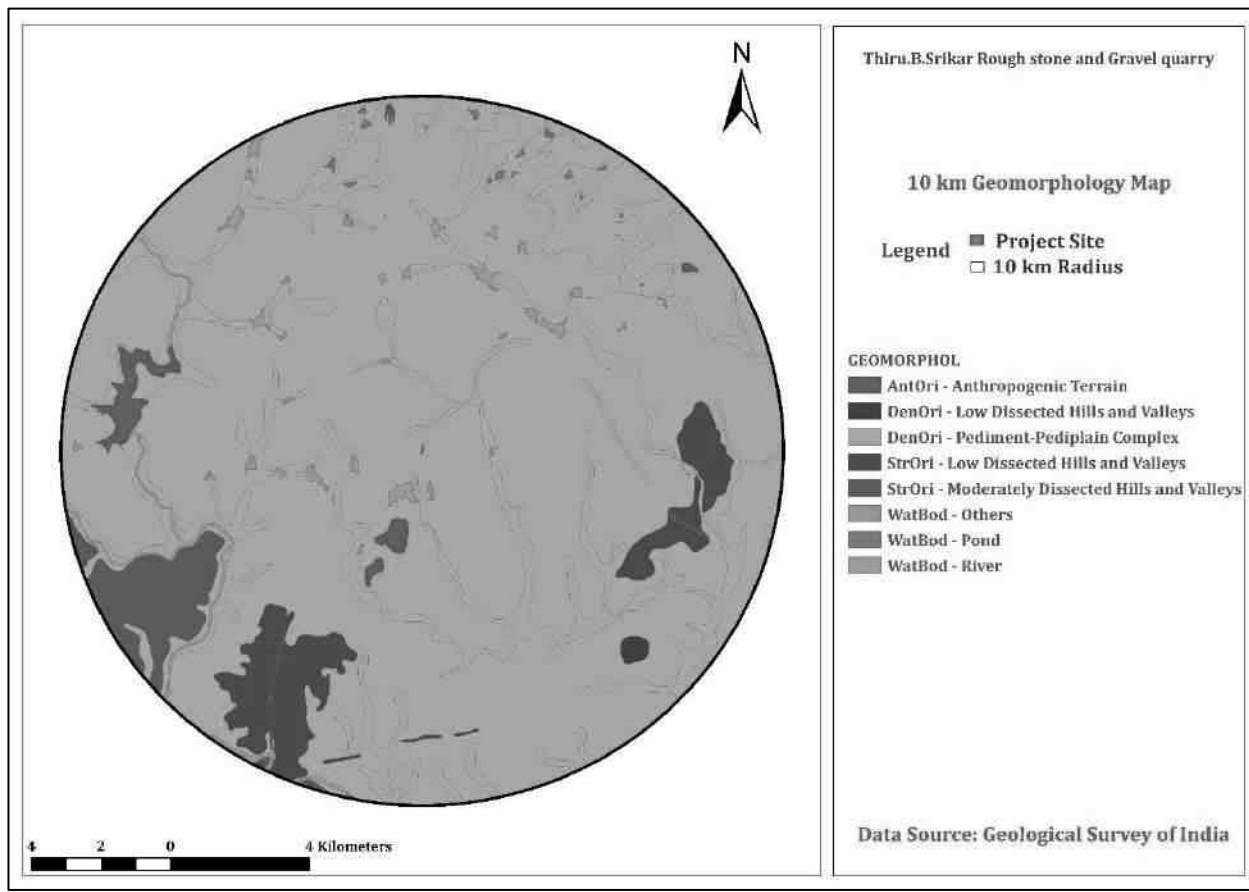


Figure 2.7: Geomorphology

Project	Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar	Draft EIA Report
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Project Location	Midithepalli Village, Shoolagiri Taluk, Krishnagiri District	

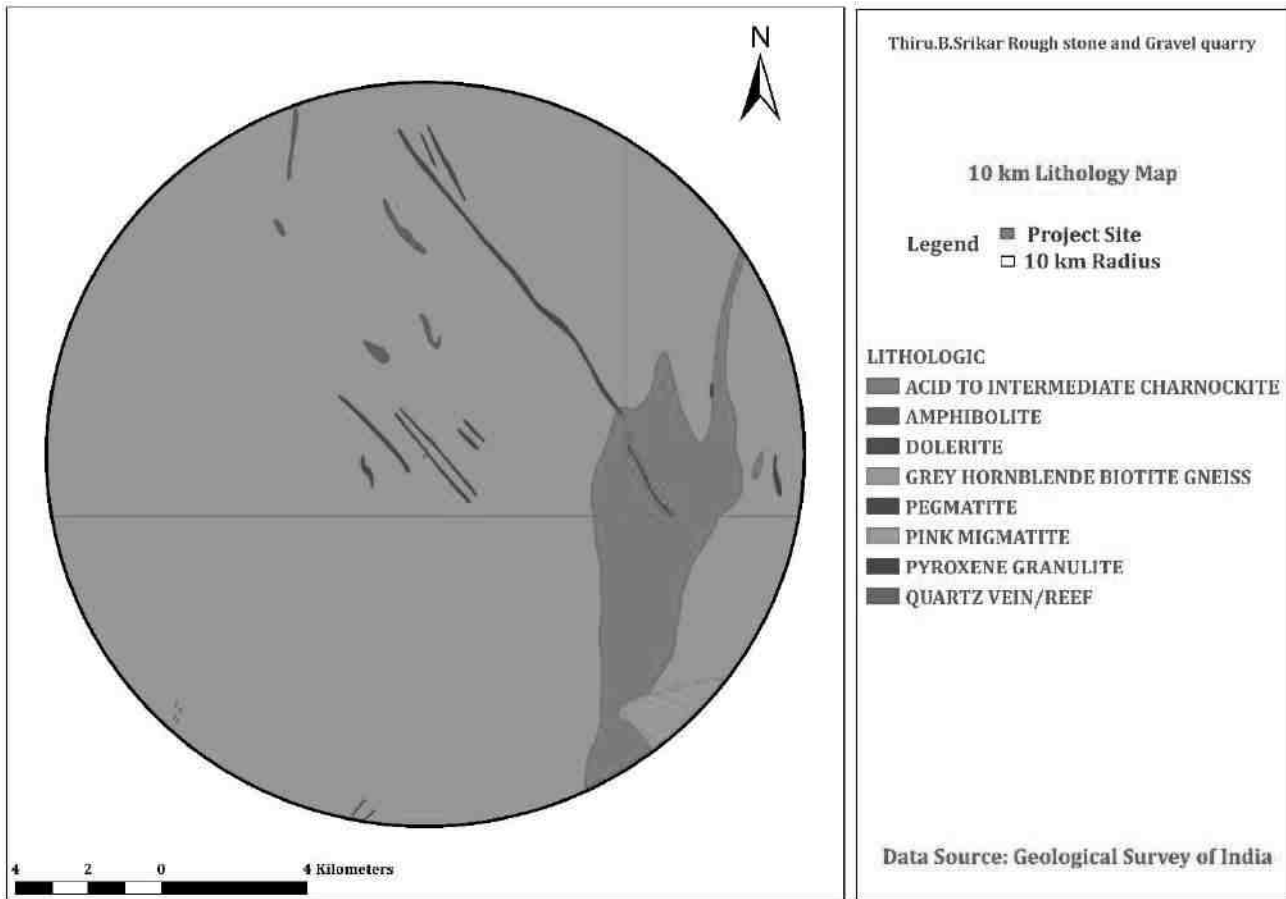


Figure 2.8 Lithology

2.6 QUALITY OF RESERVES:

The mining lease area is 1.86.50 Ha, with production capacity of 3,33,729 m³ of Rough Stone and 33,210m³ of Gravel. 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	7,65,140 m ³ of Rough Stone & 44,200m ³ Gravel
3	Recoverable Reserves	3,33,729 m ³ of Rough Stone & 33,210 m ³ of Gravel

Project	Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar	Draft EIA Report
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Project Location	Midithepalli Village, Shoolagiri Taluk, Krishnagiri District	

4	Proposed Production	3,33,729 m ³ of Rough Stone & 33,210 m ³ of Gravel
5	Elevation Range of the Mine Site	The altitude of the area is 869m 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 7,65,140 m³ of Rough Stone.

2.6.2 Geological resources

Gravel:

The Thickness of Gravel in this area is 2.0m and the total volume of Gravel will be 44200m³.

Rough Stone:

The Available Geological Resources is estimated as 765140m³ respectively. Gravel is calculated up to a depth of 2m and Rough Stone at a depth of 37m. Total Depth-39m.

Table 2-7: Geological resources

GEOLOGICAL RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In M³	Geological Reserves in m³ @ 100%	Gravel in m³
XY-AB	I	160	80	2			25600
	II	160	32	2	10240	10240	
	III	160	80	5	64000	64000	
	IV	160	80	5	64000	64000	
	V	160	80	5	64000	64000	
	VI	160	80	5	64000	64000	
	VII	160	80	5	64000	64000	
	VIII	160	80	5	64000	64000	

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	IX	160	80	5	64000	64000	
TOTAL					458240	458240	25600
XY-CD	I	155	60	2			18600
	III	155	60	3	27900	27900	
	IV	155	60	5	46500	46500	
	V	155	60	5	46500	46500	
	VI	155	60	5	46500	46500	
	VII	155	60	5	46500	46500	
	VIII	155	60	5	46500	46500	
	IX	155	60	5	46500	46500	
TOTAL					306900	306900	18600
GRAND TOTAL					765140	765140	44200

2.6.3 Mineable Reserves

Gravel:

The Thickness of Gravel in this area is 2.0m and the total volume of Gravel will be 33210m³.

Rough stone:

The Mineable reserves and the Recoverable reserves are 333729m³ respectively, at the rate of 100% recovery upto the permissible depth. Total Depth-39m (2m Gravel + 37m Rough Stone).

Table 2-8: Mineable Reserves

MINEABLE RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In M³	Mineable Reserves in m³ @ 100%	Gravel in m³
XY-AB	I	153	65	2			19890
	II	153	25	2	7650	7650	
	III	153	65	5	49725	49725	

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	IV	153	65	5	49725	49725	
	V	148	55	5	40700	40700	
	VI	143	45	5	32175	32175	
	VII	138	35	5	24150	24150	
	VIII	133	25	5	16625	16625	
	IX	123	15	5	9225	9225	
TOTAL					229975	229975	19890
XY-CD	I	148	45	2			13320
	II	148	41	3	18204	18204	
	III	148	45	5	33300	33300	
	IV	143	35	5	25025	25025	
	V	138	25	5	17250	17250	
	VI	133	15	5	9975	9975	
TOTAL					103754	103754	13320
GRAND TOTAL					333729	333729	33210

2.6.4 Year wise Production Plan

Rough stone production First Five Years details as follows:

The proposed rate of production of Rough Stone is estimated as 224329m³ & Gravel is 33210 m³ for First Five (I-V) years. The average proposed rate of production of Rough Stone is about 44866m³ per year at the rate of 100% recovery up to the permissible depth. Reserves Calculated up to 19m (2m Gravel + 17m Rough Stone). (Refer Drawing Plate No. IV-A1-Year wise Sections years.

Table 2-9: Year wise Production Plan

YEARWISE DEVELOPMENT AND PRODUCTION (First Five (I-V)Years)								
YEAR	Section	Benc h	L (m)	W (m)	D (m)	Volume in (Cu.m.)	Recoverable Reserve in Cu.m(100%)	Gravel in m ³
I-YEAR	XY-AB	I	153	65	2			19890
		II	153	25	2	7650	7650	

Project	Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar	Draft EIA Report
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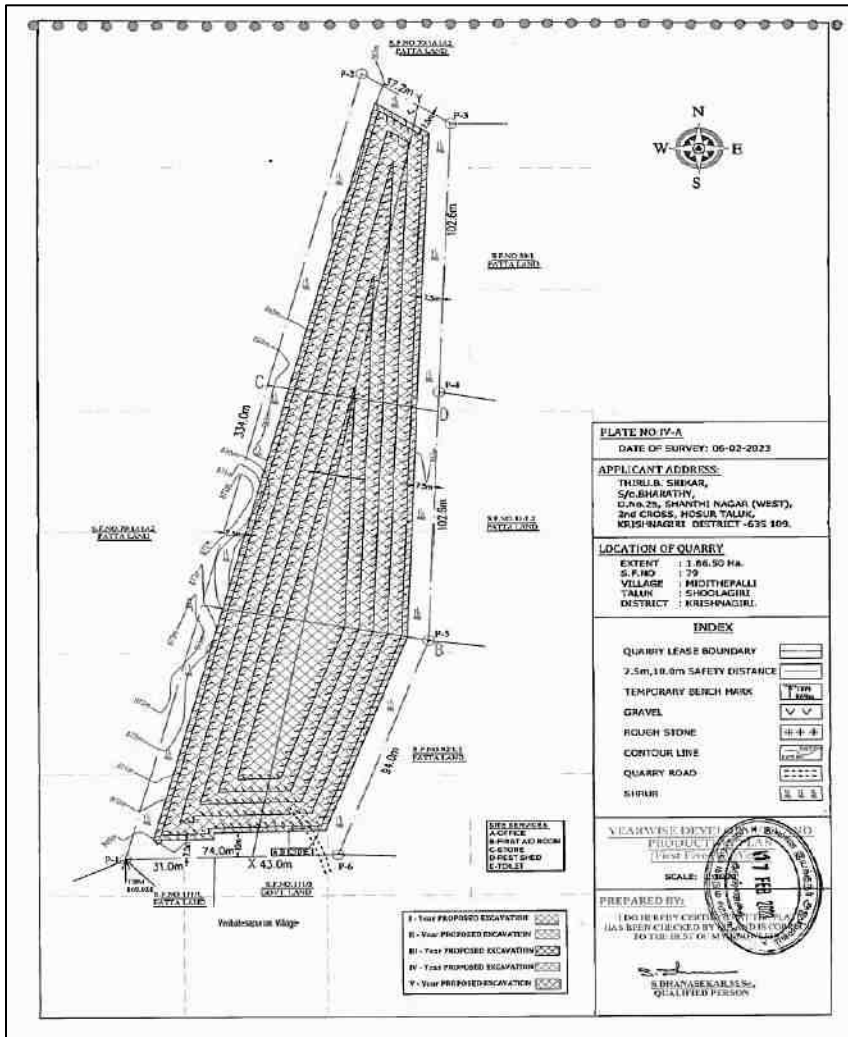
		III	153	65	5	49725	49725	
	XY-CD	I	148	45	2			13320
		II	148	41	3	18204	18204	
II-YEAR	XY-AB	IV	153	65	5	49725	49725	
III-YEAR	XY-CD	III	148	45	5	33300	33300	
IV-YEAR	XY-AB	V	148	55	5	40700	40700	
V-YEAR	XY-CD	IV	143	35	5	25025	25025	
Total (First Five (I-V)Years)						224329	224329	33210

Rough stone production Second Five Years details as follows:

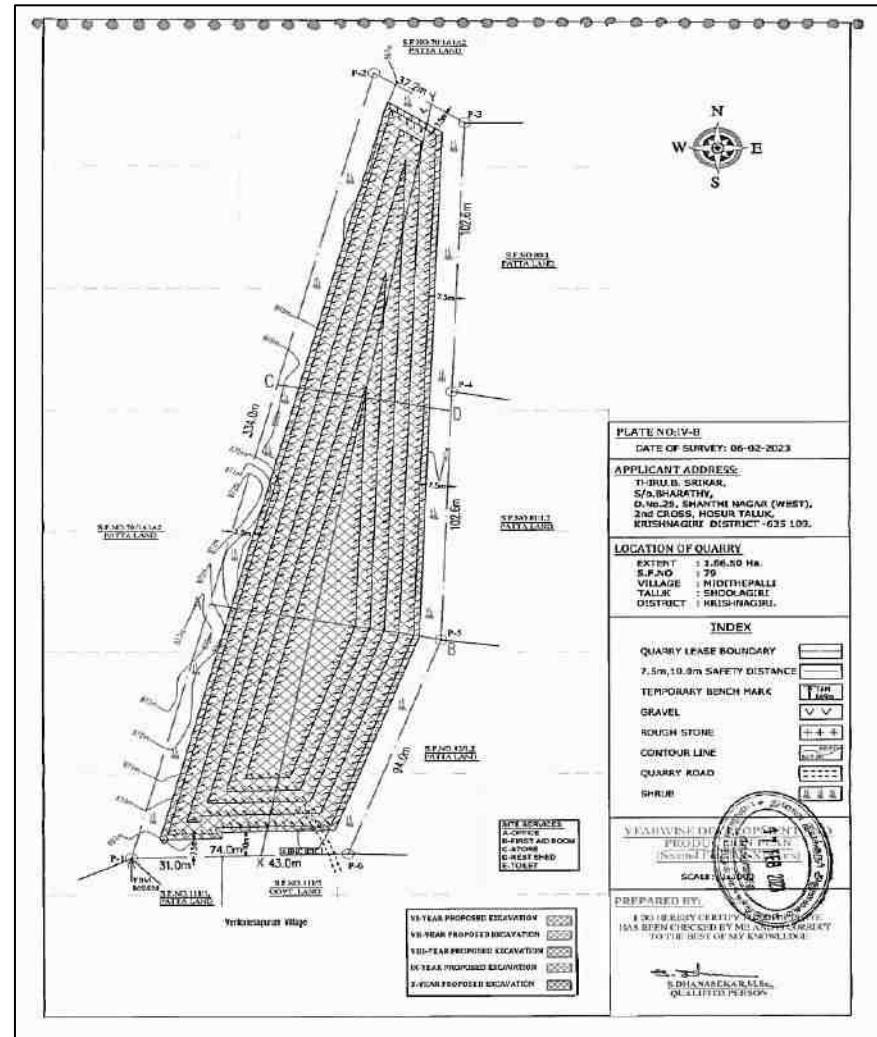
The proposed rate of production of **Rough Stone** is estimated as **109400m³** for Second Five (VI-X) years. The average proposed rate of production of **Rough Stone** is about **21880m³** per year at the rate of 100% recovery up to the permissible depth. Reserves Calculated up to **20m** Rough Stone. (Refer Drawing Plate No. IV-B1-Year wise Sections).

YEARWISE DEVELOPMENT AND PRODUCTION (Second Five (VI-X)Years)							
YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume in (Cu.m.)	Recoverable Reserve in Cu.m(100%)
VI-YEAR	XY-AB	VI	143	45	5	32175	32175
VII-YEAR	XY-CD	V	138	25	5	17250	17250
VIII-YEAR	XY-AB	VII	138	35	5	24150	24150
IX-YEAR	XY-CD	VI	133	15	5	9975	9975
X-YEAR	XY-AB	VIII	133	25	5	16625	16625
	XY-CD	IX	123	15	5	9225	9225
Total (Second Five (VI-X)Years)						109400	109400

Project	Rough stone Quarry- 1.86.500 Ha by Thiru.B.Srikar	Draft EIA Report
Project Proponent	Thiru.B.Srikar	
Project Location	Midithepalli Village, Shoolagiri Taluk, Krishnagiri District	



Production first 5 years



Production second 5 years

Figure 2.9 Year wise Production Plan

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.B.Srikar</i>	
<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

2.7 TYPE OF MINING

The proposed project is an open cast mechanized mining with one 2.0 m bench for Gravel 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 2.0m of Topsoil and estimated quantity of Topsoil is 38,740m³. 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*

The 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
Transportation	Tipper 1 No. of 10 M.T capacity

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

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	111.24m 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 25mm Slurry explosives is 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 & 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.

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

2.8 MAN POWER REQUIREMENTS

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

Table 2-13: Man Power Requirements

1.	Skilled	Operators	2 Nos
		Mechanic	1 No
		Blaster / Mat	1 No
2.	Semi – skilled	Drivers	2 Nos
3.	Unskilled	Musdoor / Labors	5 Nos
		Cleaners	2 Nos
		Office Boy	1 No
4.	Management & Suoervisory staff		2 Nos
Total			16 Nos

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

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2.8.1 Water Requirement

Total water requirement for the mining project is 2.0 KLD. Domestic water will be sourced from nearby Midithepalli 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	Mineral water purchased from approved water vendors available in Midithepalli 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 Thiru. B. Srikar (1.86.50 ha) is as follows.

Table 2-15: Mining Schedule

MINING SCHEDULE										
Activity	Dec 24	Dec 25	Dec 26	Dec 27	Dec 28	Dec 29	Dec 30	Dec 31	Dec 32	Dec 32
Site Clearance										
Excavation - Top Soil Removal/Overburden										
I Year Production – 75579 Cum - Rough Stone & 33210m ³ Gravel										
II Year Production – 49725 Cum - Rough Stone										
III Year Production – 33300 Cum - Rough Stone										
IV Year Production – 40700 Cum - Rough Stone										

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V Year Production – 25025 Cum - Rough Stone										
VI Year Production – 32175 Cum - Rough Stone										
VII Year Production – 17250 Cum - Rough Stone										
VIII Year Production – 9975 Cum - Rough Stone										
IX Year Production – 16625 Cum - Rough Stone										
X Year Production – 9225 Cum - Rough Stone										

2.10 SOLID WASTE MANAGEMENT

Table 2-15: Solid Waste Management

S. No	Type	Quantity	Disposal Method
1	Organic	2.88 kg/day	Municipal bin including food waste
2	Inorganic	4.32 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 upto a depth of 39.0m (2.0m Gravel & 37.0m Rough stone). The ground water table is reported as 66m below ground level in nearby wells of this area. Mining depth taken as 39m. Now, proposed quarry depth is above the water table. Hence, quarrying may not affect the ground water.

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.

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Midithepalli Village, Shoologiri Taluk, Krishnagiri District</i>	

2.13 PROJECT COST

1	<u>A. Fixed Asset Cost:</u> 1. Land Cost : Rs. 18,00,000/- 2. Labour Shed : Rs. 1,20,000/- 3. Sanitary Facility : Rs. 1,00,000/- 4. Refilling/Fencing cost : Rs.80,000/- Total= Rs.21,00,000/-	
2	<u>B. Operational Cost:</u> <u>Machinery cost</u> : Rs.30,00,000/-	
3	<u>C. EMP Cost:</u> Display board in site; : Rs. 1,32,48,533/- Monitoring-Air, Water, : Noise; Dust Suppression - : 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	
	Total Project Cost (A+B) : Rs. 51,00,000/-	

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
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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 the 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 200 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%	1000
Total		1000

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

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. 9962/ ToR-1486/2023 Dated: 22.06.2023. The baseline monitoring is carried out in June 2023 to August 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.

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

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 June 2023 to August 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	5 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	5 locations	24 hourly Once in 5 locations
Water (Ground water) pH, Temperature, Turbidity, Magnesium Hardness, Total Alkalinity, Chloride, Sulphate, Fluoride, Nitrate, Sodium,	5 locations	Once in 5 locations

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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)	5 locations	Once in 5 locations
Ecology and biodiversity Study	Study area covering 10 km radius	One-time Sampling
Socio- Economic study (Population, Literacy Level, employment, Infrastructure like school, hospitals & commercial establishments)	Villages around 10 km radius	One-time Sampling

3.1.5 Secondary data Collection

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

- Flora & Faunal Study
- Land use study

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- 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. 79 Midithepalli Village, Shoolagiri Taluk, Krishnagiri District.	Field Study
2.	Latitude & Longitude	Latitude: 12° 46' 01.9743"N to 12° 45' 52.1189"N Longitude: 77° 57' 03.0289"E to 77° 56' 59.2536"E	Topo Sheet
3.	Topo Sheet No.	57- H/13	Survey of India Toposheet
4.	Mine Lease Area	1.86.50 Ha	--
Demography in the study area (as per Census 2011)			
5.	Total Population	2,873	Census Survey of India
6.	Total Number of Households	650	
7.	Maximum Temperature (°C)	34	IMD
8.	Minimum Temperature (°C)	24	
9.	Ecological Sensitive Areas - Wetlands, watercourses or other	<ul style="list-style-type: none"> • Muthali lake – 4.67Km – W • Bukkasagaram Lake – 4.76Km- S • Berikai Lake – 5.12Km – N • Peddakullu Lake – 5.86Km – SW • Lake 1 – 5.25Km – SW 	Google Earth/Field Study

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

	waterbodies, coastal zone, biospheres, mountains, forests	<ul style="list-style-type: none"> • Doripalli Lake – 6.28Km – S • Thummanapalli Lake – 6.89Km – SSW • Kelavarapalli Reservoir – 7.14Km – W • Kamandoddi Lake – 8.56Km – S • Kumudapalli Lake – 9.57Km – SW • Moranapalli Lake – 9.89Km - SW 																									
10.	Densely Populated area	Hosur - 13.02 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>Government Higher Secondary School, Athimugam</td> <td>3.54 Km - SE</td> </tr> <tr> <td>2</td> <td>Adhiyaman college of Agriculture & Research, Athimugam.</td> <td>3.88 Km - SE</td> </tr> <tr> <td>3</td> <td>Government Higher Secondary School, Venkatesapuram</td> <td>1.98 Km - SW</td> </tr> <tr> <td colspan="3" style="text-align: center;">Hospitals</td> </tr> <tr> <td>1</td> <td>Government Hospital, Athimugam</td> <td>3.70 Km - SEE</td> </tr> <tr> <td>2</td> <td>Government Hospital, Kamandoddi</td> <td>8.82 Km - S</td> </tr> </tbody> </table>	S. No.	Places	Dist. From Project Site	Schools & Colleges			1	Government Higher Secondary School, Athimugam	3.54 Km - SE	2	Adhiyaman college of Agriculture & Research, Athimugam.	3.88 Km - SE	3	Government Higher Secondary School, Venkatesapuram	1.98 Km - SW	Hospitals			1	Government Hospital, Athimugam	3.70 Km - SEE	2	Government Hospital, Kamandoddi	8.82 Km - S	Google Earth/ Field Study
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2	Government Hospital, Kamandoddi	8.82 Km - S																									

3.1.7 Site Connectivity:

The site is connected to Venkatesapuram village road which is about 0.43 km – South.

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<i>Project Location</i>	<i>Midithepalli Villarge, Shoolagiri Taluk, Krishnagiri District</i>	



Figure 3.1: Site Connectivity

3.2 LAND USE ANALYSIS

3.2.1 *Land Use Classification*

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

3.2.2 *Methodology*

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

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

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

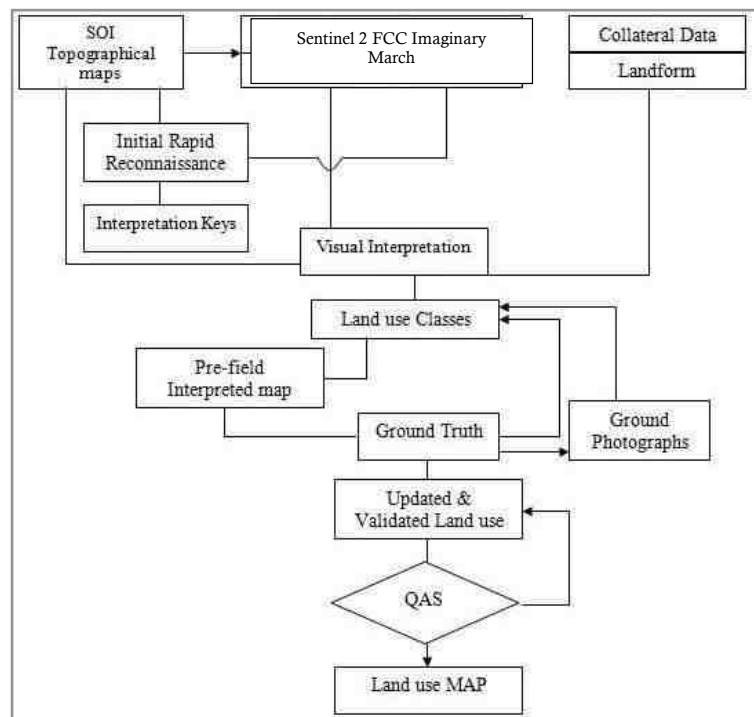


Figure 3.2 Flow Chart showing Methodology of Land use mapping

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3.2.3 *Satellite Data*

Sentinal 2 multispectral satellite data of 2020 was utilized for the present study. Details of satellite data is given below. The rectification of imagery was carried out 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 sentinal 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. These are followed by level –II where built-up land is divided into towns/cities as well as villages. The

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

3.2.6 *Field Verification*

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

3.2.7 *Description of the Land Use / land cover classes*

3.2.7.1 **Water**

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

3.2.7.2 **Trees**

Any significant clustering of tall (~15-m or higher) dense vegetation, typically with a closed or dense canopy; examples: wooded vegetation, clusters of dense tall vegetation within savannas, plantations, swamp or mangroves (dense/tall vegetation with ephemeral water or canopy too thick to detect water underneath).

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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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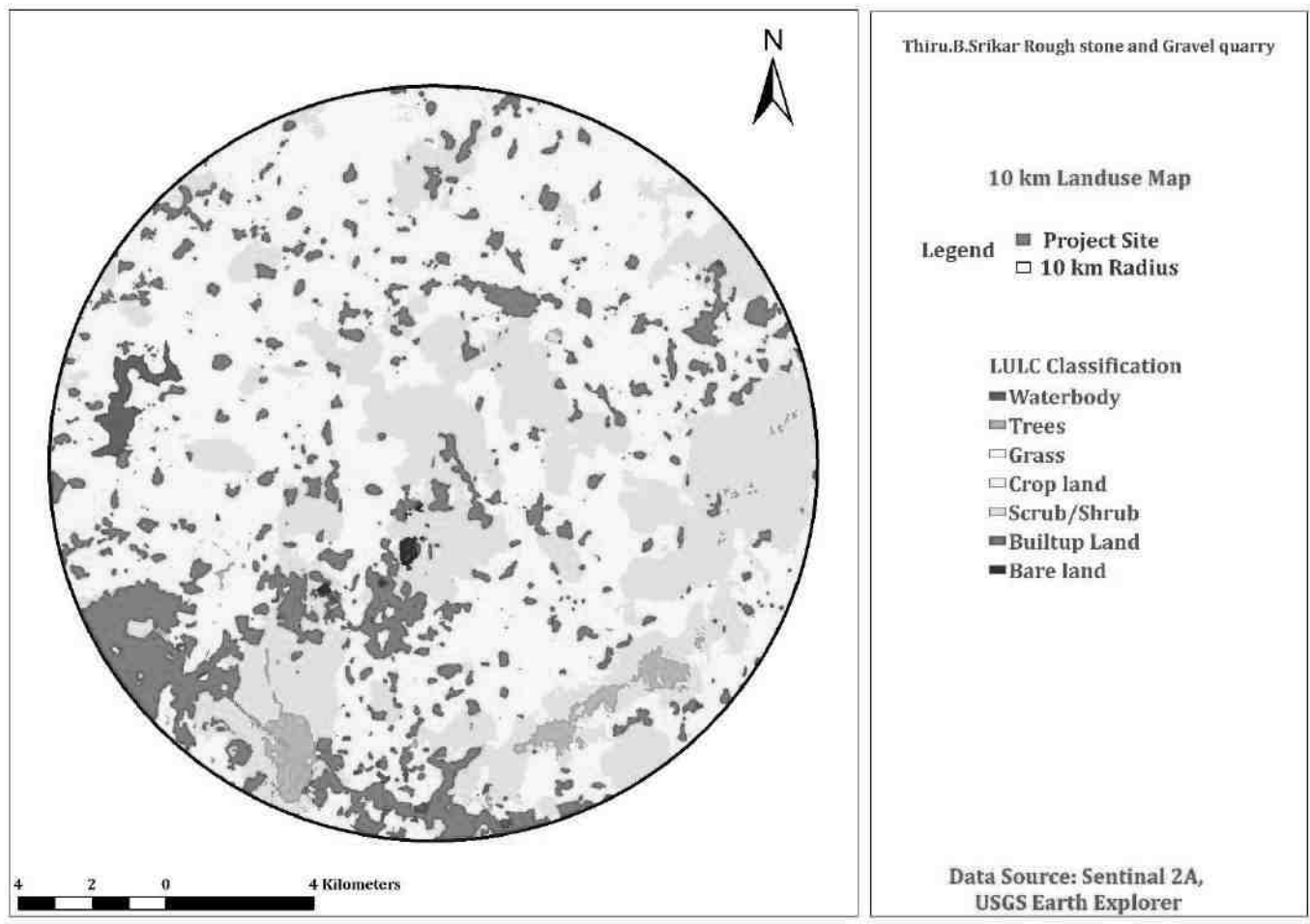


Figure 3.3 Land use classes around 10 km radius from the project site

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

Table 3-3 Land use pattern

Sl.No	Categories	Area in Sq.m	Percentage
1	Water Body	2.91	0.89
2	Trees	6.16	1.89
3	Grass	0.06	0.02
4	Crops	185.35	57.13
5	Scrub/Shrub	83.54	25.75
6	Built-up Area	45.88	14.14
7	Barren Land	0.51	0.15

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3.3 WATER ENVIRONMENT

3.3.1 *Contour & Drainage*

The altitude of the area is 869m 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 869m Amsl. The Guthrayan Durg with an elevation of 1395 m amsl is the highest peak in the district.

Soils

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

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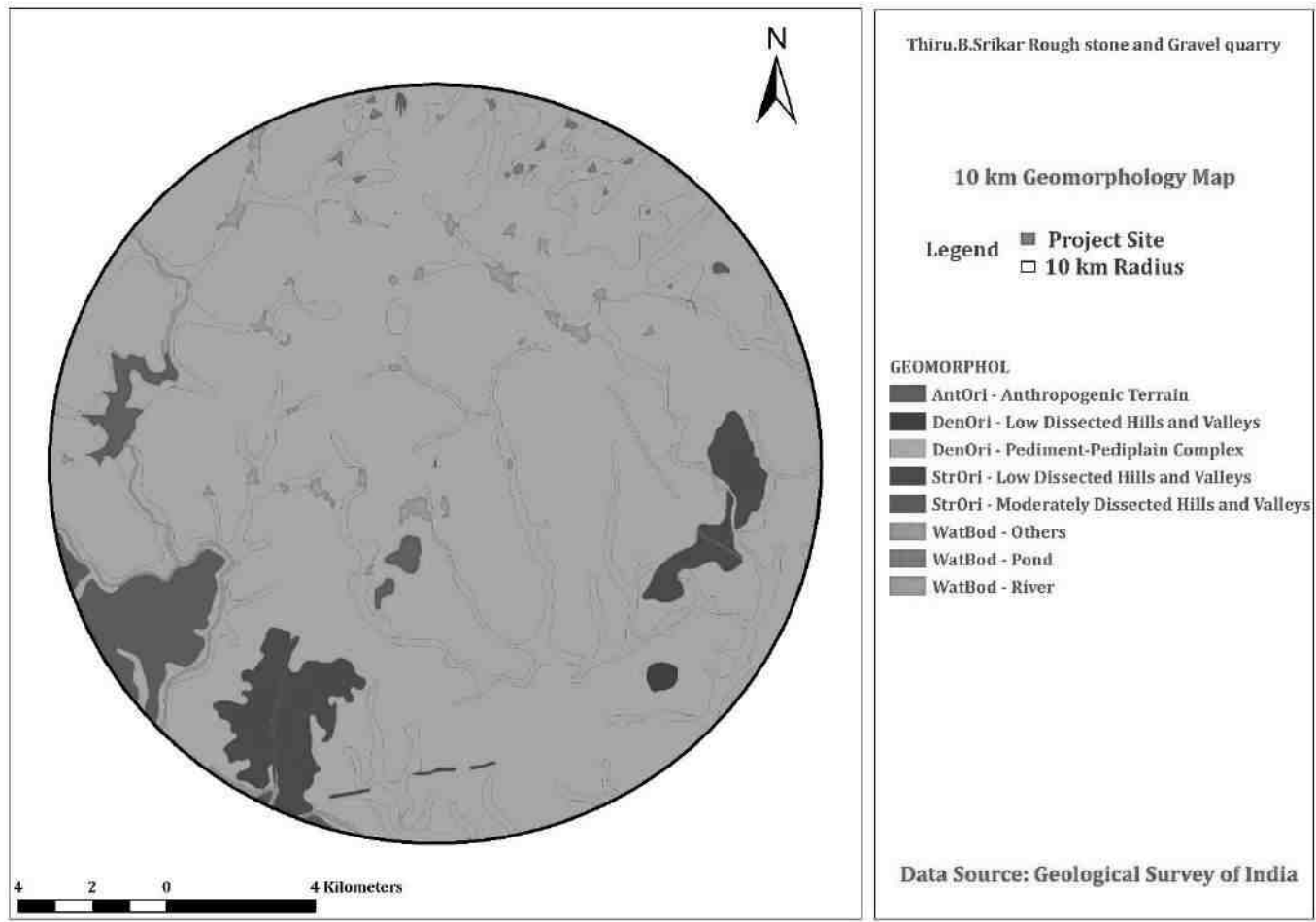


Figure 3.4 Geomorphology within 10km from the project site

3.3.3 Geology:

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

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the Kolar group and are found west and southwest of Veppanapalli. Following this there are basic intrusions occurring as dykes.

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

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

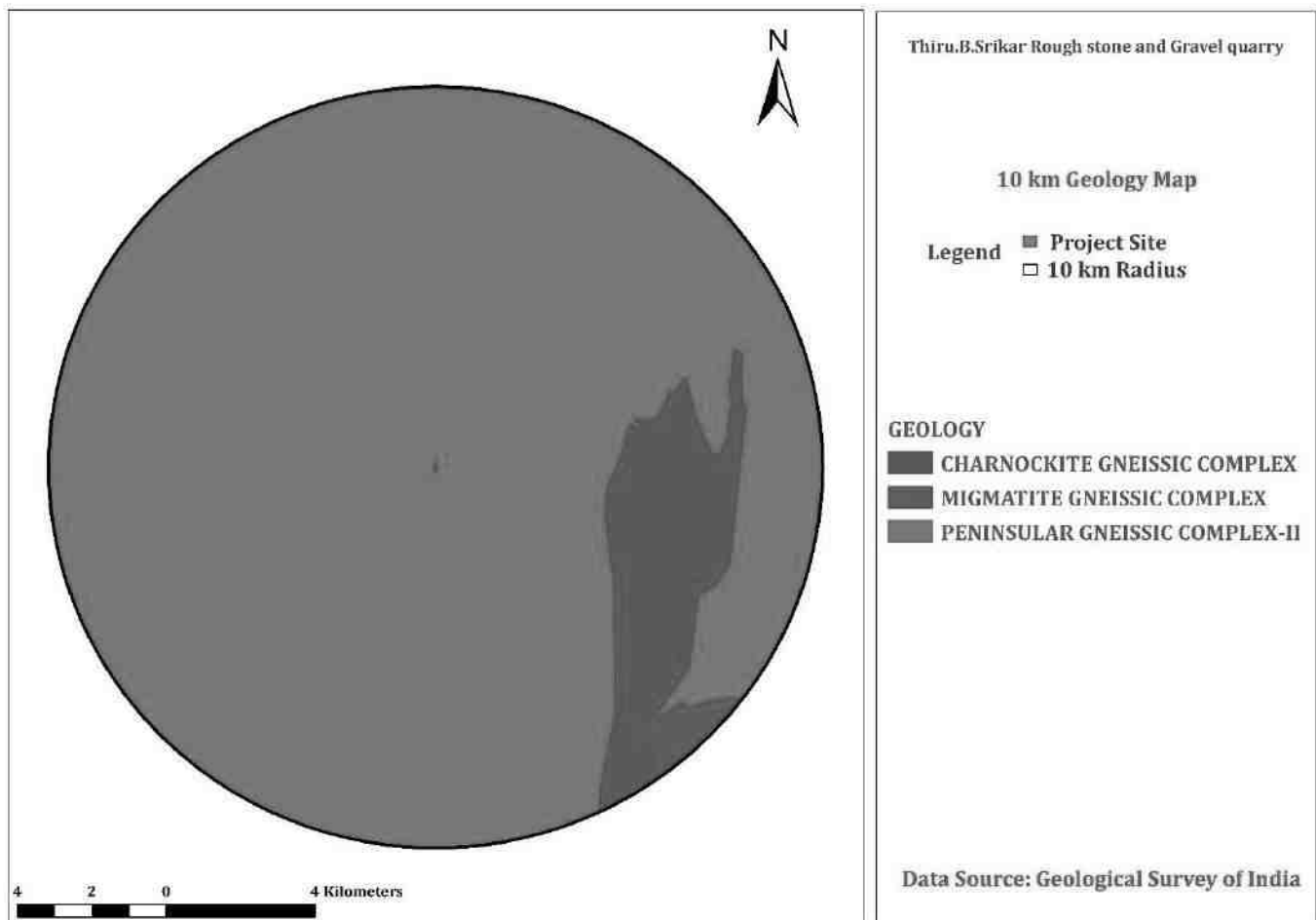


Figure 3.5 Geology within 10km from the project site

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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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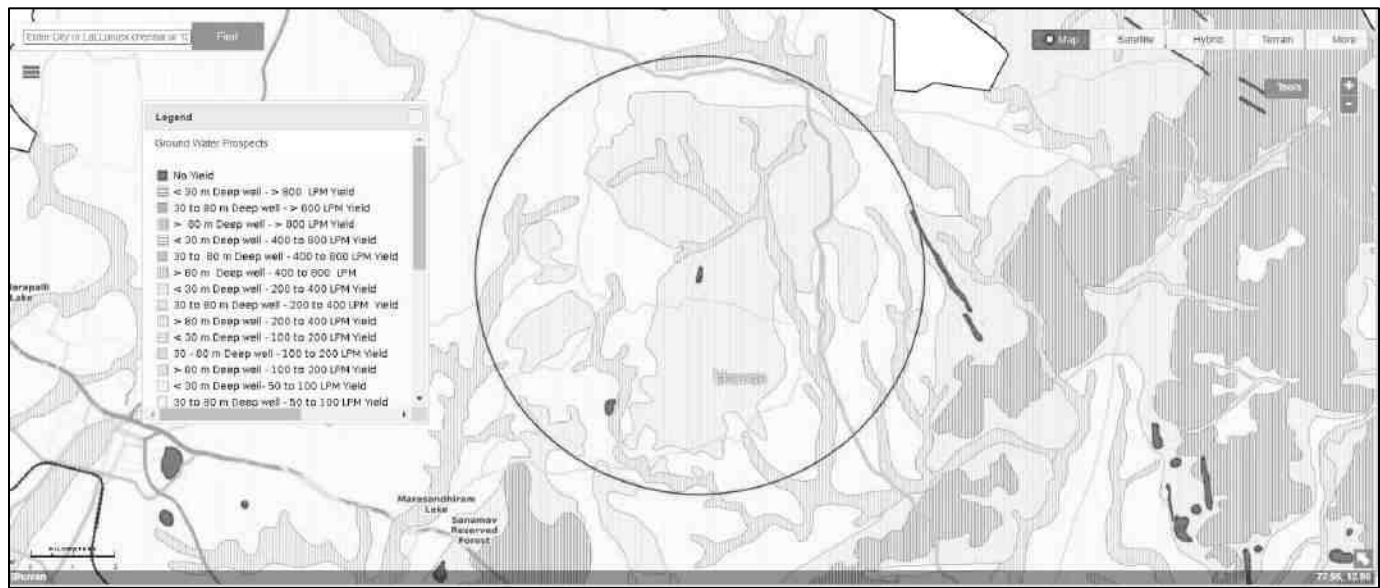


Figure 3.6 Ground water prospects within 5 km radius of the project site

3.3.5 Ground water quality monitoring

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

Table 3-4 Ground water Quality Analysis

Environmental Parameters: Ground water Quality Analysis	
Monitoring Period	June 2023 to August 2023
Design Criteria	Based on the Environmental settings in the study area
Monitoring Locations	Project Site - GW1 Government High School, Muthali – GW2 Bhargavi Narasimha Swamy Temple, Berikai Road Sandarasettipalli – GW3 Govt.Hr Sec School,bukkasagaram – GW4 Midhitepalli Bus Stop – GW5 Garagamma Temple – Vanamangalam – GW6 Sri Ardhanareshwaramma Temple – Moranapalli – GW7
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

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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 3-5: Standard Procedure

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

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Table 3-6 Ground water sampling results

S. No	Parameters	Units	GW1	GW2	GW3	GW4	GW5	GW6	GW7
1	pH (at 25°C)	-	7.41	6.74	7.59	7.59	8.1	8.53	7.36
2	Electrical Conductivity	µS/cm	967	1414	1530	1823	1154	687	1385
3	Colour	Hazen Unit	4	2	3	3	4	3	2
4	Turbidity	NTU	2.3	BQL(L OQ:1)	BQL(L OQ:1)	BQL(L OQ:1)	BQL(L OQ:1)	BQL(L OQ:1)	BQL(L OQ:1)
5	Total Dissolved Solids	mg/L	538	792	852	1003	635	405	775
6	Total Suspended Solids	mg/L	BQL(L OQ:2)	BQL(L OQ:2)	BQL(L OQ:2)	BQL(L OQ:2)	BQL(L OQ:2)	BQL(L OQ:2)	BQL(L OQ:2)
7	Total Hardness as CaCO ₃	mg/L	322	516	388	630	442	227	364
8	Calcium Hardness as CaCO ₃	mg/L	225	365	307	407	240	81.4	299
9	Magnesium Hardness as CaCO ₃	mg/L	97.0	151	81.4	223	202	145	65.9
10	Calcium as Ca	mg/L	90.1	146	123	163	96.4	32.6	119
11	Magnesium as Mg	Mg/L	23.5	36.8	19.8	54.2	49.1	35.3	16.2
12	Chloride as Cl	mg/L	34.7	139	223	174	100	38.6	135
13	Sulphate as SO ₄	mg/L	122	116	54.8	168	80.8	67.1	141
14	Total Alkalinity as CaCO ₃	mg/L	299	264	308	283	224	175	310
15	Iron as Fe	mg/L	BQL(L OQ:0.1)	BQL(L OQ:0.1)	BQL(L OQ:0.1)	BQL(L OQ:0.1)	BQL(L OQ:0.1)	BQL(L OQ:0.1)	BQL(L OQ:0.1)
16	Silica as SiO ₂	mg/L	21.9	26.4	27.4	32.4	21.9	12.7	31.4
17	Fluoride as F	Mg/L	1.21	1.02	1.31	0.59	0.48	1.01	0.65

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18	Nitrate as NO ₃	Mg/L	38.8	46.2	8.33	55.4	55.4	45.2	22.3
19	Potassium as K	mg/L	1.9	17.8	12.2	10.1	4.1	2.2	6.14
20	Sodium as Na	mg/L	12.4	105	197	175	94.1	33.5	115

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): 4 Hazen unit.

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

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.

pH:

Value observed in the Project Site: 7.41

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: 2.3.

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:

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Value observed in the Project Site: 538 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: 90.1 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: 23.5 mg/L.

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

The value of Magnesium in the project site is higher than 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: 34.7 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.

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Total Alkalinity as CaCO₃:

Value observed in the project site: 299 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: 322 mg/L.

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

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

3.3.7 Surface Water Analysis

Surface water samples were taken from **Bukkasagaram and Muthali** lake. The results are summarized below.

Table 3-7 Surface Water Sample Results

S. No	Parameters	Units	Bukkasagaram lake
1	pH (at 25°C)	-	7.94
2	Electrical Conductivity	µS/cm	862
3	Colour	Hazen Unit	5
4	Turbidity	NTU	4.4
5	Total Dissolved Solids	mg/L	484
6	Total Suspended Solids	mg/L	8.8
7	Total Hardness as CaCO ₃	mg/L	190
8	Calcium Hardness as CaCO ₃	mg/L	120
9	Magnesium Hardness as CaCO ₃	mg/L	48.2
10	Calcium as Ca	mg/L	69.8

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11	Magnesium as Mg	mg/L	16.9
12	Chloride as Cl	mg/L	87.8
13	Sulphate as SO ₄	mg/L	101
14	Total Alkalinity as CaCO ₃	mg/L	202
15	Iron as Fe	mg/L	BQL(LOQ:0.1)
16	Silica as SiO ₂	mg/L	16.5
17	Fluoride as F	mg/l	1.02
18	Nitrate as NO ₂	mg/l	76.4
19	Potassium as K	mg/L	3.2
20	Sodium as Na	mg/L	16.7
21	Total Kjeldahl Nitrogen as N	mg/L	15.2
22	Biochemical oxygen Demand @ 27c		72.2
23	Chemical Oxygen Demand		5.80
24	Dissolved Oxygen		12.3

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

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

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 36°C and minimum temperature is 28°C.

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).

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.

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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 June 2023 to August 2023.

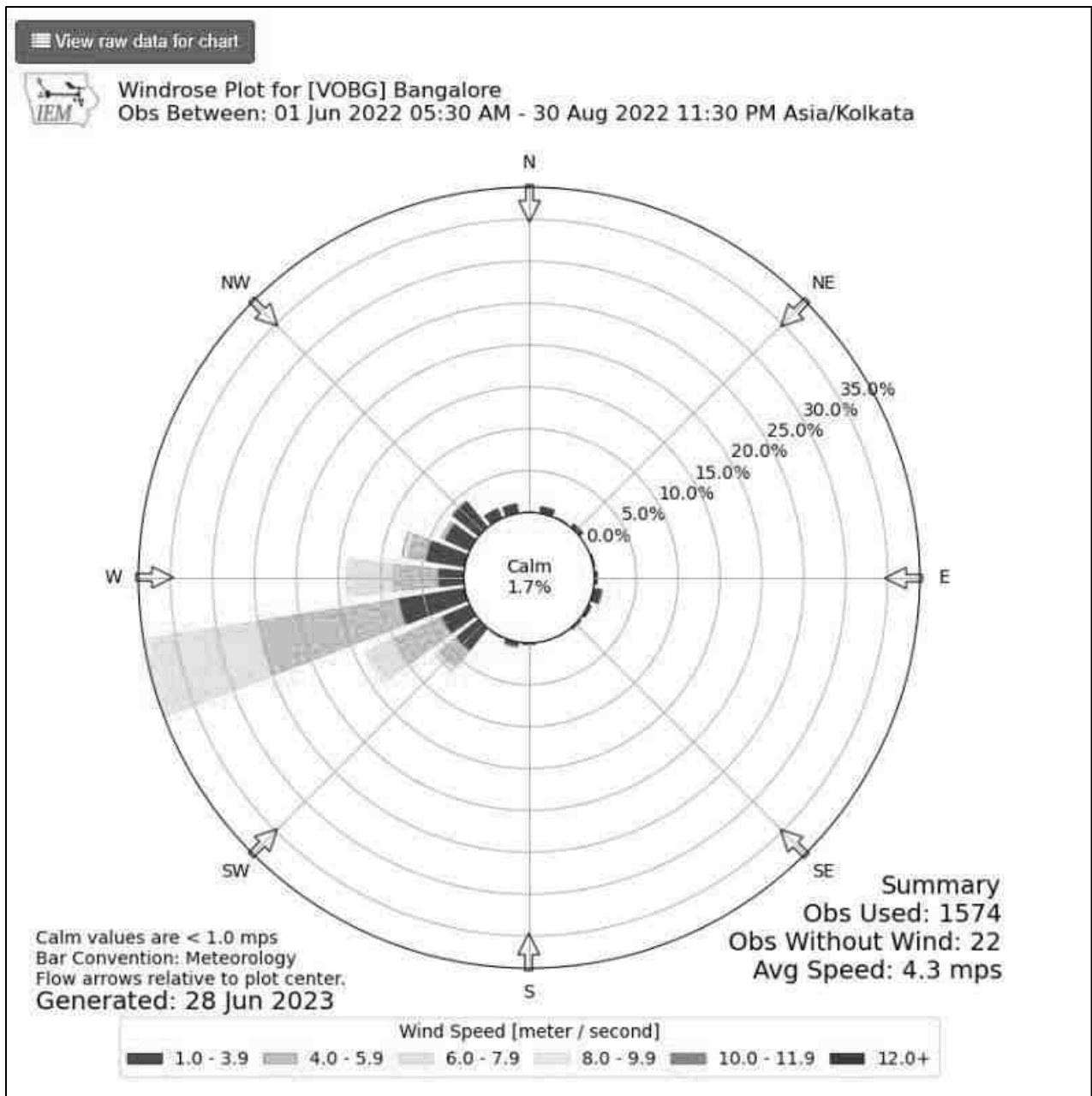


Figure 3.7 Wind rose.

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

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.

3.4 AMBIENT AIR QUALITY

Table 3-8: Selection of Sampling Location

Environmental Parameters: <i>Ambient Air</i>																											
Monitoring Period	June 2023 to August 2023																										
Design Criteria	The monitoring stations are selected based on factors like topography/terrain, prevailing meteorological conditions like predominant wind direction (December 2022 to February 2023), etc., play a vital role in the selection of air sampling stations. Based on these criteria, 7 air sampling station were selected in the area as shown below.																										
Monitoring Locations	<table border="1"> <thead> <tr> <th>Location & Code</th> <th>Distance (km)</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Project Site</td> <td>-</td> <td>-</td> </tr> <tr> <td>Government High School, Muthali</td> <td>4.59 km</td> <td>Upwind W</td> </tr> <tr> <td>Bhargavi Narasimha Swamy Temple, Berikai Road Sandarasettipalli</td> <td>6.37 km</td> <td>Downwind E</td> </tr> <tr> <td>Govt.Hr Sec School,bukkasagaram</td> <td>4.10 km</td> <td>Crosswind S</td> </tr> <tr> <td>Midhitepalli Bus Stop</td> <td>1.78 km</td> <td>Crosswind NNE</td> </tr> <tr> <td>Garagamma Temple Vanamangalam</td> <td>7.76 km</td> <td>Crosswind N</td> </tr> <tr> <td>Sri Ardhanareshwaramma Temple - Moranapalli</td> <td>8.18 km</td> <td>Crosswind SW</td> </tr> </tbody> </table>			Location & Code	Distance (km)	Direction	Project Site	-	-	Government High School, Muthali	4.59 km	Upwind W	Bhargavi Narasimha Swamy Temple, Berikai Road Sandarasettipalli	6.37 km	Downwind E	Govt.Hr Sec School,bukkasagaram	4.10 km	Crosswind S	Midhitepalli Bus Stop	1.78 km	Crosswind NNE	Garagamma Temple Vanamangalam	7.76 km	Crosswind N	Sri Ardhanareshwaramma Temple - Moranapalli	8.18 km	Crosswind SW
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	Midhitepalli Bus Stop	1.78 km	Crosswind NNE																								
	Garagamma Temple Vanamangalam	7.76 km	Crosswind N																								
	Sri Ardhanareshwaramma Temple - Moranapalli	8.18 km	Crosswind SW																								
Methodology	Respirable Particulate Matter (PM10) - Gravimetric (IS 5182: Part 23:2006) Particulate Matter PM2.5 - Gravimetric (Fine particulate matter) Sulphur Dioxide - Calorimetric (West & Gaeke Method) (IS 5182: Part 02: 2001) Nitrogen Dioxide - Calorimetric (Modified Jacob & Hocheiser Method) (IS 5182: Part 06:2006)																										
Frequency of Monitoring	2 days in a week, 4 weeks in a month for 3 months in a season.																										

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

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.

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

Table 3-9 Ambient Air Quality

Code	Location	PM 10 ($\mu\text{g}/\text{m}^3$)				PM 2.5 ($\mu\text{g}/\text{m}^3$)				SO ₂ ($\mu\text{g}/\text{m}^3$)				NO _x ($\mu\text{g}/\text{m}^3$)			
		Min	Max	Avg	98 percentiles	Min	Max	Avg	98 percentiles	Min	Max	Avg	98 percentiles	Min	Max	Avg	98 percentiles
AAQ1	Project Site	54	65	59.0	64.08	16	27	20.7	26.54	11	19	15.1	19.0	19	33	26.3	32.54
AAQ2	Government High School, Muthali	42	54	48.6	53.54	21	33	26.8	32.08	6	11	9.1	11.0	12	23	17.7	22.54
AAQ3	Bhargavi Narasimha Swamy Temple,	48	59	54.0	58.54	16	26	21.8	26.0	6	15	10.5	19.0	14	29	21.3	28.54
AAQ4	Govt.Hr Sec School,bukkasagaram	46	55	51.1	55	25	32	29.0	32.0	8	15	11.1	15.0	16	26	20.5	25.54
AAQ5	Midhitepalli Bus Stop	56	66	61.4	65.54	20	30	24.7	29.8	16	22	18.7	22.0	28	36	31.8	35.54
AAQ6	Garagamma Temple - Vanamangalam	38	57	46.5	56.29	17	26	21.6	25.54	5	14	9.1	13.54	10	22	16.0	21.54
AAQ7	Sri Ardhanarshwaramma Temple - Moranapalli	42	54	47.0	53.08	14	24	18.1	23.08	5	12	8.8	12.0	11	22	15.5	21.08
NAAQ Standards - Residential Area		100 ($\mu\text{g}/\text{m}^3$)				60($\mu\text{g}/\text{m}^3$)				80 ($\mu\text{g}/\text{m}^3$)				80 ($\mu\text{g}/\text{m}^3$)			

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

3.4.2 Interpretation of ambient air quality:

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

Observation:

The Maximum value of PM10 (66 $\mu\text{g}/\text{m}^3$), PM 2.5(33 $\mu\text{g}/\text{m}^3$), SOx (22 $\mu\text{g}/\text{m}^3$), NOx (36 $\mu\text{g}/\text{m}^3$) is observed in different places.

Inference:

The monitoring results for PM10, PM2.5, Sox, NOx was found to be high Midhitepalli Bus Stop and Project site which is due to high movement of vehicles. The observed values are all well within the Standards prescribed by NAAQ.

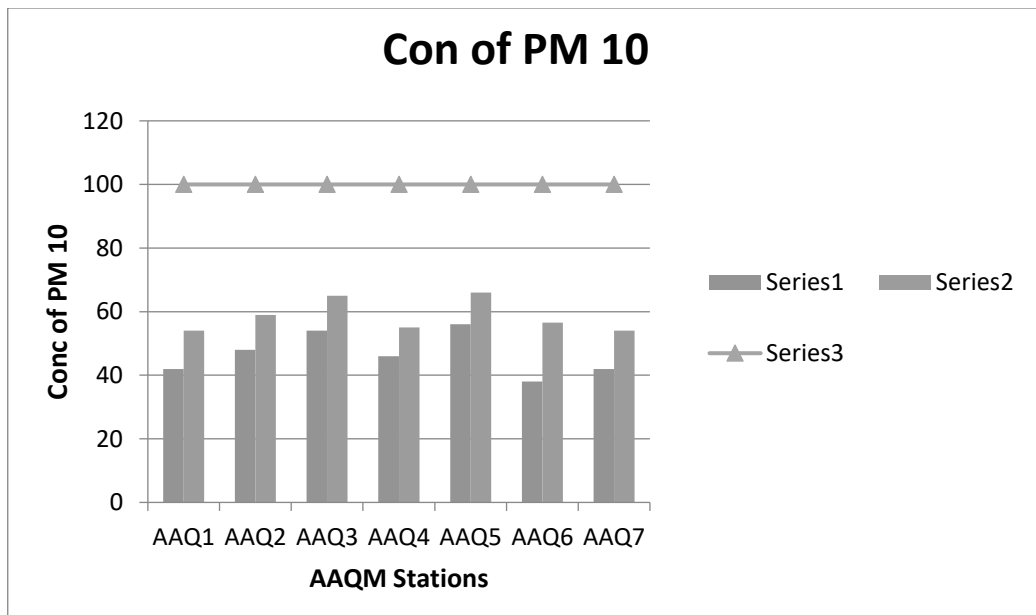


Figure 3.8 Concentration of PM10 ($\mu\text{g}/\text{m}^3$) in Study Area

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

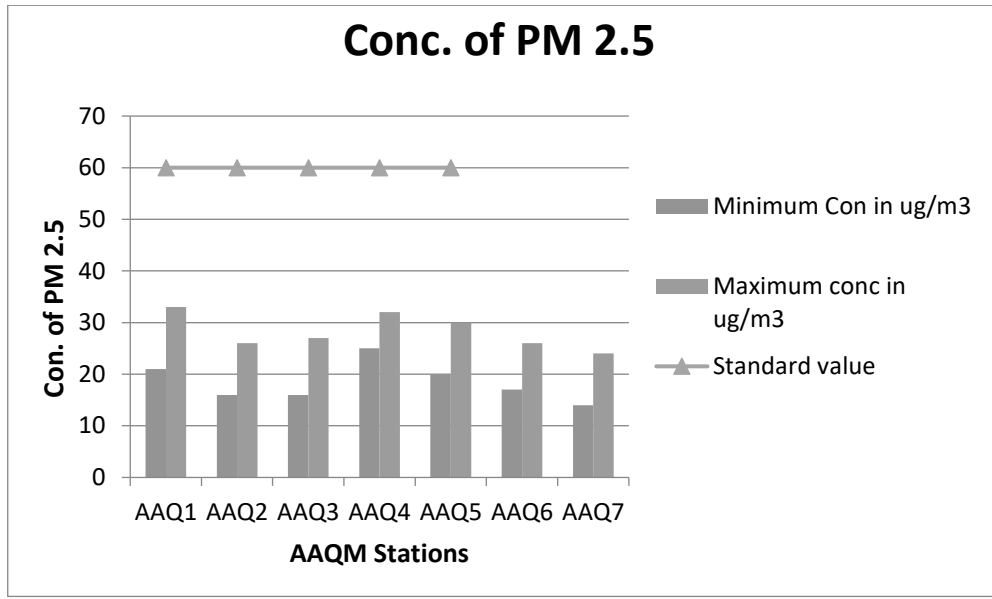


Figure 3.9 Concentration of PM_{2.5} (µg/m³) in Study Area

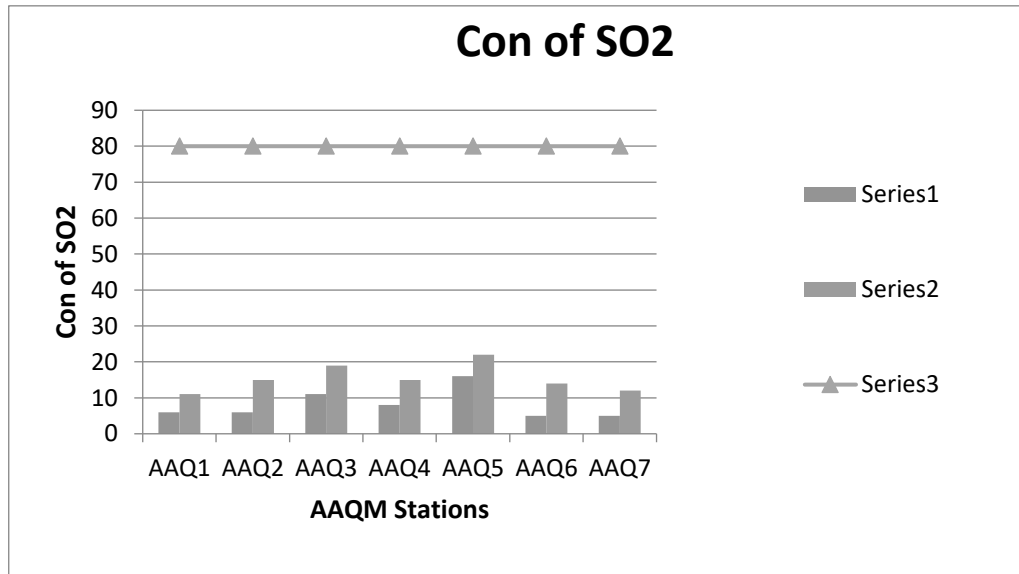


Figure 3.10 Concentration of SO_x (µg/m³) in Study Area

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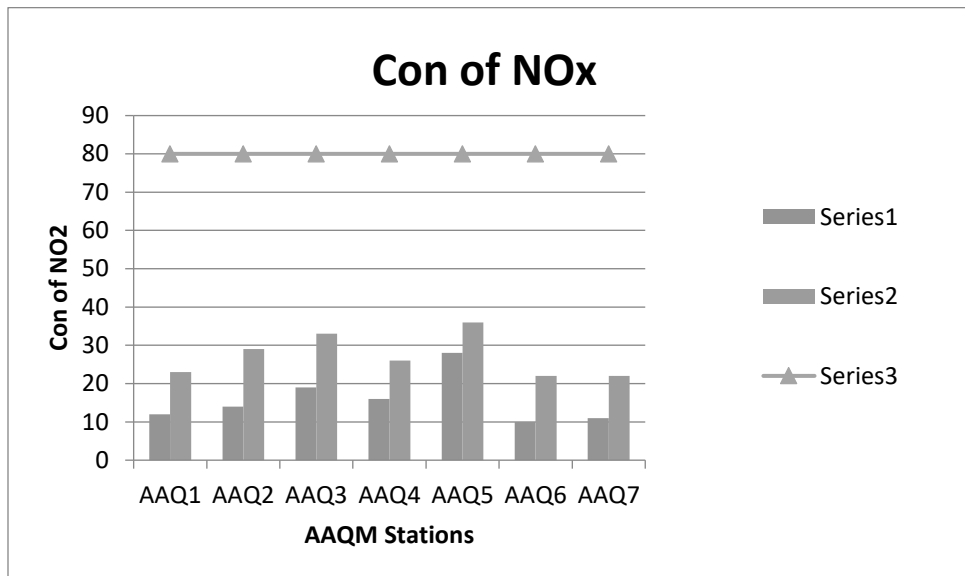


Figure 3.11 Concentration of NOx (µg/m³) in Study Area

3.5 NOISE ENVIRONMENT:

Table 3-10 Noise Analysis

Environmental Parameters: <i>Noise Analysis</i>	
Monitoring Period	June 2023 to August 2023
Design Criteria	Based on the Sensitivity of the area
Monitoring Locations	Project Site – N 1 Government High School, Muthali – N 2 Bhargavi Narasimha Swamy Temple, Berikai Road Sandarasettipalli – N 3 Govt.Hr Sec School,bukkasagaram – N 4 Midhitepalli Bus Stop – N 5 Garagamma Temple – Vanamangalam – N 6 Sri Ardhanareshwaramma Temple – Moranapalli – 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 3-11 Day Noise Level (Leq day)

Location	Leq day in dB(A)		
	Max	Min	Average
Project Site	56	47	51.6
Government High School, Muthali	65	54	59.6
Bhargavi Narasimha Swamy Temple, Berikai Road Sandarasettipalli	55	47	51.6
Govt.Hr Sec School,bukkasagaram	57	48	54.1
Midhitepalli Bus Stop	56	45	51.8
Garagamma Temple - Vanamangalam	61	50	56.4
Sri Ardhanareshwaramma Temple - Moranapalli	59	48	53.5

3.5.2 Night Noise Level (Leq Night)

Table 3-12 Night Noise Level (Leq Night)

Location	Leq Night in dB(A)		
	Max	Min	Average
Project Site	44	39	41.6
Government High School, Muthali	52	45	48.8

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Bhargavi Narasimha Swamy Temple, Berikai Road Sandarasettipalli	45	35	40.5
Govt.Hr Sec School,bukkasagaram	48	40	44.5
Midhitepalli Bus Stop	48	38	43.0
Garagamma Temple - Vanamangalam	51	43	47.1
Sri Ardhanareshwaramma Temple - Moranapalli	46	39	41.1

Observation:

The maximum Day noise and Night noise were found to be 65 dB(A) and 54 dB(A) respectively in Government High School, Muthali. The minimum Day Noise and Night noise were 44 dB(A) and 39 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.

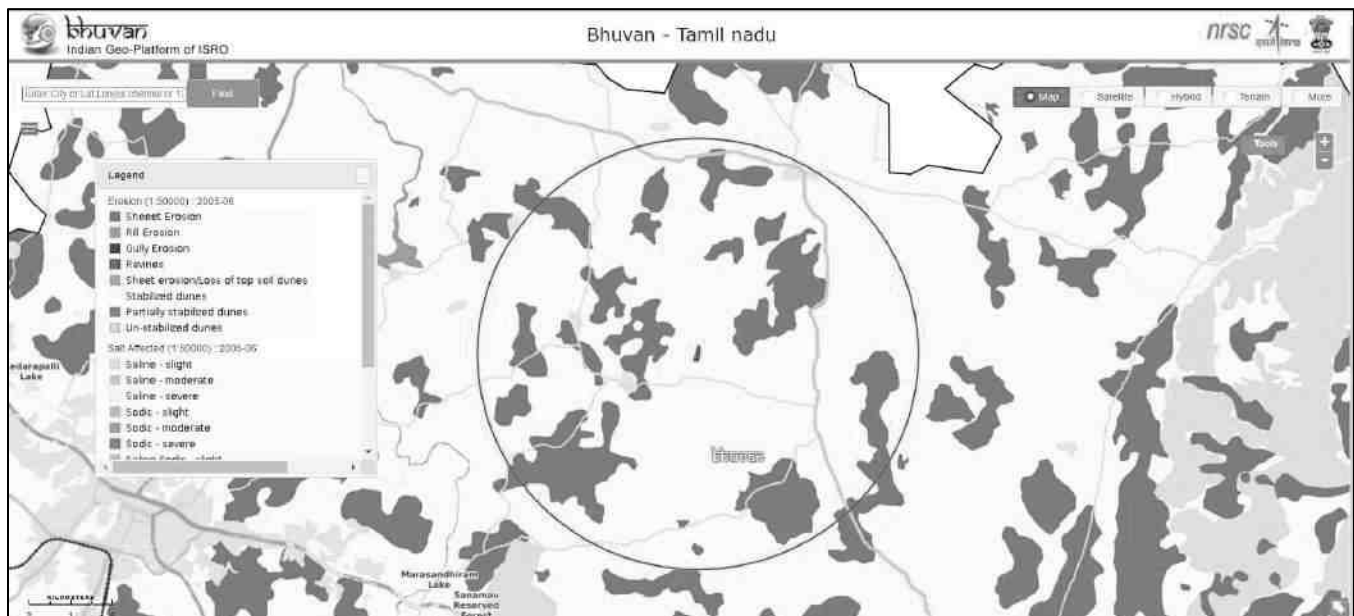


Figure 3.12 Soil Erosion pattern within 5 km radius of the project site

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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 3-13 Soil Quality Analysis

<i>Environmental Parameters: Soil Quality Analysis</i>	
Monitoring Period	June 2023 to August 2023
Design Criteria	Based on the environmental settings of the study area
Monitoring Locations	Project Site – SQ 1 Government High School, Muthali - SQ 2 Bhargavi Narasimha Swamy Temple, Berikai Road Sandarasettipalli - SQ 3 Govt.Hr Sec School,bukkasagaram - SQ 4 Midhitepalli Bus Stop - SQ 5 Garagamma Temple – Vanamangalam - SQ 6 Sri Ardhanreshwaramma Temple – Moranapalli - SQ 7
Methodology	Composite soil samples using sampling augers and field capacity apparatus
Frequency of Monitoring	Soil samples were collected from 7 locations Once in a season

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

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Table 3-14 Soil Quality Analysis

Parameters	Unit	SQ 1	SQ 2	SQ 3	SQ 4	SQ 5	SQ 6	SQ 7
pH	-	6.90	8.96	7.88	8.01	8.87	8.42	8.16
Electrical Conductivity	ms/cm	0.33	0.89	0.15	0.240	0.54	0.26	0.39
Water holding Capacity	ml/L	2.6	4.8	2.60	4.00	3.20	3.8	5.00
Chloride	mg/Kg	184	171	158	30.3	107	54	172
Calcium	mg/Kg	105	134	51.3	39.4	69.7	43.7	46
Sodium	mg/Kg	485	685	440	340	452	529	420
Potassium	mg/Kg	519	702	492	310	485	563	390
Organic matter	%	0.49	0.83	0.11	0.68	0.21	0.61	0.42
Magnesium	mg/Kg	21.6	30.5	26.5	12.6	30.2	16.5	14
Sulphate	mg/Kg	118	206	277	274	159	226	151
CEC	meq/100g	10.6	15.2	11.1	9.8	13.5	11.6	13.1
Carbonate	mg/Kg	NIL	73.6	NIL	NIL	16.5	8.04	NIL
Bi-Carbonate	mg/Kg	95.2	399	78.9	63.2	126	245	23.1
TKN	%	0.18	0.14	0.16	0.06	0.09	0.22	0.18
Bulk density	g/cm ³	1.42	1.23	1.34	1.41	1.29	1.16	1.19
Phosphorous	mg/Kg	148	256	157	176	109	178	229
Sand	%	66.7	68.8	64.3	64.3	56.3	55	66.7
Clay	%	13.3	18.8	14.3	14.3	18.8	20	20.0
Silt	%	20	12.5	21.4	21.4	25.0	25	13.3
SAR	meq/Kg	11.3	13.9	12.4	12.1	11.4	17.3	13.9
silicon	%	0.092	0.105	0.098	0.099	0.092	0.089	0.085

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

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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 1.42 meq/100g which indicates favorable physical condition for plant growth. The water holding capacity was found in the range of 2.6 ml/1 to 5.0 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 6.90 to 8.96, 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 0.11 to 0.83 %, 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.
- 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.

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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-centred 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 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 quadrats 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.

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

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

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Table 3-16 Tree Species in the core Zone

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

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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 3-17 Shrubs in the Core Zone

S. No.	Scientific Name	Local Name	Total No. of species	Total of Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Relative			IUCN Conservation Status
									Density	Density	Frequency	
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

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3	Tabernaemontanadivaricata	Crepe Jasmine	4	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
4	Catharanthus roseus	Nithyakalyani	4	3	24	0.13	0.13	1	1.55	3.03	Not Assessed
5	Datura metal	Ummattangani	7	4	24	0.21	0.17	1.25	2.58	4.04	Not Assessed
6	Robiniapseudoacacia	Black locust	15	5	24	0.71	0.21	3.4	8.76	5.05	Least Concern
7	Acalypha indica	Kuppaimeni	18	8	24	0.83	0.33	2.5	10.31	8.08	Not Assessed
8	Stachytarpheaurticifolia	Rat tail	13	9	24	0.63	0.38	1.67	7.73	9.09	Not Assessed
9	Woodfordiafruticosa	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 3-18 Herbs & Grasses in the core zone

S. No.	Scientific Name	Local Name	Total No. of species	Total of Quadrants with species	Total No. of Quadrants	Density	Frequency (%)	Abundance	Relative Density	Relative Frequency	IUCN Conservation status
1	Helicteresisora	Valampuri	4	2	30	0.07	0.07	1	0.79	2.15	Not assessed
2	Tridax procumbens	Vettukaayathalai	7	4	30	0.17	0.13	1.25	1.98	4.30	Not assessed
3	Heraculem spondylium	Hog Weed	19	10	30	0.67	0.33	2	7.94	10.75	Not assessed
4	Tridax procumbens	Cuminipachai	18	4	30	0.50	0.13	3.75	5.95	4.30	Not assessed
5	Senna occidentalis	Nattamsakarai	30	4	30	0.83	0.13	6.25	9.92	4.30	Not assessed
6	Plumbago zeylanica	Chittiramoolam	12	3	30	0.10	0.10	1	1.19	3.23	Not assessed
7	Scrophularia nodosa	Sarakkothini	18	7	30	0.50	0.23	2.14	5.95	7.53	Not assessed

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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 3-19 Calculation of species diversity

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

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

i. Species Diversity

Scientific Name	Common Name	No. of Species	Pi	ln (Pi)	Pi x ln (Pi)
Ficus Carica	Athi Maram	2	0.018182	-4.00733	-0.07286
Cocos nucifera	Thennai	10	0.090909	-2.3979	-0.21799
Azadirachta indica	Veppam	17	0.154545	-1.86727	-0.28858
Tamarindus indica	Puli	10	0.090909	-2.3979	-0.21799
Mangifera indica	Mamaram	7	0.063636	-2.75457	-0.17529
Morinda pubescens	Nuna	6	0.054545	-2.90872	-0.15866
Couroupita guianensis	Nagalingam	5	0.045455	-3.09104	-0.1405
Bombax ceiba	Sittan	4	0.036364	-3.31419	-0.12052
Acacia nilotica	Karuvelai	4	0.036364	-3.31419	-0.12052

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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
Woodfordiafruticosa	Velakkai	4	0.022989	-3.77276	-0.08673
Hibiscus rosa sinensis	Sembaruthi	3	0.017241	-4.06044	-0.07001
Lantana camara	Unnichi	8	0.045977	-3.07961	-0.14159
Parthenium hysterophorous	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

Herbs

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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.

3.7.6 Floral study in the Buffer Zone:

Economically important Flora of the study area

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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 3-20 List of fauna species

Scientific Name	Common Name	Schedule of wild life protection act	IUCN conservation status
Mammals			
Funambulus pennanti	Palm Squirrel	IV	Least Concern
Mus rattus	Indian rat	IV	Not listed
Bandicota bengalensis	Indian mole rat	IV	Least Concern
Funambulus palmarum	Three striped palm squirrel	IV	Least Concern
Herestes edwardsii	Common Mongoose	IV	Not listed
Mus musculus	Common Mouse	IV	Least Concern
Bandicota indica	Rat	IV	Least Concern
Lepus nigricollis	Indian Hare	IV	Least Concern
Felis catus	Cat	Not listed	Not listed
Canis lupus familiaris	Indian dog	Not listed	Not listed
Bos Indicus	Indian Cow	Not listed	Not listed
Bubalus bubalis	Buffalo	I	Not listed

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Sus scrofa domesticus	Domestic pig	Not listed	Not listed
Birds			
Milvus migrans	Black kite	IV	Least concern
Saxicoloides fulvicatus	Indian Robin	IV	Least concern
Pycnonotus cafer	Red vented Bulbul	IV	Least concern
Phragamaticola aedon	Thick billed warbler	IV	Least concern
Pericrocotus cinnamomeus	Small Minivet	IV	Least concern
Eudynamys scolopaceus	Koel	IV	Least concern
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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5	Kumbalam	164	761	394	367	254	159	0	95
6	Athimugam	937	4540	2339	2201	1317	980	334	17
7	Midithepalli	650	2873	1484	1389	960	695	583	0
8	Advanapalli	58	239	123	116	75	50	1	0
9	Sudugondapalli	87	447	229	218	128	89	95	0
10	Palavanapalli	258	1096	540	556	349	288	370	0
11	Nandimangalam	591	2602	1314	1288	797	609	713	0
12	Pathamuthali	205	967	499	468	275	198	392	0
13	Muthalli	108	444	223	221	132	90	130	0
14	Dhasapalli	152	894	443	451	202	161	1	0
15	Alur	678	3018	1569	1449	1058	736	178	5
16	Bukkasagaram	460	2126	1109	1017	742	471	319	0
17	Doripalli	852	3681	1898	1783	1165	848	596	0
18	A.Settipalli	605	2764	1428	1336	960	635	509	11
19	Moranapalli	2174	9160	4855	4305	3403	2439	1503	13
20	Maruthanapalli	1093	4816	2532	2284	1547	1054	422	0
21	Shoolagiri	2101	9530	4788	4742	3480	2923	1487	0
22	Onalvadi	1607	6656	3411	3245	2475	1968	1360	0
23	Sanamavu	925	4248	2182	2066	1487	1062	659	183
24	Halekotta	707	2990	1535	1455	1071	760	209	83
25	Samanapalli	721	3198	1635	1563	922	730	304	0

3.9 TRAFFIC IMPACT ASSESSMENT

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

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Figure 3.14: Site Connectivity

Table 3-22: No. of Vehicles per Day

S. No	Vehicles Distribution	Number of Vehicles Distribution/Day	Passenger Car Unit (PCU)	Total Number of Vehicle in PCU
		MDR	-	MDR
1	Cars	831	1	831
2	Buses	249	3	747
3	Trucks	352	3	1056
4	Two wheelers	946	0.5	473
5	Three wheelers	490	1.5	735
	Total	2868	-	3842

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Table 3-23: Existing Traffic Scenario and LOS

Road	V (Volume in PCU/hr)	C (Capacity in PCU/hr)	Existing V/C Ratio	LOS
MDR-422	3842/24=160.08	413	0.387	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 1.86.50 Ha mine located in Midithepalli Village having 3,33,729 m³ of Rough Stone & 33,210m³ of Gravel respectively for the period of Ten years. 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 10 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;">300.0</td> <td style="text-align: center;">55.0</td> <td style="text-align: center;">39.0</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	300.0	55.0	39.0	<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 1000 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 2.0m of Gravel and the estimated quantity of Gravel is 33210m³. Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy</p>
ULTIMATE PIT DIMENSION																	
Section	Bench	L (m)	W (m)	D (m)													
PIT	I	300.0	55.0	39.0													

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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>buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.</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 869m 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 39.0m (2m AGL + 37 BGL), whereas the ground water table is at 66m 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 66m 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 1000 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 Venkatesapuram village road.</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 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 are typically include dust collectors, hot water heaters, and emergency generator(s). Since at the present project the following sources are anticipated.

1. Hydraulic excavator –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 December 2022 to February 2023 emissions were estimated. Emissions due to haul road and general plant traffic on the unpaved road network were

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modelled as volume sources. The model volume source parameter for the haul roads initially utilized USEPA developed emission factors for hauling trucking. The haul road sources utilized source to source spacing of 6 meters along the simulated haul roads. The initial lateral dimension of the sources were set to 3 m were used as an input to replicated a 2 truck travel adjacent for a typical mining scenario. The parameters considered for the hauling operation include the following,

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

Other fugitive particulate emission sources:

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

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

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the 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 collate which may result in unwanted sound and can also cause impact on human health like breathing and respiratory system, damage to lung tissue, influenza or asthma.</p>	<ul style="list-style-type: none"> • The machinery will be maintained in good running condition so that noise will be reduced to minimum possible level. • Awareness will be imparted to the workers once in six months about the permissible noise level and effect of maximum exposure to those levels. Adequate silencers will be provided in all the diesel engines of vehicles. • It will be ensured that all transportation vehicles carry a valid PUC Certificates. • Speed of trucks entering or leaving the mine will be limited to moderate speed (20km/hr) to prevent undue noise from empty vehicles. <p>The noise generated by the machinery will be reduced by proper lubrication of the machinery and other equipments.</p> <ul style="list-style-type: none"> • It is proposed to plant 1000 Nos. of native species (Neem, Mandharai, Athi, Tamarind,

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		<p>Ashoka, Casuarinas and Villam) to reduce the impact of noise in the study area. The development of green belts around the periphery of the mine will be implemented to attenuate noise.</p> <ul style="list-style-type: none"> • The trucks will be diverted on two roads viz. Venkatesapuram village road 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

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		juliflora were present.
Planting of trees	Development of afforestation in the mine lease area will have a positive impact as the land was initially a barren.	10 m safety distance will be provided all along the boundary of the mine lease area and safety. Around 0.39.5 Ha of land is utilized for greenbelt development (1000 Nos – 10 years). This will attract avifauna thus enhancing the existing ecological environment.

4.7 SOCIO ECONOMIC ENVIRONMENT:

Aspect	Impact	Mitigation Measures
Proposed implementation of Mining activity	Land acquisition for the implementation of the project may result in loss of assets, which in return will make the PAP to shift, losing their normal routine and livelihood	The proposed project is a Patta land and the land is vacant where there are no human settlement within 300m radius. Hence the project does not involve Rehabilitation and resettlement
Drilling, Blasting, Loading and Transportation of the mined out mineral	The mining activities may cause dust emission, noise pollution thereby causing disturbance to the local habitat	No human activity is envisaged near the project site. The nearest human settlement is observed in Midithepalli village which is 1.70 Km from site

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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 movement of the vehicles may affect/injure the animals	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.
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 to Government High School, Venkatesapuram – Provision of To construct Toilet and Auditorium, To provide Sports equipments, Wire fence to playground and Basic amenities such as Environmental awareness books (Tamil) in Library for students, Green Belt development, Hygienic Toilet and maintenance of toilet upto lease period.

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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. 9962/ ToR-1486/2023 Dated: 22.06.2023. 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 Midithepalli 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 Midithepalli village which is 1.70 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	<ul style="list-style-type: none"> • Project site • Government High School, Muthali • Bhargavi Narasimha Swamy Temple,

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NO _x		24 hourly, twice a week	<ul style="list-style-type: none"> • Govt.Hr Sec School, bukkasagaram • Midhitepalli Bus Stop • Garagamma Temple - Vanamangalam • Sri Ardhanareshwaramma Temple - Moranapalli
Noise	7 locations	24 hourly Once in 7 locations	<ul style="list-style-type: none"> • Project site • Government High School, Muthali • Bhargavi Narasimha Swamy Temple, • Govt.Hr Sec School, bukkasagaram • Midhitepalli Bus Stop • Garagamma Temple - Vanamangalam • Sri Ardhanareshwaramma Temple - Moranapalli
Water (Ground water) <ul style="list-style-type: none"> • pH • Temperature • Turbidity • Magnesium Hardness • Total Alkalinity • Chloride • Sulphate • Fluoride • Nitrate • Sodium 	7 locations	Once in 7 locations	<ul style="list-style-type: none"> • Project site • Government High School, Muthali • Bhargavi Narasimha Swamy Temple, • Govt.Hr Sec School, bukkasagaram • Midhitepalli Bus Stop • Garagamma Temple - Vanamangalam

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<ul style="list-style-type: none"> • Potassium • Salinity • Total nitrogen • Total Coliforms • Fecal Coliforms 			<ul style="list-style-type: none"> • Sri Ardhanareshwaramma Temple - Moranapalli
<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. Bukkasagaram Lake – 4.45 km, S</p>
<p>Soil (Organic matter, Texture, pH, Electrical Conductivity, Permeability, Water holding capacity, Porosity)</p>	<p>7 locations</p>	<p>Once in 7 locations</p>	<ul style="list-style-type: none"> • Project site • Government High School, Muthali • Bhargavi Narasimha Swamy Temple, • Govt.Hr Sec School, bukkasagaram • Midhitepalli Bus Stop • Garagamma Temple - Vanamangalam

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			• Sri Ardhanareshwaramma Temple - Moranapalli
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	

Table 6-2: Monitoring Schedule during Mining

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

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		Permeability, Water holding capacity, Porosity)		
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. Thiru.D.Sreenivasalu – 3.17.08 Ha
2. Thiru.Venkatareddy – 2.05.92 Ha

Expired/ Old quarries:

1. M/s. Sarva Infra Pvt Ltd – 4.05.0 Ha

Proposed Quarries:

1. Thiru.B.Srikar – 1.86.50 Ha

The Total extent of the Existing / Proposed quarries are 11.14.50 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 0.87 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 1 No. of 10 M.T capacity (from quarry to needy peoples and local crushers)

a. Risk:

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

b. Mitigation measures to minimize the risk

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

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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:

To construct Toilet and Auditorium, Provide Sports equipments, Wire fence to playground and Basic amenities such as Environmental awareness books (Tamil) in Library for students, Green Belt development, Hygienic Toilet and maintenance of toilet upto lease period to Government High School, Venkatesapuram.

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8.3 PROJECT COST / INVESTMENT DETAILS

1	<p><u>D. Fixed Asset Cost:</u></p> <ul style="list-style-type: none"> • Land Cost : Rs. 18,00,000/- • Labour Shed : Rs. 1,20,000/- • Sanitary Facility : Rs. 80,000/- • Refilling/Fencing cost : Rs. 1,00,000/- Total= : Rs.21,00,000/- 	
2	<p><u>E. Operational Cost:</u> : Rs.30,00,000/-</p> <p><u>Machinery cost</u></p>	
3	<p><u>F. EMP Cost:</u></p> <p>Display board in site; : Rs. 1,32,48,533/- for the period of 10</p> <p>Monitoring-Air, Water, : (Ten) years.</p> <p>Noise; Dust Supression - : </p> <p>Water sprinkling by own : </p> <p>water tankers; Vehicle : </p> <p>Tyres Wash; Green Belt : </p> <p>Development; Road : </p> <p>Development & : </p> <p>Management; : </p> <p>Occupational Health and : </p> <p>Safety; Solid Waste : </p> <p>Management; Strom : </p> <p>Water; Renewable Energy, : </p> <p>CCTV Installation, Salary : </p> <p>for mines manager and : </p> <p>blaster</p>	
	Total Project Cost(A+B) : Rs. 51,00,000/-	

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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, Thiru.B. Srikar 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

	Mitigation Measure	Provision for Implementation	Capital	Recurring
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	Rental Dozer & drainage construction on haul road @ Rs. 10,000/- per hectare; and yearly maintenance @ Rs. 10,000/- per hectare	18650	18650
	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	Fixed Sprinkler Installation and New Water Tanker Cost for Capital; and Water Sprinkling (thrice a day) Cost for recurring	200000	25000
	Air Quality will be regularly monitored as per norms within ML area & near Reserve forest with necessary permission	Yearly Compliance as per CPCB norms	0	40000
	Muffle blasting – To control fly rocks during blasting	Blasting face will be covered with sand bags / steel mesh / old tyres / used conveyor belts	0	0
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	Dust extractor @ Rs. 25,000/- per unit deployed as capital & @ Rs. 2500 per unit recurring cost for maintenance	25000	2500
	No overloading of trucks/tippers/tractors	Manual Monitoring through Security guard	0	5000
	Stone carrying trucks will be covered by tarpaulin	Monitoring if trucks will be covered by tarpaulin	0	10000
	Enforcing speed limits of 20 km/hr within ML area	Installation of Speed Governors @ Rs. 5000/- per Tipper/Dumper deployed	5000	0
	Regular monitoring of exhaust fumes as per RTO norms	Monitoring of Exhaust Fumes by Manual Labour	0	5000

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	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	Provision for 2 labours @ Rs.10,000/labour (Contractual) per Hectare	0	37300
	Installing wheel wash system near gate of quarry	Installation + Maintenance + Supervision	30000	10000
Noise Environment	Source of noise will be during operation of transportation vehicles, HEMM for this proper maintenance will be done at regular intervals.	Provision made in Operating Cost	0	0
	Oiling & greasing of Transport vehicles and HEMM at regular interval will be done	Provision made in Operating Cost	0	0
	Adequate silencers will be provided in all the diesel engines of vehicles.	Provision made in Operating Cost	0	0
	It will be ensured that all transportation vehicles carry a fitness certificate.	Provision made in Operating Cost	0	0
	Safety tools and implements that are required will be kept adequately near blasting site at the time of charging.	Provision made in OHS part	0	0
	Ambient Noise will be regularly monitored as per norms within ML area & near Reserve forest with necessary permission	Yearly Compliance as per CPCB norms	0	20000

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	Line Drilling all along the boundary to reduce the PPV from blasting activity and implementing controlled blasting.	Provision made in Operating Cost	0	0
	Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.	Blowing Whistle by Mining Mate / Blaster / Compentent Person	0	0
	Provision for Portable blaster shed	Installation of Portable blasting shelter	30000	2000
	NONEL Blasting will be practiced to control Ground vibration and fly rocks	Rs. 30/- per 6 Tonnes of Blasted Material	0	100000
Water Environment	Water Environment	Provision for garland drain @ Rs.10,000/- per Ha with maintenance of Rs.5,000/- per annum	18650	5000
Waste Management	Waste management (Spent Oil, Grease etc.,)	Provision for domestic waste collection and disposal through authorized agency	1000	5000
		Installation of dust bins	5000	2000
	Bio toilets will be made available outside mine lease on the land of owner itself	Provision made in Operating Cost	0	0
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	Fixed Display Board at the Quarry Entrance as permanent structure mentioning Environmental Conditions	7000	1000
	Workers will be provided with Personal Protective Equipment's	Provision of PPE @ Rs. 4000/- per employee with recurring based on wear and tear (say, @ Rs. 1000/- per employee)	64000	16000

Project	Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar	Draft EIA Report
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	Health check up for workers will be provisioned	IME & PME Health check up @ Rs. 1000/- per employee	0	16000
	First aid facility will be provided	Provision of 2 Kits per Hectare @ Rs. 2000/-	0	3730
	Mine will have safety precaution signages, boards.	Provision for signages and boards made	10000	2000
	Barbed Wire Fencing to quarry area will be provisioned.	Per Hectare fencing Cost @ Rs. 2,00,000/- with Maintenance of Rs 10,000/- per annum	373000	10000
	No parking will be provided on the transport routes. Separate provision on the south side of the hill will be made for vehicles /HEMMs. Flaggers will be deployed for traffic management	Parking area with shelter and flags @ Rs. 50,000/- per hectare project and Rs. 10,000/- as maintenance cost	93250	10000
	Installation of CCTV cameras in the mines and mine entrance	Camera 4 Nos, DVR, Monitor with internet facility	2000	5000
	Implementation as per Mining Plan and ensure safe quarry working	Mines Manager (1 st Class / 2 nd Class / Mine Foreman) under regulation 34 / 34 (6) of MMR, 1961 and Mining Mate under regulation 116 of MMR,1961 @ 40,000/- for Manager & @ 25,000/- for Foreman / Mate	0	540000
Green Belt Development	Green belt development - 500 trees per one hectare (200 Inside Lease Area & 300 Outside Lease Area)	Site clearance, preparation of land, digging of pits / trenches, soil amendments, transplantation of saplings @ 200 per plant (capital) for plantation inside the lease area and @ 30 per plant maintenance (recurring)	74600	11190

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	Avenue Plantation @ 300 per plant (capital) for plantation outside the lease area and @ 30 per plant maintenance (recurring)	167850	16785
Total		1125000	919155
Grand Total Cost (Rs.)		2044155	

Year	Cost (@ 5% per year inflation adjustment) in Rs.
1st Year	2044155
2nd Year	965113
3rd Year	1013368
4th Year	1064037
5th Year	1117239
6th Year	1735601
7th Year	1231756
8th Year	1293343
9th Year	1358011
10th Year	1425911
Total	13248533/-

Total EMP cost for the period of Ten years: - **Rs. 1,32,48,533/-** (One crore thirty two lakhs forty-eight thousand thirty-three rupees only).

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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

Thiru.B.Srikar site is a cluster of six mining projects. The individual mine lease area is 1.86.50 Ha of Rough Stone Quarry located at S.F.Nos. 79 of Midithepalli Village, Shoolagiri Taluk in Krishnagiri District.

10.2 PROJECT OVERVIEW

Table 10-1: Project Overview

S. No.	Description	Details
1	Project Name	Rough Stone and Gravel Quarry-1.86.50 Ha
2	Proponent	Thiru.B.Srikar
3	Mining Lease Area Extent	1.86.50 Ha
4	Location	S.F.Nos. 79 Midithepalli Village, Shoolagiri Taluk, Krishnagiri District.
5	Latitude	12° 46' 01.9743"N to 12° 45' 52.1189"N
6	Longitude	77° 57' 03.0289"E to 77° 56' 59.2536"E
7	Topography	Gently Sloping Terrain
8	Site Elevation above MSL	The altitude of the area is 869m above MSL.
9	Topo sheet No.	57- H/13
10	Minerals of Mine	Rough Stone and Gravel Quarry
11	Proposed production of Mine	33,210m ³ of Gravel and 3,33,729m ³ of Rough stone for Ten years only.
12	Ultimate depth of Mining	39 m (2m gravel + 37 m Rough stone)
13	Method of Mining	Open cast, mechanized mining
14	Water demand	2.0 KLD

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15	Source of water	Water will be supplied through tankers supply
16	Manpower	16 Nos.
17	Mining Lease	Precise Area Communication Letter received from Deputy Director, Dept. of Geology & Mining, Krishnagiri vide letter Rc.No.646/2021 Mines Dated 31.01.2023.
18	Mining Plan Approval	Mining Plan was approved by the Deputy Director, Dept. of Geology & Mining, Krishnagiri vide letter Rc.No.646/2021 Mines Dated 17.02.2023
19	Production details	Geological resources: 7,65,140m ³ Proposed year wise recoverable reserves: 33,210m ³ of Gravel and 3,33,729m ³ of Rough stone for Ten years only
20	Boundary Fencing	10 m barrier all along the boundary Fencing will be provided.
21	Disposal of overburden	The entire lease area is covered 2.0m of Gravel and the estimated quantity of Gravel is 33210m ³ . Gravel formation will be removed, and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.
22	Ground water	The ground water table is reported as 66m below ground level in nearby wells of this area. Mining depth taken as 39m. Now,

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

		proposed quarry depth is above the water table. Hence, quarrying may not affect the ground water.
23	Habitations within 300m radius of the Project Site	There is no Habitation within 300m radius of the project site.
24	Drinking water	Water will be supplied through tankers from Midithepalli village which is 1.70 Km – Northeast 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.

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.

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.B.Srikar</i>	
<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

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

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

		<p>Noise generated by these equipments shall be intermittent and does not cause much adverse impact.</p> <p>Plantation will be carried out along approach roads. The plantation minimizes propagation of noise and also arrest dust.</p>
4	Solid waste will be generated from the mining activity as there will be refuse after 95% recovery and also generation of domestic waste	<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>
5	During mining activities, there are chances of workers getting health issues or may be prone to accidents	<p>Dust masks will be provided as additional personal protection equipment to the workers working in the dust prone area.</p> <p>Periodical trainings will be conducted to create awareness about the occupational health hazards due to activities like blasting, drilling, excavation</p> <p>Workers health related problem if any, will be properly addressed.</p>

<i>Project</i>	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.B.Srikar</i>	
<i>Project Location</i>	<i>Midithepalli Village, Shoolagiri 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.

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

Declaration by Experts contributing to the EIA of Rough Stone and Gravel Quarry- 1.86.50 Ha by Thiru.B.Srikar, S.F.No. 79 of Midithepalli Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu State

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

EIA Coordinator: Dr. A. Dhamodharan




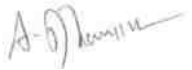


Dr. A. DHAMODHARAN
(NABET APPROVED EIA COORDINATOR)
NABET/EIA/2124/SA 0147
Environmental Consultant
Eco Tech Labs Pvt. Ltd
 Plot No.48A, 2nd Main Road, Ram Nagar South Extn.
 Pallikaranai, Chennai - 600 100.

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




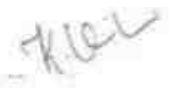
Project	<i>Rough stone Quarry- 1.86.50 Ha by Thiru.B.Srikar</i>	Draft EIA Report
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Project Location	<i>Midithepalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

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>Period: December 2021 – Till now</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>Period: December 2021 – Till now</p>	
3	SHW	Dr. A. Dhamodharan	<p>1. Identification of nature of solid waste generated</p> <p>2. Categorization of the generated waste and estimating the quantity of waste to be generated based on the per capita basis. Identification of impacts of SHW on Environment</p> <p>3. Suggesting suitable mitigation measures by recommending appropriate disposal method for each category of waste generated</p> <p>4. Top soil and refuse management</p> <p>Period: December 2021 – Till now</p>	
4	SE	Mr. S. Pandian	<p>1. Primary data collection through the census questionnaire</p> <p>2. Obtaining Secondary data from authenticated sources and incorporating the same in EIA report.</p>	

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			<p>3. Impact assessment & proposing suitable mitigation plan</p> <p>4. CSR budget allocation by discussing with the local body and allotting the same for need based activity.</p> <p>Period: December 2021 – Till now</p> <p>*Involves Public Hearing</p>	
5	EB	Dr. A. Dhamodharan	<p>1.Primary data collection through field survey and sheet observation for ecology and biodiversity</p> <p>2.Secondary Collection through various authenticated sources</p> <p>3.Prediction of anticipated impacts and suggesting appropriate mitigation measures.</p> <p>Period: December 2021 – Till now</p>	
6	HG	Dr. T. P. Natesan	<p>1. Study of existing surface drainage arrangements in the core and buffer zone, impact due to mining on these drainage courses and suggestion of mitigative measures</p> <p>2. Determination of groundwater use pattern, development of rainwater harvesting program. Storm water management through garland drainage system.</p> <p>Period: December 2021 – Till now</p>	
7	GEO	Dr. T. P. Natesan	<p>1. Field survey for assessing regional and local geology, aquifer distribution, Determination of groundwater use pattern, development of rainwater harvesting program.</p> <p>Period: December 2021 – Till now</p>	
8	SC	Dr. A. Dhamodharan	<p>1. Interpretation of baseline report</p> <p>2. Identification of possible impacts on soil, prediction of soil conservation and suggesting suitable mitigation measures.</p> <p>Period: December 2021 – Till now</p>	

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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. <p>Period: December 2021 – Till now</p>	
10	NV	Mrs. K. Vijayalakshmi	<ol style="list-style-type: none"> 1. Selection of monitoring locations 2. Interpretation of baseline data 3. Prediction of impacts due to noise pollution and suggestion of appropriate mitigation measures <p>Period: May 2022 – Till now</p>	
11	LU	Dr. T. P. Natesan	<ol style="list-style-type: none"> 1. Collection of Remote sensing satellite data to study the land use pattern. 2. Primary field survey and limited field verification for land categorization in the study area 3. Preparation of Land use map using Satellite data for 10km radius around the project site. <p>Period: December 2021 – Till now</p>	
12	RH	Mrs. K. Vijayalakshmi	<ol style="list-style-type: none"> 1. Identification of the risk 2. Interpreting consequence contours 3. Suggesting risk mitigation measures <p>Period: December 2021 – Till now</p>	

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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. 79 Midithepalli Village, Shoolagiri 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-TAMILNADU
3rd Floor, Panagal Maaligai,
No.1, Jeenis Road, Saidapet,
Chennai - 600 015.
Phone No. 044-24359973
Fax No. 044-24359975

TERMS OF REFERENCE (ToR)

Lr No.SEIAA-TN/F.No.9962/ToR- 1486/2023 Dated: 22.06.2023.

To


Thiru.B.Srikar,
S/o. Bharathy,
D.No.25, Shanthi nagar west,
2nd cross,
Hosur Taluk,
Krishnagiri-635109

Sir / Madam,

Sub: SEIAA, Tamil Nadu – Terms of Reference with public Hearing (ToR) for the Proposed Rough Stone & Gravel quarry over an extent of 1.86.50 Ha in S.F.No. 79 of Midithepalli Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu by Thiru.B.Srikar- under project category – “B1” and Schedule S.No.1 (a) – ToR issued along with Public Hearing - preparation of EIA report – Regarding.

- Ref:**
1. Online proposal No.SIA/TN/MIN/424319/2023, dated: 31.03.2023.
 2. Your application submitted for Terms of Reference dated: 06.04.2023.
 3. Minutes of the 382nd SEAC meeting held on 09.06.2023.
 4. Minutes of the 632nd Authority meeting held on 21.06.2023 & 22.06.2023.

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


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SEIAA-TN

The proponent, Thiru. B.Srikar has submitted application for Terms of Reference (ToR), for the Proposed Rough Stone & Gravel quarry over an extent of 1.86.50 Ha in S.F.No. 79 of Midithepalli Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu.

SEAC Remarks: -


The proposal was placed in this 382nd Meeting of SEAC held on 09.06.2023. The project proponent gave detailed presentation. The details of the project furnished by the proponent are available in the website (parivesh.nic.in).

The SEAC noted the following:

1. The project proponent, Thiru. B. Srikar has applied for Terms of Reference for the Proposed Rough Stone & Gravel quarry over an extent of 1.86.50 Ha in S.F.No. 79 of Midithepalli Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu
2. The project/activity is covered under Category "B1" of Item 1(a) "Mining of Mineral Projects" of the Schedule to the EIA Notification, 2006.
3. As per mining plan, the lease period is for 10 years. The mining plan is for 10 years & production should not exceed 2,24,329m³ of Rough Stone & 33,210m³ of Gravel for the first five years and 1,09,400 m³ of Rough Stone for second five years. The annual peak production 75,579m³ of Rough Stone & 33,210m³ of Gravel. The ultimate depth of mining is 39 BGL (2m – Gravel + 37m – Rough Stone).

Now, the proposal was placed in the 382nd Meeting of SEAC held on 09.06.2023. Based on the presentation made by the proponent SEAC recommended grant of Terms of Reference (TOR) with Public Hearing, subject to the following TORs, in addition to the standard terms of reference for EIA study for non-coal mining projects and details issued by the MOEF & CC to be included in EIA/EMP Report:

1. The proponent is requested to submit the valid registered lease document during the EIA appraisal after the previous lease granted for the mining operations is legally surrendered (or) lapsed with the consent of the competent authority.
2. The proponent is requested to carry out a survey and enumerate on the structures located within 100m, 200m, 300m from the boundary of the mine lease area.


MEMBER SECRETARY
SEIAA-TN

3. 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.
4. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Necessary data and documentation in this regard may be provided.
5. The proponent shall submit the "Blast Design Parameters for controlling the vibration and flyrock from the quarry blasting" considering the existence of sensitive structures including habitations within 1 km from the lease boundary.
6. The PP shall submit a 'Slope Stability Action Plan' for the proposed quarry where the proposed depth exceeds 30 m and it shall cover the aspects of stability of quarry walls including the access ramp keeping the benches intact.
7. The PP shall furnish DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., upto a radius of 25 km from the proposed site.
8. The PP shall provide individual notice regarding the Public Hearing to the nearby house owners located in the vicinity of the project site.
9. If the blasting operation is to be carried out, the PP shall present a conceptual design for carrying out the NONEL initiation based controlled blasting operation only including the line drilling & muffle blasting techniques and a Simulation Model indicating the anticipated Blast-induced Ground Vibration levels in the proposed quarry as stipulated by the DGMS Circular No.7 of 1997, during the EIA Proposal.
10. Details of Green belt & fencing shall be included in the EIA Report.
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,


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- a) What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?
 - b) Quantity of minerals mined out.
 - c) Highest production achieved in any one year
 - d) Detail of approved depth of mining.
 - e) Actual depth of the mining achieved earlier.
 - f) Name of the person already mined in that leases area.
 - g) If EC and CTO already obtained, the copy of the same shall be submitted.
 - h) Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.
13. 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).
14. The PP shall carry out Drone video survey covering the cluster, Green belt, fencing etc.,
15. The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment and the remedial measures for the same.
16. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.
17. The 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.
18. 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.


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19. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.
20. 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.
21. 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.
22. 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.
23. 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.
24. Impact on local transport infrastructure due to the Project should be indicated.
25. 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.
26. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.
27. Public Hearing points raised and commitments 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 and to be submitted to SEIAA/SEAC with regard to the Office Memorandum of MoEF& CC accordingly.
28. The Public hearing advertisement shall be published in one major National daily and one most circulated vernacular daily.
29. The PP shall produce/display the EIA report, Executive summary and other related information with respect to public hearing in Tamil Language also.


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30. 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.
31. 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.
32. Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark 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
33. 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.
34. 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.
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. 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.
38. Details of litigation pending against the project, if any, with direction /order passed by any


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- Court of Law against the Project should be given.
39. 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.
40. 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.
41. 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.
42. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.

Appendix -I

List of Native Trees Suggested for Planting

1. *Aeglemarmelos*–Vilvam
2. *Adenaantherapavonina*-Manjadi
3. *Albizialebeck*–Vaagai
4. *Albiziaamara*-Usil
5. *Bauhinia purpurea* - Mantharai
6. *Bauhinia racemosa* - Aathi
7. *Bauhinia tomentosa*–Iruvathi
8. *Buchananiaaillaris*-Kattuma
9. *Borassusflabellifer*- Panai
10. *Buteamonosperma* - Murukkamaram
11. *Bobaxceiba*– Ilavu, Sevvilavu
12. *Calophylluminophyllum* - Punnai
13. *Cassia fistula*- Sarakondrai
14. *Cassia roxburghii*- Sengondrai
15. *Chloroxylonsweitenia* - Purasamaram
16. *Cochlospermumreligiosum*– Kongu, Manjallavu


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17. *Cordiadichotoma*- Mookuchalimaram
18. *Cretevaadansonii*-Mavalingum
19. *Dilleniaindica*- Uva, Uzha
20. *Dilleniapentagyna*- SiruUva, Sitruzha
21. *Diospyrosebenum*- Karungali
22. *Diospyroschloroxylon*- Vaganai
23. *Ficusamplissima*- Kalltchi
24. *Hibiscus tiliaceous*-Aatrupoovarasu
25. *Hardwickiabinata*- Aacha
26. *Holopteliaintegrifolia*-Aayili
27. *Lanneacoromandelica* - Odhiam
28. *Lagerstroemia speciosa* - Poo Marudhu
29. *Lepisanthustetraphylla*- Neikottaimaram
30. *Limoniaacidissima* - Vila maram
31. *Litseaglutinosa*-Pisinpattai
32. *Madhucalongifolia* - Illuppai
33. *Manilkarahexandra*-UlakkaiPaalai
34. *Mimusopselengi* - Magizhamaram
35. *Mitragynaparvifolia* - Kadambu
36. *Morindapubescens*-Nuna
37. *Morindacitrifolia*- VellaiNuna
38. *Phoenix sylvestre*-Eachai
39. *Pongamiapinnata*-Pungam
40. *Premnamollissima*- Munnai
41. *Premnaserratifolia*- Narumunnai
42. *Premnatomentosa*-PurangaiNaari, PudangaNaari
43. *Prosopiscinerea* - Vannimaram
44. *Pterocarpusmarsupium* - Vengai
45. *Pterospermumcanescens*-Vennangu, Tada
46. *Pterospermumxylocarpum* - Polavu
47. *Puthranjivaroxburghii*- Puthranjivi


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48. *Salvadorapersica* – Ugaamaram
49. *Sapindusemarginatus*- Manipungan, Soapukai
50. *Saracaasoca* - Asoca
51. *Streblusasper*- Pirayamaram
52. *Strychnosnuxvomica*–Yetti
53. *Strychnopotatorum* - TherthangKottai
54. *Syzygiumcumini* - Naval
55. *Terminaliabellerica*- Thandri
56. *Terminalia arjuna*- Venmarudhu
57. *Toona ciliate* – Sandhanavembu
58. *Thespesiapopulnea*- Puvarasu
59. *Walsuratrifoliata*–valsura
60. *Wrightiatinctoria*- Vep

SEIAA Remarks: -

The subject was placed in 632nd Authority meeting held on 22.06.2023. The authority noted that the subject was appraised in 382nd SEAC meeting held on 09.06.2023.

Based on the presentation and documents furnished by the project proponent, SEAC after detailed deliberations, decided to **recommend the proposal for the grant of Terms of Reference (ToR)**.

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 following conditions and the conditions mentioned in 'Annexure B' of this minute:

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.,


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3. The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.
4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.
5. The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.
6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.
7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.
8. The committee shall furnish the Emergency Management plan within the cluster.
9. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.
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.


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h) Sediment geochemistry in the surface streams.

Agriculture & Agro-Biodiversity

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

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.


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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.

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.


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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.

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


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Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).

- 5) Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
- 6) Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
- 7) It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.
- 8) Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
- 9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
- 10) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
- 11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
- 12) Certificate from the Competent Authority in the State Forest Department should be provided.


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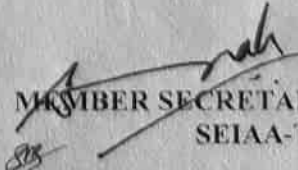
confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests,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

- 13) Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
- 14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- 16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.
- 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the



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'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.

- 20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
- 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
- 22) One season (non-monsoon) [i.e., March-May (Summer Season); October-December (post monsoon season); December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating


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


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in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.

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


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


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

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

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


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

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

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


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- 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 1.86.50 Ha

COMPLIANCE OF TOR CONDITIONS

Point wise compliance of ToR points issued by SEIAA, TN vide SEIAA-TN/F. No. 9962/ToR-1486/2023 Dated: 22.06.2023 for Mining of Minor Minerals in the Mine of Proposed Rough stone and Gravel Quarry Over an Extent of 1.86.50 Ha at S.F.No.79 of Midithepalli Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu 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 fresh mining project of Proposed Rough stone and Gravel quarry.</p> <p>Precise Area Communication Letter received from Deputy Director, Dept. of Geology & Mining, Krishnagiri vide letter Rc.No.646/2021 Mines Dated 31.01.2023.</p> <p>Mining Plan was approved by the Deputy Director, Dept. of Geology & Mining, Krishnagiri vide letter Rc.No.646/2021 Mines Dated 17.02.2023.</p> <p>As area is being exploited for the first time hence Year-wise production details since 1994 and before 1994 are not relevant or applicable.</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> <p>Page No.34</p>

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 1.86.50 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 1.86.50 hectare in Midithepalli Village for Rough stone and Gravel quarry approved by Deputy Director, Geology & Mining, Krishnagiri vide letter Rc.No.646/2021 Mines Dated 17.02.2023.	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 Page. no. 38
5	Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, important water	Topo map as attached in Chapter-2	Chapter-2, Fig no. 2.4 Page. no. 40

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 1.86.50 Ha

	bodies, streams and rivers and soil characteristics		
6.	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	Details about the land proposed for mining activities should be given Chapter 2.	Chapter-2 Page 42
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</p>	Noted.	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 1.86.50 Ha

	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.	It is an open cast mining project. Blasting details are incorporated in chapter 2	Chapter-2, Page no.52
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 Page no.41
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	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. The nearest	Chapter-2, Table no. 2.4 Page no.42

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 1.86.50 Ha

	any, of change of land use should be given.	wildlife sanctuary is Cauvery North Wildlife Sanctuary located 25.35 km - S	
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.	Gravel 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, Page no.51
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 1.86.50 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 Pg No. 95
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	

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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 is two wildlife sanctuaries named Cauvery North Wildlife Sanctuary and Cauvery South Wildlife Sanctuary located at a distance of 25.35 kms, S and 47.26 kms, S from the project site.</p>	<p>Executive Summary</p> <p>Page No: 10</p>
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</p>	<p>Details biological study (flora & fauna) within 10 km radius of the project site have been incorporated in Chapter-3 of EIA/ EMP Report.</p> <p>No flora & fauna listed in scheduled I have been found in study area so there is no need of conservation plan. However, all care will be taken for protection of flora & fauna, if any in the lease hold area.</p>	<p>Chapter – 3</p> <p>Pg No. 95</p>

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	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 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	There is no Coastal Zone within 15km radius of the project site.	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 1.86.50 Ha

	<p>also need to obtain approval of the concerned Coastal Zone Management Authority)</p>		
<p>21</p>	<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 Patta land (Consent registered).</p>	

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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 Pre monsoon season (June to August 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 will be furnished in Final EIA report</p> <p>Transportation of mineral during</p>	<p>Chapter-4</p> <p>Page No.107</p>

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	<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>operation of mines will be done by road & Venkatesapuram village road through dumpers and the impact of movement of vehicles are incorporated in EIA/EMP report.</p> <p>Air quality modelling & Impact of Air quality will be 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 KLD Plantation :0.5 KLD Domestic Water will be sourced from nearby village Midithepalli which is about 1.70 Km - NE of the area.</p>	<p>Chapter-2</p> <p>Page no. 54</p>
25	<p>Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.</p>	<p>Not Applicable Water will be taken from nearby villages</p>	
26	<p>Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in</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</p>	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 1.86.50 Ha

	the Project, if any, should be provided.	reservoir.	
27	Impact of the project on the water quality, both surface and groundwater should be assessed and necessary safeguard measures, if any required, should be provided.	Impact of the project on the water quality & its mitigation measures has been incorporated in Chapter-4 of EIA/EMP report.	Chapter-4 Page No.112
28	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.	Maximum working depth: 39 m (2m Gravel + 37 m Rough stone) The ground water table is reported as 66 m below surface ground level in nearby wells of this area. Now, the present quarry shall be proposed above the water table and hence, quarrying may not affect the ground water So mine working will not be intersecting the ground water table.	Chapter-2 Page no. 34 Table No. 2.2
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

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 1.86.50 Ha

30	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and BGL. A schematic diagram may also be provided for the same.	The altitude of the area is 869m above MSL. Depth: 39 m (2.0m Gravel & 37.0m Rough stone)	Chapter-2 Table no. 2.2 Page no. 34
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	Impact on local transport infrastructure due to the project has been assessed. There shall not be much impact on local transport. Traffic	Chapter-3

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 1.86.50 Ha

	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	density from the proposed mining activity has been incorporated in EIA/EMP report.	Page No.107
33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA report.	Adequate infrastructure & other facilities shall be provided to the mine workers. Details are given in chapter-2 of EIA/EMP	Chapter-2
34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.	Conceptual post mining land use and Reclamation and restoration sectional plates are given in Mining Plan followed by Scheme of mining.	Mining plates Annexure VI
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	Suitable measure will be adopted to minimize occupational health impacts of the project. The project shall have positive impact on local environment. Details are given in chapter-10 of EIA/EMP.	Chapter-10 Pg No. 148

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 1.86.50 Ha

	the EMP. The project 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.	Suitable measure will be adopted to minimize occupational health impacts of the project.	Chapter-10 Pg No. 149
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 has been discussed in Chapter 4	Chapter-4 Pg No. 121
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 Pg No. 144
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	Public Hearing proceedings will be furnished in Final EIA report	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 1.86.50 Ha

	provided and 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.	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. No</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;">21,00,000/-</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Operational Cost</td> <td style="text-align: right;">30,00,000 /-</td> </tr> <tr> <td></td> <td>Total</td> <td style="text-align: right;">51,00,000/-</td> </tr> <tr> <td style="text-align: center;">3</td> <td>EMP Cost (10 Years)</td> <td style="text-align: right;">1,32,48,533/-</td> </tr> </tbody> </table>	S. No	Description	Cost	1	Fixed Asset Cost	21,00,000/-	2	Operational Cost	30,00,000 /-		Total	51,00,000/-	3	EMP Cost (10 Years)	1,32,48,533/-	Chapter-8 Pg No. 138
S. No	Description	Cost																
1	Fixed Asset Cost	21,00,000/-																
2	Operational Cost	30,00,000 /-																
	Total	51,00,000/-																
3	EMP Cost (10 Years)	1,32,48,533/-																
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 Pg No. 135															
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 Pg No. 138															
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 1.86.50 Ha

(a)	Executive Summary of the EIA/EMP report	Complied	Executive Summary of EIA Report is given from page No.10-25
(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	The complete questionnaire has been prepared	

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	submitted.		
(g)	While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA. II(I) dated 4th August 2009, which are available on the website of this Ministry, should also be followed.	The EIA report has been prepared and complying with the circular issued by MoEF vide O.M. No. J-11013/41/2006-IA. II(I) dated 4th August 2009.	
(h)	Changes, if any made in the 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	There are no changes in prepared EIA as per submitted Form-1 & PFR	
(i)	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	Will be complied after grant environment clearance from SEIAA, Tamilnadu	

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 1.86.50 Ha

	<p>existing operations of the project by the Regional Office of Ministry of Environment & Forests, if applicable.</p>		
(j)	<p>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.</p>	<p>All Sectional Plates of Quarry is enclosed in Mining Plan.</p>	

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Additional ToR Compliance - SEAC

S.No.	Condition	Compliance
1.	The Proponent is requested to submit valid registered lease document during the EIA appraisal after the previous lease granted for the mining operations is legally surrendered (or) lapsed with the consent of the competent authority.	Noted and agreed to comply.
2.	The proponent is requested to carry out a survey and enumerate on the structures located within 100 m, 200 m & 300 m from the boundary of the mine lease area.	
3.	The proponent shall furnish the photographs of adequate fencing, green belt along the periphery including the replantation of existing trees and safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	Complied. The photographs of fencing and green belt attached as per SEAC recommendation.
4.	The PP shall conduct the hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface Water bodies such as rivers, tanks, canals, ponds etc., within 1km (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	Hydro geological study report will be submitted along final EIA report.

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	data and documentation in this regard may be provided.	
5.	The proponent shall submit the “Blast Design Parameters for controlling the vibration and flyrock from the quarry blasting” considering the existence of sensitive structures including habitations within 1km from the lease boundary.	The NONEL method is the safest way of carrying out blasting operation. Nonel initiation provides reasonably good solution to fly rock problem. Also, Noise level reduced significantly by NONEL initiation system.
6.	The PP shall submit a 'Slope Stability Action Plan' for the proposed quarry where the proposed depth exceeds 30 m and it shall cover the aspects of stability of quarry walls including the access ramp keeping the benches intact.	Slope stability report will be submit with Final EIA report.
7.	The PP shall furnish DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., upto a radius of 25 km from the proposed Site.	DFO letter will submit with Final EIA report.
8.	The PP shall provide individual notice regarding the Public Hearing to the nearby house owners located in the vicinity of the project site.	Noted agreed to comply.
9.	If the blasting operation is to be carried out, the PP shall present a conceptual design for carrying out the NONEL initiation based controlled blasting operation only including the line drilling & muffle blasting techniques and a Simulation Model indicating the anticipated Blast induced Ground Vibration levels in the proposed quarry as stipulated by the DGMS Circular No.7 of 1997, during the EIA Proposal.	Noted agreed to comply.

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10.	Details of Greenbelt a& Fencing shall be included in the Final EIA report.	Noted agreed to comply.
11.	The EIA Coordinator 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	<p>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,</p> <ol style="list-style-type: none"> a. What was the period of the operation and stoppage of the earlier mines with the last work permit issued by the AD/DD mines? b. Quantity of minerals mines out. c. Highest production achieved in any one year. d. Details of approved depth of mining. e. Actual depth of the mining achieved earlier. f. Name of the person already mined in that leases area. g. If EC and CTO already obtained, the copy of the same shall be submitted. <p>Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.</p>	<p>It is a fresh quarry (Patta land) Agreed to comply.</p>

TOR Reply of Proposed Rough Stone Quarry Over an Extent of 1.86.50 Ha

13.	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 feature of the study area (core and buffer zone)	Complied. All corners with coordinates of the mine lease area have attached with EIA report in chapter 2
14.	The Project Proponent shall carry out Drone video survey covering survey covering the cluster, green belt, fencing etc.,	Drone video survey will be submitted in final EIA report.
15.	The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment and the remedial measures for the same.	The details of Geological reserves, Mineable reserves and Yearwise production reserves are tabulated in Chapter 2. The mining methodology and impacts are followed as on prescribed norms by Government.
16.	The PP shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.	Complied. Manpower requirements table attached in EIA report chapter 2
17.	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

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		including traffic/vehicular movement study details attached in EIA report chapter 3
18.	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.
19.	Rainwater harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	Noted. Agree to comply.
20.	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.
21.	Details of the land for storage of Overburden/Waste dumb (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.	The entire lease area is covered 2.0m of Gravel and the estimated quantity of Gravel 33210m ³ . Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to

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		needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.
22.	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	Noted
23.	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.
24.	Impact on local transport infrastructure due to the Project should be indicated.	Traffic impact assessment has given in EIA report chapter 3.
25.	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.
26.	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

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		Mining and Geology, Krishnagiri District
27.	Public hearing points raised and commitments of the PP 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 and to be submitted to SEIAA/SEAC with regard to the Office Memorandum of MoEF & CC accordingly.	Noted and will be complied in Final EIA report.
28.	The Public hearing advertisement shall be published in on major National daily and one most circulated vernacular daily	Noted. Agree to comply.
29.	The PP shall produce/display the EIA report, Executive summary and other related information with respect to public hearing Tamil Language also.	Noted
30.	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
31.	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 and local school/college authorities. The plant species with dense/moderate canopy of native origin should be	Noted. Agree to comply

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	chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.	
32.	Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted as per the advice of local forest authorities/ botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meter wide and in between blocks in an organized manner.	The green belt plan enclosed with mining plates in Annexure VI
33.	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.
34.	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.
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.	Occupational Health impacts of the project has prepared and incorporated in Environmental management plan.

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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.
37.	The Socio-economic studies should be carried out within a 5km 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.
38.	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.
39.	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 in EIA report chapter 8
40.	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	It is a fresh quarry. So, certified compliance report is no needed.
41.	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.

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42.	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.
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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, Page number-35
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, Page number-58
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 be furnished in final EIA report.
5.	The committee shall deliberate on risk management plan pertaining to the cluster in a	Risk management plan is discussed in Chapter-7, page number-135

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	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.	Agreed to comply. It will be furnished in final EIA report.
7.	The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.	Agreed to comply. It will be furnished in final EIA report.
8.	The committee shall furnish the Emergency Management plan within the cluster.	Emergency management plan is discussed in Chapter-7, page number-139
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 Page number-153
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 EIA report
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	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	The biodiversity has been studied and discussed in chapter 3. The soil erosion map 5km

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	<p>precise area communication order issued from reputed research institutions on the following.</p> <ul 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. f) Hydrothermal/Geothermal effects due to destruction in the Environment. g) Bio-geochemical processes and its foot prints including environmental stress h) Sediment geochemistry in the surface streams <p>Sediment geochemistry in the surface streams.</p>	<p>surrounding the project site has been given in chapter 3.</p> <p>The detailed study will be carried out and will be enclosed in the Draft EIA Report.</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 page number-110
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 page number-100

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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 – Pg No. 113.
17.	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	Noted. Agree to comply.
18.	The PP shall study and furnish the impact on plantations in adjoining Patta lands, Horticulture, Agriculture and livestock.	There is no plantation surrounding 500m from project site. Hence there won't be any impact in adjoining patta lands, Horticulture, Agriculture and livestock.
Forests		
19.	The PP shall detailed study on impact of mining on Reserve forests free ranging wildlife.	There is no Reserve Forest within 1 km radius of the Project Site. Hence our project will not cause any damage to reserve forest. Also, 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,	There is no Reserve Forest within 1

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	Reserve forests, National parks, Corridors and Wildlife pathways, near project site.	<p>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		
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 report will be submitted in final EIA report.
24.	Erosion Control Measures	<p>Complied.</p> <p>Erosion details has been attached in Chapter 3. Greenbelt will be planted to avoid and control erosion.</p>
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 will be furnished in the Final EIA Report.
26.	The project proponent shall study impact on fish habitats and the food WEB/food chain in the	There is no water bodies within 1km radius, The seasonal pond located

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	water body and reservoir.	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 will be complied in Final EIA report.
28.	The PP shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site and archaeological sites possible landform changes visual and aesthetic impacts	Noted. Agree to comply.
29	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	The soil erosion map 5km surrounding the project site has been given in chapter 3. The soil samples have been collected surrounding the project site and physical, chemical components and microbial components study has been carried out and the results are tabulated in chapter 3
30	The Environmental Impact Assessment should study on wetlands, water bodies, river streams, lakes and farmer sites.	The water environment impacts and its mitigation measures has been given in Chapter 4
Energy		
31	The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently	Agreed to Comply.

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	utilize 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.	Noted and will be complied in Final EIA report.
33.	The EIA should study impact on climate change, temperature rise, pollution and above soil carbon stock.	Noted and will be complied in Final EIA report.
Mine Closure Plan		
34.	Detailed mine closure plan covering the entire mine lease period as per precise area communication order issued.	Mine closure plan has been attached 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 Draft 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 will be prepared and included in the final EIA/EMP Report.

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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
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 will be 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 fresh water systems due to activities, contemplated during mining may be investigated and reported.	There will not be any plastic and microplastic pollution due to mining activity. Also, we ensure that we won't use any single use plastics in the project site.

ANNEXURE-II
PRECISE AREA COMMUNICATION LETTER



ந.க.எண். 646/2021/கனிமம் நாள்: 31.01.2023.

புவியியல் மற்றும் சுரங்கத்துறை
மாவட்ட ஆட்சியர் அலுவலகம்,
கிருஷ்ணகிரி

குறிப்பாணை

பொருள் : கனிமங்களும் சுரங்கங்களும் - சிறு கனிமம் - சாதாரண கற்கள் - கிருஷ்ணகிரி மாவட்டம் - சூளகிரி வட்டம் - மிடிதேப்பள்ளி கிராமம் - பட்டா புல எண். 79 (1.86.50) ஹெக்டேர் பரப்பில் சாதாரண கற்குவாரி செய்ய திரு. B. ஸ்ரீகர் என்பவர் விண்ணப்பம் அளித்தது - வருவாய்துறை, புவியியல் மற்றும் சுரங்கத்துறை மற்றும் வனத்துறை புலத்தணிக்கை அறிக்கை சமர்ப்பிக்கப்பட்டது - தகுதியான நிலப்பரப்பாக கருதி ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணைய இசைவினை பெற்று சமர்ப்பிக்கக் கோருதல் - தொடர்பாக.

- பார்வை :**
1. அரசாணை எண்.208 தொழில் துறை நாள் 21.09.2020-ல்
 2. திரு. B. ஸ்ரீகர், த/பெ.பாரதி, க/எண்.25, சாந்தி நகர்(மேற்கு), 2-வது கிராஸ், ஓசூர் - 635 109 என்பவரின் விண்ணப்பம் நாள்: 30.01.2021.
 3. உதவி இயக்குநர்(கூ.பொ), புவியியல் மற்றும் சுரங்கத்துறை, கிருஷ்ணகிரி ந.க.646/2021/கனிமம், நாள்:02.07.2021.
 4. வட்டாட்சியர், சூளகிரி கடிதம் ந.க.1378/2021/அ2 நாள்:31.07.2021 மற்றும் 28.04.2022
 5. வருவாய் கோட்டாட்சியர், ஓசூர் கடிதம் ந.க.எண்.2068/2021/பி2 நாள்: 06.07.2022.
 6. அரசு ஆணை (3D) எண்.243 தொழில், முதலீட்டு ஊக்குவிப்பு மற்றும் வர்த்தகம் (எம்எம்இ-2) துறை நாள்: 14.12.2022.
 7. வன உயிரினக்காப்பாளர், ஓசூர் கடித ந.க.எண்.13119/2022/எல் நாள்:10.01.2023.
 8. உதவி புவியியலாளர் (கனிமம்) புலத்தணிக்கை அறிக்கை நாள். 28.01.2023.
 9. மற்றும் உரிய ஆவணங்கள்

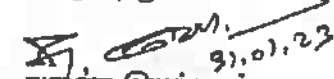
பார்வைகளின் மீது கனிவான கவனம் வேண்டப்படுகிறது.

2. கிருஷ்ணகிரி மாவட்டம், சூளகிரி வட்டம், மிடிதேப்பள்ளி கிராமம், பட்டா புல எண்.79-ல் 1.86.50 ஹெக்டேர் பரப்பில் சாதாரண வகை கற்குவாரி செய்ய உரிமம் வழங்க கோரி திரு. B. ஸ்ரீகர் என்பவர் 30.01.2021 நாளிட்ட விண்ணப்பத்தினை உரிய ஆவணங்களுடன் சமர்ப்பித்துள்ளார்.



4. எனவே, வட்டாட்சியர், துளகிரி, வருவாய் கோட்டாட்சியர், கிருஷ்ணகிரி, வன உயிரின காப்பாளர், ஒசூர் மற்றும் உதவி புவியியலாளர் (கனிமம்) ஆகியோரின் பரிந்துரை மற்றும் நிபந்தனைகளின் அடிப்படையில், கிருஷ்ணகிரி மாவட்டம், துளகிரி வட்டம், மிடிதேப்பள்ளி கிராமம், பட்டா புல எண்.79-ல் 1.86.50 ஹெக்டேர் பரப்பளவில் விண்ணப்பதாரர் திரு. B. ஸ்ரீகர் என்பவருக்கு 1959ம் வருட தமிழ்நாடு சிறுகனிம விதிகள், விதி எண். 19-ன் படி மேற்கண்ட நிபந்தனைகளுக்குட்பட்டு 10 (பத்து) வருட காலத்திற்கு மேற்பரப்பு கிராவல் மண் மற்றும் சாதாரண வகை கற்குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதப்படுகிறது.

5. மேலும், தமிழ்நாடு சிறு கனிம சலுகை விதிகள்-1959 விதி எண். 41-ன் படி குவாரிப்பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்க திட்டத்தினை 90 தினங்களுக்குள் சமர்ப்பிக்குமாறு மனுதாரரைக் கேட்டுக்கொள்ளப்படுகிறது. மேலும் ஏற்பளிக்கப்பட்ட சுரங்கத்திட்டத்தின் தொடர்ச்சியாக 1959ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், விதி எண். 42-ன் படி சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்கும் பட்சத்தில் மட்டுமே குவாரி உரிமம் வழங்கப்படும் என இதன் மூலம் தெரிவிக்கப்படுகிறது.


துணை இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
கிருஷ்ணகிரி.

பெறுநர்:

திரு. B. ஸ்ரீகர், த/பெ.பாரதி,
க/எண். 25, சாந்தி நகர் (மேற்கு),
2-வது கிராஸ்,
ஒசூர் - 635 109.

நகல்:

1. ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை.
2. மாவட்ட ஆட்சித் தலைவர், கிருஷ்ணகிரி - தகவலுக்காக


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

ANNEXURE-III
MINING PLAN APPROVED LETTER

From

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

To

Thiru. B. Srikar,
S/o. Bharathy,
No. 25, Shanti Nagar (West),
2nd Cross, Hosur Taluk,
Krishnagiri – 635 109.

Rc.No. 646 /2021/Mines Dated: 17 .02.2023.

Sir,

Sub: Mines and Minerals – Minor Mineral - Rough Stone - Krishnagiri District – Shoolagiri Taluk – Miduthepalli Village- Patta land in S.F.No. 79 (1.86.50) Over an extent of 1.86.50 Hects - Application preferred by Thiru. B. Srikar - Draft Mining Plan submitted - Approved - reg.

Ref: 1. Application prepared by Thiru. B. Srikar, S/o. Bharathy, No. 25, Shanthi Nagar (West), 2nd Cross, Hosur Taluk, Krishnagiri District dated: 30.01.2021.
2. This Office Letter No. 646/2021/Mines dated: 31.01.2023.
3. Draft Mining plan submitted by Thiru. B. Srikar, dated: 13.02.2023.

Kind attention is invited to the references cited above.

2. Thiru. B. Srikar has been preferred an application for quarrying Rough stone over an extent of 1.86.50 Hects of patta land in S.F.No. 79 (1.86.50) in Miduthepalli Village, Shoolagiri Taluk, Krishnagiri District for a period of 10 year under the provisions of Rule 19 (1) of Tamil Nadu Minor Mineral Concession Rules, 1959. In this regard, the precise area communication has given the lessee vide letter dated: 31.01.2023 with a direction to submit approved mining plan and Environment Clearance.

3. Accordingly, Thiru. B. Srikar had submitted 03 copies of draft Mining Plan vide letter dated: 13.02.2023 and the same has been examined in details and it is found correct.

4. As per the mining plan the year wise production for the proposed first and second five years are as follows.

First Five Years	Year	Recoverable Reserves (m³) @ 100%	Gravel in (m³)
	1 st Year	75579	33210
	2 nd year	49725	-
	3 rd year	33300	-
	4 th year	40700	-
	5 th year	25025	-
	Total	224329	33210

Second Five Years	Year	Recoverable Reserves (m³) @ 100%	Top Soil Gravel in (m³)
	1 st Year	32175	-
	2 nd year	17250	-
	3 rd year	24150	-
	4 th year	9975	-
	5 th year	25850	-
	Total	109400	-

5. Hence, the power delegated under Rule 42 of TNMMCR, 1959 and as per the guidelines/instructions issued by the Commissioner of Geology and Mining, vide letter Rc.No.3868/LC/2012 dated:19.11.2012, the said mining plan submitted by the lessee 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) All the conditions mentioned in the precise area letter should be followed during quarry operation as per rules.

v) The applicant should get prior Environmental clearance from the appropriate authority and should submit it to the District Collector, Krishnagiri.

vi) Every Mining Plan duly approved under rule 41(9) of TNMMCR, 1959 shall be valid for a period of five years. Further, the applicant shall submit modification in the mining plan if any, review the mining plan and submit scheme of mining plan for the next five years of the lease if any as per TNMMCR 1959.


Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

Copy submitted to : 1. The Commissionner,
Dept of Geology and Mining,
Guindy, Chennai -32.

ANNEXURE-IV
500M Radius letter

From

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

To

Thiru. B. Srikar,
S/o. Bharathy,
No. 25, Shanti Nagar (West),
2nd Cross, Hosur Taluk,
Krishnagiri – 635 109.

Roc.No.646/2021/Mines Dated: 17.02.2023

Sir,

Sub: Mines and Minerals – Minor Mineral - Rough Stone - Krishnagiri District – Shoolagiri Taluk – Miduthepalli Village- Patta land in S.F.No. 79 (1.86.50) Over an extent of 1.86.50 Hects - Application preferred by Thiru. B. Srikar - Draft Mining Plan submitted - Approved – Other quarry situated in 500 mtrs radial distance – Details furnished - reg.

Ref:

1. Application prepared by Thiru. B. Srikar, S/o. Bharathy, No. 25, Shanthi Nagar (West), 2nd Cross, Hosur Taluk, Krishnagiri District dated: 30.01.2021.
2. This Office Letter No. 646/2021/Mines dated: 31.01.2023.
3. Mining Plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Rc.no. 738/2022/Mines dated: .02.2023.

Kind attention is invited to the references cited above.

2. Thiru. B. Srikar has been preferred an application for quarrying Rough stone over an extent of 1.86.50 Hects of patta land in S.F.No. 79 (1.86.50) in Miduthepalli Village, Shoolagiri Taluk, Krishnagiri District for a period of 10 year under the provisions of Rule 19 (1) of Tamil Nadu Minor Mineral Concession Rules, 1959. In this regard, the precise area communication has given the lessee vide letter dated: 31.01.2023 with a direction to submit approved mining plan and Environment Clearance.

3. In this connection, as stipulated in the TNMMCR Rules, 1959 the applicant has submitted the Mining Plan for on 13.02.2023. Accordingly, the Mining plan submitted by the applicant has been approved by the Deputy Director (Mines) vide letter dated .02.2023. In addition to that the details of other quarries situated within 500 mts radial distance from the subject quarry is furnished as follows.

I. Details of Existing quarries.

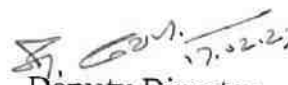
Sl No	Name of the lessee	Village & Taluk	Mineral	S.F N/o.	Extent in Het	Rc.No. & Date	Lease period.
1.	THiru. D. Sreenivasalu,S/o. Vekateshwarlu, No. Radha lakshmi nilayam, Devachandra Main road, Bangalore	Shoolagiri, Miduthepalli	Rough stone	80/1 80/2	3.17.08	Rc.No. 1305/2018/Mines dated: 20.12.2022	20.12.2022 to 19.12.2032
2.	Thiru. Venkat reddy, S/o. (Late) Uthama Reddy, Kolar Taluk, Uddanahalli, Chakkarasanahalli, Karnataka	Shoolagiri, Miduthepalli	Rough stone	81/2 82/1	2.05.92	Rc.No. 1308/2018/Mines dated: 31.10.2022	31.10.2022 to 30.10.2032

II. Details of Expired/Old quarries.

Sl. No	Name of the lessee	Village	Mineral	S.F No.	Extent in Het	Rc.No. & Date	Lease period.
1.	M/s. Sarva Infra Pvt. Ltd, 540, 3 rd floor, CMH Road, indira Nagar, Bangalore.	Shoolagiri, Miduthepalli	Rough stone	70/1B, 70/1C	4.05.0	Rc.No. 09/2014/Mines dated: 26.10.2015	28.10.2015 to 27.10.2020

III. Details of Proposed quarries

Sl No	Name of the lessee	Village & Taluk	Mineral	S.F No.	Extent in Het	Rc.No. & Date	Lease period.
1.	Thiru. B. Srikar, S/o. Bharathy, No. 25, Shanti Nagar (West), 2 nd Cross, Hosur Taluk, Krishnagiri - 635 109	Shoolagiri, Miduthepalli	Rough stone	79	1.86.50	-	Instant Proposal


 Deputy Director,
 Dept of Geology and Mining,
 Krishnagiri.

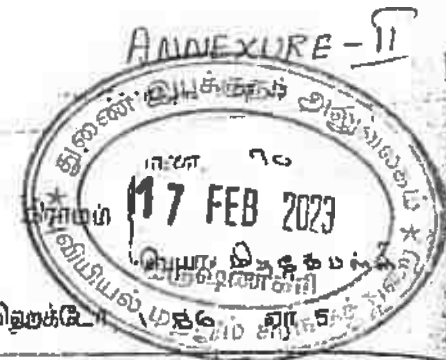
Copy to :-

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


 170223

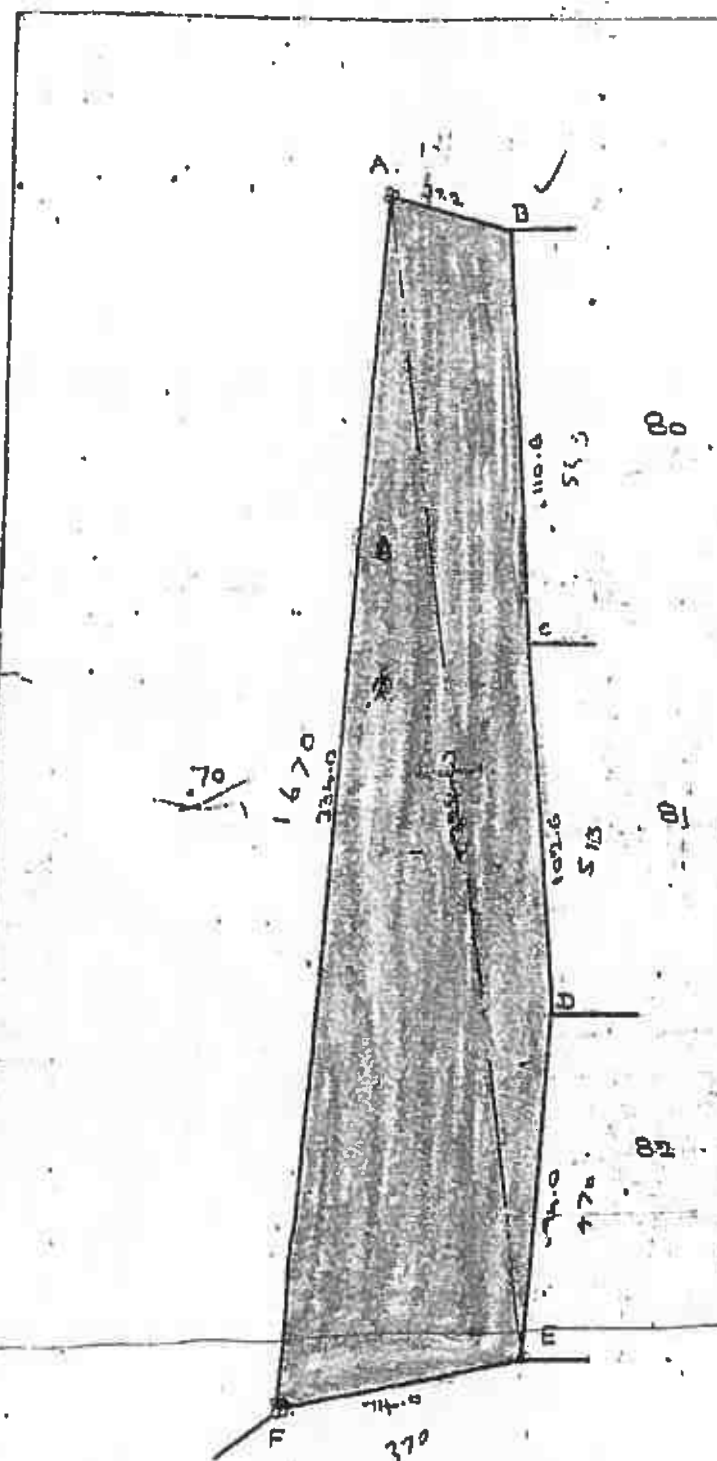
ANNEXURE-V

**FMB, A REGISTER, VILLAGE MAP,
CONSENT REGISTERED DOCUMENT**



பரப்பு 45.5
 54.5
 450 ஏக்கர் 79

பரப்பு 1021.6 மீ² 573 ஏக்கர் 5



322.0
 229.8
 92.2

322.0
 127.0
 195.0

பரப்பு: 123
 மொத்த பரப்பு: 402

P	325.8	71.2	F
	E	322.0	
D	20.0	229.8	
C	26.8	127.0	
B	35.0	229.8	

S. DHANASEKAR, M.Sc. (Geo)

Qualified Person

சமர்ப்பு: 123.0 : 2000 மீ²

32, MIDDIKOPALAI

பரப்பு: 45.5
 54.5
 450 ஏக்கர் 79

201

230



	3	4	5	6	7	8	9	10	
						ந. பை.	மெ.ஏர்ஸ்.	கு. பை.	
78-1	ர	4	...	8-3	5	2 15	1 75.5	3 75	63 சா. சிவசுந்தரம் திம்மையா.
-2	ர	4	...	8-3	5	2 15	0 36.0	0 77	279 எ. வெங்க டேசப்பா (1). சங்கரப்பா (2).
							2 11.5	4 52	
79	ர	4	...	8-3	5	2 15	1 86.5	4 01	172 பா. மாரச்.
80-1	ர	4	...	8-3	5	2 15	0 30.0	0 64	64 சூா. குடவப்பா.
-2	ர	4	...	8-3	5	2 15	0 81.0	1 74	154 சூா. பெத்த குடவப்பா.
							1 11.0	2 38	
81	ர	4	...	8-3	5	2 15	2 68.0	5 76	136 த. பச்சையப்ப செட்டி.
82-1	ர	4	...	8-3	5	2 15	1 44.0	3 09	136 த. பச்சையப்ப செட்டி.
-2	ர	4	...	8-3	5	2 15	2 66.5	5 73	241 அ. இராம சத்திரப்பா.
							4 10.5	8 82	
83-1	ர	4	...	8-3	5	2 15	0 76.5	1 65	189 தி. முனியம்மா.
-2	ர	4	...	8-3	5	2 15	0 67.0	1 44	164 சொ. மல்லம்மா.
							1 43.5	3 09	
84-1	ர	4	...	8-3	5	2 15	0 80.0	1 72	151 சி. பெத்த வக்ஷய்யா.
-2	ர	4	...	8-3	5	2 15	1 11.0	2 38	151 சி. பெத்த வக்ஷய்யா.
							1 91.0	4 10	
85-1	ர	4	...	8-3	5	0.62 (2 13)	39 26.0	24 26	334 வெங்கட ரமணப்பா.
-2	அ	40	...	...	...	...	14 47.5	...	புல் காவல் பட்டாசலுகை தீர்வை.
							53 73.5	24 26	...

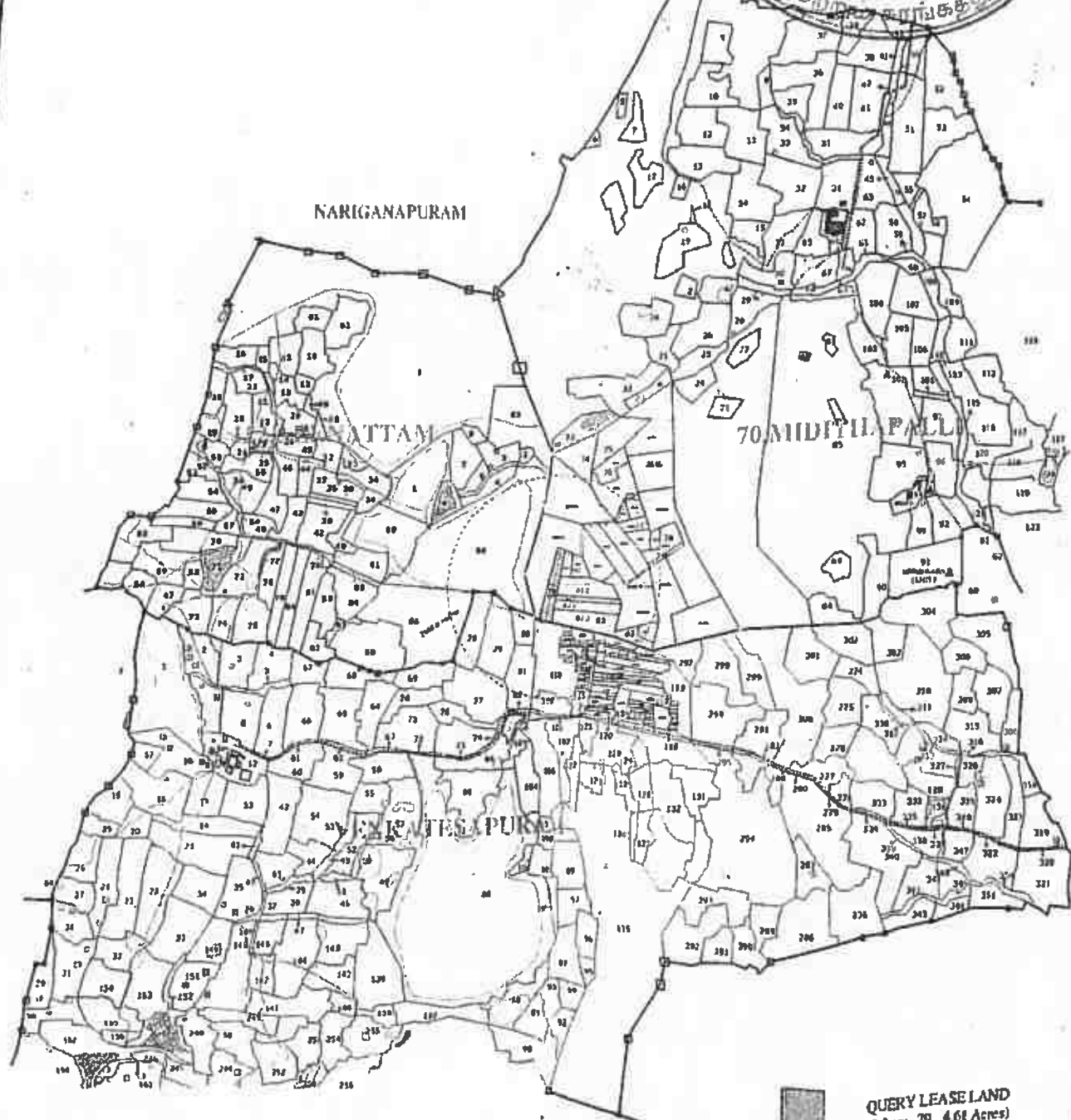
S. D. MANASEKAR, M.Sc. (Geo)
Qualified Person

Village Administrative Officer
32, MIDITHEPALLI
Shoolagiri Th. Kallakurichi-9.

Done by: R. Manassekari A. Registrar.
16/10/87
20.10.87
For Sahr.

PLAN SHOWING FOR 500.0 Metres RADIUS OF MIDIDHEPALLI, ALENATHAM & VENKATESAPURAM VILLAGE, SHOOLAGIRI BDO, HOSUR TALUK, KRISHNAGIRI DISTRICT.

ANNEXURE



QUERY LEASE LAND
(S.No: 79, 4.61 Acres)

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

4225/2022

11/125781015/2022

~1~



தமிழ்நாடு தமில்நாடு TAMILNADU
11.7.2022
Srikanth
Hosur

CU 045247
T. SRINIVASAN
S.V. Licence No: 3925/B1/2000
SHOOLAGIRI-Tk, Krishnagiri-Dt.

GENERAL POWER OF ATTORNEY

THIS DEED OF GENERAL POWER OF ATTORNEY MADE AND EXECUTED AT SHOOLAGIRI ON THIS THE 11TH DAY OF JULY 2022.

"BETWEEN"

Mr.D.RAVIKUMAR, S/o. Venkataiah, aged about 43 years, residing at No. 17/18, Sapthagiri Nilaya, K.R.Puram, Vinayaka Nagar, Near Vinayaka Temple, Bangalore North, Krishnarajapura, Bangalore, Krishnarajapura, Bangalore, Karnataka - 560036 (Aadhar No. 5271 0811 7760) (Hereinafter Called the Principal)

D. Ravikumar

Document No	4225	of 2022 of Book	1
Contains	12	Sheets	1 Sheet.
Registering Officer			



“AND”

Mr. SRIKAR, S/o. Bharathy, residing at Door No. 25, Santhi Ngar West, 2nd Cross, Hosur – 635109, Krishnagiri District, Tamilnadu. (Aadhar NO. 5985 4199 8229)(Hereinafter Called the Attorney)


Whereas an extent of Ac. 4.61 cents in Sy.No.79 of Midithepalli Village of Shoolagiri belongs to Principal as his separate and self acquired properties by way of two registered sale deed bearing Doc. No. 701/2020 the document have been registered at Sub Registration Office, Shoolagiri from the date of purchase the Principal is in possession and enjoyment of the same and the portion belongs to principal in main Sy. No. 79 and the Tahsildar, Shoolagiri Sy. No. 79 separate patta had also issued in the name of principal Mr. D. Ravikumar under Patta No. 686. Thus the principal has got good, valid, absolute, right and title over the schedule mentioned properties.

Whereas the principal is Running Quarry in the above said properties and obtained Licenses from Government of Tamilnadu and whereas the principal is unable to appear personally in all offices related to operation of Quarry work and hence the principal hereby authorised **Mr. SRIKAR, S/o. Bharathy** to maintain and Manage the schedule properties and also to represent all Government offices on behalf of principal and to do all other works on behalf of principal.

And whereas the Principal has also authorised the attorney to obtain permission, licences, permits and other approval from pollution control board, Department of Mines and Geology also other approvals from the Government Departments. The Principal also authorised the attorney to obtained Quarry and Mining Licenses in his name on behalf of the Principal.

D. Ble

Document No.	<i>6225</i>	of 2022 of Book	<i>1</i>
Contains	<i>12</i>	Sheets	<i>2</i> Sheet.
Registering Officer			



The Principal has also authorised the attorney to appear before all Government offices or concerned departments to do all works to get approve from the district collector krishnagiri.

No Consideration has been received by the Principal from attorney for execution of this General Power of Attorney this General Power of Attorney need not be attested.

SCHEDULE OF PROPERTIES

In MIDITHEPALLI Village, of Shoolagiri Taluk and attached to Shoolagiri Sub Registration District, Krishnagiri Registration District, Krishnagiri District.

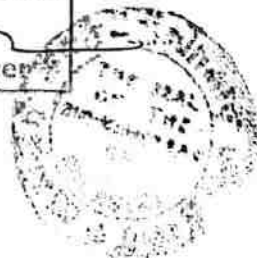
Survey No. 79, Dry. Ext. Hec. 1.86.50, Asst. Rs. 4.01 np., (or) Ac. 4.61 cents full land situated with the following boundaries.

East : Land in Sy. No's. 80, 81 and 82

West : Land in Sy. No. 70/1A1A



Document No. <u>4225</u> of 2022 of Book <u>1</u>
Contains <u>12</u> Sheets <u>3</u> Sheet.
Registering Officer



North : Land in Sy. NO. 70/1A1A

South : Venkateshpuram Village boundary

The land comes under the Panchayat limits of **Athimugam Panchayat** and Union Council of Shoolagiri.

IN WITNESSES WHERE OF THE PRINCIPAL AND THE ATTORNEY HAVE SIGNED THIS DEED OF GENERAL POWER OF ATTORNEY AT SHOOLAGIRI ON THIS THE 11TH DAY OF JULY 2022.


PRINCIPAL




ATTORNEY



WITNESSES:

1)  (Valluru Kondappa Naidu) S/o.Late.Valluru Subbaiah, Sai Peta, Kondapuram, Nellore, Andra Pradesh-524 239. (Adhaar No.2634 7007 9111)

2)  (Aswath) S/o.Nethappa, Guttalapalli Village, Venkatesapuram Post, Shoolagiri Taluk, Krishnagiri District (Adhaar No.9244 7386 7663)

DRAFTED BY:





V.S.GANESAN
DOCUMENT WRITER
LICENCE No.B36/K.S.G/1999
SHOOLAGIRI
Mobile No.93600 99497

Document No.	4225	of 2022 of Book	1
Contains	12	Sheets	4
Registering Officer		2	



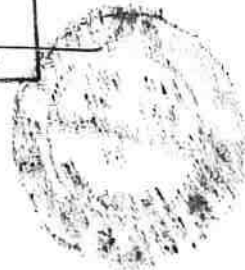
DECLARATION

Declaration for non-encroachment of land in water-Bodies
I/We hereby certify that schedule of property mentioned in this document is not encroached in any wated bodies, water passages, catchment areas of water baides. If any information/declaration issued is found false in future, i/we know that we shall be liable for disciplinary action taken by law.









VENDOR/VENDOR'S

VENDEE/VENDEE'S

Document No.	4225	of 2022 of Book/
Contains	12	Sheets 5 Sheet.
Registering Officer		



Presented in the office of the Sub Registrar of Soolagiri and fee of ₹ 10,230/- paid at 04:47 PM on the 11/07/2022 by

<p>Left Thumb</p> 	 <p>Additions as per recitals of document</p>	
<p>Execution admitted by Left Thumb</p> 	 <p>Identity of the person verified through Consent based AADHAAR Authentication using Thumb Impression with UIDAI reference No. : UKC: 3346963395b845636d4c309bcd1edfd7f2a231 (Details from UIDAI : Duddukuri Ravikumar S/O. Duddukuri Venkataiah, 02-07-1972, xxxxxxxx7760)</p>	
<p>Claim admitted by Left Thumb</p> 	 <p>Identity of the person verified through Consent based AADHAAR Authentication using Thumb Impression with UIDAI reference No. : UKC: 175232fcc21cfa1cb043e88e29c9a98c195ff7 (Details from UIDAI : Srikar Bharathy S/O: Bharathy, 19-02-1993, xxxxxxxx8229)</p>	

11th day of July 2022

SIVAKUMAR G
Sub Registrar
Soolagiri

Document No 4225 of 2022 of Book
Contains 12 Sheets 6 Sheet.
Registering Officer



R/Soolagiri/Book-1/4225/2022

Registered as Number R/Soolagiri/Book-1/4225/2022.

Date: 11/07/2022

Soolagiri



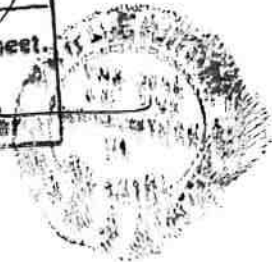
SIVAKUMAR G

Sub Registrar

Life Certificate of the Principal should be produced for any document presented for registration on the basis of this power of attorney

சார்பதிவாளர்
சூளகிரி.

Document No. 4225 of 2022 of Book 1
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Registering Officer





தமிழக அரசு

வருவாய்த் துறை

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

மாவட்டம் : கிருஷ்ணகிரி

வட்டம் : சூளகிரி

வருவாய் கிராமம் : மிடிதேபள்ளி

பட்டா எண் : 686

உரிமையாளர்கள் பெயர்

1. வெங்கட்டய்யா மகன் டி.ரவிக்குமார்

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
79	-	1 - 86.50	4.01	--	--	--	--	2020/0103 /31/134577--- -- 20-03-2020
		1 - 86.50	4.01					

குறிப்பு 2 :



1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 31/11/070/00686 /150070 என்ற குறிப்பு எண்ணை உள்ளிடு செய்து உறுதி செய்துகொள்ளவும்.
2. இத் தகவல்கள் 11-07-2022 அன்று 02:26:39 PM நேரத்தில் அச்சடிக்கப்பட்டது.
3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

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(Handwritten signature)

Document No. 4225 of 2022 of Book /
Contains 12 Sheets 8 Sheet.
Registering Officer





இந்திய தனிப்பட்ட அடையாள ஆணைய அமைப்பு

இந்திய அரசாங்கம்
Unique Identification Authority of India
Government of India

பிறப்பு அடையாளம்/Enrollment No : 2007/13215/44532

To
Srikar Bharathy
சூர் பாரதி
S/O Bharathy
DNO 25
SANTHINAGAR WEST 2 ND CROSS
HOSUR
Hosur
Hosur, Krishnagiri
Tamil Nadu - 635109
8903506227



KL267232673FT

26723267



உங்கள் ஆதார் எண் / Your Aadhaar No. :

5985 4199 8229

ஆதார் - சாதாரண மனிதனின் அதிகாரம்



இந்திய அரசாங்கம்
Government of India

சூர் பாரதி
Srikar Bharathy



பிறப்பு எண்/DOB: 12/02/1993
ஆண்கள் / Male

5985 4199 8229

ஆதார் - சாதாரண மனிதனின் அதிகாரம்



தகவல்

- ஆதார் அடையாளத்திற்கான சான்று குடியறிமைக்கு அல்ல.
- அடையாள சான்று இணையதளம் மூலம் உறுதியிடுவதற்கு கோள்ளவும்.

INFORMATION

- Aadhaar is proof of identity, not of citizenship.
- To establish identity, authenticate online.

ஆதார் நாடு முழுவதிலும் செல்லுபடியாகும்.

வருங்காலத்தில் அரசு மற்றும் அரசு சாரா சேவைகளை பயன்படுத்திக் கொள்ள ஆதார் உதவிகரமாக இருக்கும்.

Aadhaar is valid throughout the country.

Aadhaar will be helpful in availing Government and Non-Government services in future.



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Unique Identification Authority of India

சூர் பாரதி
S/O Bharathy
DNO 25, SANTHINAGAR
WEST 2 ND CROSS,
HOSUR, Hosur, Krishnagiri,
Tamil Nadu - 635109

Address: S/O. Bharathy,
DNO 25, SANTHINAGAR
WEST 2 ND CROSS,
HOSUR, Hosur, Krishnagiri,
Hosur, Tamil Nadu, 635109

5985 4199 8229



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1800-303-1947



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www.uidai.gov.in

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ಭಾರತೀಯ ವಿಶಿಷ್ಟ ಗುರುತು ಪ್ರಾಧಿಕಾರ

ಭಾರತ ಸರ್ಕಾರ

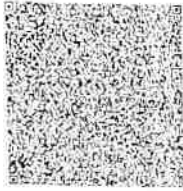
Unique Identification Authority of India
Government of India

ನೋಂದಣಿ ಸಂಖ್ಯೆ Enrolment No.: 1208/72100/00069

To
ದುದುಕೂರಿ ರವಿಕುಮಾರ್
Duddukuri Ravikumar
S/O: Venkataiah
#17/18, Saphthagiri Nilaya
K R Puram, Vinayaka Nagar
Near Vinayaka Temple
Bangalore North
Krisnharajapuram
Bangalore Karnataka - 560036
9845042149

Download Date: 07/06/2013

Generation Date: 07/07/2013



QR Code with Photograph

ನಿಮ್ಮ ಆಧಾರ್ ಸಂಖ್ಯೆ / Your Aadhaar No.:

5271 0811 7760

VID: 9152 1227 8199 9596

ನನ್ನ ಆಧಾರ್, ನನ್ನ ಗುರುತು



ಭಾರತ ಸರ್ಕಾರ
Government of India

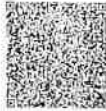


ದುದುಕೂರಿ ರವಿಕುಮಾರ್
Duddukuri Ravikumar
ಜನ್ಮ ದಿನಾಂಕ/DOB: 02/07/1972
ಪುರುಷ/ MALE

5271 0811 7760

VID: 9152 1227 8199 9596

ನನ್ನ ಆಧಾರ್, ನನ್ನ ಗುರುತು



Government of India



ಮೂಲಕೆ

- ಆಧಾರ್ ಗುರುತಿನ ಪುರಾವೆಯೇ ಹೊರತು ಪೌರತ್ವದಲ್ಲ
- ನಿಮ್ಮ ಗುರುತನ್ನು ಸಾಬೀತುಪಡಿಸಲು ಆನ್ ಲೈನ್ ಮೂಲಕ ದೃಢೀಕರಿಸಿ
- ಎಲೆಕ್ಟ್ರಾನಿಕ್ ಪ್ರಕ್ರಿಯೆ ಮೂಲಕ ಮುದ್ರಿತವಾದ ವಿದ್ಯುನ್ಮಾನ ದಾಖಲೆ ಇದಾಗಿದೆ

INFORMATION

- Aadhaar is a proof of identity, not of citizenship.
- To establish identity, authenticate online.
- This is electronically generated letter.

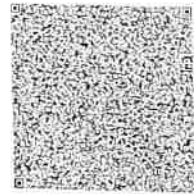
- ಆಧಾರ್ ದೇಶದಾದ್ಯಂತ ಮಾನ್ಯತೆಯನ್ನು ಪಡೆದಿದೆ.
- ಭವಿಷ್ಯದಲ್ಲಿ, ಸರ್ಕಾರಿ ಹಾಗೂ ಸರ್ಕಾರೇತರ ಸೇವೆಗಳನ್ನು ಪಡೆಯಲು ಆಧಾರ್ ನಿಮಗೆ ಸಹಾಯಕವಾಗಲಿದೆ.
- Aadhaar is valid throughout the country.
- Aadhaar will be helpful in availing Government and Non-Government services in future.



ಭಾರತೀಯ ವಿಶಿಷ್ಟ ಗುರುತು ಪ್ರಾಧಿಕಾರ
Unique Identification Authority of India

ದರಾಡು:
S/O: ವೆಂಕಟಾiah, #17/18, ಸಫಥಗಿರಿ ನಿಲಯ,
ವಿನಾಯಕ ದೇವಸ್ಥಾನದ ಹತ್ತಿರ, ಕೆ ಆರ್ ಪುರಂ, ವಿನಾಯಕ
ನಗರ, ಬೆಂಗಳೂರು ನಗರ, ಬೆಂಗಳೂರು,
ಕರ್ನಾಟಕ - 560036

Address:
S/O: Venkataiah, #17/18, Saphthagiri
Nilaya, Near Vinayaka Temple, K R
Puram, Vinayaka Nagar, Bangalore
North, Bangalore,
Karnataka - 560036



QR Code with Photograph

5271 0811 7760

VID: 9152 1227 8199 9596



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www.aadhaar.gov.in

Handwritten signature

Document No. 4225 of 2022 of Book
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 Government of India

 आरवाथी नाथराव

 Aaravathi Nethraava





 9244 7386 7863

 ஆதார - சாதுாரண மனிதலின் அதிகாரம்



 Unique Identification Authority of India

 Unique ID No: 9244 7386 7863



 9244 7386 7863





N. Ashu te .



 भारत सरकार

 Government of India

 VALLURU KONDAPA NAIDU

 DOB : 04.06.1963

 Male





 7107 0764 1853

 मेरा अधिकार, मेरी पहचान



 Unique Identification Authority of India

 Address: Erukkatekkulam, Erukkulam

 604 952A, SHARADA, Montapuram,

 Valluvar, Andhra Pradesh, 524 209



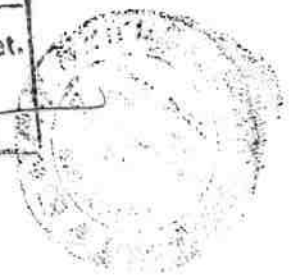
 7107 0764 1853





v. keeluri

Document No 4225 of 2022 of Book 1
 Contains 12 Sheets 11 Sheet.
 Registering Officer





Government of Tamil Nadu
Registration Department
Acknowledgement

Reference Details

SRO Name	Soolagiri
Application No.	S01LANDVV202207114290128
Transaction No.	REG202207112476907
Transaction Date	11/07/2022

Application Details

Applicant Name	Srikar
Service Type	Document Registration (New) in SRO
Registration Fee (₹)	10000/-
Computer Fee (₹)	130/-
CD Fees (₹)	100/-

Payment Details

Name of the Bank	SBI
Bank Ref. No.	CPABVQLFC6
Payment Mode	Online
Amount Paid (₹)	10230/-
Payment Status	Success
Payment Date	11/07/2022

ஏதேனும் சந்தேகங்கள்/குறைகள் இருப்பின் கீழ்க்கண்ட வழிமுறைகளில் தெரிவிக்கலாம்
கட்டணமில்லா தொலைபேசி எண் 1800 102 5174
மின்னஞ்சல் முகவரி helpdesk@tnreginet.net

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**ANNEXURE-VI MINING PLAN REPORT &
PLATES**

MINING PLAN

FOR

GRANT OF ROUGH STONE & GRAVEL QUARRY LEASE IN

TOTAL LEASE GRANTED PERIOD 10 YEARS

PROPOSED PERIOD OF MINING 10 YEARS

(Prepared Under Rules 41 & 42 as amended in Tamil Nadu Minor Mineral Concession Rules, 1959)

LOCATION OF THE APPLIED AREA

EXTENT : 1.86.50 Ha.
S.F. No : 79
VILLAGE : MIDITHEPALLI.
TALUK : SHOOLAGIRI.
DISTRICT : KRISHNAGIRI.
STATE : TAMIL NADU.

APPLICANT

THIRU. B.SRIKAR,
S/o. BHARATHY
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS,
HOSUR TALUK,
KRISHNAGIRI DISTRICT - 635 109.

PREPARED BY:

S. DHANASEKAR, M.Sc.(Geol),
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.





CONTENTS

SL. NO.	DESCRIPTION	PAGE NO.
1.0	Introduction	8
2.0	Executive Summary	10
3.0	General Information	11
4.0	Location	12
5.0	Geology And Mineral Reserves	13
6.0	Mining	17
7.0	Blasting	20
8.0	Mine Drainage	22
9.0	Other Permanent Structures	23
10.0	Employment Potentials & Welfare Measures	24
11.0	Environment Management Plan	26
12.0	Mine Closure Plan	29
13.0	Any Other Details Intend To Furnish By The Applicant	30



ANNEXURES

SL. NO.	DESCRIPTION	ANNEXURE NO.
1.	Copy of Precise Area Communication Letter	I
2.	Copy of FMB	II
3.	Copy of Combined Sketch	III
4.	Copy of Patta, Adangal, 'A' Register	IV
5.	Copy of Land Consent Document	V
6.	Copy of ID Proof	VI
7.	Copy of Qualification Certificate	VII
8.	Copy of Experience Certificate	VIII
9.	Copy of Lease Area Photos	IX

LIST OF PLATES



SL. NO.	DESCRIPTION	PLATE NO.	SCALE
1.	Location Plan	I	Not to Scale
2.	Route Map	IA	Not to Scale
3.	Toposheet Map of the Lease Area	IB	1:50,000
4.	Satellite Image (Lease Area)	IC	1:1000
5.	Satellite Image (500m Radius)	ID	1:5000
6.	Mine Lease Plan	II	1:1000
7.	Surface & Geological Plan	III	1:1000
8.	Geological Sections	III-A	1:1000
9.	Year Wise Development and Production Plan & Sections (1 st Five (I-V)Years)	IV-A & A1	1:1000
10.	Year Wise Development and Production Plan & Sections(2 nd Five (VI-X)Years)	IV- B & B1	1:1000
11.	Mine Layout, Land Use Pattern & Afforestation Plan	V	1:1000
12.	Environment Plan	VI	1:5000
13.	Conceptual/ Final Mine Closure Plan	VII	1:1000
14.	Conceptual/ Final Mine Closure Sections	VII-A	1:1000
15.	Conceptual Plan Common Boundary	VIII	1:1000
16.	Conceptual Sections Common Boundary	VIII- A	1:1000
17.	Progressive Mine Closure Plan	IX	1:1000

B.SRIKAR,
S/o. Bharathy,
D.No.25, Shanti Nagar (West),
2nd Cross,
Hosur Taluk,
Krishnagiri District - 635 109.



CONSENT LETTER FROM THE APPLICANT

I hereby give my consent for preparing the Mining Plan in respect of **Rough Stone & Gravel** quarry over an extent of **1.86.50Hectares** of **Patta Land** in **S.F.No.79** of **Midithepalli Village, Shoologiri Taluk, Krishnagiri District, Tamilnadu State** by **Shri. S. Dhanasekar, M.Sc., Qualified Person.**

I request the Deputy Director, Department of Geology and Mining, KRISHNAGIRI District to make further correspondence regarding modifications if any in the Mining Plan with the said Qualified Person on this following address.

S.DHANASEKAR, M.Sc.,

Qualified Person

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

Ponkumar Mines Road,

Jagir Ammapalayam,

Salem District - 636302.

E-Mail: geodhana@yahoo.co.in

Cell: 98946-28970

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

Place: Krishnagiri

Date:

(B. SRIKAR)

Signature of the Applicant

B.SRIKAR,

S/o. Bharathy,

D.No.25, Shanti Nagar (West),

2nd Cross,

Hosur Taluk,

Krishnagiri District - 635 109.



DECLARATION

I hereby declare that the Mining Plan in respect of Rough Stone & Gravel quarry over an extent 1.86.50Hectares of Patta Land in S.F.No.79 of Midithepalli Village, Shoologiri Taluk, Krishnagiri District, Tamilnadu State has been prepared with my consultation and I have understood the contents and agree to implement the same in accordance with the Mining Laws.

A handwritten signature in black ink, appearing to be 'B. Srikar'.

(B. SRIKAR)
Signature of the Applicant

Place: Krishnagiri.

Date:

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

Qualified Person,

No.5/30-7B

Ponkumar Mines Road

Jagir Ammapalayam,

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 Mining Plan for the grant of Rough Stone & Gravel quarry lease over an extent of 1.86.50Hectares of Patta Land in S.F.No.79 of Midithepalli Village, Shoolagiri Taluk, Krishnagiri District, Tamilnadu State obtained by Thiru. B.Srikar, for applied quarry lease.

Wherever specific permission / exemptions / relaxations or approvals are required, the Applicant will approach the concerned authorities of State and Central Governments for obtaining such permissions etc.

Certified


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

Place: SALEM

Date:

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

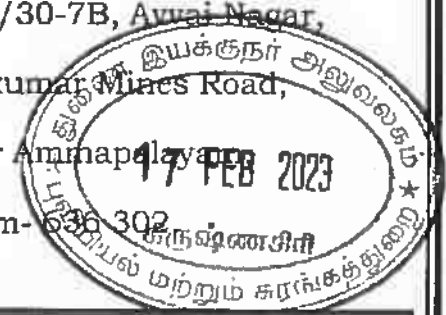
Qualified Person,

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

Ponkumar Mines Road,

Jagir Ammapalayam

Salem-636 302



CERTIFICATE

This is to certify that during preparation of Mining Plan for **Rough Stone & Gravel** quarry over an extent of **1.86.50Hectares** of **Patta Land** in **S.F.No.79** of **Midithepalli Village, Shoolagiri Taluk, Krishnagiri District, Tamilnadu State** for **Thiru. B.Srikar** covers all the provisions of Mines Act, Rules, and Regulations etc made there under and whenever specific permission are required, the Applicant will approach the Director General of Mines Safety, Chennai. The standards prescribed by DGMS in respect of Mines Health will be strictly implemented.

Certified


Signature of Qualified Person.

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

Place: SALEM

Date:

MINING PLAN FOR MINOR MINERALS
ROUGH STONE & GRAVEL QUARRY
TOTAL LEASE GRANTED PERIOD 10 YEARS
PROPOSED PERIOD OF MINING 10 YEARS



Over an extent 1.86.50 Hectares of Patta Land in S.F. No.79 of Midithepalli Village,
Shoolagiri Taluk, Krishnagiri District, Tamilnadu State

(Prepared Under Rules 41 & 42 as amended in Tamil Nadu Minor Mineral Concession
Rules, 1959)

1.0 INTRODUCTION :

1. **Thiru. B.SRIKAR**, S/o. Bharathy, residing at D.No.25, Shanti Nagar (West), 2nd Cross, Hosur Taluk, Krishnagiri District-635 109, has applied quarry lease for **Rough Stone & Gravel** over an extent of 1.86.50 Hectares of Patta Land in S.F. No.79 of Midithepalli Village, Shoolagiri Taluk, Krishnagiri District, Tamilnadu State for a period of Ten Years.
2. The Deputy Director, KRISHNAGIRI in his letter Rc. No.646/2021/Minerals dated 31.01.2023 has directed the applicant to produce approved Mining Plan and Environmental Clearance certificate from the State Environment Impact Assessment Authority (SEIAA) for the grant of quarry lease for the applied area.
3. Accordingly, Mining Plan is prepared under Rules 41 & 42 as amended in Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating the conditions imposed in the precise area communication letter and by incorporating all the details proposed in the letter to obtain environmental clearance from State Environment Impact Assessment Authority.
4. In the above circumstances, the mining plan has been prepared for the applicant **Thiru. B.SRIKAR** for a period of 10 years for approval and subsequent submission of Form-I and Pre-Feasibility report to obtain environmental clearance from the SEIAA of Tamil Nadu.
5. This Mining Plan is prepared for the Applied Rough Stone & Gravel quarry for the period of Ten years by considering the TNMMCR 1959, and as per the EIA Notification 2006 and subsequent amendments and judgments.


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

6. The Geological Reserves is estimated as 765140M³ and Mineable & recoverable Reserves is estimated as 333729 M³ of Rough Stone and 33210M³ of Gravel after leaving necessary safety distance from the lease boundary as indicated while granting the quarry lease Proceedings and relevant mining laws in force.

7. The proposed production scheduled for the Ten years is estimated as 333729M³ (for the First five (I-V)years- 224329M³ & for the Next five (VI-X)years- 109400M³) of Rough stone and 33210m³ of Gravel for first five years.

The proposed average annual production of Rough stone is about 33373 m³(Ten Years) & 33210m³ of Gravel(first five years).

8. Estimated Life of the Quarry

Total Mineable ROM	= 333729 M ³
Recoverable Reserves @ 100%	= 333729 M ³
Average production per year	= 33373 M ³
Estimated Life of the Quarry	= 333729 / 33373 = 10.0 years

Life = 10.0 years

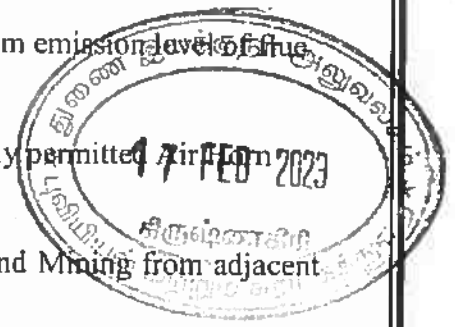
9. Environmental parameters,

- i) There is no interstate boundary around 10Kms radius.
- ii) There is no wild life animal sanctuary within 10Kms radius form the project site area under the Wildlife (Protection) Act, 1972. Therefore the project seeks clearance only from State Environment Impact Assessment Authority (SEIAA), under B2 Category.

10. Environmental measures already adopted are,

- i) Dust Control at source while drilling and blasting,
- ii) Dust suppression at loading point and transport haul roads,
- iii) Noise Control in blasting, control of fly rock missiles and vibration by doing peak particle velocity with in standard as prescribed by the DGMS and MoEF.
- iv) Unnecessary land degradation should be avoided or damaged land should be reclaimed or rehabilitated.
- v) Uneven rat hole mining is avoided and follow scientific and systematic mining by safe bench system of open cast mining.
- vi) Mining near major fracture zones already avoided to control ground water fluctuation in the adjacent agricultural lands.

- vii) Emission test of vehicles should be in stack maintain minimum emission level of fumes gases.
- viii) Noise level should not exceed 80db and the vehicles use only permitted while on road near residential areas.
- ix) Safety zones as prescribed by the Department of Geology and Mining from adjacent infrastructures should be strictly adhering to.
- x) And any other conditions as stipulated by the concerned authorities will be followed to protect the environment.



2.0 EXECUTIVE SUMMARY:

a.	Name of the Village	:	Midithepalli
b.	Name of the Panchayat / Union	:	Athimugam / Shoolagiri
c.	The proposed total Mineable Reserves	:	333729M ³
d.	The proposed quantity of reserves (level of production) Rough stone and Gravel to be mined is (Recoverable reserves)	:	333729M ³ (for the First five (I-V)years- 224329M ³ & for the Next five (VI-X)years- 109400M ³) & 33210M ³ - Gravel.
e.	Total extent of the area	:	1.86.50Ha
f.	Proposed Period of mining	:	Ten Years
g.	Proposed Depth of mining	:	39.0m (2.0m Gravel + 37.0m Roughstone)
h.	Existing Pit Dimension	:	Nil
i.	Average Production Per Year Rough Stone & Gravel	:	33373M ³ - Rough stone 33210M ³ - Gravel
j.	Method of mining / level of mechanization	:	Opencast, Semi-mechanized Mining with a bench height of 5m and bench width of 5m is proposed.
k.	Types of Machineries used in the quarry	:	i) Compressor with jack hammer. ii) Excavator of 0.90Cbm bucket Capacity.
l.	Cost of the Project	:	
	a. Fixed Cost		Rs. 21,00,000/-
	b. Operational Cost		Rs. 30,00,000/-
	c. EMP Cost		Rs. 3,80,000/-

m.	The Applied lease area is bounded by four corners and the coordinates are	: Toposheet No. 57- H/13
	Latitude	: 12° 46' 01.9743" N to 12° 45' 52.1189" N
	Longitude	: 77° 57' 03.0289" E to 77° 56' 59.2536" E
	North East	: 12° 46' 01.9743" N 77° 57' 03.0289"E
	South East	: 12° 45' 52.1734" N 77° 57' 01.7042"E
	North West	: 12° 46' 02.6386" N 77° 57' 01.9992"E
	South West	: 12° 45' 52.1189" N 77° 56' 59.2536"E



3.0. GENERAL INFORMATION:

3.1	a.	Name of the Applicant	: Thiru. B.Srikar,
	b.	Address of the Applicant with phone No and e-mail id if any	: B. Srikar, S/o. Bharathy, D.No.25, Shanti Nagar (West), 2 nd Cross, Hosur Taluk, Krishnagiri District-635 109.
	c.	Status of the Applicant	: Individual
3.2	a.	Mineral Which the Applicant intends to mine	: Rough Stone & Gravel
	b.	Precise area letter	: Rc. No. 646/2021/Minerals dated: 31.01.2023
	c.	Period of permission	: 10 Years
	e.	Name and Address of the Qualified Person/Authorized person preparing the Mining Plan	: S.Dhanasekar, M.Sc., No.5/30-7B, Avvai Nagar, Ponkumar Mines Road, Jagir Ammapalayam, Salem District - 636302. E-Mail: geodhana@yahoo.co.in Cell: 98946-28970 & 73733-74702

4.0 LOCATION:**a. DETAILS AREA:**

State	District	Panchayat / Union	Taluk	Village	S.F.No.	Extent In Hectare
Tamil Nadu	Krishnagiri	Athimugam / Shoolagiri	Shoolagiri	Midithepalli	79	1.86.50
TOTAL =						1.86.50Ha

b.	Classification of the Area (Ryotwari / Poramboke / others)	:	It is a Patta Land, which is not fit for vegetation/cultivation.
c.	Ownership / Occupancy of the Applied Lease area (Surface rights)	:	It is a Patta Land in S. F.No. 79 registered in the name of Mr. D. Ravikumar S/o. Vengatayya vide patta no.686. Pattadhar Mr.D.Ravikumar gave consent to B.Srikar, S/o. Bharathy for a period of 12 years. Hence applicant has surface right over the area.
d.	Toposheet No. with Latitude and Longitude	:	Toposheet No. 57 - H/13 12° 46' 01.9743" N to 12° 45' 52.1189" N 77° 57' 03.0289" E to 77° 56' 59.2536" E
e.	Existence of Public Road / Railway line if any nearby the area and approximate distance	:	Krishnagiri - Shoolagiri = 26.0 Kms. Shoolagiri - Athimugam = 10.5 Kms. Quarry site is located in Northwestern side at a distance of 3.0kms from Athimugam village.

PART - A

5.0 GEOLOGY AND MINERAL RESERVES:



5.1	a.	Topography	: 1. The area is situated gently sloping terrain towards NE direction covered with Gravel & Rough Stone which does not sustain any type of vegetation. The altitude of the area is 869m above MSL. 2. No major river is found nearby the lease area. 3. Water table is noticed at a depth of 66m from below the surface in the adjacent open well and bore well. 4. Temperature of the area is reported to be 18 ⁰ C to a maximum of 38 ⁰ C during summer. 5. Rainfall of this area is about 800mm to 900 mm during the monsoons in a year.
	b.	Infrastructures nearby the Applied Lease area. 1. Post Office 2. Police Station 3. G.H 4. Fire service 5. Railway Station 6. School 7. Airport 8. Seaport	: Venkatesapuram – 2.1kms : Berigai – 9.7kms : Shoolagiri – 15.0kms : Hosur – 22.0kms : Hosur – 18.0kms : Venkatesapuram – 1.3kms : Bangalore – 90.5kms : Chennai – 303.0kms
	c.	Regional Geology	: KRISHNAGIRI District is underlined by the wide range of metamorphic rocks of peninsular gneissic complex. These rocks are extensively weathered and overlain by the recent valley fills and alluvium at places. The geological formations found in the District are Archaean rocks like Gneisses, Granites, Charnockite basic granulites and calc-gneisses. The younger formations are Quartz veins and pegmatite.

The generalized stratigraphic succession and the geological formations met within this District is as follows.



	Age	Rock Formation
1.	Recent to Sub recent	Soil, Alluvium
2.	Archaean	Granites, basic granulites, Peninsular Gneiss, Calc Gneiss and Charnockites

d. Geology of the Lease Area

1. The area is mainly composed of Archaean crystalline metamorphic complex.
2. The rock type noticed in the area for lease is **Granite Gneiss** which contains mostly Quartz and Feldspar with some ferromagnesian minerals.
3. The Charnockite is part of peninsular Gneisses, a high grade metamorphic rock.
4. The general trend of formation is NE – SW and dip SE 70°.

The general geological succession of the area is given under

	Age	Rock Formation
1.	Recent to Sub recent	Soil, Alluvium
2.	Archaean	Charnockites
3.	Archaean	Peninsular Gneiss, and Calc Gneiss

5.2 Details of Exploration already carried out if any

: Since the **Rough Stone & Gravel** is seen from the Surface itself, No needed to exploration. However, the area was personally examined by the Geologist who prepared the Mining Plan.

5.3 a. Already excavated in pit dimensions

Nil

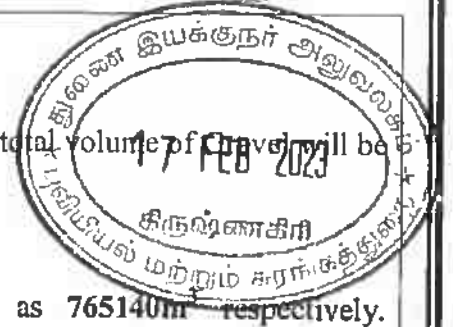
b. Geological Reserves:

Gravel :

The Thickness of Gravel in this area is 2.0m and the total volume of Gravel will be 44200m³.

Rough Stone :

The Available Geological Reserve is estimated as 765140m³ respectively. Gravel is calculated upto a depth of 2m and Rough Stone at a depth of 37m. Total Depth-39m.



GEOLOGICAL RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Geological Reserves in m3 @ 100%	Gravel in m3
XY-AB	I	160	80	2			25600
	II	160	32	2	10240	10240	
	III	160	80	5	64000	64000	
	IV	160	80	5	64000	64000	
	V	160	80	5	64000	64000	
	VI	160	80	5	64000	64000	
	VII	160	80	5	64000	64000	
	VIII	160	80	5	64000	64000	
	IX	160	80	5	64000	64000	
TOTAL					458240	458240	25600
XY-CD	I	155	60	2			18600
	III	155	60	3	27900	27900	
	IV	155	60	5	46500	46500	
	V	155	60	5	46500	46500	
	VI	155	60	5	46500	46500	
	VII	155	60	5	46500	46500	
	VIII	155	60	5	46500	46500	
	IX	155	60	5	46500	46500	
TOTAL					306900	306900	18600
GRAND TOTAL					765140	765140	44200

c. **Mineable Reserves:**

The Mineable reserves are calculated by deducting 7.5m & 10m Safety distance and bench loss. In this regard, since the adjacent area also to be under new lease area, necessary action will be taken to get permission from DGMS in future to comply regulation under (111)3 of MMR.1961.



Gravel:

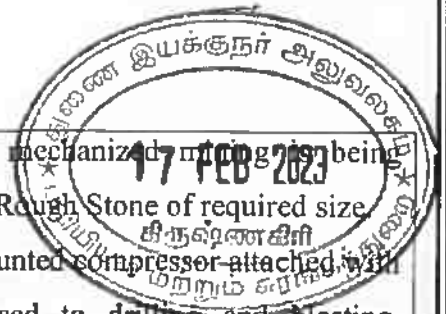
The Thickness of Gravel in this area is 2.0m and the total volume of Gravel will be 33210m³.

Rough Stone :

The Mineable reserves and the Recoverable reserves are 333729m³ respectively, at the rate of 100% recovery upto the permissible depth. Total Depth-39m (2m Gravel + 37m Rough Stone).

MINEABLE RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume In M3	Mineable Reserves in m3 @ 100%	Gravel in m3
XY-AB	I	153	65	2			19890
	II	153	25	2	7650	7650	
	III	153	65	5	49725	49725	
	IV	153	65	5	49725	49725	
	V	148	55	5	40700	40700	
	VI	143	45	5	32175	32175	
	VII	138	35	5	24150	24150	
	VIII	133	25	5	16625	16625	
	IX	123	15	5	9225	9225	
TOTAL					229975	229975	19890
XY-CD	I	148	45	2			13320
	II	148	41	3	18204	18204	
	III	148	45	5	33300	33300	
	IV	143	35	5	25025	25025	
	V	138	25	5	17250	17250	
	VI	133	15	5	9975	9975	
TOTAL					103754	103754	13320
GRAND TOTAL					333729	333729	33210

6.0 MINING:

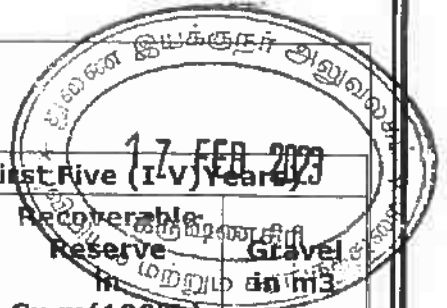


6.1	Method of Mining	: 1. Opencast method of semi mechanized mining being adopted to extract Gravel & Rough Stone of required size. 2. Machineries like Tractor mounted compressor attached with Jack hammers is being used to drilling and blasting. Excavators are operated for quarrying of Rough Stone & Gravel and Tippers / Lorries are used for the transportation of Rough Stone & Gravel to the destination.
6.2	Mode of Working	: It is a semi mechanized quarrying operation using shot hole drilling with the help of compressor and jack hammers and smooth blasting. Rough Stone are removed using Hydraulic excavator and loaded directly to the tippers and transported to the needy end users.
6.3	Proposed bench height & Width	: Bench height = 5mts. Bench width = 5mts.
6.4	Details of Gravel / Mineral Production proposed for Ten years.	: Gravel / Overburden production details follows: The entire lease area is covered 2.0m of Gravel and the estimated quantity of Gravel is 33210m ³ . Gravel formation will be removed and hydraulic excavators are used for loading the gravel into the tipper from pit head to needy buyers. This will be done only after obtaining permission and paying necessary seigniorage fees to the Government.

Year wise reserves calculations :

Rough stone production First Five Years details as follows:

The proposed rate of production of **Rough Stone** is estimated as 224329m³ & Gravel is 33210 for First Five (I-V) years. The average proposed rate of production of **Rough Stone** is about 44866m³ per year at the rate of 100% recovery upto the permissible depth. Reserves Calculated upto 19m (2m Gravel + 17m Rough Stone). (Refer Drawing Plate No.IV-A1-Year wise Sections).



YEARWISE DEVELOPMENT AND PRODUCTION (First Five (I-V) Years)

YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume in (Cu.m.)	Recoverable Reserve in Cu.m(100%)	Gravel in m ³
I-YEAR	XY-AB	I	153	65	2			19890
		II	153	25	2	7650	7650	
		III	153	65	5	49725	49725	
	XY-CD	I	148	45	2			13320
		II	148	41	3	18204	18204	
II-YEAR	XY-AB	IV	153	65	5	49725	49725	
III-YEAR	XY-CD	III	148	45	5	33300	33300	
IV-YEAR	XY-AB	V	148	55	5	40700	40700	
V-YEAR	XY-CD	IV	143	35	5	25025	25025	
Total (First Five (I-V)Years)						224329	224329	33210

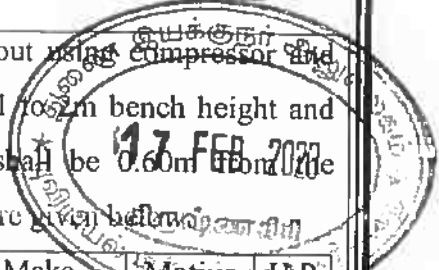
Rough stone production Second Five Years details as follows:

The proposed rate of production of **Rough Stone** is estimated as **109400m³** for Second Five (VI-X) years. The average proposed rate of production of **Rough Stone** is about **21880m³** per year at the rate of 100% recovery upto the permissible depth. Reserves Calculated upto **20m** Rough Stone. (Refer Drawing Plate No.IV-BI-Year wise Sections).

YEARWISE DEVELOPMENT AND PRODUCTION (Second Five (VI-X)Years)

YEAR	Section	Bench	L (m)	W (m)	D (m)	Volume in (Cu.m.)	Recoverable Reserve in Cu.m(100%)
VI-YEAR	XY-AB	VI	143	45	5	32175	32175
VII-YEAR	XY-CD	V	138	25	5	17250	17250
VIII-YEAR	XY-AB	VII	138	35	5	24150	24150
IX-YEAR	XY-CD	VI	133	15	5	9975	9975
X-YEAR	XY-AB	VIII	133	25	5	16625	16625
	XY-CD	IX	123	15	5	9225	9225
Total (Second Five (VI-X)Years)						109400	109400

6.5 a. **Mining** : Drilling of shot holes will be carried out using ~~air~~ ^{air} compressor and jack hammer. Depth of holes shall be 1.70m bench height and spacing shall be 0.75m and burden shall be 0.60m ^{0.60m}. Details of drilling equipments are given below.



Type	Nos	Dia of hole	Size / Capacity	Make	Motive power	H.P
Jack Hammer	3	25.5 mm	Hand held	Atlas copco 2Nos	Diesel	60

b. **Loading** : Loading of waste and Rough Stone & Gravel is being carried out by Excavator into 10 tonne capacity tippers from the working place periodically. Details of loading equipment are given as under.

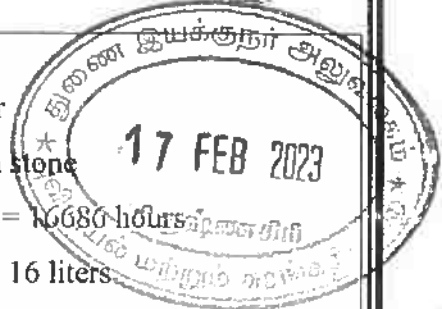
Type	Nos	Bucket Capacity (MT)	Make	Motive power	H.P
Hydraulic excavator	1	1.2 M ³	L&T or Ex200	Diesel	120

c. **Transportation** : Transport of raw materials and waste shall be done by 10 tonnes tipper

Type	Nos	Size / Capacity	Make	Motive power	H.P.
Tipper	1	10 M.T	Ashok Leyland	Diesel	110

d. **Energy:**
 Electricity for mines and lights only at nights (working is restricted on day time only between 8Am to 4Pm). Diesel (HSD) will be used for quarrying machines around 272511 litres for the entire project life. Diesel will be brought from nearby diesel pumps. No power is required for the project. Lightings on the night is taken from nearby electric poles after obtaining permission from concerned authorities.

For Gravel:
 Per hour excavator will consume = 10 litres / hour
 Per hour excavator will excavate = 60m³ of Gravel
 For 33210m³ = 33210/ 60 = 553.5hours
 Diesel consumption 553.5working hours = 553.5 x 10 litres
 Total diesel consumption = 5535 litres of HSD will be utilized for Gravel



For Rough stone:

Per hour excavator will consume = 16 liters / hour

Per hour excavator will excavate = 20m³ of rough stone

For 333729m³ = 333729 / 20 = 16686 hours

Diesel consume 16686 working hours = 16686 hours x 16 liters.

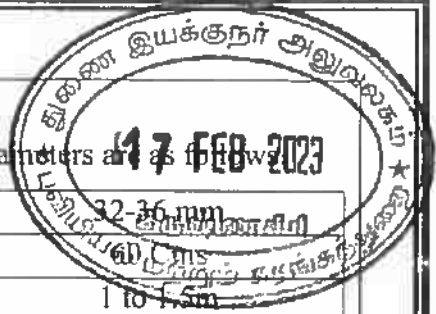
Total diesel consumption = 266976 litres of HSD will be utilized for Rough stone

Total diesel consumption is around Gravel 5535 Litres + Rough Stone 266976 Litres)= 272511 litres of HSD for the entire period of life.

6.6	a.	Disposal of Overburden /Gravel	: The Gravel of the lease area is 33210m ³ . Gravel formation will be removed and transported to the needy end user, only after obtaining permission and paying necessary seigniorage fees to the Government.
6.7	a.	Brief Note on Conceptual Mining Plan for the entire lease period	: Conceptual Mining Plan is prepared with an object of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, etc., Average Ultimate Pit dimension in given as Under, <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p style="text-align: center;">Ultimate Pit Dimensions:</p> <p style="text-align: center;">=300.0m(L) X 55.0m(W) Avg X 39.0m(D)</p> </div> <p>Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc. Afforestation has been proposed on the boundary barrier by planting trees.</p> <p>All the baseline information studies like Air Quality monitoring, Noise and Vibration monitoring, Water Analysis studies are being carried out every year as per the MOEF norms.</p>

7.0 BLASTING:

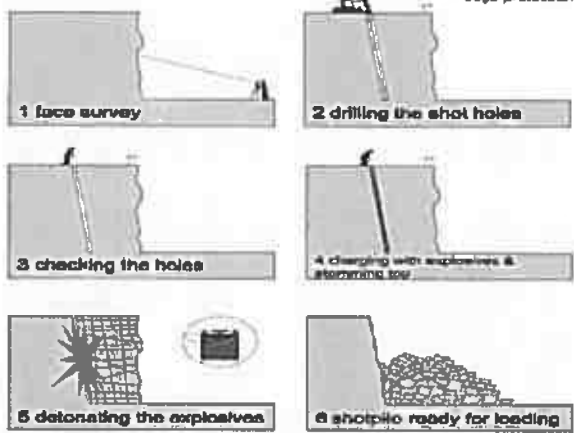
7.1	Proposed Control Blasting Pattern	: The massive formation shall be broken into pieces of portable size by drilling and Proposed Control Blasting using jack hammers and shot hole Blasting. Powder factor of explosives for breaking such hard rock shall be in the order of 6 to 7 tonnes per K.g of explosives.
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Proposed Control Blasting parameters are as follows

Diameter of the hole	:	32-36 mm
Spacing	:	60 Cms
Depth	:	1 to 1.5m
Charge / Hole	:	D.Cord with water or 70 gms of gun powder or Gelatine.
Pattern of hole	:	Zig Zag
Inclination of hole	:	70° from the horizontal.
Quantity of rock broken	:	0.45 MT x 2.6 = 1.17 MT
Control Blasting efficiency @90%	:	1.17 x 90% = 1.05MT / hole
Charge per hole	:	140 gms of 25mm dia cartridge
Quantity of rock broken per day	:	111.24M ³ .

ROCK BLASTING

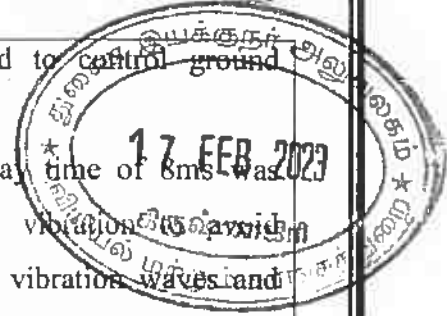


7.2 Types of Explosives

: Following explosives are recommended for efficient blasting with safe practice.

S. No	Description	Class / Division	Type	Size
1.	Slurry	Class - 3	Nitro Compound	25 x 200
2.	Detonators	Class - 3	Ordinary and elec (OD & ED)	6.5 x 32
3.	Safety fuse	Class - 6	Blue sump fuse coils of 10mts each	

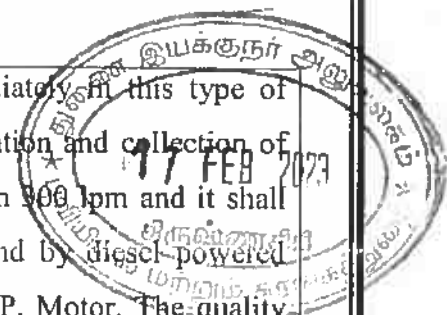
7.3	Measures proposed to minimize ground vibration due to blasting	<p>The following steps are being adopted to control ground vibration due to blasting.</p> <ol style="list-style-type: none"> 1. The minimum recommended delay time of 8ms was introduced to minimize ground vibration constructive interference of blast vibration waves and hence its impact or amplitude is less. 2. Use of Ammonium nitrate fuel oil mixture for shot holes is avoided because which cause high fly of rocks in view critical diameter problem. Only high strength explosives like slurry are used in the form of cartridge. 3. Charge per hole will exceed the powder factor designed for each hole based on the quantum of blasting, strength of rocks, fracture pattern etc.
7.4	Storage of Explosives and safety measures to be taken while blasting.	<ol style="list-style-type: none"> 1. The Applicant stores the explosives as per the Indian Explosives Act, 1958. 2. The explosives to be used in mines being a small quantity, the District collector may be approached to keep the stocks not exceeding 5kgs at time or any other quantity permitted by the concerned authorities in a portable magazine of S & B types. 3. An authorized explosive agency is engaged to carry out blasting. 4. The blasting time in a day is between 5 PM to 6 PM. 5. First Aid Box is kept ready at all the time. 6. Necessary precautionary announcement is being carried out before the blasting operation.



8.0 MINE DRAINAGE:

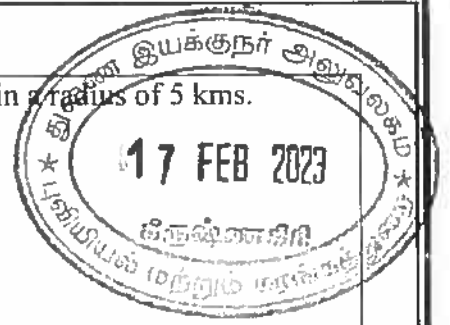
8.1	Depth of Water table	<p>The ground water table is reported as 66m below ground level in nearby wells of this area. Mining depth taken as 39m. Now, proposed quarry depth is above the water table. Hence, quarrying may not affect the ground water.</p>
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8.2 Arrangement and Places where the mine water is finally proposed to be discharged	: The ground water may not rise immediately in this type of mining. However, the rain water percolation and collection of water from the seepage shall be less than 900 lpm and it shall be pumped about periodically by a stand by diesel-powered Centrifugal pump motivated with 7.5 H.P. Motor. The quality of water is potable and it is not contaminated with any hazardous things.
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9.0 OTHER PERMANENT STRUCTURES:

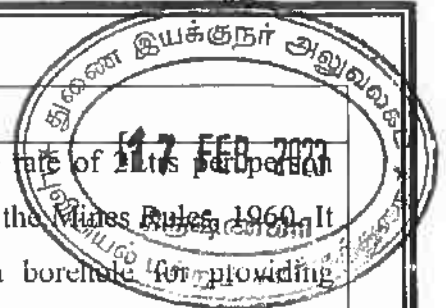
9.1 Habitations / Village	: There are no villages within a radius of 500m. The nearest habitations with the population is given as under, <table border="1"> <thead> <tr> <th>Direction</th> <th>Village</th> <th>Distance in kms</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>North</td> <td>Alnatham</td> <td>1.5Kms</td> <td>240</td> </tr> <tr> <td>East</td> <td>Athetti</td> <td>1.5Kms</td> <td>180</td> </tr> <tr> <td>South</td> <td>Venkatesapuram</td> <td>1.7Kms</td> <td>420</td> </tr> <tr> <td>West</td> <td>Andevanapalli</td> <td>3.0Kms</td> <td>310</td> </tr> </tbody> </table>	Direction	Village	Distance in kms	Population	North	Alnatham	1.5Kms	240	East	Athetti	1.5Kms	180	South	Venkatesapuram	1.7Kms	420	West	Andevanapalli	3.0Kms	310
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9.2 Power lines (HT/LT)	: No power line is located in the lease area.																				
9.3 Water bodies (River, Pond, Lake, Odai, Channel etc)	: There is No Water bodies (River, Pond, Lake, Odai, Channel etc) located within a radius of 500m.																				
9.4 Archeological / Historical Monuments	: There are no Archeological / Historical Monuments within a radius of 500m.																				
9.5 Road (NH, SH, Village Road etc)	: Krishnagiri – Shoolagiri = 26.0 Kms. Shoolagiri – Athimugam = 10.5 Kms. Quarry site is located in Northwestern side at a distance of 3.0kms from Athimugam village.																				
9.6 Places of Worship	: There are no Places of Worship within a radius of 500m.																				
9.7 Reserved Forest / Forest / Social Forest / Wild Life Sanctuary etc.,	: No Reserve forest is located within 500m radial distance. North Cauvery Wild life Sanctuary, Udedurgam located within the distance of about 25 kms from the lease area.																				



9.8	Any Interstate Border, Protected areas under the Wild Life (Protection) Act, 1972, Critically Polluted Areas as Identified by Central Pollution Control Board and Notified Eco sensitive areas	:	There are No inter State border within a radius of 5 kms.
9.9	Any Other Structures	:	Nil.

10.0 EMPLOYMENT POTENTIAL & WELFARE MEASURES:

10.1	Employment Potential (Management & Supervisory personal)	<p>1. As per Mines safety under the provisions of MMR, 1961 under the Mines Act, 1952, whenever the workers are employed more than 10, it is preferred to have a qualified Mining Mate to keep all the production workers directly under his control and supervision.</p> <p>2. The following man power is proposed for quarrying Rough Stone & Gravel during the Ten years period to achieve the proposed production and to comply the provisions of the Government norms.</p> <table border="1"> <tr> <td>1.</td> <td>Skilled</td> <td>Operator</td> <td>2 No.</td> </tr> <tr> <td></td> <td></td> <td>Mechanic</td> <td>1 No.</td> </tr> <tr> <td></td> <td></td> <td>Blaster/Mat</td> <td>1 No.</td> </tr> <tr> <td>2.</td> <td>Semi – skilled</td> <td>Driver</td> <td>2 Nos</td> </tr> <tr> <td>3.</td> <td>Unskilled</td> <td>Musdoor / Labors</td> <td>5 Nos</td> </tr> <tr> <td></td> <td></td> <td>Cleaners</td> <td>2Nos</td> </tr> <tr> <td></td> <td></td> <td>Office Boy</td> <td>1No</td> </tr> <tr> <td>4.</td> <td colspan="2">Management & Supervisory staff</td> <td>2No.</td> </tr> <tr> <td></td> <td colspan="2">Total =</td> <td>16Nos</td> </tr> </table>	1.	Skilled	Operator	2 No.			Mechanic	1 No.			Blaster/Mat	1 No.	2.	Semi – skilled	Driver	2 Nos	3.	Unskilled	Musdoor / Labors	5 Nos			Cleaners	2Nos			Office Boy	1No	4.	Management & Supervisory staff		2No.		Total =		16Nos
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10.2	Welfare Measures		
a.	Drinking Water	:	Drinking water at the rate of 2 Litrs per person shall be provided as per the Mines Rules, 1960. It is proposed to make a borehole for providing uninterrupted supply of drinking water and other utilities.
b.	Sanitary facilities	:	Semi-permanent latrines & urinals shall be maintained at convenient places for use of labours as per the provisions of Rule (33) of the Mines Rules, 1960 separately for males and females. Washing facilities shall also be arranged as per rule (36) of the Mines Rules, 1960.
c.	First Aid Facility	:	Being a small mine First Aid station as per provisions under Rule (44) of the Mines Rules 1960 will be provided with facilities as per the third schedule as prescribed. Qualified First Aid personnel should be appointed or nominated to attend emergency first aid treatment.
d.	Labor Health	:	As per Mines Rule, Periodic medical examination has been arranged for occupational health once in a year in addition to attending medical treatment of occupational injuries under the Rule 45 (A), MR, 1960.
e.	Precautionary safety measures to the Laborers	:	Safety provisions like helmet, goggles, safety shoes, Dust mask, Ear muffs etc have been provided as per the circulars and amendments made for Mine labours under the guidance of DGMS being a mechanized operation. Necessary training will be conducted once in a year to all the employees with the help of qualified and experienced officers to train about the safe and system at quarrying operation.

PART - B

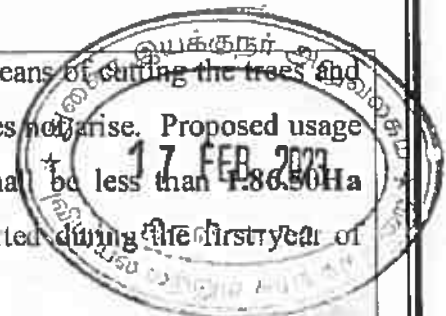


11.0 ENVIRONMENTAL MANAGEMENT PLAN:

11.1	Area Land Use Pattern	<p>The land use pattern is given as under</p> <table border="1"> <thead> <tr> <th>SL. NO.</th> <th>LAND USE</th> <th>PRESENT AREA (HECT)</th> <th>AREA IN USE DURING THE QUARRYING PERIOD (HECT)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Area under Quarrying</td> <td>Nil</td> <td>1.45.0</td> </tr> <tr> <td>2.</td> <td>Infrastructure</td> <td>Nil</td> <td>0.01.0</td> </tr> <tr> <td>3.</td> <td>Roads</td> <td>Nil</td> <td>0.01.0</td> </tr> <tr> <td>4.</td> <td>Green Belt</td> <td>Nil</td> <td>0.39.5</td> </tr> <tr> <td>5.</td> <td>Unutilized Area</td> <td>1.86.5</td> <td>Nil</td> </tr> <tr> <td colspan="2">Total =</td> <td>1.86.5Ha</td> <td>1.86.5Ha</td> </tr> </tbody> </table>	SL. NO.	LAND USE	PRESENT AREA (HECT)	AREA IN USE DURING THE QUARRYING PERIOD (HECT)	1.	Area under Quarrying	Nil	1.45.0	2.	Infrastructure	Nil	0.01.0	3.	Roads	Nil	0.01.0	4.	Green Belt	Nil	0.39.5	5.	Unutilized Area	1.86.5	Nil	Total =		1.86.5Ha	1.86.5Ha
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Total =		1.86.5Ha	1.86.5Ha																											
11.2	Water Regime	<p>Water table in this area is noticed at a depth of 66m below the surface ground level and presently, the quarrying of Rough Stone & Gravel is proposed up to a depth of 39m. Hence, it will not affect the ground water depletion of this area.</p>																												
11.3	Flora and Fauna	<p>Except acacia bushes, no other valuable trees are noticed in the Applied Lease area. Further, neither flora of botanical interest nor fauna of zoological interest is noticed in this area.</p>																												
11.4	Climatic conditions	<p>Generally sub tropical climatic condition prevails throughout the year and this District receives rain both in South west and North east monsoon. The average rainfall is about 800mm to 900mm and the temperature ranges from 18⁰C during winter and to a maximum of 38⁰C during the summer.</p>																												
11.5	Human Settlement	<p>The nearest habitations with the population.</p> <table border="1"> <thead> <tr> <th>Direction</th> <th>Village</th> <th>Distance in Kms</th> <th>Population</th> </tr> </thead> <tbody> <tr> <td>North</td> <td>Alnatham</td> <td>1.5Kms</td> <td>240</td> </tr> <tr> <td>East</td> <td>Athetti</td> <td>1.5Kms</td> <td>180</td> </tr> <tr> <td>South</td> <td>Venkatesapuram</td> <td>1.7Kms</td> <td>420</td> </tr> <tr> <td>West</td> <td>Andevanapalli</td> <td>3.0Kms</td> <td>310</td> </tr> </tbody> </table>	Direction	Village	Distance in Kms	Population	North	Alnatham	1.5Kms	240	East	Athetti	1.5Kms	180	South	Venkatesapuram	1.7Kms	420	West	Andevanapalli	3.0Kms	310								
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11.6	Plan for Air, Dust Suppression	: Air or dust expected to be generated from drilling process, hauling roads, places of excavation etc will be suppressed by periodical wetting of land by water spraying. For the sampling of air, high volume air sampler (Model VFC-PM10) was used (10 meter above and 5 meter away from road) and the particulates were collected on what man GFA glass fiber filters dried in a hot air oven at 105°C for 1hr and weighed. The average flow rate was about 1.1 cubic meters.
11.7	Plan for Noise Control	: Quarrying of Rough Stone & Gravel will be carried out by drilling and blasting by using low power explosives, and hence, noise is very minimum. However, periodical noise level monitoring will be carried out to check the noise level in and around the quarry site. In order to assess the extent of noise pollution due to vehicular traffic different zones viz., Silence zone, Residential Zone, Commercial zone, Traffic signals and Industrial zones were identified in urban and suburban areas of Krishnagiri. Adequate number of observations were made in all the selected sites by using the sound level meter (LT Lutron SL-4001).
11.8	Environmental Impact Assessment Statement Describing Impact on mining on the Ten years.	: Factors to be considered for EIA are, <ol style="list-style-type: none"> 1. Dust generation, 2. Land degradation 3. Stabilization and vegetation of dumps 4. Adverse effect on water regime 5. Socio economic benefits arising out of Mining. 6. Noise and Vibration.
	a. Dust	: Dust is expected to be generated from drilling, hauling roads; place of excavation etc and it will be suppressed by periodical wetting of lands.

	b. Land degradation	:	Land degradation is by means of cutting the trees and removal of fertile soil does not arise. Proposed usage of land for Ten years shall be less than 1.86.50Ha. Afforestation will be started during the first year of mining operation itself.
	c. Stabilization and vegetation of dumps	:	The soil will be spread over the non-active dumps along the slope and edges to plant tree saplings to form vegetal cover over the dumps. Such vegetal cover will prevent erosion of dumps during rainy seasons.
	d. Socio economic benefits arising out of mining	:	<ol style="list-style-type: none"> 1. To provide Employment opportunities of the nearby villagers. 2. For the cultural development of the nearby villagers.
	e. Noise and vibration	:	Since, no deep hole blasting is proposed with small dia explosives are used for breaking the hard rock and boulders, the noise and vibration will be very minimum and are within the permissible limits.
11.9	Proposal for Waste Management	:	There is no requirement for waste management as there is 100% recovery percentage.
11.10	Proposal of Reclamation of Land affected during mining activities and at the end of mining.	:	The present mining is proposed to a depth of 39m. The mined out area will be fenced on top of open cast working with S1 fencing. Low lying areas with water logging shall be used for fish culture. No immediate proposals for closure of pit as the rough stone persist still at deeper level.
11.11	Program for Afforestation	:	Trees like tamarind, casuarinas etc were planted along the lease boundary and avenues as well as over non active dumps at a rate 60 trees per annum with an interval of 5m. The rate of survival expected to be 70% in this area.



11.12	Proposed Financial Estimate / Budget for (EMP) Environment Management	:	
	Fixed Asset Cost:		
	1. Land Cost	:	Rs.18,00,000/- (Amount for Patta Land)
	2. Labour Shed	:	Rs.1,20,000/-
	3. Sanitary Facility	:	Rs. 80,000/-
	4. Fencing cost	:	Rs.1,00,000/-
	Total=	:	Rs.21,00,000/-
	Operational Cost:		
	Machinery cost	:	Rs.30,00,000/-
	EMP Cost:		
	1. Drinking water facility	:	Rs. 1,20,000/-
	2. Safety kits	:	Rs. 50,000/-
	3. Water sprinkling	:	Rs. 90,000/-
	4. Afforestation	:	Rs. 30,000/-
	5. Water quality test	:	Rs. 30,000/-
	6. Air quality test	:	Rs. 30,000/-
	7. Noise/vibration test	:	Rs. 30,000/-
	Total=	:	Rs. 3,80,000/-
	Total Project Cost	:	Rs.54,80,000/-



12.0 MINE CLOSURE PLAN:

12.1	Steps proposed for phased restoration, reclamation of already mined out area.	:	The present mining is proposed to a depth of 39m. The mined out area will be fenced on top of open cast working with S1 fencing to arrest the entry of cattle's and public in to the quarry site.
12.2	Measures to be under taken on mine closure as per Act & Rules	:	Measures will be taken as per the Acts and Rules. The quarried pit will be fenced by using Barbed wire fencing. Green belt development at the rate of 60 trees per year will be proposed.
12.3	Mitigation measures to be undertaken for safety and restoration/ reclamation of the already mined out area	:	It is a fresh Rough Stone & Gravel quarry with a mineable depth of 39m only and hence, no need of mitigation and restoration / reclamation of the applied lease area.

13.0 ANY OTHER DETAILS INTEND TO FURNISH BY THE APPLICANT



- (i) Permission will be obtained from the Director of Mines Safety for extracting Rough Stone & Gravel from the Boundary barriers and from slopes.
- (ii) Care and precautionary measures will be taken for the safety of workers as per Rules and Acts.
- (iii) The applicant will endeavor every attempt to quarry the Rough Stone & Gravel economically without any wastage and to improve the environment and ecology.
- (iv) Accordingly, Mining Plan is prepared under Rule 41 & 42 as amended in Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating the conditions imposed in the precise area communication letter and by incorporating all the details proposed in the letter to obtain environment clearance from State Environment Impact Assessment Authority.
- (v) This Mining Plan is prepared for the Applied Rough Stone & Gravel Quarry for a period of Ten Years.


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

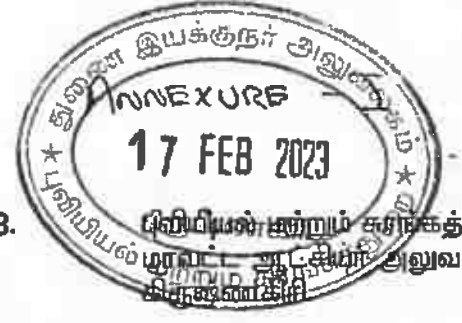
This Mining Plan is approved based on guidelines / instruction issued and in corporation of the particulars specified in the letter Roc. No. 646/2021 Dated 17.2.2023 of the Deputy Director of Geology and Mining, Krishnagiri and subject to further fulfillment of the conditions laid down under Tamil Nadu Minor Mineral Concession Rules, 1959 and Minor Mineral Conservation and Development Rule 2010.


DEPUTY DIRECTOR
Geology and Mining,
Collectorate, Krishnagiri.

646/2021
17.2.23

This Mining Plan is approved subject to the conditions / Stipulation indicated in the Mining Plan Approval

Letter Roc. No. 646/2021 Dated 17.2.2023



ந.க.எண். 646/2021/கனிமம் நாள்: 31.01.2023.

புவியியல் மற்றும் சுரங்கத்துறை
மாவட்ட ஆட்சியர் அலுவலகம்,
கிருஷ்ணகிரி

குறிப்பாணை

பொருள் : கனிமங்களும் சுரங்கங்களும் - சிறு கனிமம் - சாதாரண கற்கள் - கிருஷ்ணகிரி மாவட்டம் - சூளகிரி வட்டம் - மிடிதேப்பள்ளி கிராமம் - பட்டா புல எண். 79 (1.86.50) ஹெக்டேர் பரப்பில் சாதாரண கற்குவாரி செய்ய திரு. B. ஸ்ரீகர் என்பவர் விண்ணப்பம் அளித்தது - வருவாய்துறை, புவியியல் மற்றும் சுரங்கத்துறை மற்றும் வனத்துறை புலத்தணிக்கை அறிக்கை சமர்ப்பிக்கப்பட்டது - தகுதியான நிலப்பரப்பாக கருதி ஏற்பளிக்கப்பட்ட சுரங்க திட்டம் மற்றும் சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணைய இசைவினை பெற்று சமர்ப்பிக்கக் கோருதல் - தொடர்பாக.

- பார்வை :**
1. அரசாணை எண்.208 தொழில் துறை நாள் 21.09.2020-ல்
 2. திரு. B. ஸ்ரீகர், த/பெ.பாரதி, க/எண்.25, சாந்தி நகர்(மேற்கு), 2-வது கிராஸ், ஓசூர் - 635 109 என்பவரின் விண்ணப்பம் நாள்: 30.01.2021.
 3. உதவி இயக்குநர்(கூ.பொ), புவியியல் மற்றும் சுரங்கத்துறை, கிருஷ்ணகிரி ந.க.646/2021/கனிமம், நாள்:02.07.2021.
 4. வட்டாட்சியர், சூளகிரி கடிதம் ந.க.1378/2021/அ2 நாள்:31.07.2021 மற்றும் 28.04.2022
 5. வருவாய் கோட்டாட்சியர், ஓசூர் கடிதம் ந.க.எண்.2068/2021/பி2 நாள்: 06.07.2022.
 6. அரசு ஆணை (3D) எண்.243 தொழில், முதலீட்டு ஊக்குவிப்பு மற்றும் வர்த்தகம் (எம்எம்இ-2) துறை நாள்: 14.12.2022.
 7. வன உயிரினக்காப்பாளர், ஓசூர் கடித ந.க.எண்.13119/2022/எல் நாள்:10.01.2023.
 8. உதவி புவியியலாளர் (கனிமம்) புலத்தணிக்கை அறிக்கை நாள். 28.01.2023.
 9. மற்றும் உரிய ஆவணங்கள்

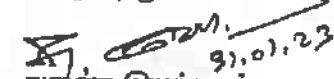
பார்வைகளின் மீது கனிவான கவனம் வேண்டப்படுகிறது.

2. கிருஷ்ணகிரி மாவட்டம், சூளகிரி வட்டம், மிடிதேப்பள்ளி கிராமம், பட்டா புல எண்.79-ல் 1.86.50 ஹெக்டேர் பரப்பில் சாதாரண வகை கற்குவாரி செய்ய உரிமம் வழங்க கோரி திரு. B. ஸ்ரீகர் என்பவர் 30.01.2021 நாளிட்ட விண்ணப்பத்தினை உரிய ஆவணங்களுடன் சமர்ப்பித்துள்ளார்.




4. எனவே, வட்டாட்சியர், துளகிரி, வருவாய் கோட்டாட்சியர், கிருஷ்ணகிரி, வன உயிரின காப்பாளர், ஒசூர் மற்றும் உதவி புவியியலாளர் (கனிமம்) ஆகியோரின் பரிந்துரை மற்றும் நிபந்தனைகளின் அடிப்படையில், கிருஷ்ணகிரி மாவட்டம், துளகிரி வட்டம், மிடிதேப்பள்ளி கிராமம், பட்டா புல எண்.79-ல் 1.86.50 ஹெக்டேர் பரப்பளவில் விண்ணப்பதாரர் திரு. B. ஸ்ரீகர் என்பவருக்கு 1959ம் வருட தமிழ்நாடு சிறுகனிம விதிகள், விதி எண். 19-ன் படி மேற்கண்ட நிபந்தனைகளுக்குட்பட்டு 10 (பத்து) வருட காலத்திற்கு மேற்பரப்பு கிராவல் மண் மற்றும் சாதாரண வகை கற்குவாரி உரிமம் வழங்குவதற்குரிய தகுதியான நிலப்பரப்பாக கருதப்படுகிறது.

5. மேலும், தமிழ்நாடு சிறு கனிம சலுகை விதிகள்-1959 விதி எண். 41-ன் படி குவாரிப்பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்க திட்டத்தினை 90 தினங்களுக்குள் சமர்ப்பிக்குமாறு மனுதாரரைக் கேட்டுக்கொள்ளப்படுகிறது. மேலும் ஏற்பளிக்கப்பட்ட சுரங்கத்திட்டத்தின் தொடர்ச்சியாக 1959ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள், விதி எண். 42-ன் படி சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்கும் பட்சத்தில் மட்டுமே குவாரி உரிமம் வழங்கப்படும் என இதன் மூலம் தெரிவிக்கப்படுகிறது.


துணை இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
கிருஷ்ணகிரி.

பெறுநர்:

திரு. B. ஸ்ரீகர், த/பெ.பாரதி,
க/எண். 25, சாந்தி நகர் (மேற்கு),
2-வது கிராஸ்,
ஒசூர் - 635 109.


31/01/23 31/01/23

நகல்:

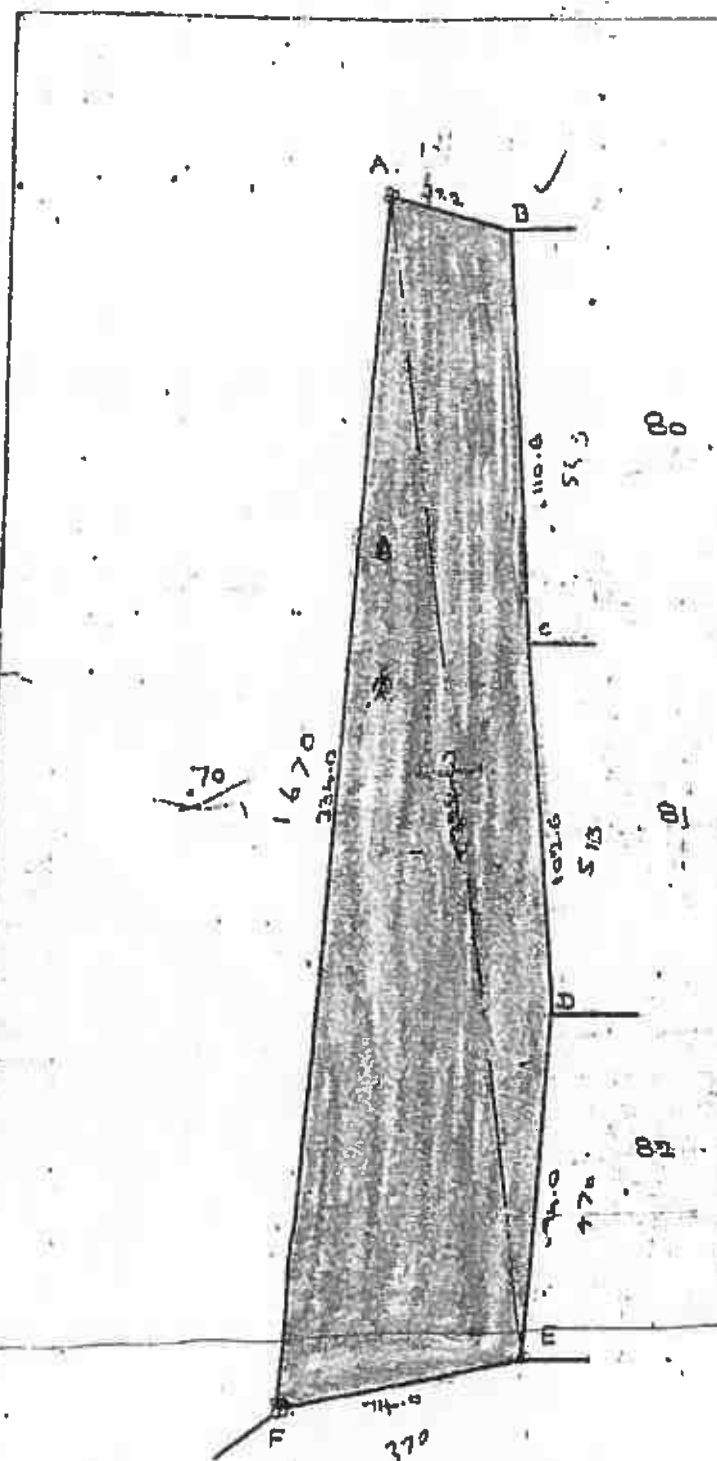
1. ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, சென்னை.
2. மாவட்ட ஆட்சித் தலைவர், கிருஷ்ணகிரி - தகவலுக்காக


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



பரப்பு 400 மீட்டர்
 54.5
 400 மீட்டர் 79

பரப்பு 100 மீட்டர் 100 மீட்டர் 5



322.0
 229.8
 92.2

322.0
 127.0
 195.0

1.70
 1670
 284.0

Paid	325.8	71.2	F
	F		
	322.0		
D	20.0	229.8	
C	26.8	127.0	
B	35.0	195.0	

ச.எண்: 123
 சென்னை 400

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

புள்ளி 38
 23.2 407

சமீப: 12.12.2000

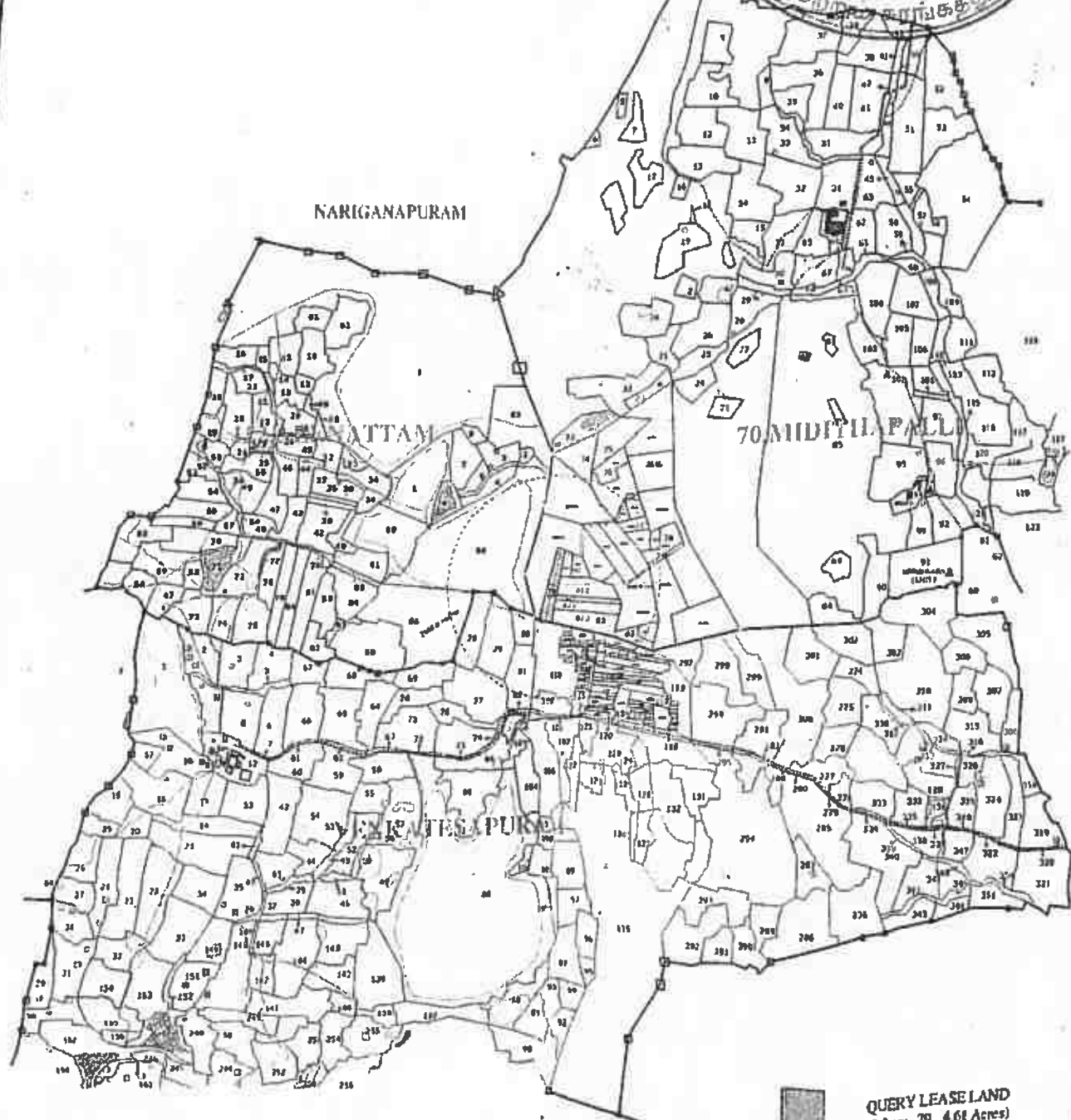
32, MIDTHERAPALAI


201

280

PLAN SHOWING FOR 500.0 Metres RADIUS OF MIDIDHEPALLI, ALENATHAM & VENKATESAPURAM VILLAGE, SHOOLAGIRI BDO, HOSUR TALUK, KRISHNAGIRI DISTRICT.

ANNEXURE




 QUERY LEASE LAND
 (S.No: 79, 4.61 Acres)


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



தமிழக அரசு

வருவாய்த் துறை

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

மாவட்டம் : கிருஷ்ணகிரி

வருவாய் கிராமம் : மிடிதேபள்ளி



பட்டா எண் : 686

உரிமையாளர்கள் பெயர்

1. வெங்கட்டய்யா

மகன்

டி.ரவிக்குமார்

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	ஹெக்ட - ஏர்	ரூ - பை	
79	-	1 - 86.50	4.01	--	--	--	--	2020/0103/31/134577- --- 20-03-2020
		1 - 86.50	4.01					

குறிப்பு2 :

	1. மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் https://eservices.tn.gov.in என்ற இணைய தளத்தில் 31/11/070/00686/150070 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
	2. இத் தகவல்கள் 15-06-2021 அன்று 11:14:47 AM நேரத்தில் அச்சடிக்கப்பட்டது.
	3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

CSC
COMMON SERVICES CENTRE
SRI SARAVANA YUNUS
OPP. Taluk Office
HOAJUR - 635102.
KRISHNAGIRI DIST. TN

ஆம் பரவியில்

சிறீரங்கபுரம்

மாவட்டம்

சீரங்கபுரம்

வட்டம்

குடிசைப்பள்ளி

நில வரித் திட்டத்தின்படி அலகுகளின் விபரம்					சாகுபடி யாளரின் பெயர்	முதல் போகம்.						
(1) நில அளவை எண்	(2) உட்பிரிவு எண்	(3) ஊர்	(4) ரீர்வை	(5) ஒரு ஊரை அல்லது இரண்டு ஊரை		(6) கைப்பற்று தரக்கூடிய பெரும் எண்ணும் ஆக்கிரமிப்புக்குரிய நிலம்	(7) நிலத்தின் எந்த பகுதி மாவது சாகுபடியாளரால் பயிரிடப்பட்டுள்ளது	(8) எந்த மாதத்தில் பயிர் செய்யப்பட்டது எந்த மாதத்தில் அறுவடை செய்யப்பட்டது	(9) பயிரின் பெயர்	(10) பயிரான அறுவடை யான மாதம்	(11) உண்டாகிய பரப்பளவு ஆகாரம்	(12) விளைச்சல் அளவு விழுக்காடு

79 - 1.66⁵ A-01 4. 2. 2018 686 750

Village Administration Office
32, MIDITHEPALL
Sankarapuram, Madhavaram



	3	4	5	6	7	8	9	10	
						ந. பை.	செ. ஏர்ஸ்.	கு. பை.	
78-1	ர	4	...	8-3	5	2 15	1 75.5	3 75	63 சா. சிவசுந்தரம் திம்மையா.
-2	ர	4	...	8-3	5	2 15	0 36.0	0 77	279 எ. வெங்க டேசப்பா (1). சங்கரப்பா (2).
							2 11.5	4 52	
79	ர	4	...	8-3	5	2 15	1 86.5	4 01	172 பா. மாரச்.
80-1	ர	4	...	8-3	5	2 15	0 30.0	0 64	64 சூா. குடவப்பா.
-2	ர	4	...	8-3	5	2 15	0 81.0	1 74	154 சூா. பெத்த குடவப்பா.
							1 11.0	2 38	
81	ர	4	...	8-3	5	2 15	2 68.0	5 76	136 த. பச்சையப்ப செட்டி.
82-1	ர	4	...	8-3	5	2 15	1 44.0	3 09	136 த. பச்சையப்ப செட்டி.
-2	ர	4	...	8-3	5	2 15	2 66.5	5 73	241 அ. இராம சத்திரப்பா.
							4 10.5	8 82	
83-1	ர	4	...	8-3	5	2 15	0 76.5	1 65	189 தி. முனியம்மா.
-2	ர	4	...	8-3	5	2 15	0 67.0	1 44	164 சொ. மல்லம்மா.
							1 43.5	3 09	
84-1	ர	4	...	8-3	5	2 15	0 80.0	1 72	151 சி. பெத்த வக்ஷய்யா.
-2	ர	4	...	8-3	5	2 15	1 11.0	2 38	151 சி. பெத்த வக்ஷய்யா.
							1 91.0	4 10	
85-1	ர	4	...	8-3	5	0.62 2 13	39 26.0	24 26	334 வெங்கட ரமணப்பா.
-2	அ	40	...	...	...	...	14 47.5	...	...
							53 73.5	24 26	

S. D. MANASEKAR, M.Sc. (Geo)
Qualified Person

புல் காவல் பட்டாசலுகை தீர்வை.
... (T) ...
Village Administrative Officer
32, MIDITHEPALLI
Shoolagiri Th. Kallakudi-9.

Done by: R. Manassekar
R. Manassekar, A. Registrar.
16/10/87
20.10.87
For Sign.



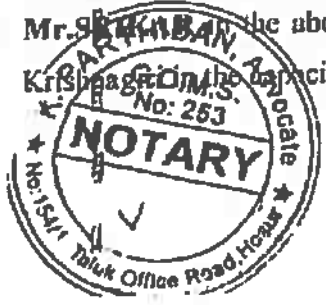
கடும்குறி ரவிகுமார் தமில்நாடு TAMIL NADU,
 D. Ravikumar
 Bangalore


92AB 670217
 K.A. KRISHNA MURTHI
 STAMP VENDOR
 D. Dis No 734/B1/2003
 HOSUR - 635 109.

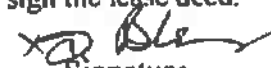
SWORN AFFIDAVIT FOR CONSENT OF PATTI LANDS

I, Duddukuri Ravikumar S/o.Venkataiah, aged about 42 years, residing at No.17/18, Saptagiri Nilaya, K.R. Puram, Vinayaka Nagar, Near Vinayaka Temple, Bangalore North Krishnarajapura, Bangalore, Karnataka-560036. Do hereby solemnly affirm and sincerely state as follows.

I am residing in the above mention address. The land over an extent of Ac.4.61 Cents in Sy.No.79 stands registered in my name vide patta No.686 in Midithepalli Village records. I, hereby giving my consent to Mr.SRIKAR, S/o.Bharathy, residing at Door No.25, Santhi Nagar West 2nd Cross, Hosur-635109, Krishnagiri District, Tamil Nadu. to carry out rough stone quarrying activity in the above mentioned lands for a period of twelve years from 24.06.2021 to 23.06.2033. I have no objection for the grant of rough stone quarry lease in favour of Thiru. Mr. SRIKAR, the above said lands. I assure that I will appear before the District Collector in the capacity of the registered holder of the lands and to sign the lease deed.




 K. PARTHIBAN, B.A., B.L
 Advocate & Notary
 No:154/1, Taluk Office Road,
 Hosur Krishnagiri Dt-635109


 Signature


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



இந்திய சார்பாங்கம் - அனைத்து இந்திய அரசாங்கம்

இந்திய அரசாங்கம்
Unique Identification Authority of India
Government of India

புதிய அட்டையம் / Enrollment No. : 2007/13215/44532

To
Srikar Bharathy
தலை மாரி
S/O: Bharathy
DNO 25
SANTHINAGAR WEST 2 ND CROSS
HOSUR
Hosur, Krishnagiri
Tamil Nadu - 635109
8803900227

KL267232673FT
26723267



உங்கள் ஆதார் எண் / Your Aadhaar No. :

5985 4199 8229

ஆதார் - சாதாரண மனிதனின் அதிகாரம்



இந்திய அரசாங்கம்
Government of India



தலை மாரி
Srikar Bharathy

பால் பாலக்கூடு: (M02/1993)
ஆண் / Male

5985 4199 8229



ஆதார் - சாதாரண மனிதனின் அதிகாரம்



தகவல்

- ஆதார் அட்டையாள் திறக்கான சான்று குடியறிமைக்கு அல்ல.
- அட்டையாள சான்றை திரைப்படதளம் மூலம் உறுதிப்படுத்திக் கொள்ளவும்.

INFORMATION

- Aadhaar is proof of identity, not of citizenship.
- To establish identity, authenticate online.

- ஆதார் நாடு முழுவதிலும் செல்லுபடியாகும்.
- வருங்காலத்தில் அரசு மற்றும் அரசு சாரா சேவைகளை பயன்படுத்திக் கொள்ள ஆதார் உதவிகரமாக இருக்கும் .

- Aadhaar is valid throughout the country.
- Aadhaar will be helpful in availing Government and Non-Government services in future.



இந்திய அரசாங்கம்
Unique Identification Authority of India

முகவல்: தலை மாரி, மலை
சாந்தினகரம் 1 வது குறுக்கு
தலை மாரி, தலை மாரி, ஆதர்
தலை மாரி

Address: S/O: Bharathy,
DNO 25, SANTHINAGAR
WEST 2 ND CROSS,
HOSUR, Hosur, Krishnagiri,
Hosur, Tamil Nadu, 635109

5985 4199 8229



1800 300 1047



help@uidai.gov.in



www.uidai.gov.in

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

Reg. No DIBBB1005
Col Code 106 / 106



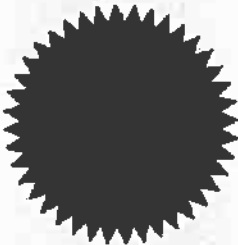
அறிவியல் புலம்

FACULTY OF SCIENCE

பெரியார் பல்கலைக்கழக ஆட்சிக்குழு 2003 ஆம் ஆண்டு ஏப்ரல் மாதம்
நடந்த பயன்பாட்டு புலியமைப்பியல் தேர்வில்
S தனசேகர் என்பவர்
முதல் வகுப்பில் தேர்ச்சி பெற்றார் என்று தக்க தேர்வாளர்கள்
சான்றளித்தபடி அறிவியல் நிறைஞர் என்னும்
பட்டத்தை அவருக்குப் பல்கலைக்கழக இலச்சிணையுடன் 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,



APPENDIXURE - VIII
04288 - 262489
VARANALIAMPALAYAM,
ALATHUR POST - 637 303.
SANKARITk 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 PROPOSED APPLIED LEASE AREA VIEW-1



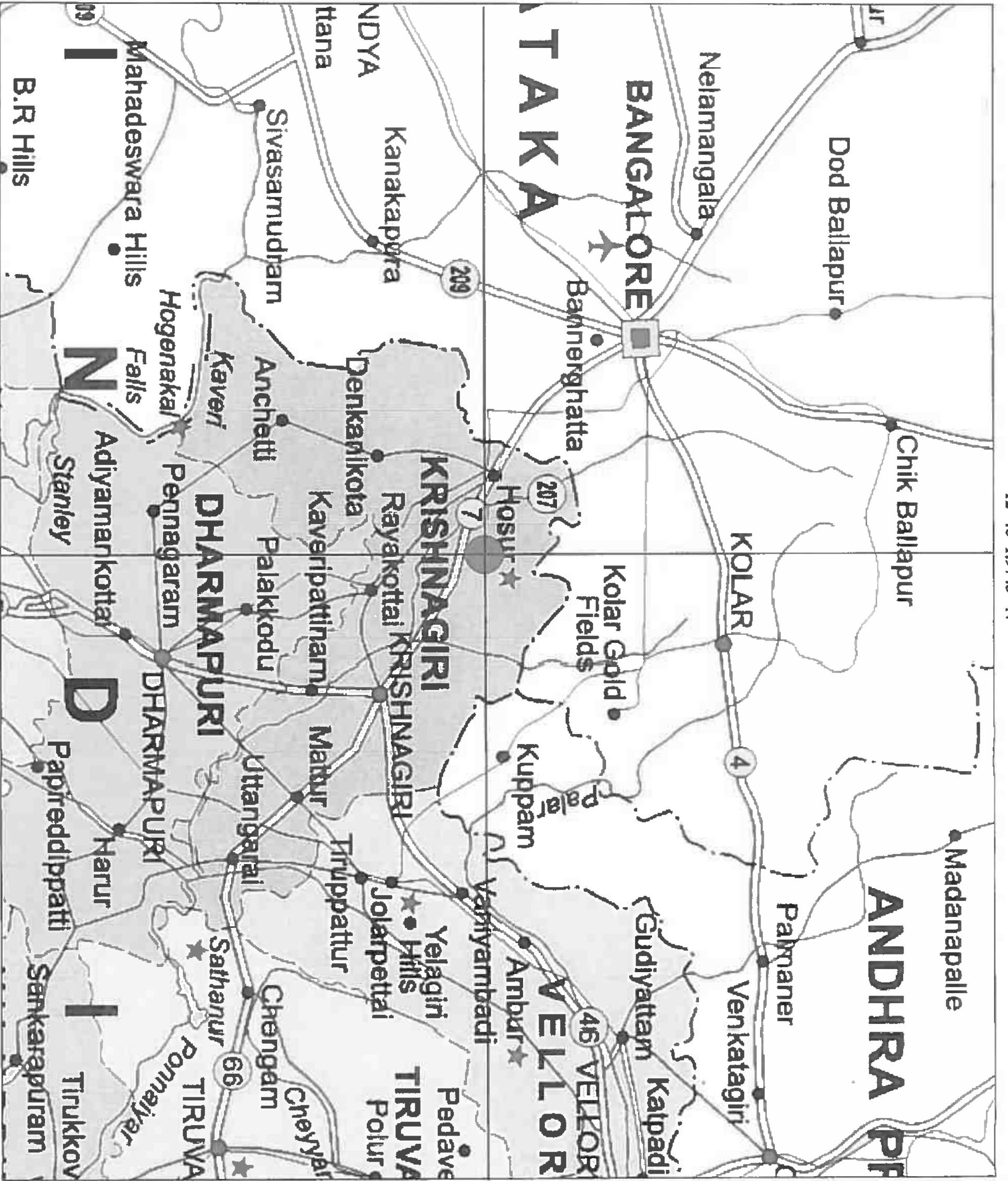
PHOTO SHOWN PROPOSED APPLIED LEASE AREA VIEW-2




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

77° 56' 59.2536" E

12° 46' 1.9743" N



77° 57' 3.0289" E



PLATE NO:1

DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:

THIRU.B. SRIKAR,
 S/O.BHARATHY,
 D.No.25, SHANTHI NAGAR (WEST),
 2nd CROSS, HOSUR TALUK,
 KRISHNAGIRI DISTRICT -635 109.

INDEX

QUARRY LEASE AREA : ●

TOPO SHEET NO.:57-H/13,

LATITUDE : 12° 46' 1.9743" N to 12° 45' 52.1189" N

LONGITUDE : 77° 57' 3.0289" E to 77° 56' 59.2536" E

LOCATION OF QUARRY

EXTENT : 1.86.50 Ha.

S.F.NO : 79

VILLAGE : MIDTHERPALLI

TALUK : SHOOLAGIRI

DISTRICT : KRISHNAGIRI.

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. Dhana Sekar
 S.DHANASEKAR,M.Sc.,
 QUALIFIED PERSON

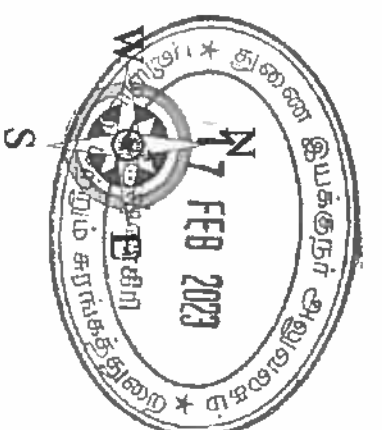
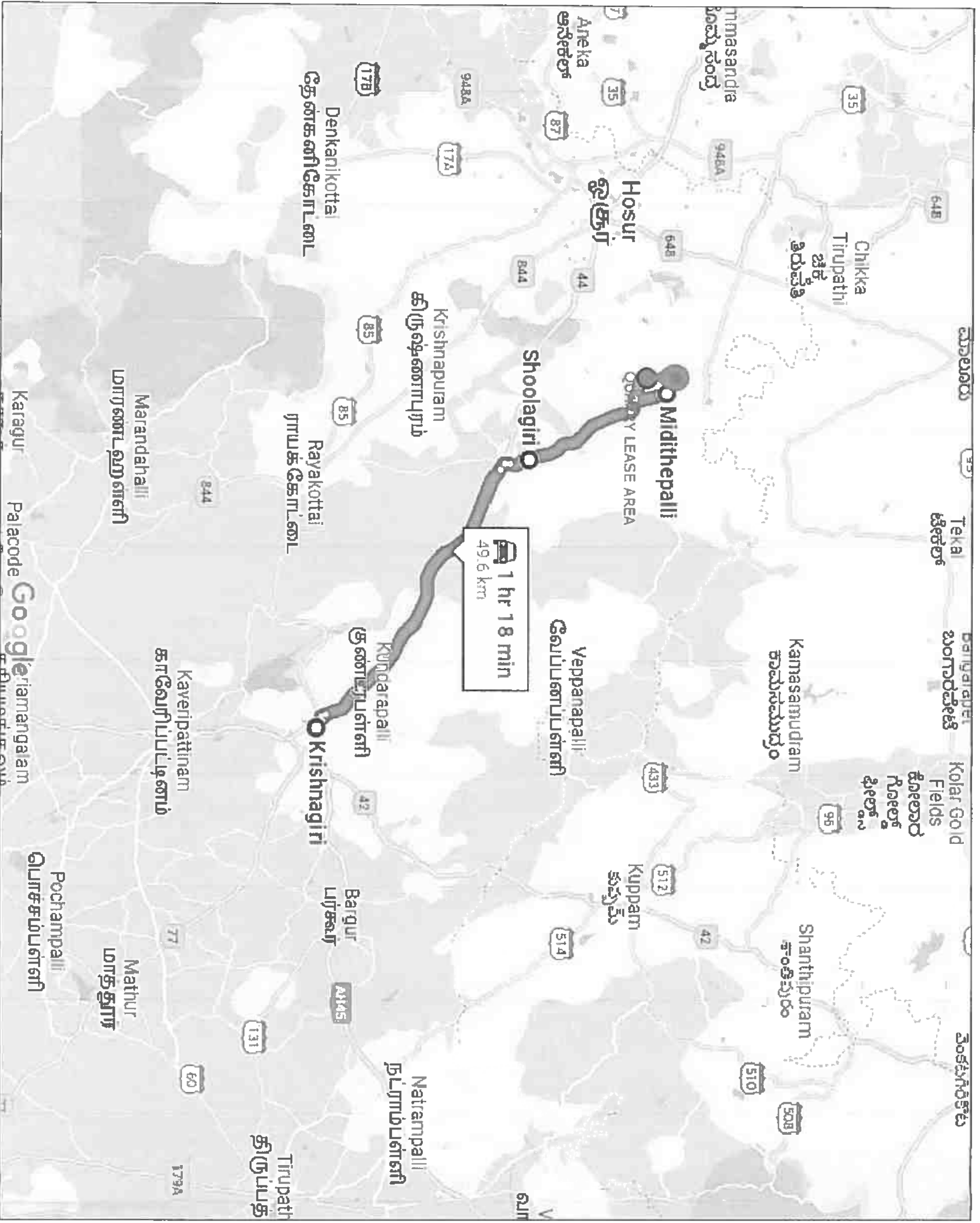


PLATE NO:IA

DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:

THIRU.B. SRIKAR,
S/o.BHARATHY,
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS, HOSUR TALUK,
KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY

EXTENT : 1.86.50 Ha.
S.F.NO : 79
VILLAGE : MIDTHERPALLI
TALUK : SHOOLAGIRI
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. DIWANASEKAR, M.Sc.
QUALIFIED PERSON

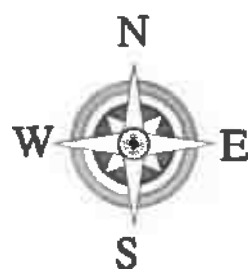


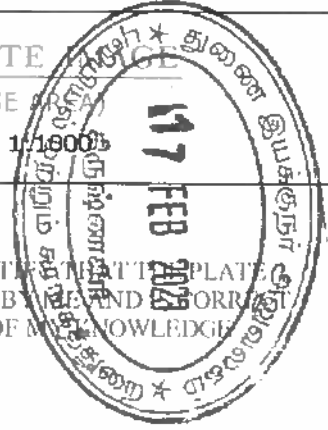
PLATE NO:IC
DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:
THIRU.B. SRIKAR,
S/o.BHARATHY,
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS, HOSUR TALUK,
KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY
EXTENT : 1.86.50 Ha.
S.F.NO : 79
VILLAGE : MIDITHEPALLI
TALUK : SHOOLAGIRI
DISTRICT : KRISHNAGIRI.

- INDEX
QUARRY LEASE AREA :

SATELLITE
(LEASE AREA)
SCALE: 1:10000

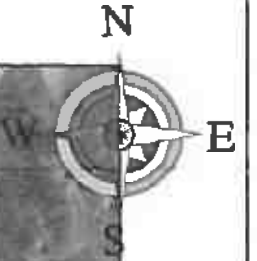


PREPARED BY:
I DO HEREBY CERTIFY THAT THIS PLATE
HAS BEEN CHECKED BY ME AND FOUND CORRECT
TO THE BEST OF MY KNOWLEDGE

S.DHANASEKAR,M.Sc.,
QUALIFIED PERSON

PILLAR NO	LATITUDE	LONGITUDE
1	12° 45' 52.1189" N	77° 56' 59.2536" E
2	12° 46' 2.6386" N	77° 57' 1.9992" E
3	12° 46' 1.9743" N	77° 57' 3.0289" E
4	12° 45' 58.3809" N	77° 57' 2.8910" E
5	12° 45' 55.0474" N	77° 57' 2.7631" E
6	12° 45' 52.1734" N	77° 57' 1.7042" E

12° 46' 2.6386" N
77° 57' 1.9992" E



12° 46' 1.9743" N
77° 57' 3.0289" E

12° 45' 52.1189" N
77° 56' 59.2536" E



12° 45' 52.1734" N
77° 57' 1.7042" E

APPLICANT ADDRESS:

THIRU.B. SRIKAR,
S/o.BHARATHY,
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS, HOSUR TALUK,
KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY

EXTENT : 1.86.50 Ha.
S.F.NO : 79
VILLAGE : MIDITHEPALLI
TALUK : SHOOLAGIRI
DISTRICT : KRISHNAGIRI.

INDEX




QUARRY LEASE BOUNDARY 
500M RADIUS 
300M RADIUS 

PLATE NO:ID

DATE OF SURVEY: 06-02-2023

SATELLITE IMAGE
(500m RADIUS)

SCALE 1:5000

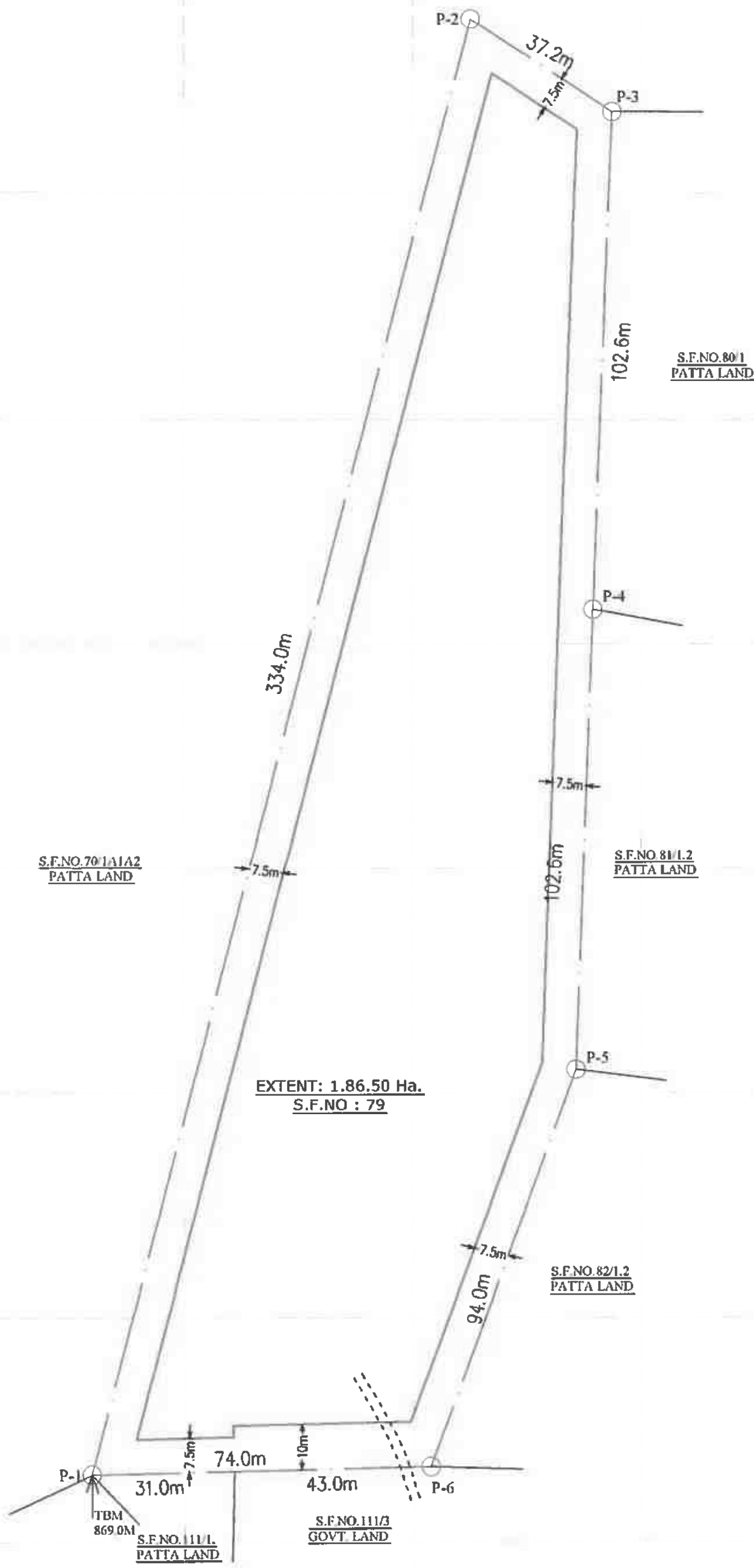
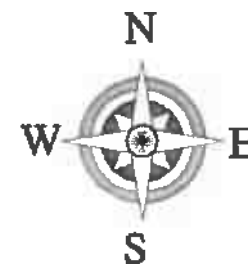
PREPARED BY:

I DO HEREBY CERTIFY THAT THIS PLATE
HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE.


S.DHANASEKAR, M.Sc.,
QUALIFIED PERSON



S.F.NO.70/1A1A2
PATTA LAND



EXTENT: 1.86.50 Ha.
S.F.NO : 79

PLATE NO:II

DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:

THIRU.B. SRIKAR,
S/o.BHARATHY,
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS, HOSUR TALUK,
KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY

EXTENT : 1.86.50 Ha.
S.F.NO : 79
VILLAGE : MIDITHEPALLI
TALUK : SHOOLAGIRI
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. Dhana Sekar
S.DHANASEKAR,M.Sc.,
QUALIFIED PERSON

PILLAR NO	LATITUDE	LONGITUDE
1	12° 45' 52.1189" N	77° 56' 59.2536" E
2	12° 46' 2.6386" N	77° 57' 1.9992" E
3	12° 46' 1.9743" N	77° 57' 3.0289" E
4	12° 45' 58.3809" N	77° 57' 2.8910" E
5	12° 45' 55.0474" N	77° 57' 2.7631" E
6	12° 45' 52.1734" N	77° 57' 1.7042" E

Venkatesapuram Village

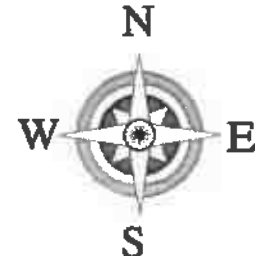
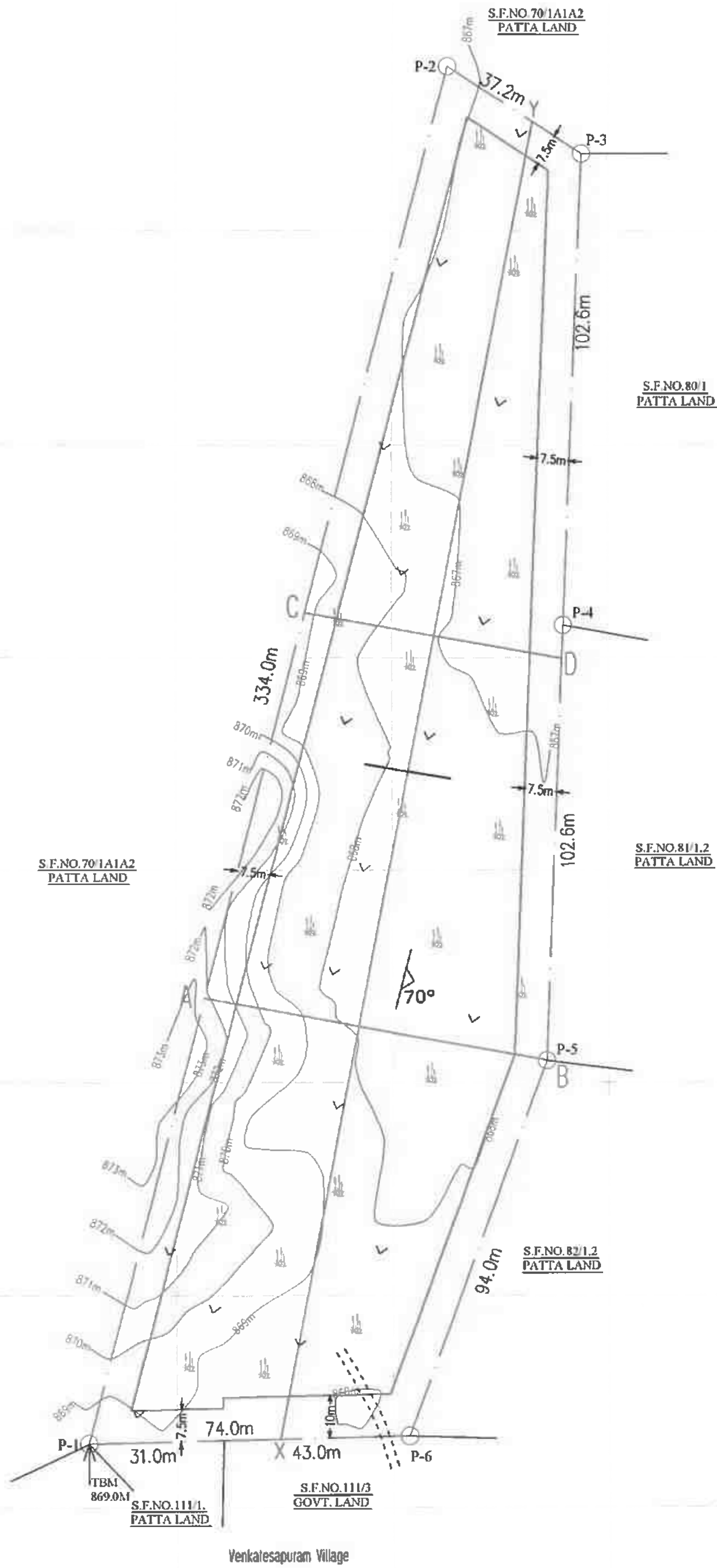


PLATE NO:III
DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:
THIRU.B. SRIKAR,
S/o.BHARATHY,
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS, HOSUR TALUK,
KRISHNAGIRI DISTRICT -635 109.

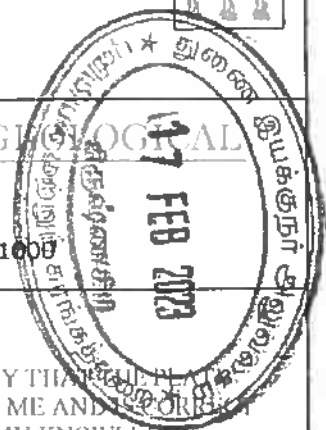
LOCATION OF QUARRY
EXTENT : 1.86.50 Ha.
S.F.NO : 79
VILLAGE : MIDITHEPALLI
TALUK : SHOOLAGIRI
DISTRICT : KRISHNAGIRI.

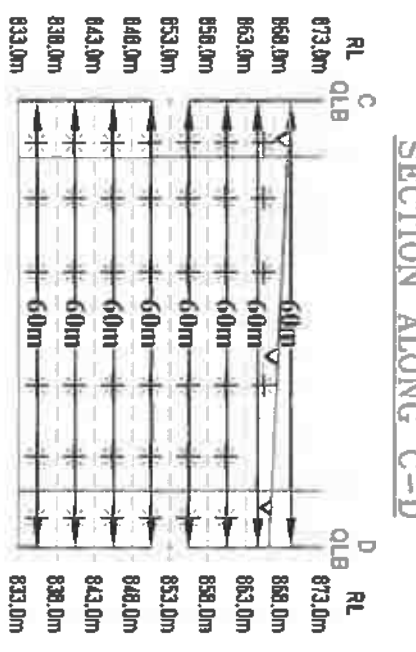
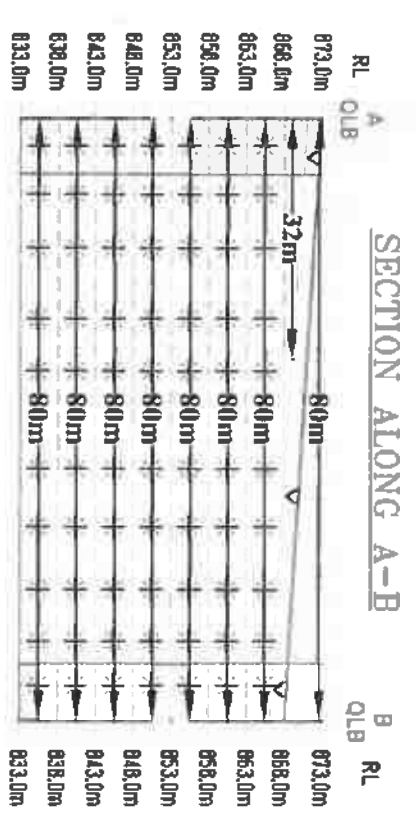
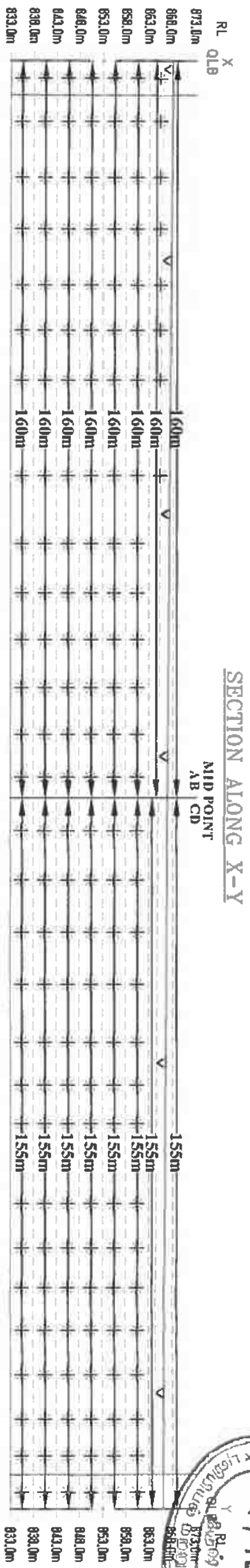
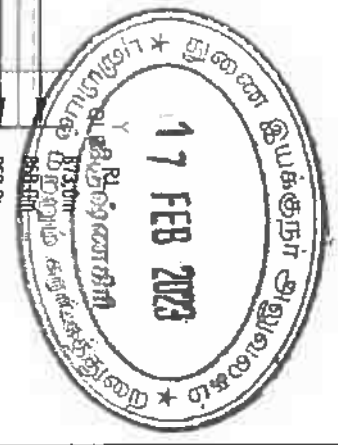
INDEX	
QUARRY LEASE BOUNDARY	
7.5m,10.0m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
GRAVEL	
ROUGH STONE	
STRIKE AND DIP	
CONTOUR LINE	
QUARRY ROAD	
SHRUB	

SURFACE & GEOLOGICAL PLAN
SCALE: 1:1000

PREPARED BY:
 I DO HEREBY CERTIFY THAT THE PLAN HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

S.DHANASEKAR,M.Sc.,
QUALIFIED PERSON





TOTAL DEPTH = 39m

PLATE NO: III-A
 DATE OF SURVEY: 06-02-2023
 APPLICANT ADDRESS:
 THIRU. B. SRIKAR,
 S/o. BHARATHY,
 D.No. 25, SHANTHI NAGAR (WEST),
 2nd CROSS, HOSUR TALUK,
 KRISHNAGIRI DISTRICT - 635 109.

LOCATION OF QUARRY
 EXTENT : 1.86.50 Ha.
 S.F.NO : 79
 VILLAGE : MIDTHERPALLI
 TALUK : SHOOLAGIRI
 DISTRICT : KRISHNAGIRI.

INDEX
 QUARRY LEASE BOUNDARY
 7.5m, 10.0m SAFETY DISTANCE
 GRAVEL
 ROUGH STONE

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. J. J.
 S. BHANASEKAR, M.Sc.
 QUALIFIED PERSON

GEOLOGICAL RESERVES						
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in M ³	Geological Reserves in m ³ @ 100%
XY-AB	I	160	80	2	10240	10240
	II	160	32	2	10240	10240
	III	160	80	5	64000	64000
	IV	160	80	5	64000	64000
	V	160	80	5	64000	64000
	VI	160	80	5	64000	64000
	VII	160	80	5	64000	64000
	VIII	160	80	5	64000	64000
	IX	160	80	5	64000	64000
TOTAL		458240		458240		25600
XY-CD	I	155	60	2	27900	27900
	III	155	60	3	27900	27900
	IV	155	60	5	46500	46500
	V	155	60	5	46500	46500
	VI	155	60	5	46500	46500
	VII	155	60	5	46500	46500
	VIII	155	60	5	46500	46500
	IX	155	60	5	46500	46500
	TOTAL		306900		306900		18600
GRAND TOTAL		765140		765140		44200

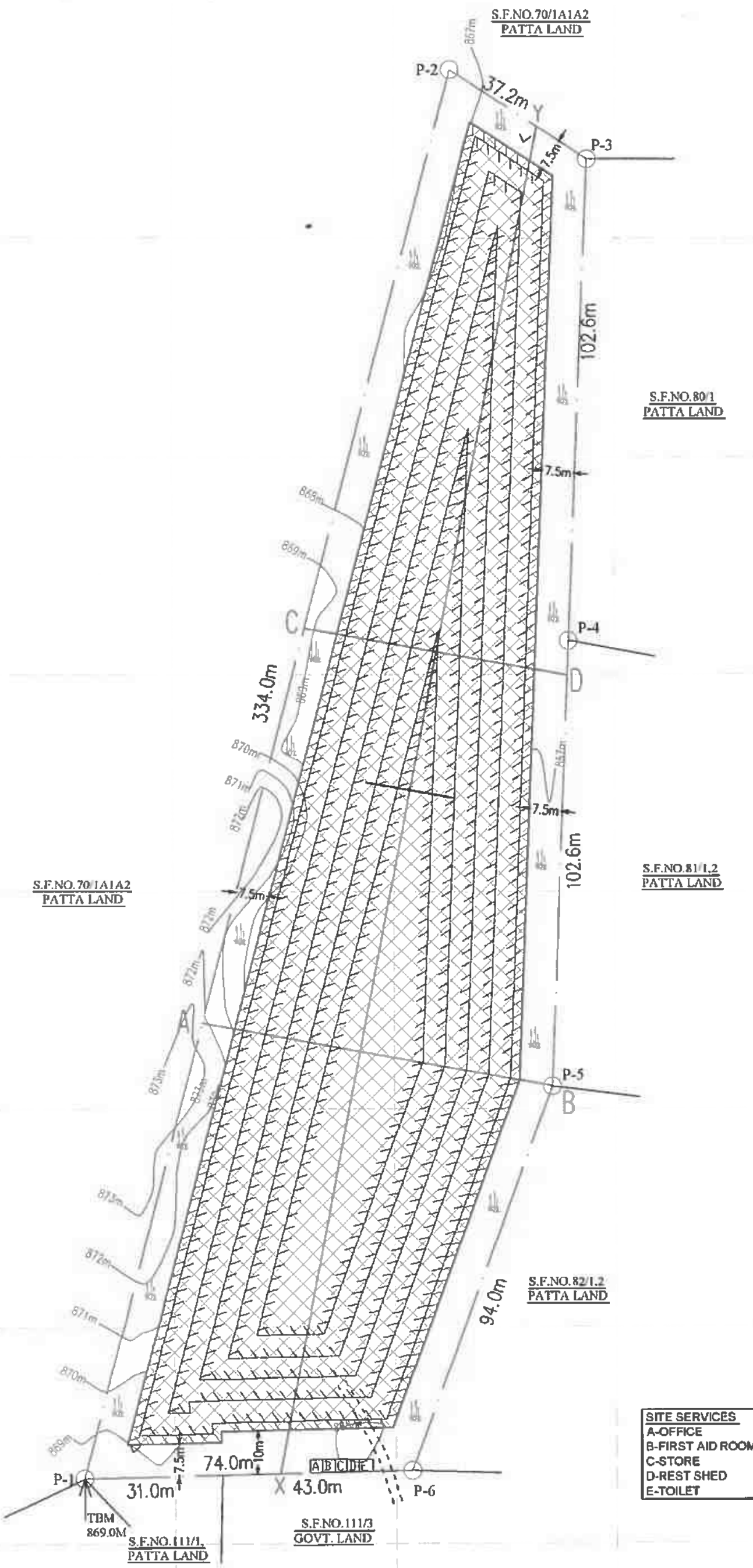


PLATE NO:IV-A
DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:
THIRU.B. SRIKAR,
S/o.BHARATHY,
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS, HOSUR TALUK,
KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY
EXTENT : 1.86.50 Ha.
S.F.NO : 79
VILLAGE : MIDITHEPALLI
TALUK : SHOOLAGIRI
DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY	
7.5m,10.0m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
GRAVEL	
ROUGH STONE	
CONTOUR LINE	
QUARRY ROAD	
SHRUB	

SITE SERVICES
A-OFFICE
B-FIRST AID ROOM
C-STORE
D-REST SHED
E-TOILET

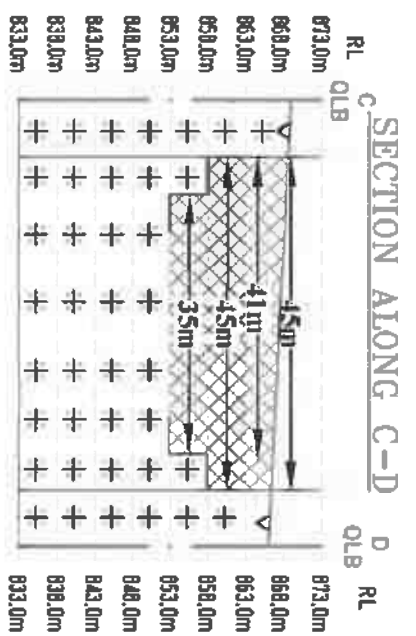
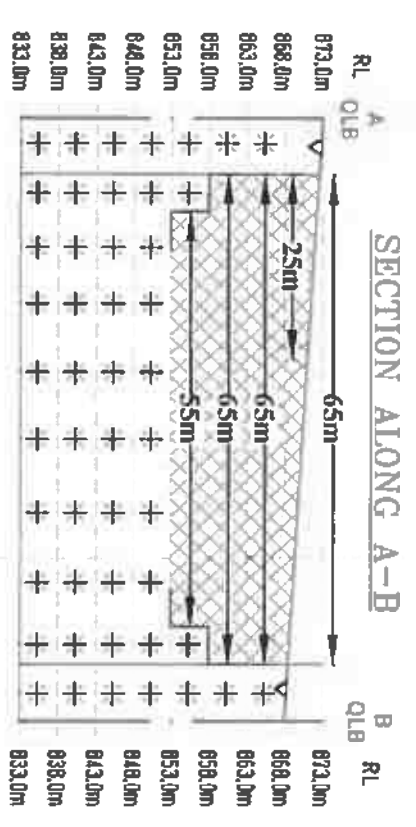
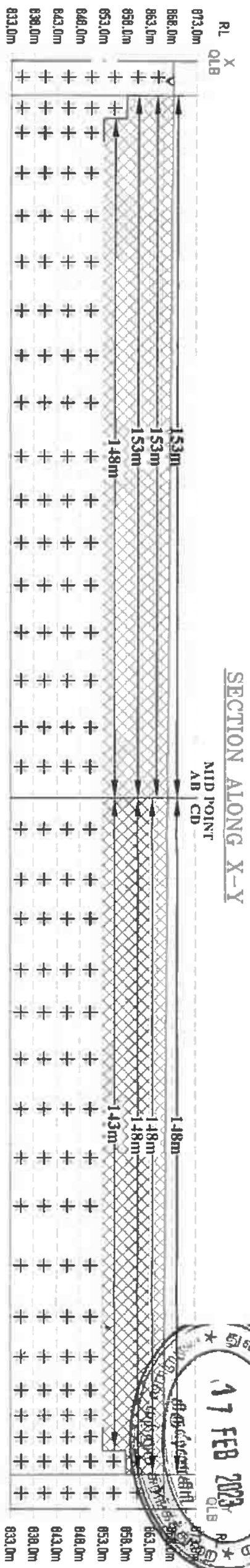
YEARWISE DEVELOPMENT AND PRODUCTIVE PLAN
(First Five Year)
SCALE: 1:1000

PREPARED BY:
 I DO HEREBY CERTIFY THAT THE PLAN HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.

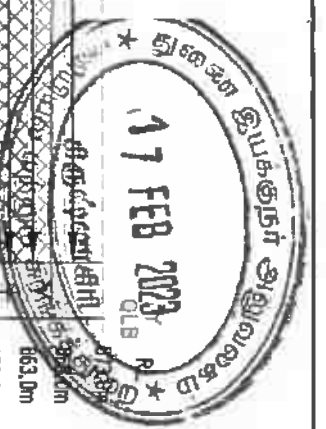
S.DHANASEKAR, M.Sc.,
QUALIFIED PERSON

- I - Year PROPOSED EXCAVATION
- II - Year PROPOSED EXCAVATION
- III - Year PROPOSED EXCAVATION
- IV - Year PROPOSED EXCAVATION
- V - Year PROPOSED EXCAVATION

Venkatesapuram Village



TOTAL DEPTH = 19m



YEARWISE DEVELOPMENT AND PRODUCTION (First Five (I-V)Years)								
YEAR	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Recoverable Reserve in Cu.m.(100%)	Gravel in m ³
I-YEAR	XY-AB	I	153	65	2	7650	49725	19890
		II	153	25	2			
		III	153	65	5			
		IV	148	45	2			
		V	148	41	3			
II-YEAR	XY-AB	IV	153	65	5	49725	49725	
III-YEAR	XY-CD	III	148	45	5	18204	49725	
IV-YEAR	XY-AB	V	148	55	5	49725	49725	
V-YEAR	XY-CD	IV	143	35	5	18204	49725	
Total (First Five (I-V)Years)						224329	224329	33210

- I - Year PROPOSED EXCAVATION
- II - Year PROPOSED EXCAVATION
- III - Year PROPOSED EXCAVATION
- IV - Year PROPOSED EXCAVATION
- V - Year PROPOSED EXCAVATION

PLATE NO:IV-A1
DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:
THIRU.B. SRIKAR,
S/O.BHARATHY,
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS, HOSUR TALUK,
KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY
EXTENT : 1.86.50 Ha.
S.F.NO : 79
VILLAGE : MIDTHEPALLI
TALUK : SHOOLAGIRI
DISTRICT : KRISHNAGIRI.

INDEX
QUARRY LEASE BOUNDARY
7.5m,10.0m SAFETY DISTANCE
GRAVEL
ROUGH STONE

YEARWISE DEVELOPMENT AND PRODUCTION SECTIONS (First Five (I-V)Years)
SCALE: 1:1000

PREPARED BY:
I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

S.DHANASEKAR,M.Sc.
QUALIFIED PERSON

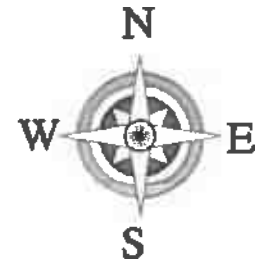
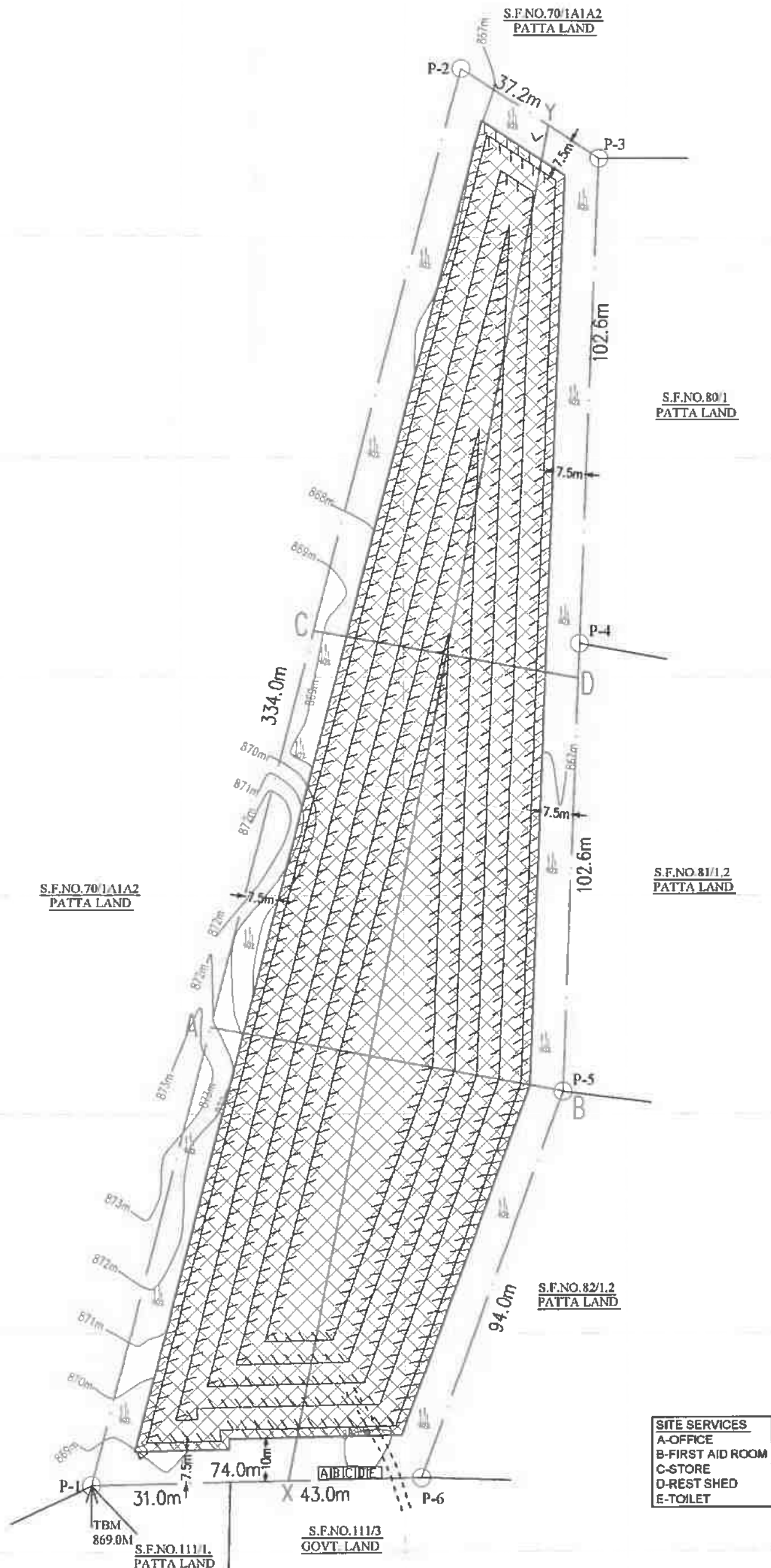


PLATE NO:IV-B
DATE OF SURVEY: 06-02-2023
APPLICANT ADDRESS:
THIRU.B. SRIKAR,
S/o.BHARATHY,
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS, HOSUR TALUK,
KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY
EXTENT : 1.86.50 Ha.
S.F.NO : 79
VILLAGE : MIDITHEPALLI
TALUK : SHOOLAGIRI
DISTRICT : KRISHNAGIRI.

INDEX

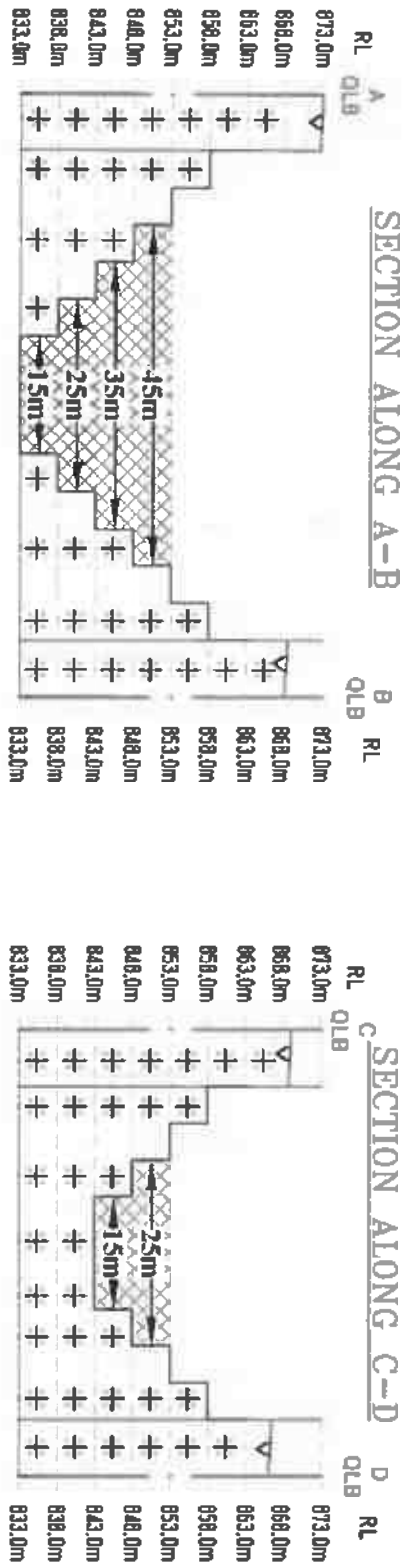
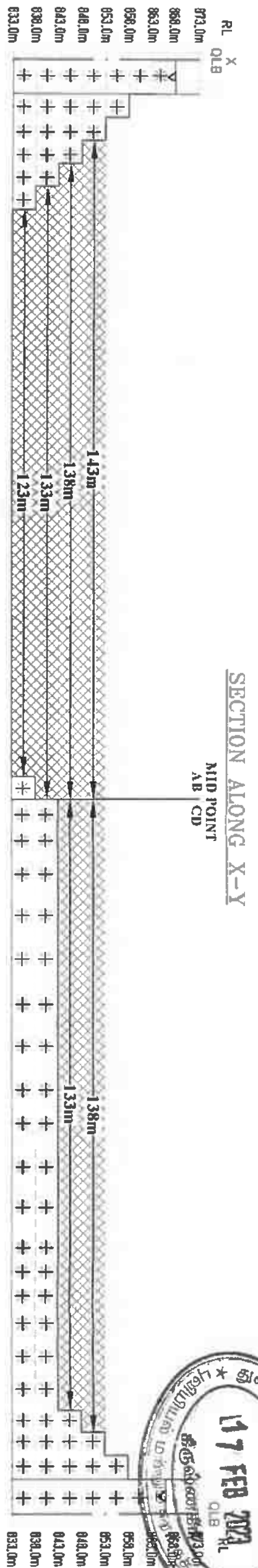
QUARRY LEASE BOUNDARY	
7.5m,10.0m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
GRAVEL	
ROUGH STONE	
CONTOUR LINE	
QUARRY ROAD	
SHRUB	

YEARWISE DEVELOPMENT PLAN
PRODUCTION PLAN
(Second Five Year Plan)
SCALE: 1:1000

PREPARED BY:
 I DO HEREBY CERTIFY THAT THIS PLAN HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE
S.DHANASEKAR,M.Sc.,
QUALIFIED PERSON

VI-YEAR PROPOSED EXCAVATION	
VII-YEAR PROPOSED EXCAVATION	
VIII-YEAR PROPOSED EXCAVATION	
IX-YEAR PROPOSED EXCAVATION	
X-YEAR PROPOSED EXCAVATION	

Venkatesapuram Village



TOTAL DEPTH = 20m



YEARWISE DEVELOPMENT AND PRODUCTION (Second Five (VI-X)Years)							
YEAR	Section	Bendh	Length In (m)	Width In (m)	Depth In (m)	Volume In (Cu.m.)	Recoverable In Cu.m(100%)
VI-YEAR	XY-AB	VI	143	45	5	32175	32175
VII-YEAR	XY-CD	V	138	25	5	17250	17250
VIII-YEAR	XY-AB	VII	138	35	5	24150	24150
IX-YEAR	XY-CD	VI	133	15	5	9975	9975
X-YEAR	XY-AB	VIII	133	25	5	16625	16625
X-YEAR	XY-CD	IX	123	15	5	9225	9225
Total (Second Five (VI-X)Years)						109400	109400

VI-YEAR PROPOSED EXCAVATION	
VII-YEAR PROPOSED EXCAVATION	
VIII-YEAR PROPOSED EXCAVATION	
IX-YEAR PROPOSED EXCAVATION	
X-YEAR PROPOSED EXCAVATION	

PLATE NO:IV-B1

DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:
 THIRU. B. SRIKAR,
 S/o. BHARATHY,
 D.No.25, SHANTHI NAGAR (WEST),
 2nd CROSS, HOSUR TALUK,
 KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY
 EXTENT : 1.86.50 Ha.
 S.F.NO : 79
 VILLAGE : MIDTHEPALLI
 TALUK : SHOOLAGIRI
 DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY

7.5m, 10.0m SAFETY DISTANCE

GRAVEL

ROUGH STONE

YEARWISE DEVELOPMENT AND PRODUCTION SECTIONS (Second Five (VI-X)Years)

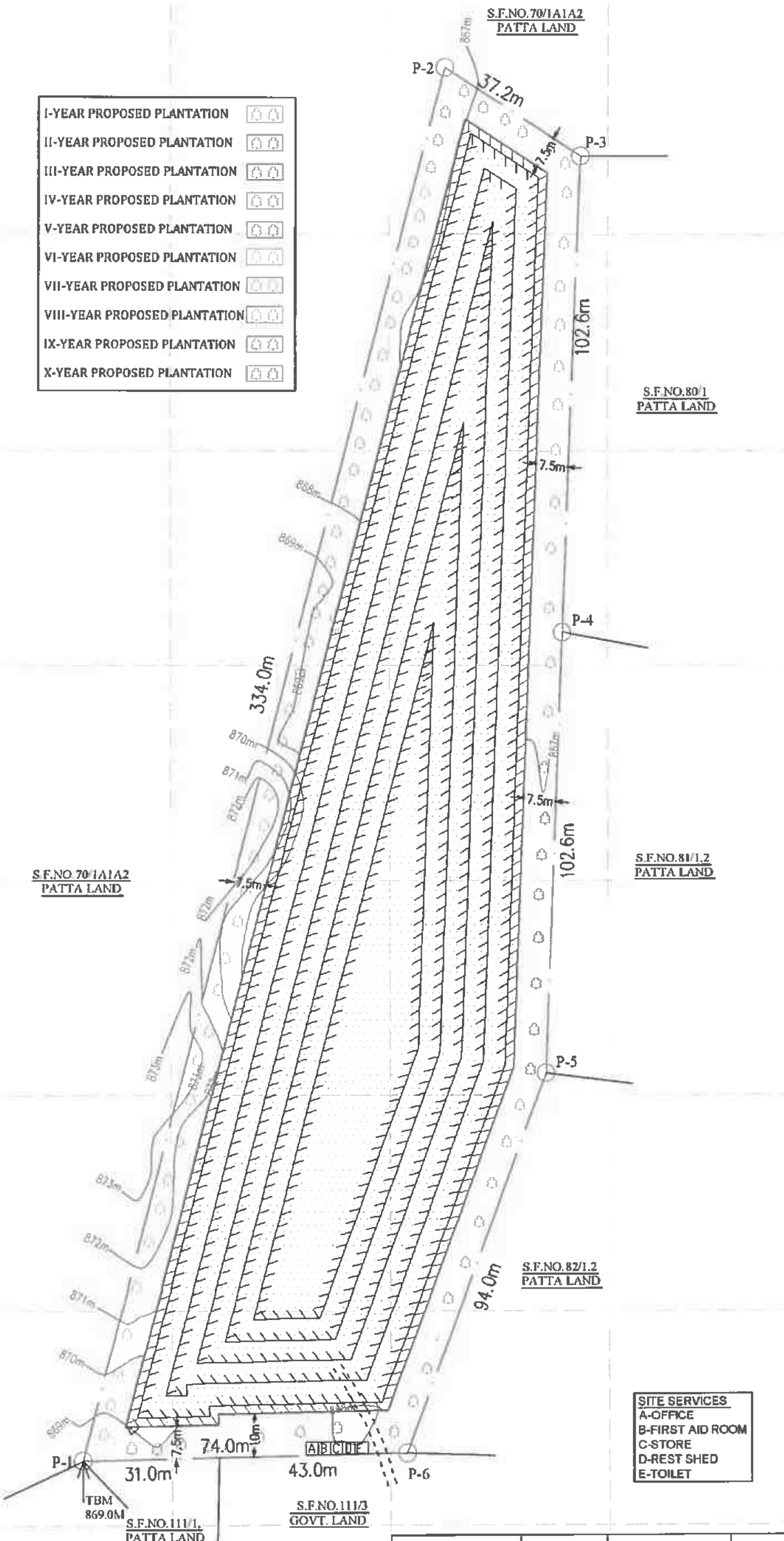
SCALE: 1:1000

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. BHANASEKAR, M.Sc.,
 QUALIFIED PERSON

I-YEAR PROPOSED PLANTATION	
II-YEAR PROPOSED PLANTATION	
III-YEAR PROPOSED PLANTATION	
IV-YEAR PROPOSED PLANTATION	
V-YEAR PROPOSED PLANTATION	
VI-YEAR PROPOSED PLANTATION	
VII-YEAR PROPOSED PLANTATION	
VIII-YEAR PROPOSED PLANTATION	
IX-YEAR PROPOSED PLANTATION	
X-YEAR PROPOSED PLANTATION	



SITE SERVICES	
A-OFFICE	
B-FIRST AID ROOM	
C-STORE	
D-REST SHED	
E-TOILET	

PLATE NO:V
DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:
THIRU.B. SRIKAR,
S/o.BHARATHY,
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS, HOSUR TALUK,
KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY
EXTENT : 1.86.50 Ha.
S.F.NO : 79
VILLAGE : MIDITHEPALLI
TALUK : SHOOLAGIRI
DISTRICT : KRISHNAGIRI.

INDEX

QUARRY LEASE BOUNDARY	
7.5m,10.0m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
GRAVEL	
ROUGH STONE	
CONTOUR LINE	
QUARRY ROAD	
MINE LAYOUT	

MINE LAYOUT, LAND USE PATTERNS & AFFORESTATION PLAN
SCALE: 1:1000
17 FEB 2023

PREPARED BY:
I DO HEREBY CERTIFY THAT THE PLAN HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

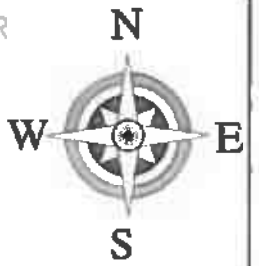
S. DHANASEKAR, M.Sc.,
QUALIFIED PERSON

DESCRIPTION	PRESENT AREA (Ha)	AREA IN USE DURING THE QUARRYING PERIOD (Ha)	COLOR CODE
AREA UNDER QUARRYING	NIL	1.45.0	
INFRASTRUCTURE	NIL	0.01.0	
ROADS	NIL	0.01.0	
GREEN BELT	NIL	0.39.5	
UN-UTILIZED AREA	1.86.5	NIL	
GRAND TOTAL	1.86.5	1.86.5	

Venkatesapuram Village

12° 46' 2.6386" N
77° 57' 1.9992" E

OCTOBER TO DECEMBER



CRUSHER UNIT

500M RADIUS

300M RADIUS

60M RADIUS

12° 46' 1.9743" N
77° 57' 3.0289" E

12° 45' 52.1189" N
77° 56' 59.2536" E

JULY TO SEPTEMBER

12° 45' 52.1734" N
77° 57' 1.7042" E

INDEX

Q.L.BOUNDARY	
500M RADIUS	
300M RADIUS	
60M RADIUS	
APPROACH ROAD	
QUARRY ROAD	
TREES	
CRUSHER UNIT	
DRY AGRICULTURAL LAND	
WIND DIRECTION	
SHRUB	

ADJACENT QUARRY	
INFRASTRUCTURES	

APPLICANT'S ADDRESS:
THIRU.B. SRIKAR,
S/o.BHARATHY,
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS, HOSUR TALUK,
KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY
EXTENT : 1.86.50 Ha.
S.F.NO : 79
VILLAGE : MIDITHEPALLI
TALUK : SHOOLAGIRI
DISTRICT : KRISHNAGIRI.

PLATE NO:VI
DATE OF SURVEY: 06-02-2023

ENVIRONMENT PL...
SCALE: 1:5000

PREPARED BY:
I DO HEREBY CERTIFY THAT THE PLAN HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.

S.DHANASEKAR, M.Sc.,
QUALIFIED PERSON



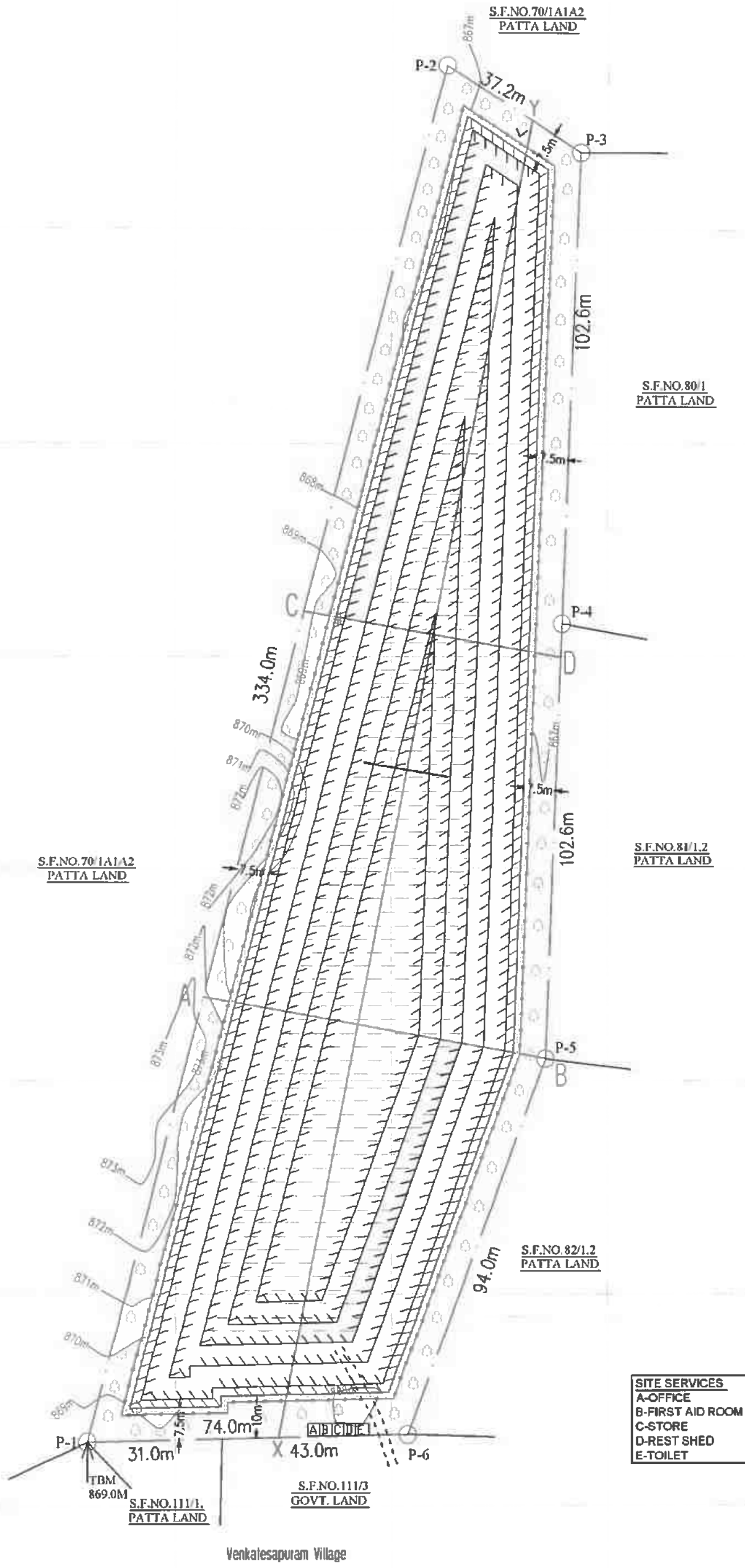


PLATE NO:VII
DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:
 THIRU.B. SRIKAR,
 S/o.BHARATHY,
 D.No.25, SHANTHI NAGAR (WEST),
 2nd CROSS, HOSUR TALUK,
 KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY
 EXTENT : 1.86.50 Ha.
 S.F.NO : 79
 VILLAGE : MIDITHEPALLI
 TALUK : SHOOLAGIRI
 DISTRICT : KRISHNAGIRI.

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QUARRY ROAD	
FENCING	
PARAPET WALL	
ULTIMATE PIT LIMIT	
PROPOSED WATER STORAGE	

CONCEPTUAL MINE CLOSURE PLAN

SCALE: 1:500

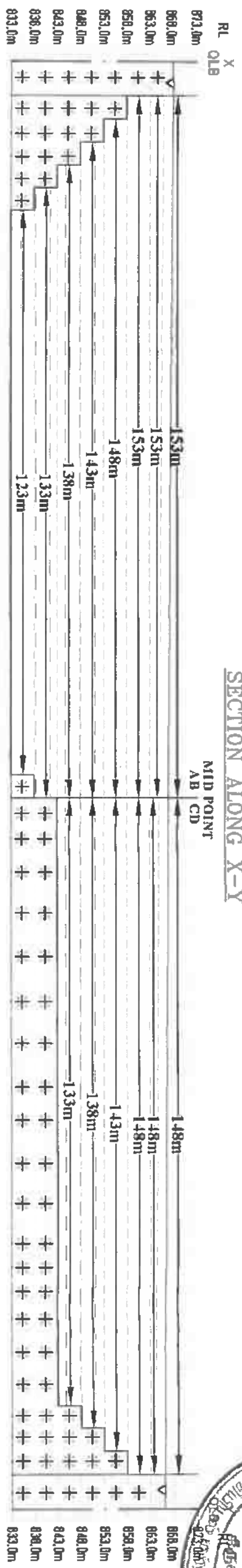
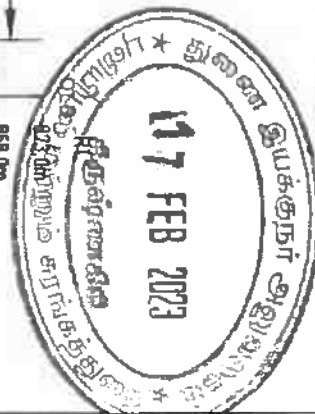
PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLAN HAS BEEN CHECKED AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.

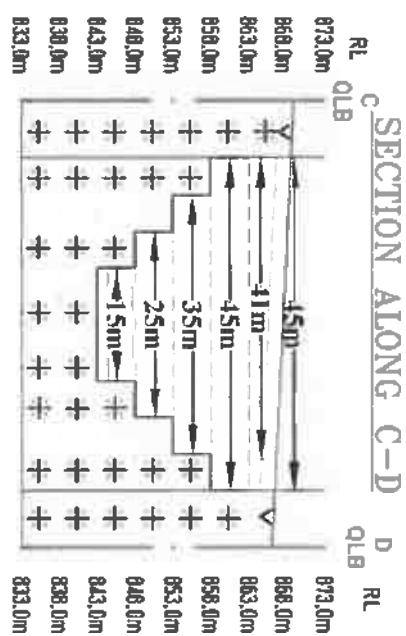
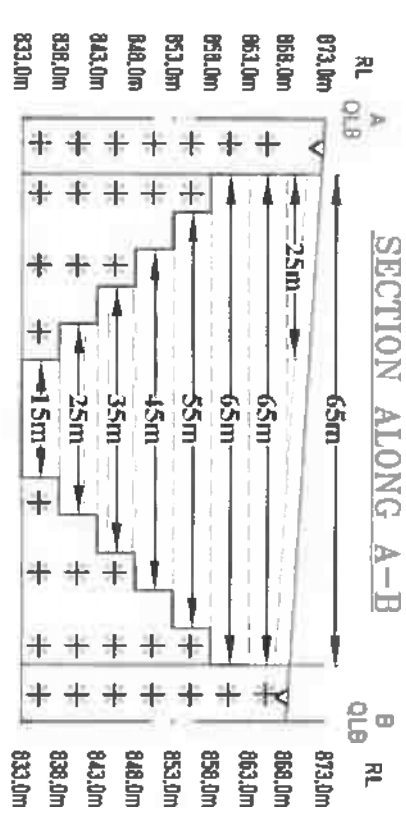
S.DHANASEKAR, M.Sc.,
 QUALIFIED PERSON

1st V Yr Afforestation

2nd V Yr Afforestation



TOTAL DEPTH = 39m



MINEABLE RESERVES							
Section	Bench	Length In (m)	Width In (m)	Depth In (m)	Volume In M3	Mineable Reserves In m3 @ 100%	Gravel In m3
XY-AB	I	153	65	2	7650	7650	19890
	II	153	25	2	49725	49725	
	III	153	65	5	49725	49725	
	IV	153	65	5	49725	49725	
	V	148	55	5	40700	40700	
	VI	143	45	5	32175	32175	
	VII	138	35	5	24150	24150	
	VIII	133	25	5	16625	16625	
	IX	123	15	5	9225	9225	
TOTAL		148	45	2	229975	229975	19890
XY-CD	I	148	41	3	18204	18204	13320
	II	148	45	5	33300	33300	
	III	143	35	5	25025	25025	
	IV	138	25	5	17250	17250	
	V	133	15	5	9975	9975	
	VI	133	15	5	9975	9975	
TOTAL		148	45	2	103754	103754	13320
GRAND TOTAL					333729	333729	33210

ULTIMATE PIT DIMENSION
= 300.0m(L) X 55.0m(W) Avg X 39.0m(D)

PLATE NO: VII-A

DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:

THIRU.B. SRIKAR,
S/O. BHARATHY,
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS, HOSUR TALUK,
KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY

EXTENT : 1.86.50 Ha.
S.F.NO : 79
VILLAGE : MIDTHEPALLI
TALUK : SHOOLAGIRI
DISTRICT : KRISHNAGIRI.

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- QUARRY LEASE BOUNDARY
- 7.5m, 10.0m SAFETY DISTANCE
- GRAVEL
- ROUGH STONE
- ULTIMATE PIT SLOPE
- PROPOSED WATER STORAGE

CONCEPTUAL & FINAL
MINE CLOSURE SECTIONS

SCALE: HOR-1:1000
VER-1:500

PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE
HAS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE

S. DHANASEKARAN, I.S.C.
QUALIFIED PERSON

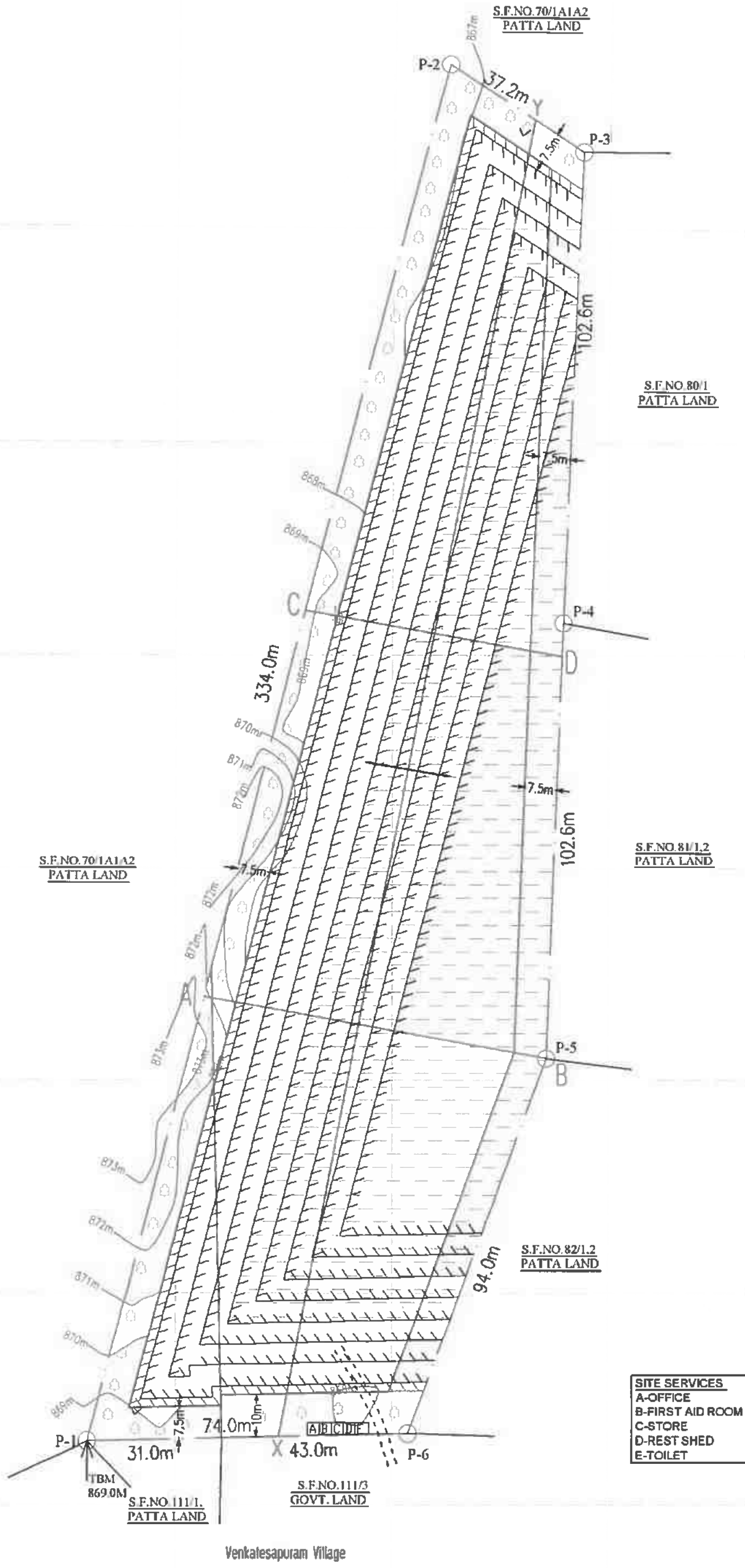


PLATE NO: VIII
DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:
THIRU.B. SRIKAR,
S/o.BHARATHY,
D.No.25, SHANTHI NAGAR (WEST),
2nd CROSS, HOSUR TALUK,
KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY
EXTENT : 1.86.50 Ha.
S.F.NO : 79
VILLAGE : MIDITHEPALLI
TALUK : SHOOLAGIRI
DISTRICT : KRISHNAGIRI.

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ULTIMATE PIT LIMIT	
PROPOSED WATER STORAGE	

SITE SERVICES
A-OFFICE
B-FIRST AID ROOM
C-STORE
D-REST SHED
E-TOILET

CONCEPTUAL COMMON PLAN

SCALE: 1:1000

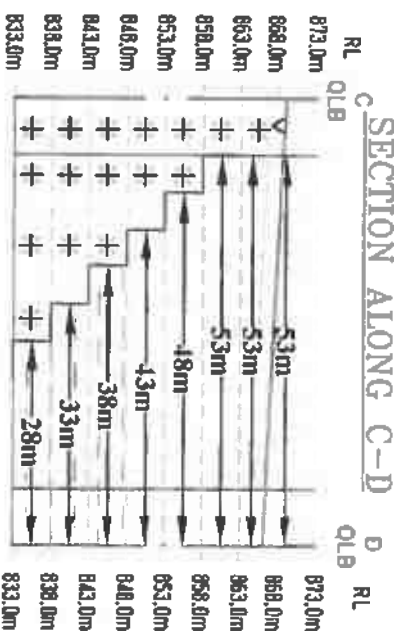
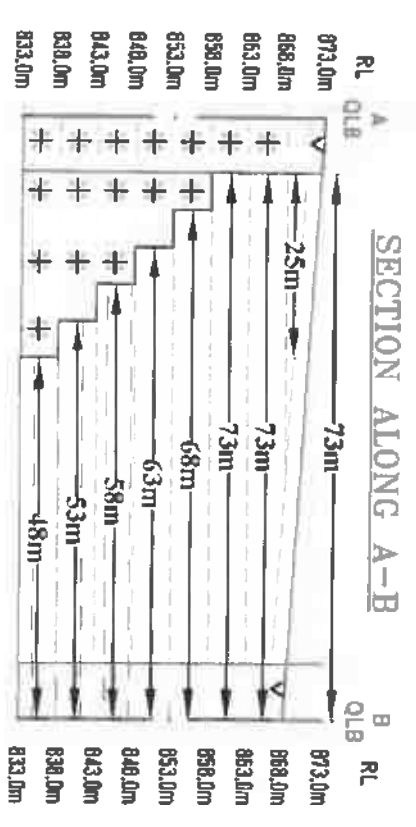
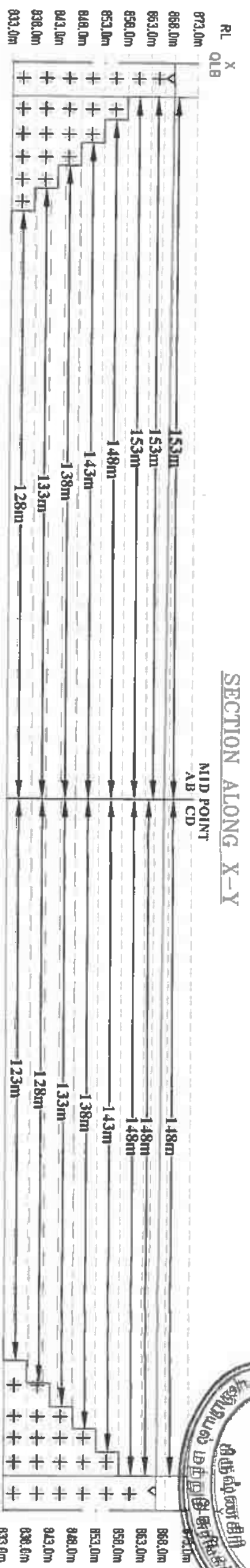
PREPARED BY:
 I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND I AM RESPONSIBLE TO THE BEST OF MY KNOWLEDGE



S. Dhana Sekar
S.DHANASEKAR, M.Sc.,
QUALIFIED PERSON

1st V Yr Afforestation

2nd V Yr Afforestation



TOTAL DEPTH = 39m

MINEABLE RESERVES COMMON BOUNDARY						
Section	Bench	Length In (m)	Width In (m)	Depth In (m)	Volume In m3	Mineable Reserves In m3 @ 100%
XY-AB	I	153	73	2	7650	22338
	II	153	25	2	55845	
	III	153	73	5	55845	
	IV	153	73	5	55845	
	V	148	68	5	50320	
	VI	143	63	5	45045	
	VII	138	58	5	40020	
	VIII	133	53	5	35245	
	IX	128	48	5	30720	
TOTAL					320690	22338
XY-CD	I	148	53	2	23532	15688
	II	148	53	3	39220	
	III	148	53	5	39220	
	IV	143	48	5	34320	
	V	138	43	5	29670	
	VI	133	38	5	25270	
	VII	128	33	5	21120	
	VIII	123	28	5	17220	
TOTAL					190352	15688
GRAND TOTAL					511042	38026

ULTIMATE PIT DIMENSION = 300.0m(L) X 63.0m(W) Avg X 39.0m(D)

PLATE NO: VIII-A

DATE OF SURVEY: 06-02-2023

APPLICANT ADDRESS:
 THIRU.B. SRIKAR,
 S/O. BHARATHY,
 D.No.25, SHANTHI NAGAR (WEST),
 2nd CROSS, HOSUR TALUK,
 KRISHNAGIRI DISTRICT -635 109.

LOCATION OF QUARRY

EXTENT : 1.86.50 Ha.
 S.F.NO : 79
 VILLAGE : MIDITHEPALLI
 TALUK : SHOOLAGIRI
 DISTRICT : KRISHNAGIRI.

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 - ROUGH STONE
 - ULTIMATE PIT SLOPE
 - PROPOSED WATER STORAGE

CONCEPTUAL SECTIONS
 COMMON BOUNDARY

SCALE: HOR-1:1000
 VER-1:500

PREPARED BY:

I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

S. DHANASEKARAN, I.Sc.
 QUALIFIED PERSON

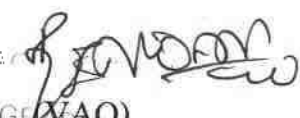
ANNEXURE-VII
VAO CERTIFICATE

Thiru. B. SRIKAR, Rough Stone & Gravel quarry in the S.F.No.79 over an extent of 1.86.50ha. in Midithepalli Village, Shoolagiri Taluk, Krishnagiri District.

GENERAL VIEW OF THE APPLIED LEASE AREA




B. Srikar
(Deponent)


VILLAGE ADMINISTRATIVE OFFICER,
MIDBITHEPALLI (Vill & Po)
Shoolagiri Taluk Krishnagiri Dist

சான்று

கிருஷ்ணகிரி மாவட்டம், சூளகிரி வட்டம், பேரிகை உள்வட்டம், மிடிதேப்பள்ளி கிராம புல எண்:79 விஸ்.1.86.50 ஹெக்டேர் பட்டா நிலமாகும். இதில் 1.86.50 ஹெக்டேரில் குவாரி அமைய உள்ள Thiru.B.SRIKAR என்ற நிறுவனத்திலிருந்து 500 மீட்டர் சுற்றளவில் கிராம நத்தமோ, குடியிருப்புகளோ, ஏரியோ, தேவாலயமோ, வழிப்பாட்டுத்தளங்களோ, மசூதியோ, புராதன சின்னங்களோ, புதை குழிகளோ, கல்விக் கூடங்களோ, ஆறுகள், அரசு கட்டிடங்களோ இல்லை என்பதை புலத்தணிக்கையின் மூலம் அறிந்து சான்றளிக்கப்படுகிறது.


கிராம நிர்வாக அலுவலர்
MIDDITHEPALLE (VILL & P.O.)
மிடிதேப்பள்ளி கிராமம்
Shoolagiri Taluk Krishnagiri Dist
Krishnagiri Dist

ANNEXURE-VIII BLASTING AGREEMENT



VISHNU EXPLOSIVES



No.235/9, R.G. Nagar Engineer's Colony Extension, Jagir Reddipatty, Salem - 636 302.

Ref:

Date :

To

Thiru. B. Srikar,
S/o. Bharathy,
D.No.25, Shanthi Nagar (West),
2nd Cross,
Hosur Taluk,
Krishnagiri District-635 109.

Sir,

Sub: Willingness to do Explosives Blasting Works – Reg.

With respect to the above subject, we would like to introduce myself as the Explosives Blasting Contractors, for which our LICENCE NO: E/HQ/TN/22/335(E64278) & E/SC/TN/22/463(E37227) S.F.No.344/3B, Paiyur Village, Krishnagiri Taluk magazine is situated in No.273-A, Keel Paiyur Village, Kaveripattinam, Krishnagiri, Tamilnadu-635 112.

We were engaged in professional blasting contract works with all facilities and License holders to carry out blasting works in specified time and period covered under Explosives Rules, 2008.

We kindly request yourself to engage us to do Explosives Blasting Works in your proposed Rough Stone & Gravel Quarry situated at S.F.No: 79 in Midithepalli Village, Shoolagiri Taluk, Krishnagiri District over an extent of 1.86.50 hectares.

SERVING BEST AT ALL TIMES

Thanking you.

For VISHNU EXPLOSIVES,

For Vishnu Explosives


Proprietor

Enclosure: Magazine License Copy.

अनुज्ञापित प्रारूप एल. ई. 3 [Licence Form 11-3]

विस्फोटक नियम, 2008 की अनुसूची 4 के भाग 1 के अनुबन्ध में प्रकाशित की गई है।
(See article 4 of the Rules of 2008 in Part I of Schedule IV of Explosives Rules, 2008)

यह, उभयपक्ष के लिए एक समय पर कर्म [2.84] के वर्ग के विस्फोटक या किसी भाग में वर्ग 1 के विस्फोटक प्रदान करने के लिए जारी है।
License to possess and use explosives of class 1, Div 1.2 or 1.3 in a magazine

अनुज्ञापित सं. (Licence No.): F/110/TN/22/335(E/4278)
वार्षिक फीस रुपए (Annual Fee Rs): 14000/-

This licence is hereby granted to

M/s Vishnu Explosives (अधिभोगी / Occupier: Shri G.V.Sai Supramaniam) S/O V.G. Vesshwanthar Plot No. 17-A Keel Panyur Panyur Village, Kaveripattinam PO., Town Village - Kaveripattinam, District-KRISHNAGIRI, State-Tamil Nadu. Pincode - 635112



का अनुज्ञापित अनुदत्त को जारी है।

1) अनुज्ञापितारी की प्रकृति: Status of licensee - Proprietorship Firm

2) अनुज्ञापित निम्नलिखित प्रयोजनों के लिए विधिमय है।

Licence is valid only for the following purpose

process for use of Safety Fuse, Detonating Fuse, Nitrate mixture - Sherry and Emulsion Explosives, Detonators, - के उपयोग के लिए

3) अनुज्ञापित विस्फोटक के निम्नलिखित किस्मों, प्रकार और मात्रा के लिए विधिमय है।

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

क्र.	नाम और विवरण	वर्ग और प्रभाग	उप-प्रभाग	मात्रा कि सी 1 के समय में
Sl. No.	Name and Description	Class & Division	Sub-division	Quantity at any one time
1	Nitrate mixture - Sherry and Emulsion Explosives	2.9	0	2000 kgs
2	Detonators	6.3	0	40000 Nos
3	Safety Fuse	6.1	0	20000 Mtrs
4	Detonating Fuse	6.2	0	50000 Mtrs

(अ) किसी एक कलेंडर मास में कमी से जने वाले विस्फोटक की मात्रा (अनुदत्त) उक्त और (ग) के अधीन अनुज्ञापित की जाएगी।
(b) Quantity of explosives to be purchased in a calendar month applicable for licence under article 3(a) and (b) 20 tons or less

5) निम्नलिखित रेखाचित्र (रेखाचित्रों) से अनुज्ञापित परिसर की पृष्ठ लेनी है।

The licensed premises shall conform to the following drawings:

रेखाचित्र क्र. (Drawing No.): E/110/TN/22/335(E/4278)
दिनांक (Date): 11/10/2021

6) अनुज्ञापित परिसर निम्नलिखित पते पर स्थित है। The licensed premises are situated at following address:

Survey No. 344/3B ग्राम (Town/Village) Panyur Village, Kaveripattinam
जिला (District) KRISHNAGIRI राज्य (State) Tamil Nadu
दूरभाष (Phone) 9842744073 ई-मेल (E-Mail)

पुलिस थाना (Police Station): Kaveripattinam
पिनकोड (Pincode) 635112
फैक्स (Fax)

7) अनुज्ञापित परिसर में निम्नलिखित सुविधाएँ अंतर्भूत हैं।

The licensed premises consist of following facilities

1 main magazine room, 1 lobby and a detonator storage room

8) अनुज्ञापित समय - समय पर यथासंभावित विस्फोटक अधिनियम, 1884 और उनके अधीनस्थित विस्फोटक नियम, 2008 के अन्वये, प्राचीन और अतिरिक्त प्रयोग के लिए अनुज्ञापित प्रमाणपत्रों के अधीन रहते हुए अनुदत्त को जारी है।

The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed there under and conditions additional conditions and the following Annexures:

- 1) उपरोक्त क्रम सं. 5 में यथा कथित रेखाचित्र (स्थल, सांरचनात्मक आदि) के अतिरिक्त अन्य विवरण दर्शाए गए हैं।
Drawings (showing site, construction and other details) as stated in serial 5 above.
- 2) अनुज्ञापित प्रधिकारी द्वारा सेहत और सुरक्षा के अनुज्ञापित की शर्तें और अतिरिक्त शर्तें।
Conditions and Additional Conditions of this licence granted by the licensing authority
- 3) दूरी प्रारूप DF-2: Distance Form DE-2

9) यह अनुज्ञापित तारीख 31 मार्च 2015 तक विधिमय रहेगी। The licence shall remain valid till the date of March 2015.

यदि अनुज्ञापित, अधिनियम या उसके अधीन स्थित नियमों या अनुदत्तों के अंतर्गत प्रयोग के अंतर्गत प्रमाणपत्रों के अधीन तथा उपरोक्त इस अनुज्ञापित की शर्तों का अतिक्रमण करने या यदि अनुज्ञापित परिसर योजना या उससे संलग्न उपबंध में दर्शाए विवरण के अनुज्ञापित प्रमाणपत्रों के अधीन तथा उपरोक्त इस अनुज्ञापित की शर्तों का अतिक्रमण करने या यदि अनुज्ञापित परिसर योजना या उससे संलग्न उपबंध में दर्शाए विवरण के अनुज्ञापित प्रमाणपत्रों के अधीन तथा उपरोक्त इस अनुज्ञापित की शर्तों का अतिक्रमण करने, जहाँ पर लागू हो, (whenever applicable) referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and Annexures attached hereto

तारीख: The Date: 11/08/2012

मुख्य विस्फोटक नियंत्रक (Chief Controller of Explosives)

Amendments:

- Change in Postal Address dated: 26/04/2017
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated: 02/04/2018
- Amendment of Quantity of Explosives/Monthly Purchase: (min) dated: 24/04/2019
- Amendment of Quantity of Explosives/Monthly Purchase Limit dated: 11/10/2021
- Amendment in Drawings/Facilities/Premises dated: 11/10/2021

Transfers:

- Change in Licensee Name/Address/Status dated: 08/10/2021

गर्बनीकरण के पृष्ठानक के लिए स्थान
Space for Endorsement of Renewal

नवीकरण की तारीख Date of Renewal	समाप्त की तारीख Date of Expiry	अनुज्ञापित प्रधिकारी के हस्ताक्षर और स्थान Signature of licensing authority and stamp
28/02/2020	31/03/2025	CC- Controller of Explosives, Mysore

कानूनी चेतावनी: विस्फोटकों का गलत ढंग से बचाना या उनका दुरुपयोग विधि के अधीन गंभीर दंडित अपराध है।
Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

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

**ANNEXURE-IX AFFIDAVIT AND CER
DETAILS**



தமிழ்நாடு தமில்நாடு TAMILNADU 9.3.2023 / BH 521509



B. Srikar,
Krishnagiri

M. கண்ணன்
முத்திரைத்தாள் விழப்பளையாளர்
உரிமம் எண். 1/2003
கம்மாளைய நகர் விரிவாக்கம்,
காமங்கலம். சேலம்-5, தமிழ்நாடு

AFFIDAVIT TO SEIAA, TAMIL NADU

I, **B. Srikar**, S/o. Bharathy residing at D.No.25, Shanthi Nagar (West), 2nd Cross, Hosur Taluk, Krishnagiri District-635 109, 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 & Gravel quarry over an extent of 1.86.50 Ha with Survey No. 79, in Midithepalli village, Shoolagiri 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.



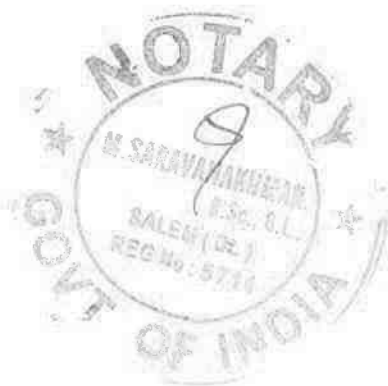
2. The following Corporate Environment Responsibility (CER) activities will be completed before commencement of the quarrying activities.

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.54,80,000/-	Rs.3,00,000/-
Total cost Allocation	Rs.54,80,000/-	Rs.3,00,000/-

3. Details of quarry within 500m radius from the applied area:

a. Existing Quarries						
S.No	Name of the lessee	Village & Taluk	SF.No.	Extent in Hectare	Rc.No. & Date	Lease Period
1.	Thiru. D. Sreenivasalu, S/o. Venkateshwarlu, No. Radha Lakshmi Nilayam, Devachandra Main Road, Bangalore.	Midithepalli village & Shoolagiri Taluk	80/1, 80/2.	3.17.08	Rc.No.1305 / 2018/ Mines Dated:20.12.2022	20.12.2022 To 19.12.2032
2.	Thiru. Venkat Reddy, S/o. (Late) Uthama Reddy, Kolar Taluk, Uddanahalli, Chakkarasanahalli, Karnataka.	Midithepalli village & Shoolagiri Taluk	81/2, 82/1.	2.05.92	Rc.No.1308 / 2018/ Mines Dated:31.10.2022	31.10.2022 To 30.10.2032

b. Details of Expired/ Old Quarries						
S.No	Name of the lessee	Village & Taluk	SF.No.	Extent in Hectare	Rc.No. & Date	Lease Period
1.	M/s. Sarva Infra Pvt. Ltd, 540, 3 rd floor, CMH Road, Indira Nagar, Bagalore.	Midithepalli village & Shoolagiri Taluk	70/1B, 70/1C.	4.05.0	Rc.No.09 / 2014/ Mines Dated:26.10.2015	28.10.2015 To 27.10.2020




c. Details of Proposed Quarries						
S.No	Name of the lessee	Village & Taluk	SF.No.	Extent in Hectare	Rc.No. & Date	Lease Period
1	Thiru. B. Srikar, S/o. Bharathy, No.25, Shanthy Nagar (West), 2 nd Cross, Hosur Taluk, Krishnagiri - 635 109.	Midithepalli Village & Shollagiri Taluk	79	1.86.0 Ha.	-	Instant Proposal

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 & Gravel.
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.


B. Sirikar
(Deponent)




Cell: (0)9443286345
20/3/2013
A. SARAVANAN KUMAR, B.Sc., B.L.
ADVOCATE & NOTARY,
(GOVT. OF INDIA)
No. 11, A. V. Mansion,
1st Floor, Near Sansa College,
Hosur - 635 109

சிஷ்யர்கள்,

சு.பு. மாரணன் எம்.சு. எம்.எல்
தலைமையாசிரியர்

புது உயர்திணைப் பள்ளி,
உலங்கடையூர் (அ)
சுனகிரி தாலூகா
கிருஷ்ணகிரி மாவட்டம்

பெண்கள்,

உயர்திணை, மாதிரி சான்றிதழ்கள் தாக்க மதிப்பீடு
நினைவார் அலுவலர்.

பெண்கள்,
ஆயர்,

உயர்திணை:- பள்ளிக் குறைவான கடிவறை,
கலையுலகம், அடிப்படை வசதிகள்,
பள்ளிக் குறைவான விலையாடல்
உயர்திணை வேண்டுகள் தொடர்வாத
உணக்கம் கிருஷ்ணகிரி மாவட்டம், சுனகிரிவட்டம்

குறைபாடுகள் கிராம சேவை எண் : 79 1.86.50 தொகையின்
திரு. ப. பதிகர் (Rough stone & gravel quarry) அலுவலர்
கட்டுவாரி திருவணங்குடல் எங்கள் பள்ளிக் குறைவான
வசதிகளை கேட்டதன் பின்னர் கருவாக கம்ப கடுப்பூலை
(மைதானத்திற்கு)
பயம் சேர்த்து பணிகளை வசிக்க சம்பந்திக்கு பணிகளை
சுலக்கியுள்ளார் என்பதை திணைவேளம் கவனக்கு பணிவுடன்
உதவலுக்கே தொன்களேன்.

கிபம்:- உலங்கடையூர்
நாள்:- 09.03.2023

Head Master
GOVT. HIGH SCHOOL
VENKATESAPURAM - 635109.
Shoolagiri Tk, Krishnagiri Dt.319

ANNEXURE-X NABET CERTIFICATE



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/23/2877

September 15, 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 December 14, 2023– regarding
Ref.: 1. Certificate no. NABET/EIA/2124/SA 0147
2. Request e-mail dated September 11, 2023

Dear Sir,

This has reference to the Accreditation of your organization under the QCI-NABET EIA Scheme and your request email dated May 15, 2023. It is to inform your good self that the validity of **Eco Tech Labs Pvt Ltd.**, is hereby extended till **December 14, 2023**, 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