

January
2024

Application Form (Draft EIA Report)

For

Proposed Rough stone Quarry – 4.50.0 Ha

at

S.F.No. 637 (Part – 2) of Thuppuganapalli Village,
Shoolagiri Taluk, Krishnagiri District, Tamilnadu State

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

Category of the Project: B1 Cluster Mining

Baseline Period: October 2023 - December 2023

***Environmental Consultant
& Laboratory details:***

Ecotech Labs Pvt Ltd,



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

Proponent details:

Thiru.K.P.Anand,
S/o. V.P. Perumal,
No.2/10,
Velampatty Post,
Pennagaram Taluk,
Dharmapuri District
636 809

Date:

From

Thiru.K.P.Anand,
S/o. V.P. Perumal,
No. 2/10, Velampatty Post,
Pennagaram Taluk,
Dharmapuri District - 636 809

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. K.P.Anand Rough stone Quarry over a total extent of 4.50.0 Ha in Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District, TamilNadu State.– Reg

Ref: Lr No. SEIAA-TN/F. No. 10220/2023/SEAC/ToR-1593/2023 Dated: 30.10.2023

Please find enclosed herewith the application of Draft EIA Report along with necessary enclosures towards seeking environmental clearance for the “Thiru. K.P.Anand Rough stone Quarry over a total extent of 4.50.0 Ha in Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District, TamilNadu State. 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.K.P. Anand,
S/o. V.P. Perumal,
No. 2/10, Velampatty Post,
Pennagaram Taluk,
Dharmapuri District - 636 809

UNDERTAKING

I, Thiru.K.P.Anand, undertaking that the Draft Environmental Impact Assessment (EIA) Report for Rough Stone Quarry over an extent of 4.50.0 Ha at S.F.No. 637 (Part-2) Thuppuganapalli 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 Lr No. SEIAA-TN/F.No. 10220/2023/SEAC/ToR-1593/2023 Dated: 30.10.2023.

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.K.P.Anand

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



Eco Tech Labs Pvt Ltd

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

UNDERTAKING

I, Dr. A. Dhamodharan, Managing Director confirms that this Draft EIA Report of Rough Stone Quarry over an extent of 4.50.0 Ha at S.F.No. 637 (Part-2) of Thuppuganapalli 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 Quarry (minor mineral) mining project of Thiru. K.P.Anand Rough stone Quarry over a total extent of 4.50.0 Ha in Thuppuganapalli 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.

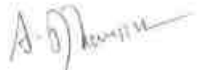

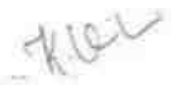

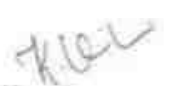
Project	Existing Rough Stone Quarry - 4.50.0 Ha
Type & Category	1 (a) Mining of Minerals
Project Proponent	Thiru.K.P.Anand
Environment Consultant with their Accreditation Status	M/s. Eco Tech Labs Pvt. Ltd., QCI Accredited
NABET Certificate No.	NABET/ EIA/2124/ SA 0147
EIA Coordinator Name Signature	Dr. A. Dhamodharan (Mining of Minerals)  
Period of Involvement	October 2023 to December 2023
Contact Information	M/s. Eco Tech Labs Pvt. Ltd. No. 48, 2nd Main Road, Ram Nagar South Extension Pallikaranai, Chennai - 600 100 Mobile: +91 9789906200 E-mail: dhamo@ecotechlabs.in

Functional Area Experts

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

S. No.	Functional areas	Name of the experts	Involvement (period and task)	Signature and date
1	AP	Mrs. K. Vijayalakshmi	<p>1. Selection of Baseline Monitoring stations based on the wind direction.</p> <p>2. Interpretation of Baseline data by comparing it with standards prescribed by CPCB against the type of area.</p> <p>3. Identification of sources of air pollution and suggesting mitigation measures to minimize impact.</p> <p>Period: March 2022 – 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: March 2022 – 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: March 2022 – Till now</p>	

4	SE	Mr. S. Pandian	<p>1. Primary data collection through the census questionnaire</p> <p>2. Obtaining Secondary data from authenticated sources and incorporating the same in EIA report.</p> <p>3. Impact assessment & proposing suitable mitigation plan</p> <p>4. CSR budget allocation by discussing with the local body and allotting the same for need based activity.</p> <p><i>Period: March 2022 – Till now</i></p> <p>*INVOLVES PUBLIC HEARING</p>	
5	EB	Dr. A. Dhamodharan	<p>1. Primary data collection through field survey and sheet observation for ecology and biodiversity</p> <p>2. Secondary Collection through various authenticated sources</p> <p>3. Prediction of anticipated impacts and suggesting appropriate mitigation measures.</p> <p><i>Period: March 2022 – Till now</i></p>	
6	HG	Dr. T. P. Natesan	<p>1. Study of existing surface drainage arrangements in the core and buffer zone, impact due to mining on these drainage courses and suggestion of mitigative measures</p> <p>2. Determination of groundwater use pattern, development of rainwater harvesting program. Storm water management through garland drainage system.</p> <p><i>Period: March 2022 – Till now</i></p>	
7	GEO	Dr. T. P. Natesan	<p>1. Field survey for assessing regional and local geology, aquifer distribution, Determination of groundwater use pattern, development of rainwater harvesting program.</p> <p><i>Period: March 2022 – Till now</i></p>	

8	SC	Dr. A. Dhamodharan	<p>1. Interpretation of baseline report</p> <p>2. Identification of possible impacts on soil, prediction of soil conservation and suggesting suitable mitigation measures.</p> <p>Period: March 2022 – Till now</p>	
9	AQ	Mrs. K. Vijayalakshmi	<p>1. Collection of Meteorological data for the baseline study period</p> <p>2. Plotting wind rose plot and thereby selecting the monitoring locations based on the wind pattern</p> <p>3. Estimation of sources of air emissions and air quality modeling is done</p> <p>4. Interpretation of the results obtained</p> <p>5. Identification of the impacts and suggesting suitable mitigation measures.</p> <p>Period: March 2022 – Till now</p>	
10	NV	Mrs. K. Vijayalakshmi	<p>1. Selection of monitoring locations</p> <p>2. Interpretation of baseline data</p> <p>3. Prediction of impacts due to noise pollution and suggestion of appropriate mitigation measures</p> <p>Period: May 2022 – Till now</p>	
11	LU	Dr. T. P. Natesan	<p>1. Collection of Remote sensing satellite data to study the land use pattern.</p> <p>2. Primary field survey and limited field verification for land categorization in the study area</p> <p>3. Preparation of Land use map using Satellite data for 10km radius around the project site.</p> <p>Period: March 2022 – Till now</p>	
12	RH	Mrs. K. Vijayalakshmi	<p>1. Identification of the risk</p> <p>2. Interpreting consequence contours</p> <p>3. Suggesting risk mitigation measures</p> <p>Period: March 2022 – Till now</p>	

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

I, Dr. A. Dhamodharan, hereby confirm that the above-mentioned experts prepared the EIA report of mining project at S.F.No. 637 (Part-2) of Thuppuganapalli 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	<i>Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand</i>	Draft EIA Report
Project Proponent	<i>Thiru.K.P.Anand</i>	
Project Location	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

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<i>Project</i>	<i>Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

ABBREVIATION

LU –Land use

AP – Air Pollution monitoring, prevention and control

AQ- Meteorology, Air quality modeling and prediction

WP – Water pollution monitoring, prevention and control

EB- Ecology and Biodiversity

NV- Noise & Vibration

SE- Socio-economics

HG- Hydrology, ground water and water conservation

GEO –Geology

RH – Risk assessment and hazards management

SHW –Solid and Hazardous waste management

SC- Soil conservation

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EXECUTIVE SUMMARY

1. Project Background:

The Proposed project is in Government Poramboke Land having total extent area of 4.50.0 Ha, located at S.F.No. 637 (Part-II) of Thuppuganapalli Village of Shoolagiri Taluk, Krishnagiri District and Tamil Nadu. The category of project is B1, it is an existing rough stone quarry in Thuppuganapalli village. The area is situated on hilly terrain sloping towards the Southeast covered with Rough Stone 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 49 m Surface Ground Level Above. The Total Geological resources are about 14,17,155m³ of Rough Stone and 26,980m³ of Topsoil. The Mineable Reserves are about 8,20,955m³ of Rough Stone and 22,440m³ of Topsoil. The year wise production/recoverable resources of rough stone and Gravel is about 6,03,365m³ and 22,440m³ for the period of 5 years.

The Mining Plan was approved by the Deputy Director, Geology & Mining, Krishnagiri vide letter Rc.No.210/2018 Mines dated 07.05.2018. The project area does not fall in Hill Area Conservation Authority region. There is no interstate boundary, CRZ zone, Western Ghats, notified Bird sanctuaries, wildlife sanctuaries as per Wildlife protection Act 1972, within a radius of 15 km.

2. Nature & Size of the Project

The Rough Stone Quarry over an extent of 4.50.0 Hectares land is located Thuppuganapalli Village of Shoolagiri Taluk, Krishnagiri District.

Mineral intends to quarry : Rough stone.

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District : Krishnagiri
Taluk : Shoolagiri
Village : Thuppuganapalli
S. F. Nos. : 637 (Part-II)
Extent : 4.50.0 Hectares

Table 1: Brief Description of the Project

S. No	Particulars	Details
1	Latitude	12° 37' 39.82" N To 12° 37' 50.19" N
2	Longitude	77° 57' 12.63" E To 77° 57' 20.49" E
3	Site Elevation above MSL	Maximum 813m and Minimum 768m above MSL.
4	Topography	Hilly terrain
5	Land use of the site	Government Poramboke land
6	Extent of lease area	4.50.0 Ha
7	Nearest highway	AH-45: Chennai to Bengaluru Highway – 5.10 Km – NNE. SH-85: Kelamangalam Road – 10.78 Km - W
8	Nearest railway station	Kelamangalam Railway Station – 9.81Km - W
9	Nearest airport	Kempagowda International Airport – 68.49Km - NNW
10	Nearest town / city	Town - Shoolagiri – 6.78 Km - NE City - Krishnagiri – 28.71 Km - NE District - Krishnagiri – 28.71 Km - SE
11	Rivers / Canal	➤ Ponnaniyar River – 0.58Km - NE
12	Lake	➤ Chappadi Lake – 5.20Km – NE ➤ Konerapalli Lake - 5.48Km – N ➤ Kamandoddi Lake – 5.74Km – N ➤ Kamandoddi New Lake – 6.67 Km - NW ➤ Kamandoddi Old Lake – 5.63Km – NW ➤ Nagamangalam Lake – 7.23Km – S ➤ Anachandiram Lake – 7.67Km – NE ➤ Bukkasagaram Lake – 9.96 Km – N

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		<ul style="list-style-type: none"> ➤ Doripalli Lake – 8.62 Km – N ➤ Thummanapalli Lake – 8.73 Km – NNE ➤ Gangapuram Lake – 8.06 Km – NW ➤ A. Kothur Lake – 7.21 Km – NNW ➤ Subbagiri Lake – 6.67 Km – N ➤ Thiyagarsanapalli Lake – 5.73 Km – NE ➤ Obeapalayam Lake – 4.60 Km – W ➤ Addakurukki Lake – 3.89 Km – N ➤ Beerjapalli Lake – 4.03 Km - NW
13	Hills / valleys	Nil in 15 km radius
14	Archaeologically places	Nil in 15 km radius
15	National parks / Wildlife Sanctuaries	Nil in 15 Km radius
16	Reserved / Protected Forests	<ul style="list-style-type: none"> ➤ Sanamavu RF – 6.15 Km – W ➤ Perandapalli RF – 5.87Km – NW ➤ Settipalli RF – 6.95 Km - NE ➤ Udedurgam RF – 11.45 Km – S ➤ Denkanikaottai RF – 14.33 Km - SW
17	Seismicity	Proposed Lease area come under Seismic zone-II (low risk area)
18	Defense Installations	Nil in 15 Km radius

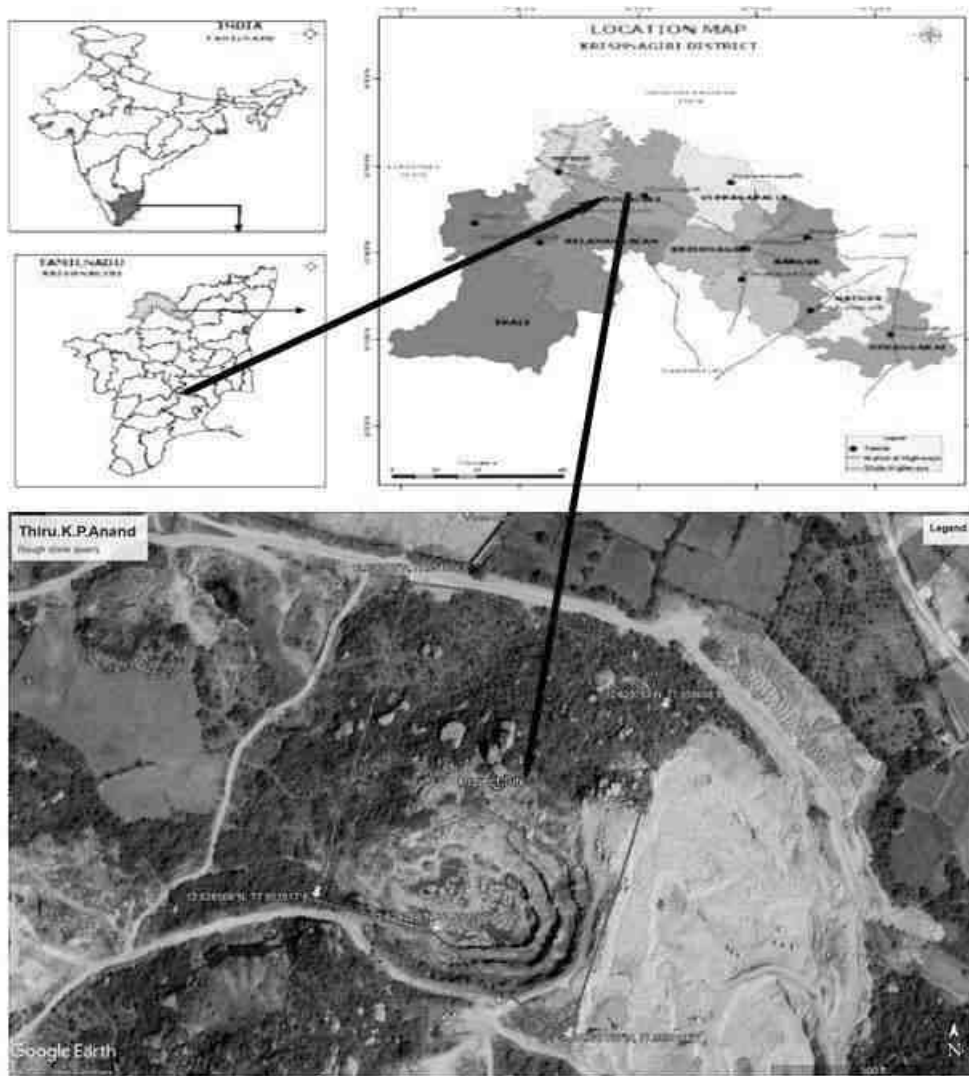
3. Need for the Project

- ❖ 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.

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- ❖ 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.

Figure 1: Location Map of the Project Site



Project	Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
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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 color.

5. Geological resources

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

Table 2. Geological resources

Project	Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
Project Proponent	Thiru.K.P.Anand	
Project Location	Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District	

GEOLOGICAL RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume in (Cu.m.)	Recoverable Reserve in Cbm (100%)	Topsoil
XY-AB	I	190	142	1			26980
	II	61	40	5	12200	12200	
	III	86	48	5	20640	20640	
	IV	107	55	5	29425	29425	
	V	130	63	5	40950	40950	
	VI	157	71	5	55735	55735	
	VII	179	79	5	70705	70705	
	VIII	190	189	5	179550	179550	
	IX	190	197	5	187150	187150	
	X	190	204	5	193800	193800	
	XI	190	212	5	201400	201400	
	XII	190	220	5	209000	209000	
	XIII	190	228	5	216600	216600	
Total=					1417155	1417155	26980

Table 3. Mineable Reserves

MINEABLE RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume in (Cu.m.)	Recoverable Reserve in Cbm (100%)	Topsoil
XY-AB	I	170	132	1			22440
	II	61	40	5	12200	12200	
	III	82	48	5	19680	19680	
	IV	91	55	5	25025	25025	
	V	109	63	5	34335	34335	
	VI	131	71	5	46505	46505	
	VII	148	79	5	58460	58460	

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	VIII	138	178	5	122820	122820	
	IX	128	181	5	115840	115840	
	X	118	184	5	108560	108560	
	XI	108	186	5	100440	100440	
	XII	98	189	5	92610	92610	
	XIII	88	192	5	84480	84480	
Total=					820955	820955	22440

Table 4. Year wise Production Plan

YEARWISE DEVELOPMENT AND PRODUCTION								
Year	Section	Bench	L (m)	W (m)	D (m)	Volume in (Cu.m.)	Recoverable Reserve in Cbm(100%)	Topsoil
I-Year	XY-AB	I	170	132	1			22440
		II	61	40	5	12200	12200	
		III	82	48	5	19680	19680	
		IV	91	55	5	25025	25025	
		V	109	63	5	34335	34335	
II-Year		VI	131	71	5	46505	46505	
III-Year		VII	148	79	5	58460	58460	
IV-Year		VIII	138	178	5	122820	122820	
		IX	128	181	5	115840	115840	
V-Year		X	118	184	5	108560	108560	
		XI	108	185	3	59940	59940	
Total=						603365	603365	22440

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6. Mining

Opencast mining

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, blasting, loading and transportation.

Process Description

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

7. Water Requirement

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

Table 5. Water Balance

Purpose	Quantity	Source
Drinking Water	1.0 KLD	Packaged Drinking water vendors available in Thuppuganapalli which is about 0.54 km-N 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

Project	Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
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Project Location	Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District	

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	3 Nos
		Office Boy	1 No
4.	Management & Supervisory staff		3 Nos
	Total		18 Nos

9. Solid Waste Management

Table 7 Solid Waste Management

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

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

Table 8 500m Radius Cluster Mine

1) Details of Existing quarries:

S. No.	Name of the lessee	ROC. No. dated	Village	S.F No	Extent in Het	Lease period
1.	M/s. AVS Building Solutions India Private Limited, Plot No.298, Sipcot Staff Housing Colony, Mookandapalli, Hosur 635 126	Rc.No.211 /2018/ Mines dated: 25.01.2018	Thuppuganapalli village, Shoolagiri Taluk	637 (Part - 3)	4.50.0	25.01.2019 to 24.01.2029

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2.	S.Sundraiah, S/o Subramaniam (Late), 14/5 Amman Nagar, Opp to Government ITI, HCF (Post), Hosur.	Rc. No. 98/2016/ Mines dated: 08.08.2016	Thuppuganapalli village, Shoolagiri Taluk	420 (Part - 2)	3.00.0	22.08.2016 to 21.08.2026
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2) Details of abandoned/Old Quarries Proposed Quarries

S. No.	Name of the lessee	ROC. No. dated	Village & Taluk	S.F. No	Extent	Lease period
1.	Thiru.R.Rathinam, Manangkundram, Alagu Goundanapatti Post, Buthar Natham, Trichy.	Rc.No.91/ 2008/ Mines dated: 29.03.2018	Thuppuganap alli village, Shoolagiri Taluk	420 (Part- 5)	5.00.0	03.07.2008 to 02.07.2018

3) Details of other Proposed/ applied Quarries

S. No.	Name of the lessee	ROC. No. dated	Village & Taluk	S.F. No	Extent	Lease period
1.	Thiru.Anand, V.P.Perumal, No.2/10, Velampatty Post, Pennagaram Taluk, Dharmapuri District 636809	Rc.No.210/ 2018/ Mines dated: 09.03.2018	Thuppuganapalli , Shoolagiri Taluk	637 (Part-2)	4.50.0	TCA E.C. Obtained Lease not yet granted
2.	Thiru.Anand, V.P.Perumal, No.2/10, Velampatty Post, Pennagaram Taluk, Dharmapuri District 636809	Rc.No.209/ 2018/ Mines dated: 09.03.2018	Thuppuganapalli , Shoolagiri Taluk	637 (Part-1)	4.00.0	TCA E.C. Obtained Lease not yet granted
3.	M/s. Sri Vari Infrastructure, Prop.Thiru.Adal Arasu S/o,Ramathilagan, D.No.2/389, Poosaripatti Village and Sogathur Post, A.Reddyhalli, Dharmapuri.	Rc.No.231/ 2019/ Mines dated: 13.06.2019	Thuppuganapalli and Agaram Agraharam Village, Shoolagiri Taluk	637 (Part) & 4 (Part)	2.95.0	Precise area given

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Project Location	Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District	

4.	M/s.AVS Building Solutions India Private Limited, Plot No.298, Sipcot Staff Housing Colony, Mookandapalli, Hosur 635 126	Rc.No.230/2019/ Mines dated: 13.06.2019	Thuppuganapalli , Shoolagiri Taluk	420 (Part-5)	4.90.0	Precise area given
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The Total extent of the Existing / Lease expired / Proposed quarries is 23.35.0 Ha

10. Land Requirement

The total extent area of the project is 4.50.0 Ha, Government Poramboke land in Thuppuganapalli 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.	Quarrying Pit	1.17.9	4.30.9
2.	Infrastructure	Nil	0.01.0
3.	Roads	0.01.0	0.02.0
4.	Green Belt	Nil	0.16.1
5.	Unutilized Area	3.31.1	Nil
	Total	4.50.0	4.50.0

11. Human Settlement

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

Table 10 Habitation

SL. NO.	DIRECTION	VILLAGE	POPULATION	DISTANCE
1	North	Ayarnapalli	4986	0.54 Km
2	South	Devasanapalli	1450	1.32 Km
3	East	Samanapalli	3198	2.29 Km
4	West	Thuppuganapalli	4281	1.38 Km

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12. Power Requirement

The Rough Stone Quarry project does not require huge water and electricity for the project.

16 Litre diesel per hour for excavator for mining and loading for Rough stone needed.

13. Scope of the Baseline Study

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

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

13.1 Micro – Meteorology

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

- i) Average Minimum Temperature : 18 °C
- ii) Average Maximum Temperature : 38 °C
- iii) Average Annual Rainfall of the area: 800 mm to 900 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 10 km. radius, air quality survey has been conducted at 7 locations. Major air

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pollutants like Particulate Matter (PM10), Sulphur Dioxide (SO2), Nitrogen Dioxide (NO2) were monitored, and the results are summarized below.

The baseline levels of PM₁₀ (69-39.8 µg/m³), PM_{2.5} (26-16 µg/m³), SO₂ (9-5 µg/m³), NO₂ (37-9.3 µg/m³), all the parameters are well within the standards prescribed by National Ambient Air Quality during the study period from October 2023 to December 2023.

13.3 Noise Environment

The maximum Day noise and Night noise were found to be 59 dB(A) and 47 dB(A) respectively in in Jama Masjid, Mosque, Thirumalaigowni kotta. The minimum Day Noise and Night noise were 39 dB(A) and 30 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 7.25 – 7.92.
- TDS value varied from 198 mg/l to 962 mg/l
- Hardness varied from 164 to 557 mg/l
- Chloride varied from 20.5 to 243 mg/l

13.5 Land Environment

The analysis results show that the majority of soil in the project and surrounding area is slightly alkaline in nature and pH value ranges from 6.87 to 7.87 with organic matter 0.31 to 1.04 %. 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.

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- 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.
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 400 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%	2250
Total		2250

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.

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3. Noise generated by these equipments shall be intermittent and does not cause much adverse impact

17. Responsibilities for Environmental Management Cell (EMC)

The responsibilities of the EMC include the following:

- i. Environmental Monitoring of the surrounding area
- ii. Developing the green belt/Plantation
- iii. Ensuring minimal use of water
- iv. Proper implementation of pollution control measures

18. Environmental Monitoring Program

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

19. Project Cost

The total project cost is **Rs.82,60,000/-** 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.62,60,000/-
2	Operational and Fencing Cost	Rs. 20,00,000/-
	Total	Rs. 82,60,000/-

EMP Cost: Rs.83,72,336/- (Rupees Eighty three lakhs seventy two thousand and three hundred thirty six only) for the period of five years.

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20. Corporate Environmental Responsibility

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

Table 13 CER Cost

S.No.	CER Activity	CER value (Rs)
1.	Government Higher Secondary School, Uddanapalli, Krishnagiri – 635119, Provision of To construct Auditorium or Canteen for students 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. & Conservation activity to Cauvery North wildlife sanctuary	10,00,000/-
Total		10,00,000/-

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.

<i>Project</i>	<i>Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

1 Introduction

1.1 PREAMBLE

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

1.2 GENERAL INFORMATION ON MINING OF MINERALS

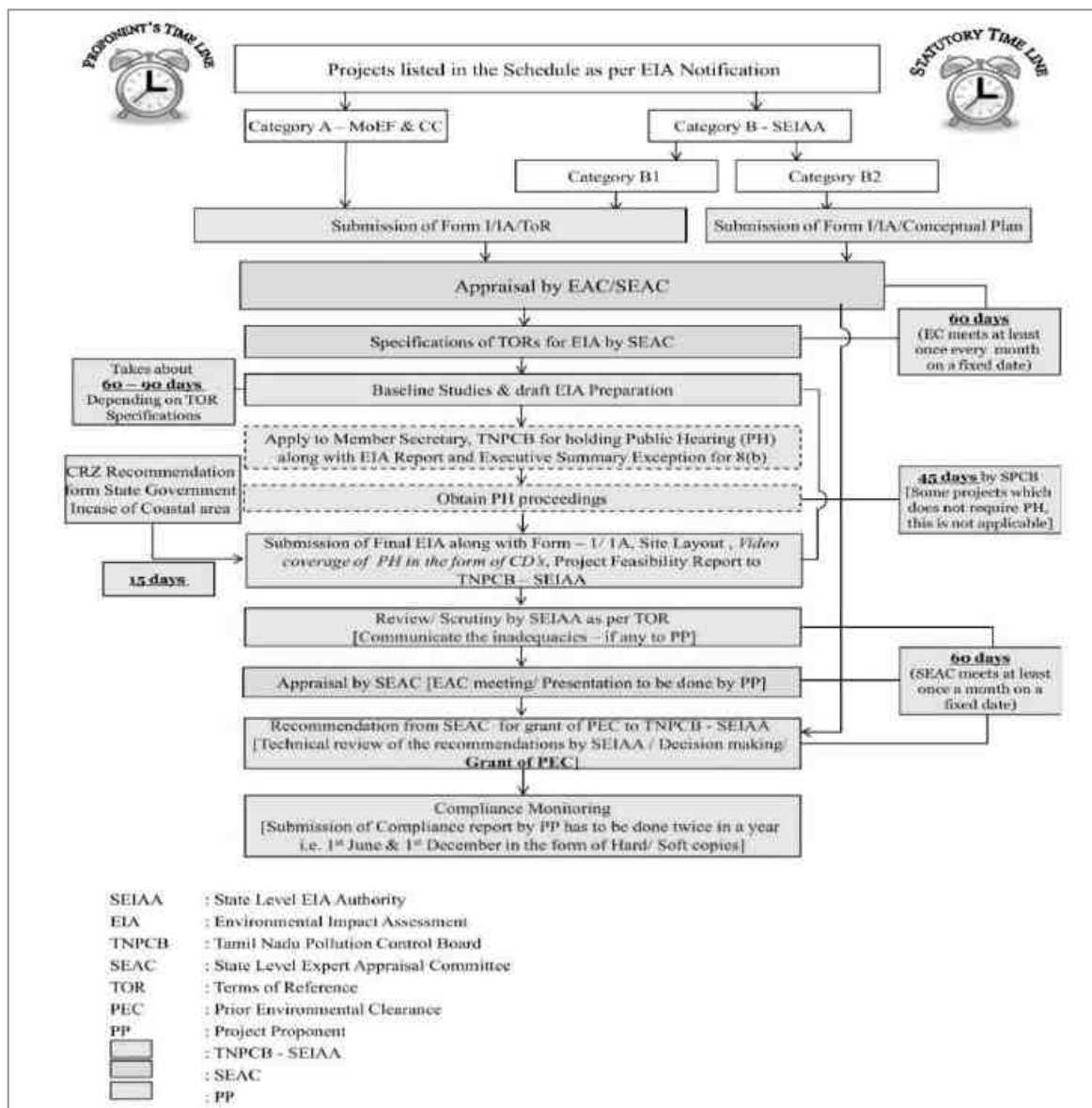
The Entire district is underlain by the rocks belonging to hard crystalline rock masses of Archaean age. The Archaean rocks in this area are represented by rocks of eastern Ghat complex comprising charnockites, Migmatite complex of composite gneiss. The district is covered by metamorphic crystalline 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 - 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
Project Proponent	Thiru.K.P.Anand	
Project Location	Thuppuganapalli 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.



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1.4 TERMS OF REFERENCE (TOR)

The terms of Reference have been issued by SEAC TN vide Letter No. SEIAA-TN/F. No. 10220/2023/SEAC/ToR-1593/2023 Dated: 30.10.2023. 43 additional ToR points were recommended by SEAC TN in addition to the Standard ToR Points. The replies for the same were addressed in this report.

1.5 POST ENVIRONMENTAL CLEARANCE MONITORING

1.5.1 Methodology adopted

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

Table 1-1: Post Environmental Clearance Monitoring

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

1.6 GENERIC STRUCTURE OF THE EIA DOCUMENT

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

Chapter 2: Project Description. In this chapter the proponent should also furnish detailed description of the proposed project, such as the type of the project, need for the project, project location, layout, project activities during construction and operational phases, capacity of the project, project operation i.e., land availability, utilities (power and water supply) and infrastructure facilities such as roads, railways, housing and other requirements. If the project site is near a sensitive area, it is to be mentioned clearly

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<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

why an alternative site could not be considered. The project implementation schedule estimated cost of development as well as operation etc. should also be included.

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

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

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

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

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

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

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

Chapter 10: Environmental Management Plan. This chapter should comprehensively present the Environmental Management Plan (EMP), which includes the administrative and technical setup, summary matrix of EMP, the cost involved to implement the EMP, both during the construction and operational phase and provisions made towards the same in the cost estimates of project construction

<i>Project</i>	<i>Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

and operation. This chapter should also describe the proposed post-monitoring scheme as well as inter-organizational arrangements for effective implementation of the mitigation measures.

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

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

1.7 DETAILS OF PROJECT PROPONENT

Project Proponent : Thiru.K.P.Anand
 Status of the Proponent : Individual
 Proponent's Name & Address : S/o. V.P. Perumal,
 No.2/10, Velampatty Post,
 Pennagaram Taluk,
 Dharmapuri District 636 809.

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 Thuppuganapalli Village, Shoolagiri Taluk of Krishnagiri District, Tamil Nadu. It is an elevated terrain. The total allotted mine lease for the proposed project is 4.50.0 Ha with their maximum production capacity i.e., 603365m³ of Rough Stone and 22440m³ of Topsoil.

Project	Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
Project Proponent	Thiru.K.P.Anand	
Project Location	Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District	

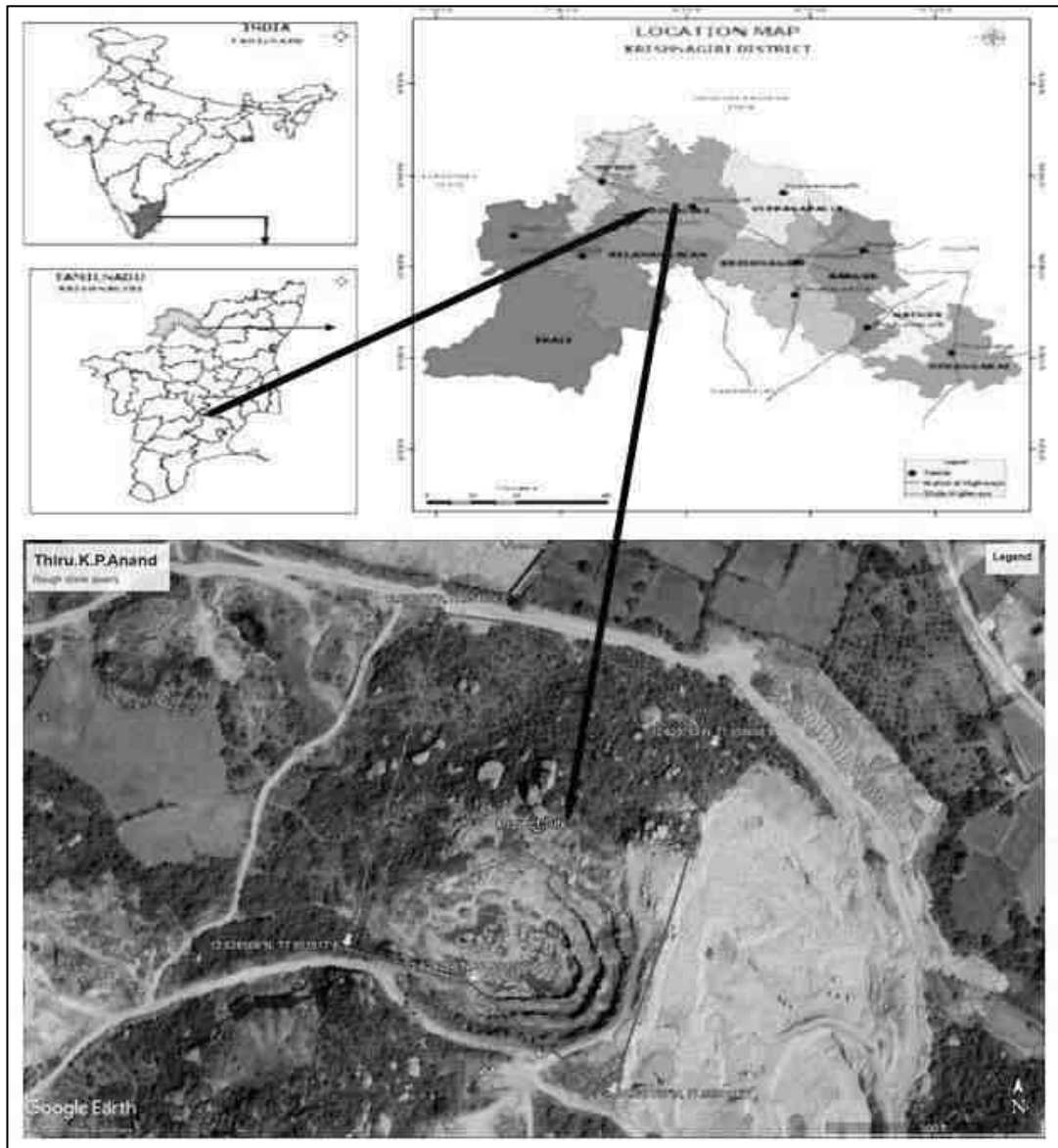


Figure 1.1: Location Map of the Project site

<i>Project</i>	<i>Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli 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 Thuppuganapalli Village, Shoolagiri Taluk of Krishnagiri District, Tamil Nadu. It is a hilly terrain. We have obtained a fresh mining plan from the Department of Geology and Mining, Krishnagiri District for 4.50.0 Ha land area in the S.F.Nos. 637 (Part-II) for a proposed mining depth of 49m (Surface Ground Level Above). and five years production of 6,03,365m³ of Rough Stone and 22,440m³ of Topsoil.

Type of the project:

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

The mines within 500m radius from the project site are listed below.

Table 2-1: Quarry within 500m Radius

1) Details of Existing quarries:

Project	Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
Project Proponent	Thiru.K.P.Anand	
Project Location	Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District	

S. No.	Name of the lessee	ROC. No. dated	Village	S.F No	Extent in Het	Lease period
1.	M/s. AVS Building Solutions India Private Limited, Plot No.298, Sipcot Staff Housing Colony, Mookandapalli, Hosur 635 126	Rc.No.211 /2018/ Mines dated: 25.01.2018	Thuppuganapalli village, Shoolagiri Taluk	637 (Part - 3)	4.50.0	25.01.2019 to 24.01.2029
2.	S.Sundraiah, S/o Subramaniam (Late), 14/5 Amman Nagar, Opp to Government ITI, HCF (Post), Hosur.	Rc. No. 98/2016/ Mines dated: 08.08.2016	Thuppuganapalli village, Shoolagiri Taluk	420 (Part - 2)	3.00.0	22.08.2016 to 21.08.2026

2) Details of abandoned/Old Quarries Proposed Quarries

S. No.	Name of the lessee	ROC. No. dated	Village & Taluk	S.F. No	Extent	Lease period
1.	Thiru.R.Rathinam, Manangkundram, Alagu Goundanapatti Post, Buthar Natham, Trichy.	Rc.No.91/ 2008/ Mines dated: 29.03.2018	Thuppuganapalli village, Shoolagiri Taluk	420 (Part-5)	5.00.0	03.07.2008 to 02.07.2018

3) Details of other Proposed/ applied Quarries

S. No.	Name of the lessee	ROC. No. dated	Village & Taluk	S.F. No	Extent	Lease period
1.	Thiru.Anand, V.P.Perumal, No.2/10, Velampatty Post, Pennagaram Taluk, Dharmapuri District 636809	Rc.No.210/ 2018/ Mines dated: 09.03.2018	Thuppuganapalli, Shoolagiri Taluk	637 (Part-2)	4.50.0	TCA E.C. Obtained Lease not yet granted

<i>Project</i>	<i>Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

2.	Thiru.Anand, V.P.Perumal, No.2/10, Velampatty Post, Pennagaram Taluk, Dharmapuri District 636809	Rc.No.209/ 2018/ Mines dated: 09.03.2018	Thuppuganapalli , Shoolagiri Taluk	637 (Part-1)	4.00.0	TCA E.C. Obtained Lease not yet granted
3.	M/s. Sri Vari Infrastructure, Prop.Thiru.Adal Arasu S/o,Ramathilagan, D.No.2/389, Poosaripatti Village and Sogathur Post, A.Reddyhalli, Dharmapuri.	Rc.No.231/ 2019/ Mines dated: 13.06.2019	Thuppuganapalli and Agaram Agraharam Village, Shoolagiri Taluk	637 (Part) & 4 (Part)	2.95.0	Precise area given
4.	M/s.AVS Building Solutions India Private Limited, Plot No.298, Sipcot Staff Housing Colony, Mookandapalli, Hosur 635 126	Rc.No.230/ 2019/ Mines dated: 13.06.2019	Thuppuganapalli , Shoolagiri Taluk	420 (Part-5)	4.90.0	Precise area given

The Total extent of the Existing / Lease expired / Proposed quarries are 23.35.0 Ha

2.1.1 *Need for the project:*

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

Project	<i>Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
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Project Location	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

isolated outcrops. The crystalline formations are charnockite, granitic gneiss of Archean age have been intruded by dolerite dykes and pegmatite veins. These rocks are highly metamorphosed and have been subjected to very severe folding, crushing and faulting. The crystalline rocks are subjected to tectonic activities under various orogenic cycles resulting in the development of secondary structures such as joints, fissures and cleavages. The intensity of weathering varies from place to place.

2.2 BRIEF DESCRIPTION OF THE PROJECT

Table 2-2 Salient Features of the Project

S. No.	Description	Details
1	Project Name	Rough Stone Quarry - 4.50.0 ha
2	Proponent	Thiru.K.P.Anand
3	Mining Lease Area Extent	4.50.0Ha
4	Location	S.F.Nos. 637 (Part-II) Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District.
5	Latitude	12° 37' 39.82" N To 12° 37' 50.19" N
6	Longitude	77° 57' 12.63" E To 77° 57' 20.49" E
7	Topography	Hilly terrain
8	Site Elevation above MSL	Maximum 813m and Minimum 768m above MSL.
9	Topo sheet No.	57- H/14
10	Minerals of Mine	Rough Stone Quarry
11	Proposed production of Mine	6,03,365m ³ of Rough Stone & 22,440 m ³ of Topsoil
12	Ultimate depth of Mining	49 m (1m Topsoil + 48 Rough stone) Surface Ground Level Above.
13	Method of Mining	Open cast, mechanized mining
14	Water demand	2.0 KLD

<i>Project</i>	<i>Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

15	Source of water	Water will be supplied through tankers supply
16	Manpower	18 Nos.
17	Mining Lease	Precise Area Communication Letter received from District Collector, Krishnagiri vide letter Roc.No.210/2018 Mines dated 09.03.2018.
18	Mining Plan Approval	Mining Plan was approved by the Deputy Director, Dept. of Geology & Mining, Krishnagiri vide letter Rc.No.210/2018 Mines dated 07.05.2018.
19	Production details	Geological resources: 1417155m ³ of Rough stone & Proposed year wise recoverable reserves: 26980m ³ of Rough Stone.
20	Boundary Fencing	10 m barrier all along the boundary Fencing will be provided.
21	Disposal of overburden	The entire lease area covers 1.0m of Topsoil and estimated quantity of Topsoil is 22,440m ³ . Topsoil formation will be removed and transported to the needy users, only after obtaining permission and paying necessary seigniorage fees to the Government.
22	Ground water	The ground Water Level is noticed at the depth of 90m below Ground Level by monitoring nearby bore hole, Mining depth taken as 49m (Surface Ground Level Above). 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.

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

24	Drinking water	Water will be supplied through tankers from Thuppuganapalli village which is 0.50km-N from the project site.
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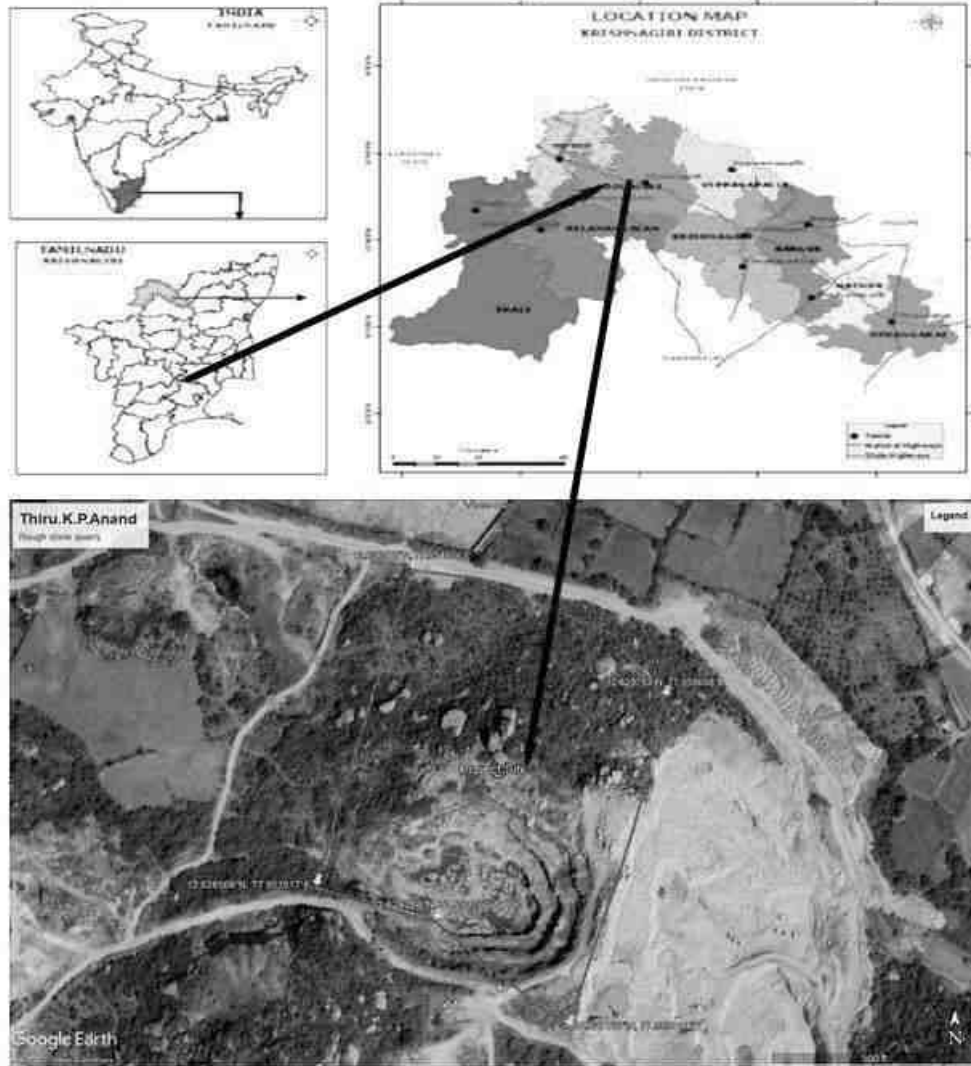


Figure 2.1: Location Map of the Project Site

Project	<i>Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand</i>	Draft EIA Report
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Figure 2.2: Google Earth Image and Coordinates of the Project Site

2.2.1 *Site Connectivity:*

The site is connected to Village Road Shoolagiri to Uddanapalli Road – 0.72 Km - E.

AH-45: Chennai to Bengaluru Highway – 5.10 Km – NNE.

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Figure 2.3: Site Connectivity

2.3 LOCATION DETAILS:

Table 2-3: Location Details

S. No	Particulars	Details
1.	Latitude	12° 37' 39.82" N To 12° 37' 50.19" N
2.	Longitude	77° 57' 12.63" E To 77° 57' 20.49" E
3.	Site Elevation above MSL	Maximum 813m and Minimum 768m above MSL.
4.	Topography	Hilly terrain
5.	Land use of the site	Government Poramboke land
6.	Extent of lease area	4.50.0 Ha

Project	Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
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Figure 2.5: Environmental Sensitivity within 15km radius

Project	Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
Project Proponent	Thiru.K.P.Anand	
Project Location	Thuppuganapalli 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 (Ha)	Area in use during the quarrying period (Ha)
1	Quarrying Pit	1.17.9	4.30.9
2	Infrastructure	Nil	0.01.0
3	Roads	0.01.0	0.02.0
4	Green Belt	Nil	0.16.1
5	Unutilized Area	3.31.1	Nil
	Total	4.50.0 Ha	4.50.0 Ha

2.3.3 Human Settlement

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

<i>Project</i>	<i>Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
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Table 2-5: Habitation

SL. NO.	DIRECTION	VILLAGE	POPULATION	DISTANCE
1	North	Ayarnapalli	4986	0.54 Km
2	South	Devasanapalli	1450	1.32 Km
3	East	Samanapalli	3198	2.29 Km
4	West	Thuppuganapalli	4281	1.38 Km

2.4 LEASEHOLD AREA

The Rough Stone Quarry mine of 4.50.0 Ha is a Government Poramboke land. The lease area falls in S.F No: 637 (Part-II) of Thuppuganapalli 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,

A 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.

<i>Project</i>	<i>Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

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

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

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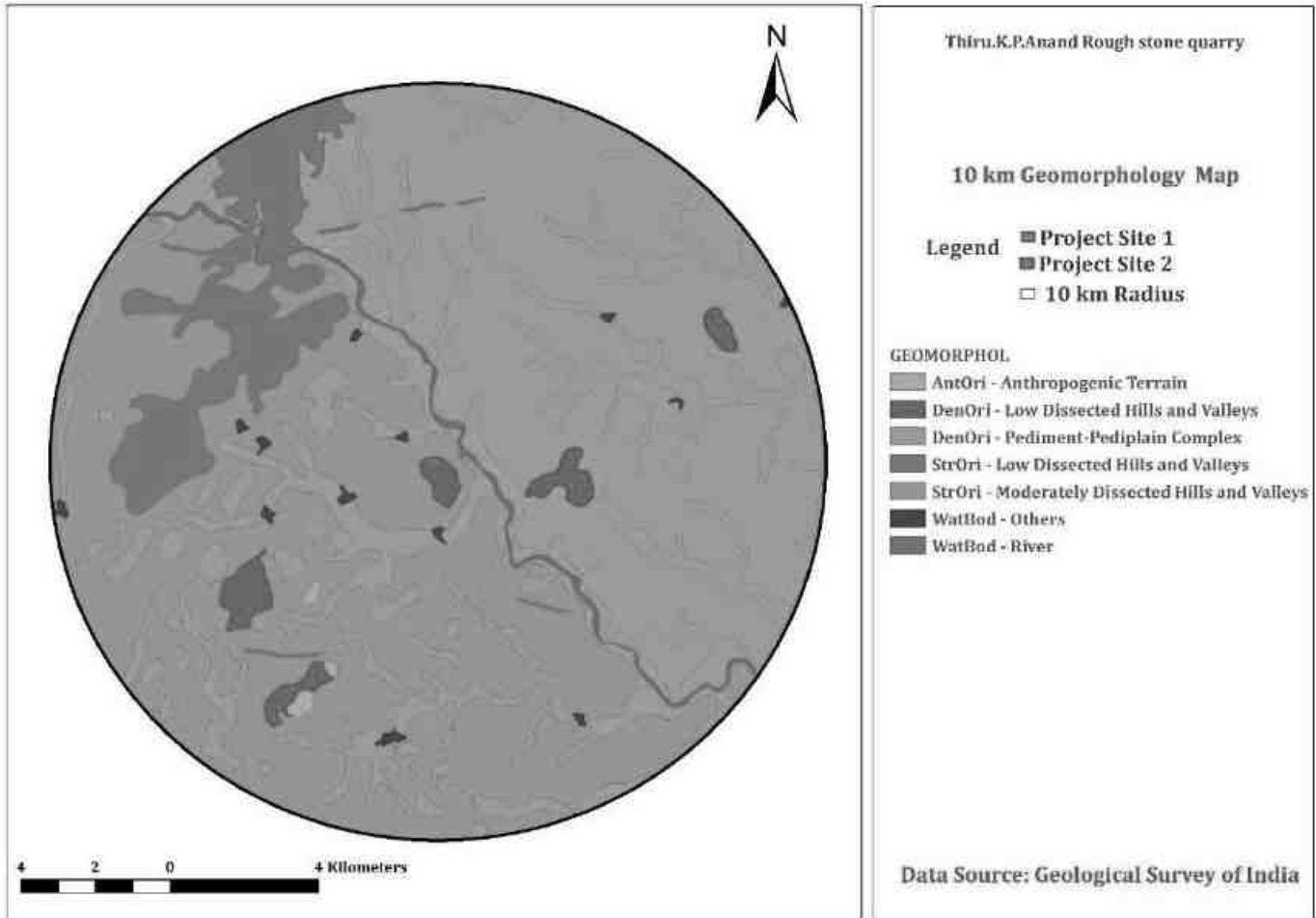


Figure 2.7: Geomorphology

Project	<i>Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand</i>	Draft EIA Report
Project Proponent	<i>Thiru.K.P.Anand</i>	
Project Location	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

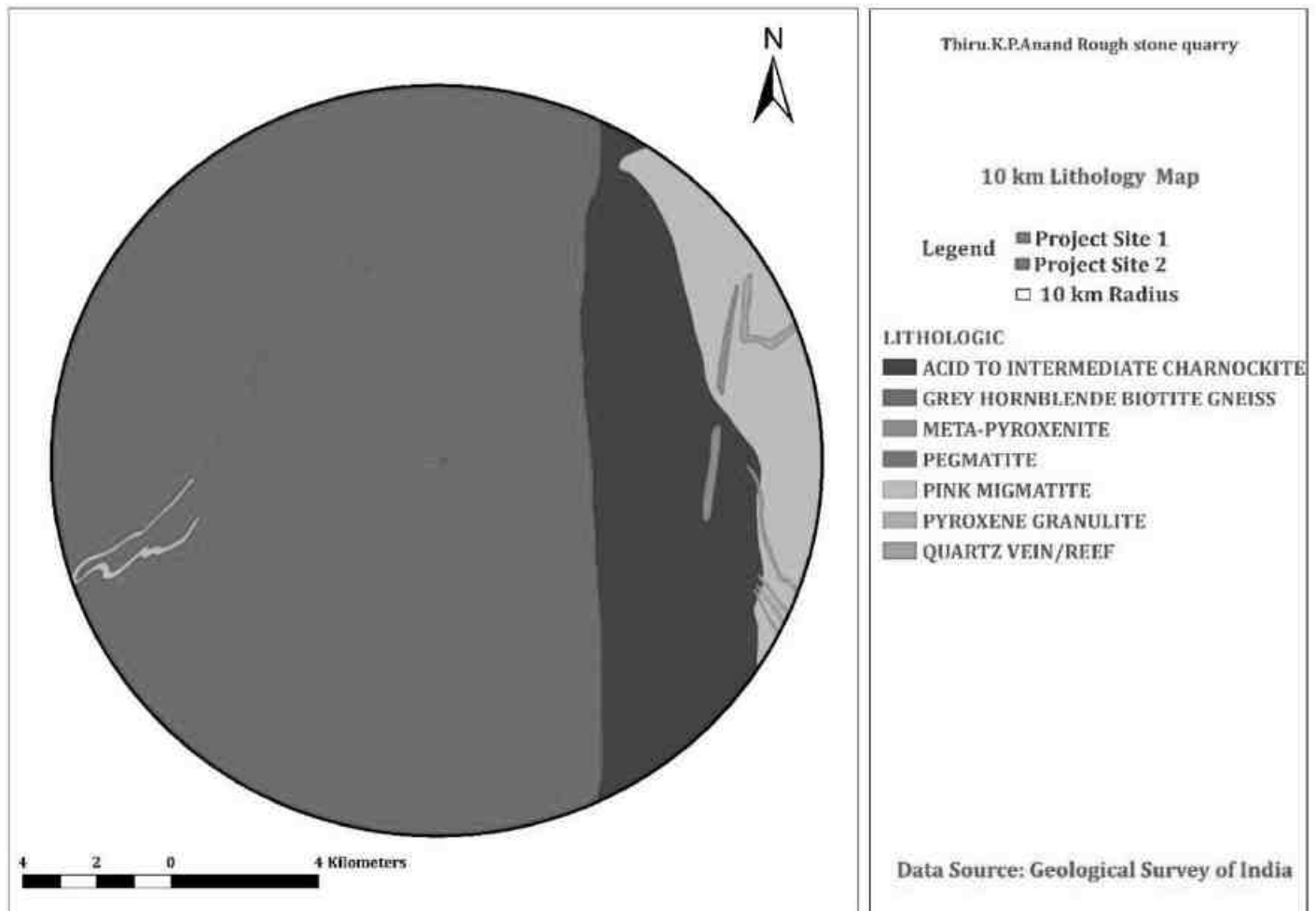


Figure 2.8 Lithology

2.6 QUALITY OF RESERVES:

The mining lease area is 4.50.0 Ha, with production capacity of 6,03,365m³ of Rough Stone and 22,440m³ of Topsoil. Due to its significant role in the domestic as well as infrastructural market, making the mining of Stone along with associated minor minerals is economically viable.

Table 2-6: Details of Mining

Project	Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
Project Proponent	Thiru.K.P.Anand	
Project Location	Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District	

S. No	Particulars	Details
1	Method of Mining	Open Cast mechanized
2	Geological resources	1417155 m ³ of Rough Stone.
3	Recoverable Reserves	820955 m ³ of Rough Stone.
4	Proposed Production	603365 m ³ of Rough Stone.
5	Elevation Range of the Mine Site	The altitude of the area is Maximum 813m and Minimum 768m 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 1417155m³ of Rough Stone.

2.6.2 Geological resources

The Thickness of Topsoil in this area is 1.0m and the total volume of topsoil will be 26980m³. The Available Geological reserve is estimated as 1417155m³ respectively, at the rate of 100% recovery up to a depth of wise. The Geological reserve of Rough stone and Topsoil is calculated up to a depth of 49m from surface ground level above.

Table 2-7: Geological resources

GEOLOGICAL RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume in (Cu.m.)	Recoverable Reserve in Cbm(100%)	Topsoil
XY-AB	I	190	142	1			26980
	II	61	40	5	12200	12200	
	III	86	48	5	20640	20640	
	IV	107	55	5	29425	29425	

Project	Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
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	V	130	63	5	40950	40950	
	VI	157	71	5	55735	55735	
	VII	179	79	5	70705	70705	
	VIII	190	189	5	179550	179550	
	IX	190	197	5	187150	187150	
	X	190	204	5	193800	193800	
	XI	190	212	5	201400	201400	
	XII	190	220	5	209000	209000	
	XIII	190	228	5	216600	216600	
	Total=				1417155	1417155	26980

2.6.3 Mineable Reserves

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

Table 2-8: Mineable Reserves

MINEABLE RESERVES							
Section	Bench	L (m)	W (m)	D (m)	Volume in (Cu.m.)	Recoverable Reserve in Cbm (100%)	Topsoil
XY-AB	I	170	132	1			22440
	II	61	40	5	12200	12200	
	III	82	48	5	19680	19680	
	IV	91	55	5	25025	25025	
	V	109	63	5	34335	34335	
	VI	131	71	5	46505	46505	
	VII	148	79	5	58460	58460	
	VIII	138	178	5	122820	122820	

Project	Rough stone Quarry - 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
Project Proponent	Thiru.K.P.Anand	
Project Location	Thuppuganapalli Village, Shoologiri Taluk, Krishnagiri District	

	IX	128	181	5	115840	115840	
	X	118	184	5	108560	108560	
	XI	108	186	5	100440	100440	
	XII	98	189	5	92610	92610	
	XIII	88	192	5	84480	84480	
Total=					820955	820955	22440

2.6.4 Year wise Production Plan

The year-wise production to be carry out 6,03,365m³ of Rough Stone and 22,440m³ of Topsoil for the period of five years.

Table 2-9: Year wise Production Plan

YEARWISE DEVELOPMENT AND PRODUCTION								
Year	Section	Bench	L (m)	W (m)	D (m)	Volume in (Cu.m.)	Recoverable Reserve in Cbm (100%)	Topsoil
I-Year	XY-AB	I	170	132	1			22440
		II	61	40	5	12200	12200	
		III	82	48	5	19680	19680	
		IV	91	55	5	25025	25025	
		V	109	63	5	34335	34335	
II-Year		VI	131	71	5	46505	46505	
III-Year		VII	148	79	5	58460	58460	
IV-Year		VIII	138	178	5	122820	122820	
		IX	128	181	5	115840	115840	
V-Year		X	118	184	5	108560	108560	
		XI	108	185	3	59940	59940	
Total=						603365	603365	22440

Project	Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
Project Proponent	Thiru.K.P.Anand	
Project Location	Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District	

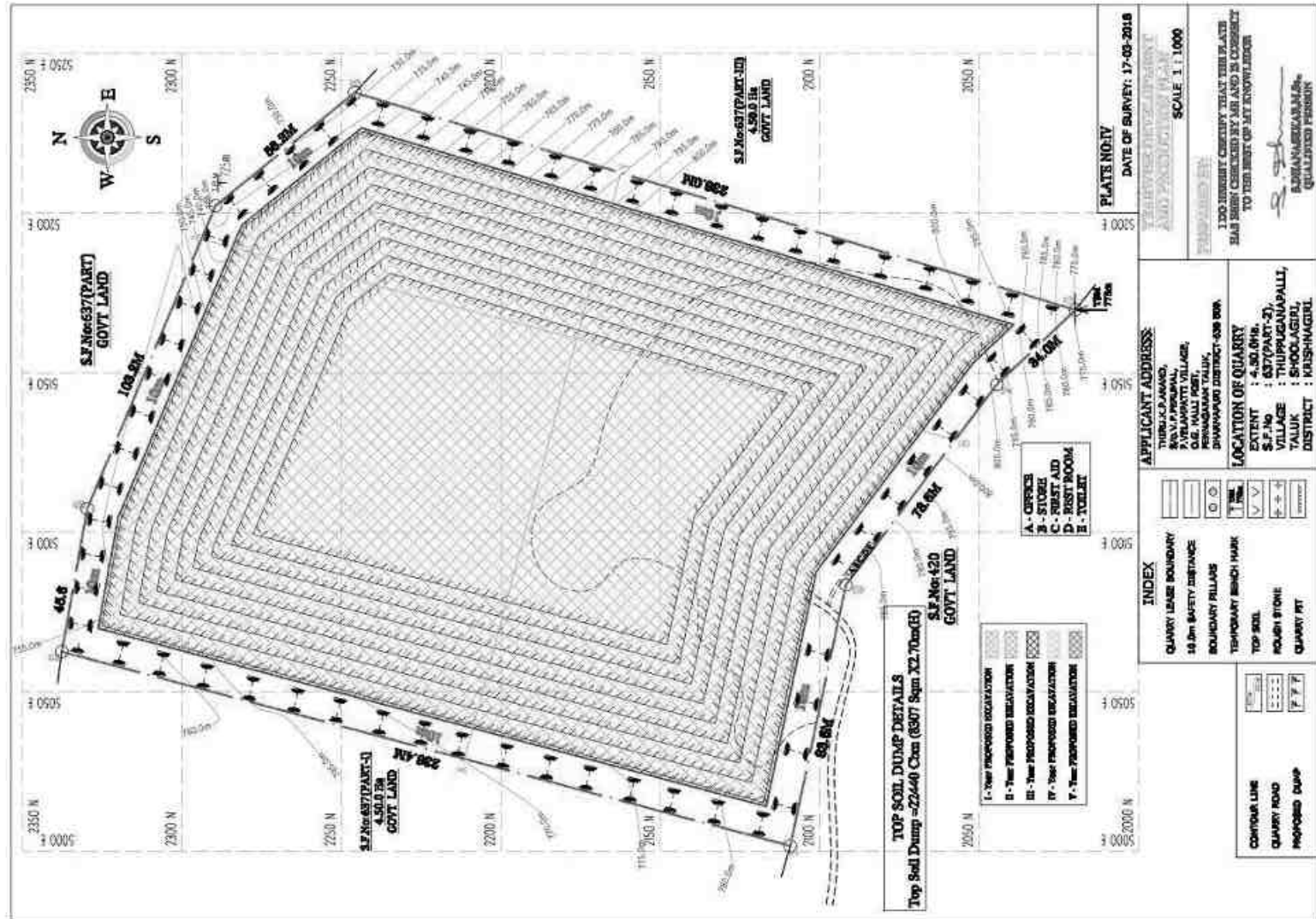


Figure 2.9 Year wise Production Plan

<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

2.7 TYPE OF MINING

The proposed project is an open cast mechanized mining with one 1.0 m bench for Topsoil followed by a 5.0m vertical bench with a bench width not less than the bench height. However, as far as the quarrying of Rough Stone is concerned, observance of the provisions of regulations 106(2) (b) as above is seldom possible due to various inherent Petro genetic factors coupled with mining difficulties. Hence, it is proposed to obtain relaxation to the provisions of the above regulation from the Director of Mines Safety for which necessary provision is available with the Regulation 106(2) (b) of MMR-1961, under Mines Act- 1952.

2.7.1 *Method of Working:*

The Rough stone are proposed to quarry at 5m bench height & 5m bench width with conventional Open cast mechanized method. The quarry operation involves Shallow jack hammer drilling, Blasting, Loading & transportation of Rough Stone to the nearby crusher units/road formation works. The production of Rough Stone in this quarry involves the following method which is typical for Rough Stone quarrying in contrast to other major mineral mining.

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

2.7.2 *Overburden*

The entire lease area covers 1.0m of Topsoil and estimated quantity of Topsoil is 22440m³. 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 6 Nos. of 10 M.T capacity

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<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri 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	402.24m 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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<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

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.K.P. Anand” 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	3 Nos
		Office Boy	1 No
4.	Management & Supervisory staff		3 Nos
Total			18 Nos

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

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

2.8.1 Water Requirement

Total water requirement for the mining project is 2.0 KLD. Domestic water will be sourced from nearby Ayarnapalli village and other water will be source from nearby road tankers supply.

Table 2-14: Water Requirement

Purpose	Quantity	Sources
Drinking Water	1.0 KLD	Packaged Drinking water vendors available in Ayarnapalli village.
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.K.P. Anand (4.50.0 ha) is as follows.

Table 2-15: Mining Schedule

MINING SCHEDULE					
Activity	Dec-23	Dec-24	Dec-25	Dec-26	Dec-27
Site Clearance					
Excavation - Top Soil Removal/Overburden					
I Year Production – 91240 Cum - Rough Stone & 22440 Topsoil					
II Year Production – 46505 Cum - Rough Stone					
III Year Production – 58460 Cum - Rough Stone					
IV Year Production - 238660 Cum - Rough Stone					
V Year Production 168500 Cum - Rough Stone					

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2.10 SOLID WASTE MANAGEMENT

Table 2-15: Solid Waste Management

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

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

2.11 MINE DRAINAGE

The quarry operation is proposed up to a depth of 49 m (Surface ground level above). The water table is below 90 m from the ground level which is observed from the nearby bore wells and bore wells of this area. Hence the ground water will not be affected in any manner due to the quarrying operation during the entire lease period.

2.12 POWER REQUIREMENT

This rough stone quarry project does not require huge water and electricity for the project. **16 Litre** diesel per hour for excavator for mining and loading for Rough Stone needed.

2.13 PROJECT COST

1	<u>A. Fixed Asset Cost:</u> 1. Land Cost : Rs. 60,00,000/- 2. Labour Shed : Rs. 60,000/- 3. Sanitary Facility : Rs. 1,50,000/- 4. Refilling/Fencing cost : Rs.50,000/- Total= Rs.62,60,000/-
2	<u>B. Operational Cost:</u> <u>Machinery cost</u> : Rs.20,00,000/-

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<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoologiri 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. 10220/2023/SEAC/ToR-1593/2023 Dated: 30.10.2023. The baseline monitoring is carried out from October 2023 to December 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 Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoologiri 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 October 2023 to December 2023.

3.1.4 Frequency of Monitoring

Table 3-1: Frequency of Sampling and Analysis

Attributes	Sampling	Frequency
Air environment – Meteorological (wind speed, wind direction, rainfall, humidity, temperature)	Project site	1 hourly continuous
Air environment – Pollutants PM 10 PM 2.5 SO ₂ NO _x	7 locations	24 hourly twice a week 4 hourly. Twice a week, One non-monsoon season 8 hourly, twice a week 24 hourly, twice a week
Noise	7 locations	24 hourly Once in 7 locations
Water (Ground water) pH, Temperature, Turbidity, Magnesium Hardness, Total Alkalinity, Chloride, Sulphate, Fluoride, Nitrate, Sodium,	7 locations	Once in 7 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)	7 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. 637 (Part-II) Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District.	Field Study
2.	Latitude & Longitude	Latitude: 12° 37' 39.82" N To 12° 37' 50.19" N Longitude: 77° 57' 12.63" E To 77° 57' 20.49" E	Topo Sheet
3.	Topo Sheet No.	57- H/14	Survey of India Toposheet
4.	Mine Lease Area	4.50.0 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 waterbodies, coastal zone,	<ul style="list-style-type: none"> ➤ Chappadi Lake – 5.20Km – NE ➤ Konerapalli Lake - 5.48Km – N ➤ Kamandoddi Lake – 5.74Km – N ➤ Kamandoddi New Lake – 6.67 Km - NW ➤ Kamandoddi Old Lake – 5.63Km – NW ➤ Nagamangalam Lake – 7.23Km – S ➤ Anachandiram Lake – 7.67Km – NE 	Google Earth/Field Study

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

	biospheres, mountains, forests	<ul style="list-style-type: none"> ➤ Bukkasagaram Lake – 9.96 Km – N ➤ Doripalli Lake – 8.62 Km – N ➤ Thummanapalli Lake – 8.73 Km – NNE ➤ Gangapuram Lake – 8.06 Km – NW ➤ A. Kothur Lake – 7.21 Km – NNW ➤ Subbagiri Lake – 6.67 Km – N ➤ Thiyagarsanapalli Lake – 5.73 Km – NE ➤ Obeapalayam Lake – 4.60 Km – W ➤ Addakurukki Lake – 3.89 Km – N ➤ Beerjapalli Lake – 4.03 Km - NW 																									
10.	Densely Populated area	Shoolagiri – 6.78 Km - NE																									
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>Govt. Primary School, Halekotta</td> <td>2.33 Km – NW</td> </tr> <tr> <td>2</td> <td>Govt. High School, Devasanapalli</td> <td>1.56 Km - S</td> </tr> <tr> <td>3</td> <td>Govt. Hr. Sec. School, Uddanapalli</td> <td>3.09 Km - SW</td> </tr> <tr> <td colspan="3" style="text-align: center;">Hospitals</td> </tr> <tr> <td>1</td> <td>Vijay Hospital, Shoolagiri</td> <td>7.09Km - NE</td> </tr> <tr> <td>2</td> <td>Government Hospital, Shoolagiri</td> <td>7.82Km - NE</td> </tr> </tbody> </table>	S. No.	Places	Dist. From Project Site	Schools & Colleges			1	Govt. Primary School, Halekotta	2.33 Km – NW	2	Govt. High School, Devasanapalli	1.56 Km - S	3	Govt. Hr. Sec. School, Uddanapalli	3.09 Km - SW	Hospitals			1	Vijay Hospital, Shoolagiri	7.09Km - NE	2	Government Hospital, Shoolagiri	7.82Km - NE	Google Earth/ Field Study
S. No.	Places	Dist. From Project Site																									
Schools & Colleges																											
1	Govt. Primary School, Halekotta	2.33 Km – NW																									
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3	Govt. Hr. Sec. School, Uddanapalli	3.09 Km - SW																									
Hospitals																											
1	Vijay Hospital, Shoolagiri	7.09Km - NE																									
2	Government Hospital, Shoolagiri	7.82Km - NE																									

3.1.7 Site Connectivity:

Village Road – Shoolagiri to Uddanapalli Road – 0.72 Km – E & AH-45: Chennai to Bengaluru Highway – 5.10 Km – NNE.

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Figure 3.1: Site Connectivity

3.2 LAND USE ANALYSIS

3.2.1 Land Use Classification

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

3.2.2 Methodology

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

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

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

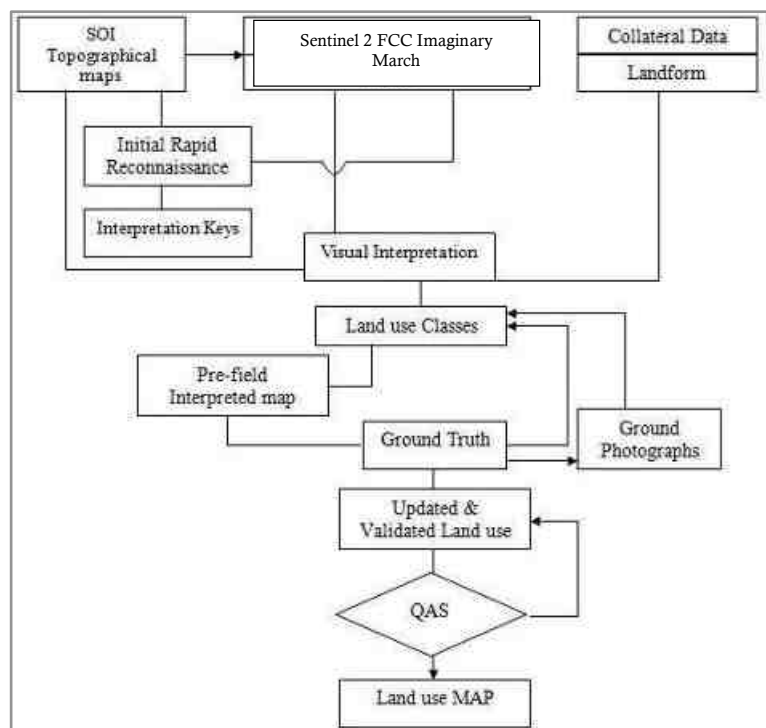


Figure 3.2 Flow Chart showing Methodology of Land use mapping.

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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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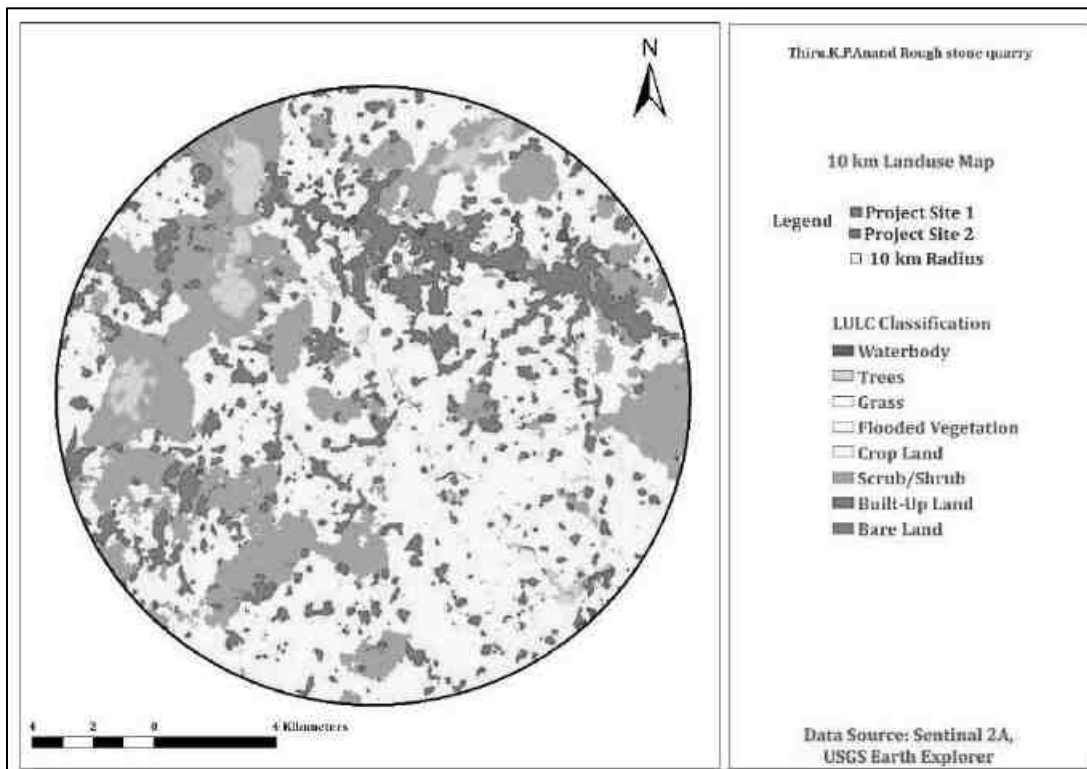


Figure 3.3 Land use classes around 10 km radius from the project site

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	1.69	0.52
2	Trees	10.72	3.30
3	Grass	0.06	0.018
4	Flooded vegetation	0.01	0.003
5	Crops	180.57	55.70
6	Scrub/Shrub	77.74	23.98
7	Built-up Area	53.18	16.40
8	Barren Land	0.16	0.049

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3.3 WATER ENVIRONMENT

3.3.1 *Contour & Drainage*

The altitude of the area is Maximum 813m and Minimum 768m above MSL.

3.3.2 *Geomorphology*

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

Soils

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

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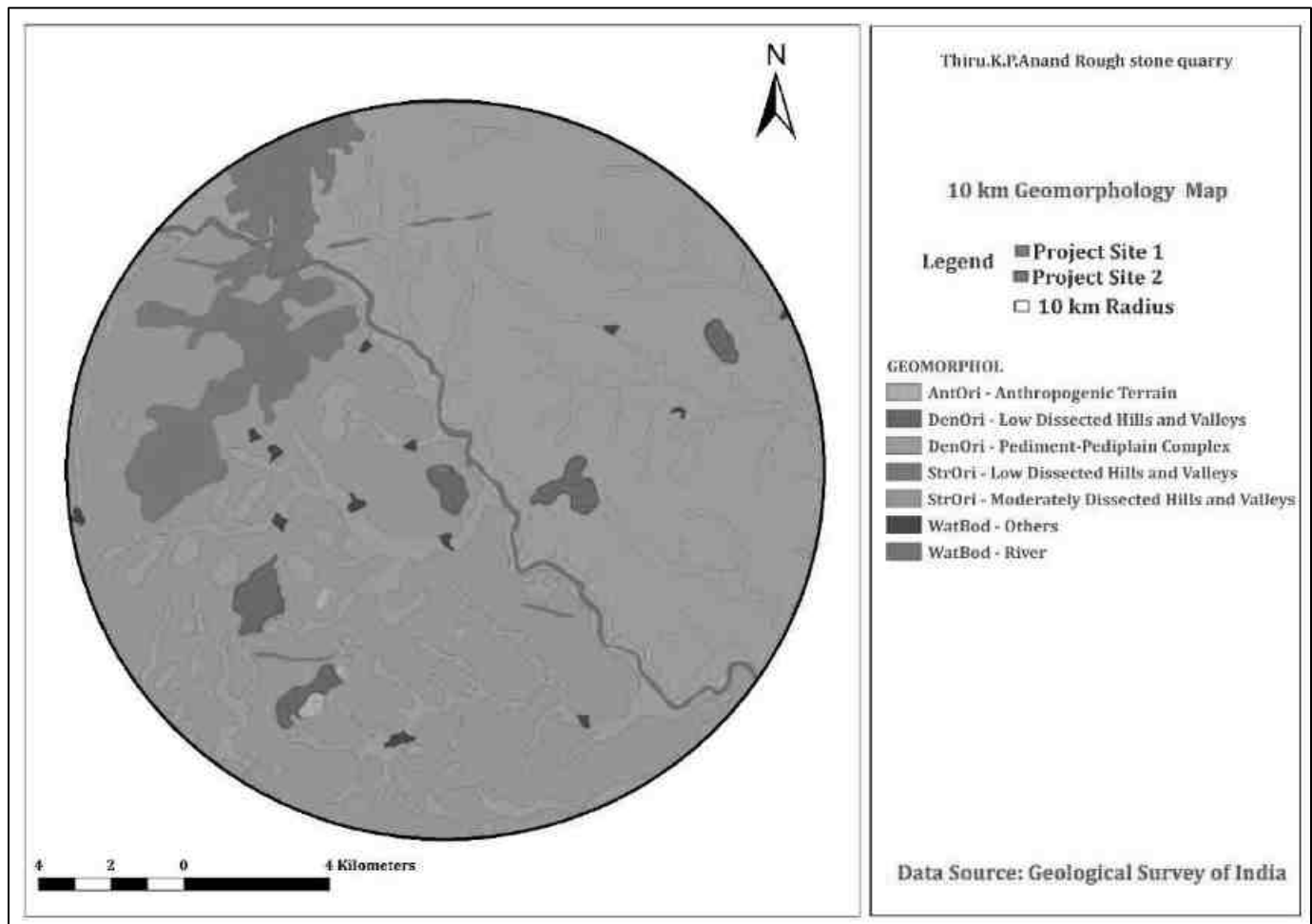


Figure 3.4 Geomorphology within 10km from the project site

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-feldspathic gneiss, Granite gneiss and dolerite dykes. The North-East and Northern part of the District mainly consist of granite gneiss with small patches of Pink Migmatite, 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.

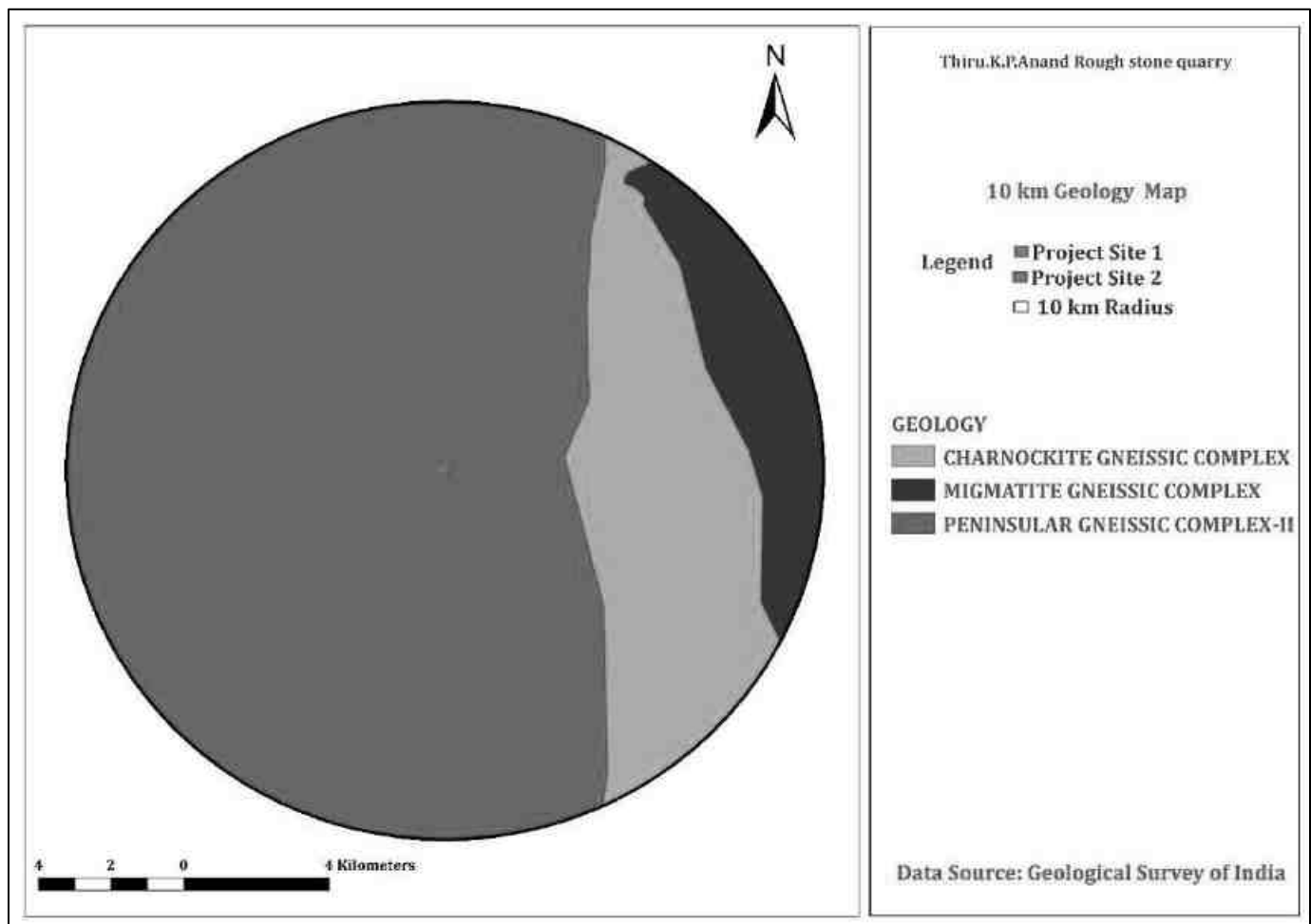


Figure 3.5 Geology within 10km from the project site

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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 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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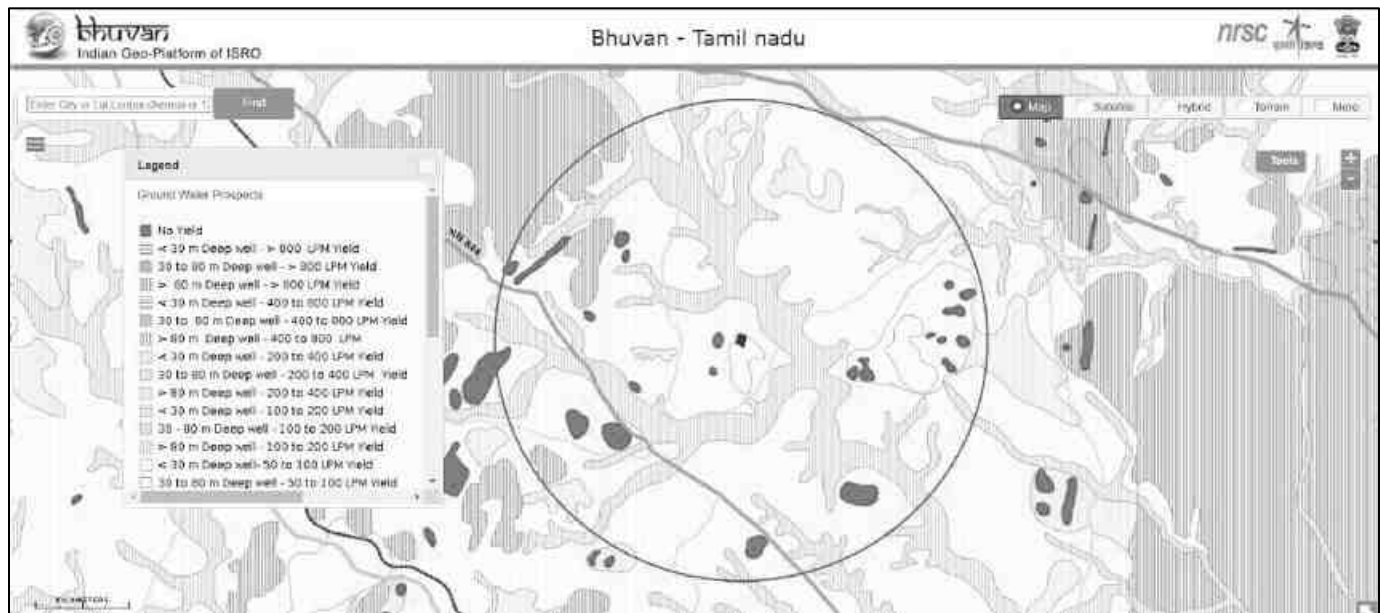


Figure 3.6 Ground water prospects within 5 km radius of the project site

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	October 2023 to December 2023
Design Criteria	Based on the Environmental settings in the study area
Monitoring Locations	Project Site – GW 1 GH, Shoolagiri – GW 2 Govt Higher Secondary, School, Uddanapalli - GW 3 Mandu Mariyamman Temple, Koppagarai - GW 4 Sri Varadaraja Swamy Temple, Pathakotta – GW5 Jama Masjid, Mosque, Thirumalaigowni kotta – GW 6 St Anthony's Church Nagamangalam, Ayaranapalli, Tamil Nadu 635119 – GW 7

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

3.3.5.1 Sampling Procedure

Quality of ground water was compared with IS: 10500: 1991 (Reaffirmed 1993 With Amendment NO-3 July 2010) for drinking purposes. Water samples were collected as Grab sample from 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)	-	7.88	7.68	7.25	7.9	7.75	7.92	7.43
2	Electrical Conductivity	µS/cm	360	1750	685	1750	1390	1630	890
3	Colour	Hazen Unit	3	5	3	4	4	3	4
4	Turbidity	NTU	BQL(LOQ:1)	BQL(LOQ:1)	BQL(LOQ:1)	BQL(LOQ:1)	BQL(LOQ:1)	BQL(LOQ:1)	BQL(LOQ:1)
5	Total Dissolved Solids	mg/L	198	962	430	948	764	945	535
6	Total Suspended Solids	mg/L	BQL(LOQ:2)	BQL(LOQ:2)	BQL(LOQ:2)	BQL(LOQ:2)	BQL(LOQ:2)	BQL(LOQ:2)	BQL(LOQ:2)
7	Total Hardness as CaCO ₃	mg/L	164	557	333	501	440	446	347
8	Calcium Hardness as CaCO ₃	mg/L	82.8	255	251	238	222	230	200

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9	Magnesium Hardness as CaCO ₃	mg/L	80.8	303	80.8	263	218	216	147
10	Calcium as Ca	mg/L	33.1	10.2	101	95.5	89.1	92.2	80.1
11	Magnesium as Mg	Mg/L	19.6	73.6	19.6	63.8	53.1	52.5	35.8
12	Chloride as Cl	mg/L	20.5	243	61.6	213	186	239	83.7
13	Sulphate as SO ₄	mg/L	21.6	154	35.9	110	66.7	124	89
14	Total Alkalinity as CaCO ₃	mg/L	98.9	248	220	317	196	406	256
15	Iron as Fe	mg/L	BQL(LOQ:0.1)	BQL(LOQ:0.1)	BQL(LOQ:0.1)	BQL(LOQ:0.1)	BQL(LOQ:0.1)	BQL(LOQ:0.1)	BQL(LOQ:0.1)
16	Silica as SiO ₂	mg/L	5.92	29.6	21.2	20.4	25.2	15.4	13.6
17	Fluoride as F	Mg/L	BQL(LOQ:0.2)	0.64	0.24	0.56	BQL(LOQ:0.2)	BQL(LOQ:0.2)	0.57
18	Nitrate as NO ₃	Mg/L	15.4	30.7	10.2	27.6	19.2	12.5	15.9
19	Potassium as K	mg/L	1.2	35.5	9.2	22.5	16.1	22.5	8.5
20	Sodium as Na	mg/L	17.8	206	43.5	185	152	158	62.5

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3.3.6 Interpretation of results:

3.3.6.1 Physical parameters of water:

The basic physical parameters of water include

Colour:

Value observed in Project Site (True/Apparent Color): 3 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: 7.88

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: less than 1.

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

Total Dissolved Solids:

Value observed in the Project Site: 198 mg/L.

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

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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: 33.1 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: 19.6 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: 20.5 mg/L.

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

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

Total Alkalinity as CaCO₃:

Value observed in the project site: 98.6 mg/L.

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

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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: 164 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 **Ponnaiyar River and Obeapalayam Lake**. The results are summarized below.

Table 3-7 Surface Water Sample Results

S. No	Parameters	Units	Ponnaiyar River	Obeapalayam lake
1	pH (at 25°C)	-	7.59	6.47
2	Electrical Conductivity	µS/cm	1180	250
3	Colour	Hazen Unit	20	40
4	Turbidity	NTU	5.9	12.5
5	Total Dissolved Solids	mg/L	699	145
6	Total Suspended Solids	mg/L	12.5	24.4
7	Total Hardness as CaCO ₃	mg/L	335	72.7
8	Calcium Hardness as CaCO ₃	mg/L	222	50.5
9	Magnesium Hardness as CaCO ₃	mg/L	113	22.2
10	Calcium as Ca	mg/L	89.1	20.2
11	Magnesium as Mg	mg/L	27.5	5.4
12	Chloride as Cl	mg/L	196	27.1
13	Sulphate as SO ₄	mg/L	67.5	12.5

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

14	Total Alkalinity as CaCO ₃	mg/L	157	72.7
15	Iron as Fe	mg/L	0.43	1.03
16	Silica as SiO ₂	mg/L	21.3	9.52
17	Fluoride as F	mg/l	0.64	0.32
18	Nitrate as NO ₂	mg/l	25.4	5.21
19	Potassium as K	mg/L	15.2	5.5
20	Sodium as Na	mg/L	173	17.5
21	Total Kjeldahl Nitrogen as N	mg/L	37.8	12.8
22	Biochemical oxygen Demand @ 27c		12.2	11.2
23	Chemical Oxygen Demand		42.9	39.0
24	Dissolved Oxygen		3.52	4.80

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 Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoologiri 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 October 2023 to December 2023.

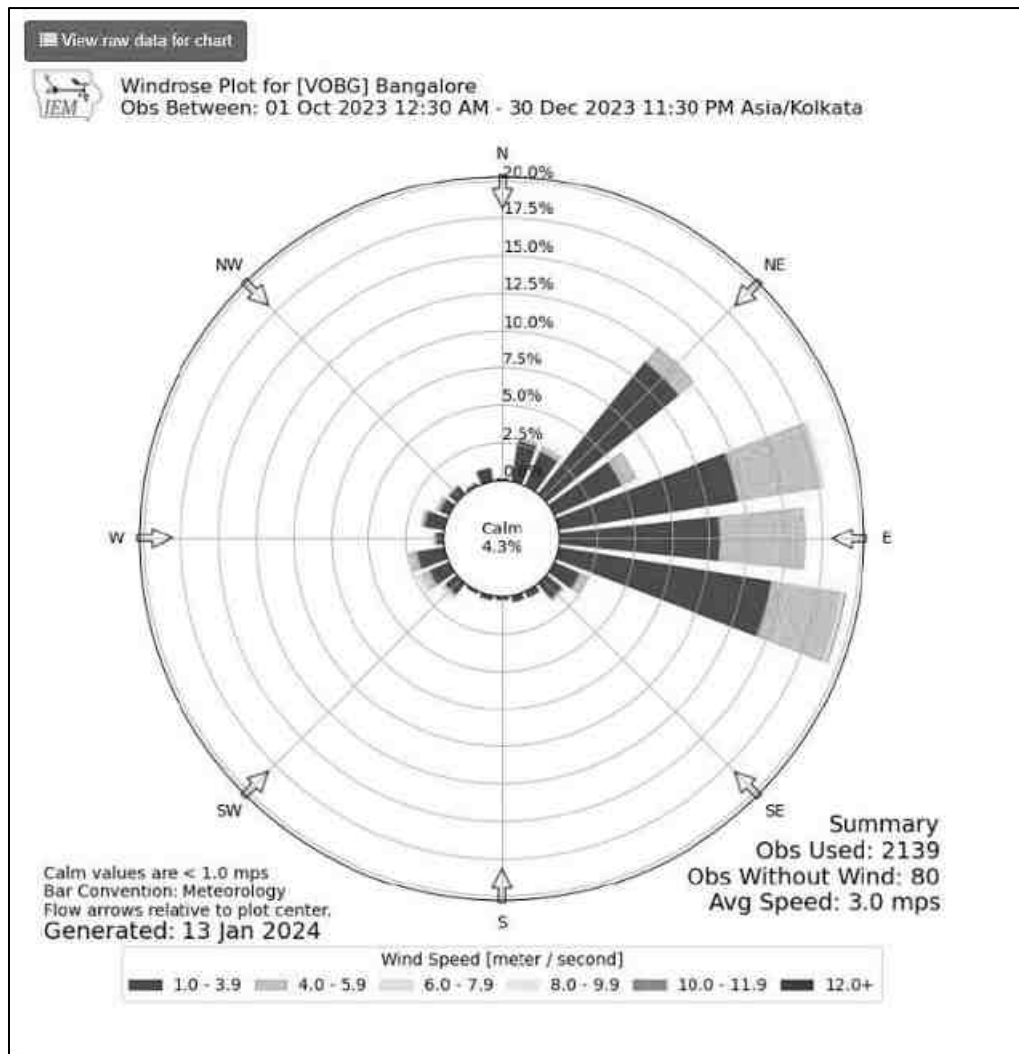


Figure 3.7 Wind rose.

3.3.9 Selection of Sampling Locations:

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

<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

3.4 AMBIENT AIR QUALITY

Table 3-8: Selection of Sampling Location

Environmental Parameters: <i>Ambient Air</i>																											
Monitoring Period	October 2023 to December 2023																										
Design Criteria	The monitoring stations are selected based on factors like topography/terrain, prevailing meteorological conditions like predominant wind direction (October 2023 to December 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 - AAQ1</td> <td>-</td> <td>-</td> </tr> <tr> <td>GH, Shoolagiri – AAQ2</td> <td>7.78 km</td> <td>NE</td> </tr> <tr> <td>Govt Higher Secondary, School, Uddanapalli – AAQ3</td> <td>3.01 km</td> <td>SW</td> </tr> <tr> <td>Mandu Mariyamman Temple, Koppagarai – AAQ4</td> <td>9.24 km</td> <td>SE</td> </tr> <tr> <td>Sri Varadaraja Swamy Temple, Pathakotta – AAQ5</td> <td>3.36 km</td> <td>NW</td> </tr> <tr> <td>Jama Masjid, Mosque, Thirumalaigowni kotta– AAQ6</td> <td>2.93 km</td> <td>N</td> </tr> <tr> <td>St Anthony's Church Nagamangalam, Ayaranapalli, Tamil Nadu 635119 – AAQ7</td> <td>5.66 km</td> <td>S</td> </tr> </tbody> </table>			Location & Code	Distance (km)	Direction	Project Site - AAQ1	-	-	GH, Shoolagiri – AAQ2	7.78 km	NE	Govt Higher Secondary, School, Uddanapalli – AAQ3	3.01 km	SW	Mandu Mariyamman Temple, Koppagarai – AAQ4	9.24 km	SE	Sri Varadaraja Swamy Temple, Pathakotta – AAQ5	3.36 km	NW	Jama Masjid, Mosque, Thirumalaigowni kotta– AAQ6	2.93 km	N	St Anthony's Church Nagamangalam, Ayaranapalli, Tamil Nadu 635119 – AAQ7	5.66 km	S
	Location & Code	Distance (km)	Direction																								
	Project Site - AAQ1	-	-																								
	GH, Shoolagiri – AAQ2	7.78 km	NE																								
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	Jama Masjid, Mosque, Thirumalaigowni kotta– AAQ6	2.93 km	N																								
	St Anthony's Church Nagamangalam, Ayaranapalli, Tamil Nadu 635119 – AAQ7	5.66 km	S																								
Methodology	Respirable Particulate Matter (PM10) - Gravimetric (IS 5182: Part 23:2006) Particulate Matter PM2.5 - Gravimetric (Fine particulate matter)																										

<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
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	Sulphur Dioxide - Calorimetric (West & Gaeke Method) (IS 5182: Part 02: 2001) Nitrogen Dioxide - Calorimetric (Modified Jacob & Hocheiser Method) (IS 5182: Part 06:2006)
Frequency of Monitoring	2 days in a week, 4 weeks in a month for 3 months in a season.

3.4.1 *Ambient Air Quality: Results & Discussion*

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

<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

Table 3-9 Ambient Air Quality

Code	Location	PM 10 ($\mu\text{g}/\text{m}^3$)				PM 2.5 ($\mu\text{g}/\text{m}^3$)				SO ₂ ($\mu\text{g}/\text{m}^3$)				NO _x ($\mu\text{g}/\text{m}^3$)			
		Min	Max	Avg	98 percentiles	Min	Max	Avg	98 percentiles	Min	Max	Avg	98 percentiles	Min	Max	Avg	98 percentiles
AAQ 1	Project Site	39.8	51	45.6	50.54	16	26	20.1	25.08	5	9	6.5	9	9.3	20	13.4	19.54
AAQ 2	GH, Shoolagiri	47	59	53.8	58.54	19	27	23.7	27	5	12	7.7	11.08	10	23	14.8	21.62
AAQ 3	Govt Higher Secondary, School, Uddanapalli	48	59	54.5	58.54	21	28	24.6	27.54	7	13	9.9	12.54	14	23	17.5	22.54
AAQ 4	Mandu Mariyamman Temple, Koppagarai	57	65	60.5	64.08	22	32	26.7	31.08	9	18	12.4	17.54	13	31	21.9	30.08
AAQ 5	Sri Varadaraja Swamy Temple, Pathakotta	51	61	57.2	61	22	29	25.6	28.54	7	13	9.5	12.54	21	23	16.8	22.54
AAQ 6	Jama Masjid, Mosque, Thirumalaigowni kotta	61	69	65.3	69	27	33	29.7	32.54	11	19	16.2	19	23	36	28.5	35.54
AAQ 7	St Anthony's Church Nagamangalam, Ayanapalli,	58	67	62.5	66.08	26	34	29.6	33.08	12	19	14.5	19	21	37	26.8	36.54
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 ($\mu\text{g}/\text{m}^3$)			

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Project Location	Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District	

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 (69(µg/m³), PM_{2.5}(34(µg/m³), SO_x (19(µg/m³), NO_x (37 (µg/m³) is observed in different places.

Inference:

The monitoring results for PM₁₀, PM_{2.5}, Sox, NO_x was found to be high in Jama Masjid, Mosque, Thirumalaigowni kotta which is due to high movement of vehicles. The observed values are all well within the Standards prescribed by NAAQ.

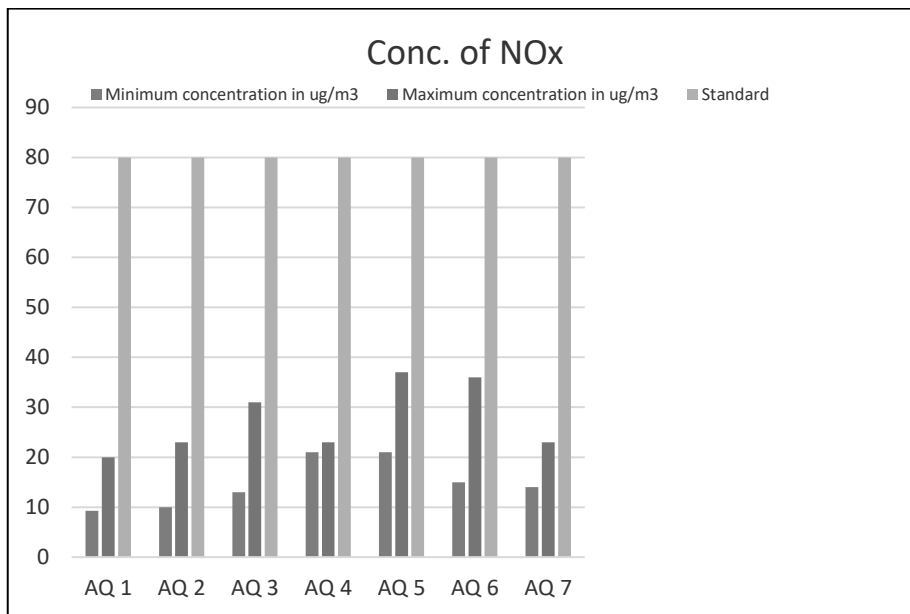


Figure 3.8 Concentration of PM₁₀ (µg/m³) in Study Area

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Project Proponent	Thiru.K.P.Anand	
Project Location	Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District	

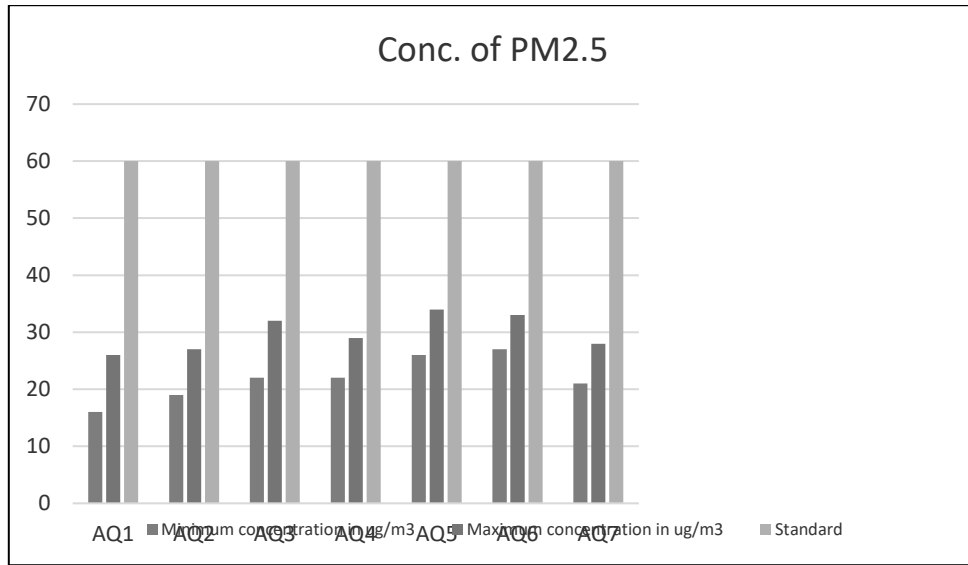


Figure 3.9 Concentration of PM2.5 (µg/m³) in Study Area

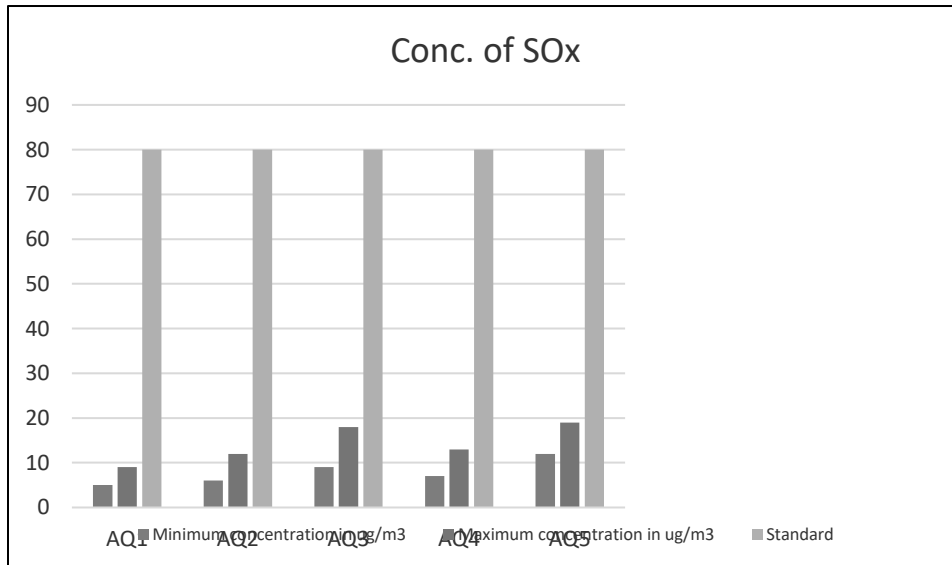


Figure 3.10 Concentration of SOx (µg/m³) in Study Area

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Project Proponent	Thiru.K.P.Anand	
Project Location	Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District	

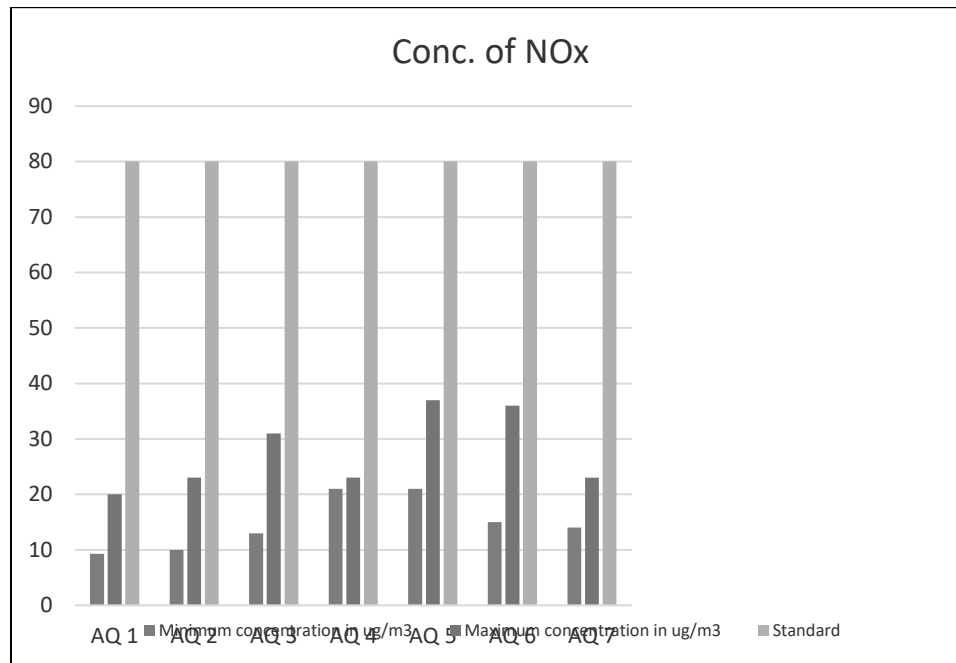


Figure 3.11 Concentration of NO_x (ug/m³) in Study Area

3.5 NOISE ENVIRONMENT:

Table 3-10 Noise Analysis

Environmental Parameters: Noise Analysis	
Monitoring Period	October 2023 to December 2023
Design Criteria	Based on the Sensitivity of the area
Monitoring Locations	Project Site – N 1 GH, Shoolagiri – N 2 Govt Higher Secondary, School, Uddanapalli – N 3 Mandu Mariyamman Temple, Koppagarai – N 4 Sri Varadaraja Swamy Temple, Pathakotta – N 5 Jama Masjid, Mosque, Thirumalaigowni kotta – N 6 St Anthony's Church Nagamangalam, Ayaranapalli – N 7

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Project Proponent	<i>Thiru.K.P.Anand</i>	
Project Location	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

Methodology	Noise level measurements were taken at the selected locations using noise level meter both during day and night time. Noise level measurements were taken continuously for 24 hours at hourly intervals
Frequency of Monitoring	Noise samples were collected from 7 locations - Once in a season

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

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 – N1	47	39	44
GH, Shoolagiri – N 2	50	39	45
Govt Higher Secondary, School, Uddanapalli – N 3	52	42	48
Mandu Mariyamman Temple, Koppagarai – N 4	51	42	47
Sri Varadaraja Swamy Temple, Pathakotta – N 5	54	45	50
Jama Masjid, Mosque, Thirumalaigowni kotta – N 6	59	48	53
St Anthony's Church Nagamangalam, Ayaranapalli – N 7	54	46	51

<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

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 – N1	38	30	34
GH, Shoolagiri – N 2	39	30	35
Govt Higher Secondary, School, Uddanapalli – N 3	39	32	36
Mandu Mariyamman Temple, Koppagarai – N 4	41	35	38
Sri Varadaraja Swamy Temple, Pathakotta – N 5	43	36	39
Jama Masjid, Mosque, Thirumalaigowni kotta – N 6	47	39	43
St Anthony's Church Nagamangalam, Ayaranapalli – N 7	46	38	42

Observation:

The maximum Day noise and Night noise were found to be 59 dB(A) and 47 dB(A) respectively in Jama Masjid, Mosque, Thirumalaigowni kotta. The minimum Day Noise and Night noise were 39 dB(A) and 30 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 10 km radius image shows that the soil is not affected by any kind of erosion.

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Project Location	Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District	

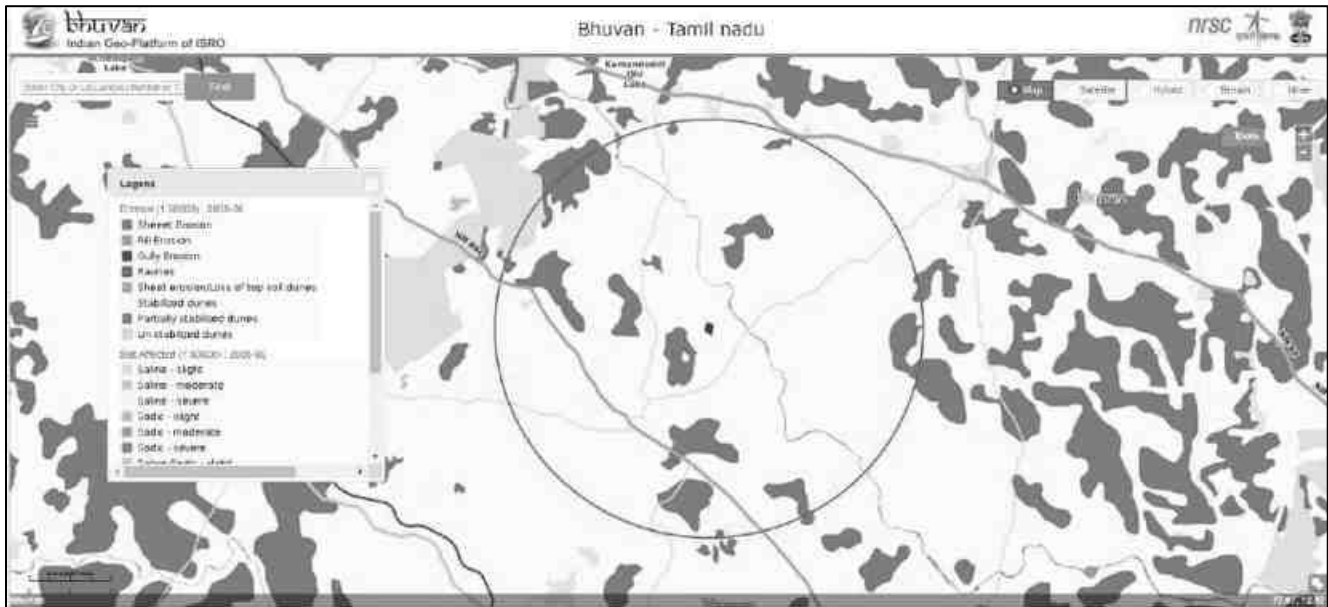


Figure 3.12 Soil Erosion pattern within 5 km radius of the project site

3.6.1 Baseline Data:

The present study of the soil quality establishes the baseline characteristics which will help in future in identifying the incremental concentrations if any, due to the operation Phase of the 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

Environmental Parameters: Soil Quality Analysis	
Monitoring Period	October 2023 to December 2023
Design Criteria	Based on the environmental settings of the study area
Monitoring Locations	Project Site – SQ 1 GH, Shoolagiri – SQ 2 Govt Higher Secondary, School, Uddanapalli – SQ 3 Mandu Mariyamman Temple, Koppagarai – SQ 4

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	Sri Varadaraja Swamy Temple, Pathakotta – SQ 5 Jama Masjid, Mosque, Thirumalaigowni kotta – SQ 6 St Anthony's Church Nagamangalam, Ayaranapalli, Tamil Nadu 635119 – SQ 7
Methodology	Composite soil samples using sampling augers and field capacity apparatus
Frequency of Monitoring	Soil samples were collected from 5 locations Once in a season

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

Table 3-14 Soil Quality Analysis

Parameters	Unit	SQ 1	SQ 2	SQ 3	SQ 4	SQ 5	SQ 6	SQ 7
pH	-	6.83	7.82	7.87	6.98	6.85	6.96	7.34
Electrical Conductivity	ms/cm	0.24	0.31	0.22	0.41	0.11	0.25	0.26
Water holding Capacity	ml/L	4.98	4.74	5.1	5.0	3.4	5.1	4.4
Chloride	mg/Kg	38.2	31.1	46.1	148	27.3	41.1	68.3
Calcium	mg/Kg	20.6	53.2	19.7	74.6	14.3	19.4	61
Sodium	mg/Kg	382	635	398	634	382	367	415
Potassium	mg/Kg	31.6	158	99.2	236	95.6	92.1	104
Organic matter	%	0.31	0.46	1.04	0.33	0.93	0.36	0.43
Magnesium	mg/Kg	7.73	23.6	8.62	26.4	19.1	7.86	22
Sulphate	mg/Kg	34.5	41.5	38.4	162	16.4	33.6	85.3
CEC	meq/100g	11.8	14.1	13.4	15.2	9.4	12.5	11.9
Carbonate	mg/Kg	NIL	NIL	NIL	NIL	NIL	NIL	NIL
Bi-Carbonate	mg/Kg	51.7	71.4	69.1	58.5	35.9	53.3	82.3
TKN	%	0.12	0.21	0.19	0.19	0.23	0.16	0.2
Bulk density	g/cm ³	1.21	1.27	1.19	1.18	1.38	1.24	1.31

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Phosphorous	mg/Kg	25.6	15.7	31.4	8.44	16.1	26.8	23.1
Sand	%	56.2	61.1	62.5	66.6	60	57.1	76.4
Clay	%	12.6	5.55	12.5	6.66	6.66	14.3	5.88
Silt	%	31.2	33.3	25.0	26.6	33.3	28.6	17.6
SAR	meq/Kg	18.2	18.2	18.8	16.1	15.5	17.8	11.6
silicon	%	0.094	0.088	0.091	0.091	0.089	0.093	0.087

3.6.1.1 Physical Properties:

Regular cultivation practices increase the bulk density of soils thus inducing compaction. This results in reduction in water percolation rate and penetration of roots through soils. The soils with low bulk density have favorable physical conditions whereas those with high bulk density exhibit poor physical conditions for agriculture crops. The bulk density of the soil in the study area ranged between 1.18 to 1.38 meq/100g which indicates favorable physical condition for plant growth. The water holding capacity was found in the range of 3.4 ml/1 to 5.1 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 6.83 to 7.87, 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 0.31 to 1.04 %, 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.

<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
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<i>Project Location</i>	<i>Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

3.7.1 *Methods available for floral analysis:*

3.7.1.1 **Plot Sampling Methods**

- Quadrat – 2D shape (e.g. square or rectangle, or other shape) used as a sampling unit
- Transect
 - Line transects feature only a length dimension, usually defined by a tape stretched across the area to be sampled.
 - Belt transects have a width as well as length.
 - Pace-transects are established when the observer strides along an imaginary line across the sample site and uses their foot placement to determine specific sampling points.

3.7.1.2 **Plot less Sampling Methods**

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

3.7.2 *Field study& Methodology adopted:*

To assess the suitability of the methodology, a random field survey was done. Field survey was conducted around a 2 km radius from the project site and five locations were chosen based on the species density. Quadrat method is chosen for the proposed study as compared to other sampling methods, because they are relatively simple to use. Quadrat plots are uniform in size and shape and 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.

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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.

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 Density	Relative Frequency	IUCN	Conservation Status
1	Jatropagossypifolia	Kaatamanaku	32	17	24	1.17	0.71	1.65	14.43	17.17		Not Assessed
2	Calotropis gigantea	Erukam	16	12	24	0.58	0.50	1.17	7.22	12.12		Not Assessed

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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	Vishapoondur	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

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

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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

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

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i. Species diversity calculation

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

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

3.7.6 Floral study in the Buffer Zone:

Economically important Flora of the study area

Agricultural crops: 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.

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

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

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

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

Methodology Adopted:

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

Study in the core zone:

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

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.

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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 stripped palm squirrel	IV	Least Concern
Herestes edwardsii	Common Mangoose	IV	Not listed
Mus musculus	Common Mouse	IV	Least Concern
Bandicota indica	Rat	IV	Least Concern
Lepus nigricollis	Indian Hare	IV	Least Concern
Felis catus	Cat	Not listed	Not listed
Canis lupus familiaris	Indian dog	Not listed	Not listed
Bos Indicus	Indian Cow	Not listed	Not listed
Bubalus bubalis	Buffalo	I	Not listed
Sus scrofa domesticus	Domestic pig	Not listed	Not listed
Birds			
Milvus migrans	Black kite	IV	Least concern
Saxicoloides fulicatus	Indian Robin	IV	Least concern
Pycnonotus cafer	Red vented Bulbul	IV	Least concern
Phragamaticola aedon	Thick billed warbler	IV	Least concern
Pericrocotus cinnamomeus	Small Minivet	IV	Least concern
Eudynamys scolopaceus	Koel	IV	Least concern
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

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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

3.8 DEMOGRAPHY AND SOCIO ECONOMICS

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

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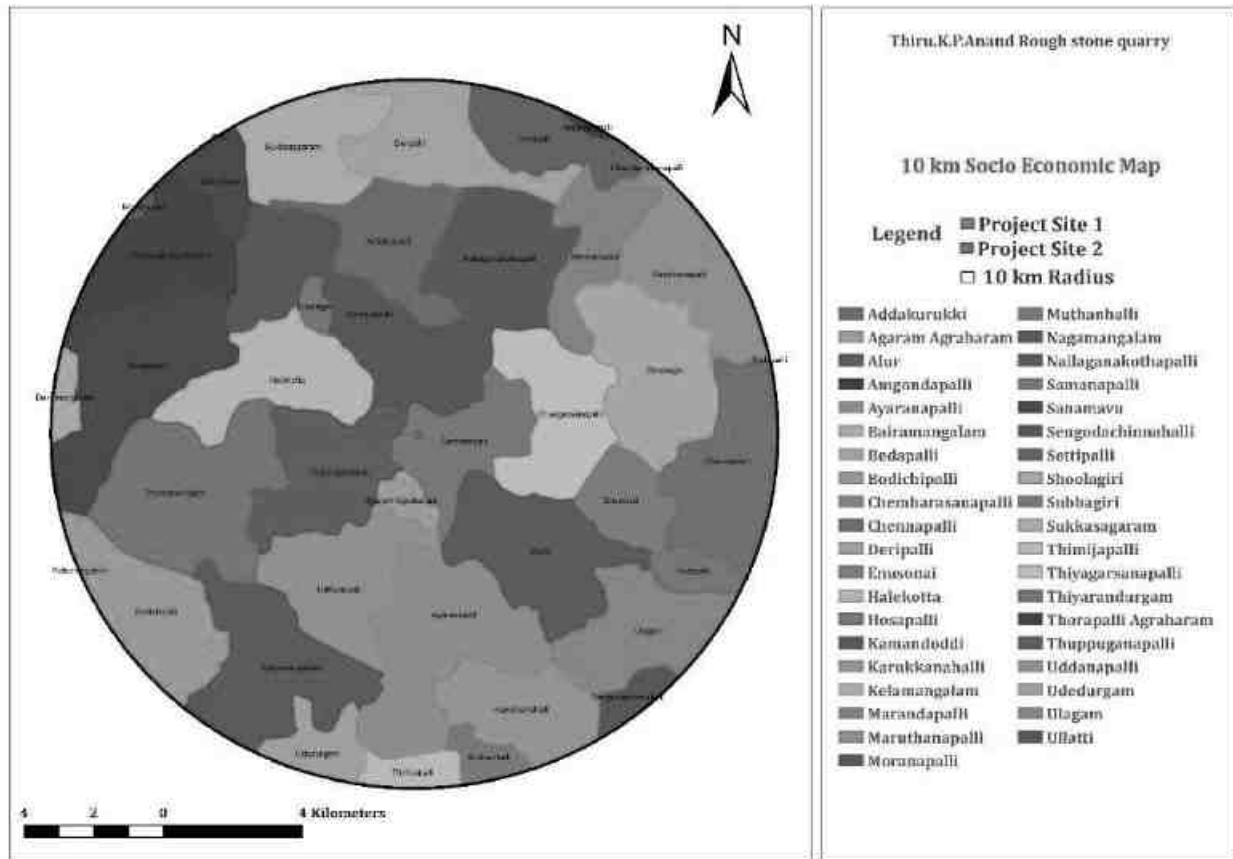


Figure 3.13 Socio Economic map surrounding the project site.

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

Table 3-21: Demography Survey Study

Source: Census of India, 2011

S.No	Villages	Household	Population	Sex Ratio		Literacy Rate		SC	ST
				Male	Female	Male	Female		
1	Kariyasandiram	95	346	184	162	23	24	0	0
2	Amuthugondapalli	120	543	274	269	131	97	228	0
3	Koladasapuram	221	857	429	428	276	216	390	0
4	Midithepalli	287	1287	667	620	369	261	278	31
5	Kumbalam	164	761	394	367	254	159	0	95
6	Athimugam	937	4540	2339	2201	1317	980	334	17

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7	Thuppuganapalli	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
		Village Road	-	Village Road
1	Cars	813	1	813
2	Buses	294	3	882
3	Trucks	325	3	975
4	Two wheelers	967	0.5	483.5
5	Three wheelers	409	1.5	613.5
	Total	2808	-	3767

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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	3767/24=157	413	0.38	B

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

V/C	LOS	Performance
0.0-0.2	A	Excellent
0.2-0.4	B	Very Good
0.4-0.6	C	Good/ Average/ Fair
0.6-0.8	D	Poor
0.8-1.0	E	Very Poor

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4 Anticipated Environmental Impacts & Mitigation Measures

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

4.1 INTRODUCTION

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

Environmental Impacts can be group into Primary impacts & Secondary Impacts

Primary Impacts: These impacts are directly attributed by the project

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

Assessment of impacts is done for the following Environmental Parameters:

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

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4.2 LAND ENVIRONMENT:

Aspect	Impact	Mitigation Measures		
<i>Mining of rough stone</i>	<p>The proposed 4.50.0 Ha mine located in Thuppuganapalli Village having 6,03,365 m³ of Rough Stone & 22,440 m³ of Topsoil respectively. The quarry operation is proposed to carry out with conventional open cast mechanized mining with 5.0 meter vertical bench and bench width of 5.0 meter. At the end of 10 years, mining lease area will be converted into ultimate pit.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">ULTIMATE PIT DIMENSION</td> </tr> <tr> <td style="text-align: center;">224.0m(L) x 170.0m(W) Avg x 61.0m(D)</td> </tr> </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	224.0m(L) x 170.0m(W) Avg x 61.0m(D)	<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 2250 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 1.0m of Topsoil and estimated quantity of Topsoil is 22440m³. Topsoil formation will be removed and transported to the needy users, only after</p>
ULTIMATE PIT DIMENSION				
224.0m(L) x 170.0m(W) Avg x 61.0m(D)				

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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>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 Maximum 868m and Minimum 813m and Minimum 768m 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 49.0m (AGL), whereas the ground water table is at 90m below the ground level. The municipal wastewater will be disposed into septic tanks of 5 cum and soak pit. No chemicals consisting of toxic elements will be used for carrying out mining activity.</p> <p>The ground water table is at a depth of 90m BGL, the mining operation will not affect the aquifer. The ultimate pit at the end of the mining operation will be used for rainwater storage, the stored water will be used for green belt development and further the stored water will be used for domestic purposes (other than drinking) after proper treatment.</p> <p>Further, the run-off water will be stored in sumps and after proper treatment; water will be</p>

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	<p>Improper management of Domestic wastewater in the Mine lease may create unhygienic conditions in the site thereby causing health impacts to the labours.</p>	<p>used in the mining operation for dust suppression.</p> <p>Provision of urinals/Latrines along with septic tank followed by soak pit arrangement will be provided in the Mine Lease area for the proper management of wastewater</p>
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4.4 AIR ENVIRONMENT:

Aspect	Impact	Mitigation Measures
<p><i>Drilling, Blasting, Loading and unloading, Transportation of the excavated mineral.</i></p>	<p><i>Impacts during Operation Phase</i></p> <p>During mining operation, fugitive dust and other air pollutants like particulate matter (PM₁₀ & PM_{2.5}) will be generated.</p> <p>The main source of pollutants arises due to drilling and blasting. 3 Nos 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 2250 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 Village road 0.72km East from the project site.</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. 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 October 2023 to December 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 March to May 2022 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 collide which may result in unwanted sound and can also cause impact on human health like breathing and respiratory system, damage to lung tissue, influenza or asthma.</p>	<ul style="list-style-type: none"> • The machinery will be maintained in good running condition so that noise will be reduced to minimum possible level. • Awareness will be imparted to the workers once in six months about the permissible noise level and effect of maximum exposure to those levels. Adequate silencers will be provided in all the diesel engines of vehicles. • It will be ensured that all transportation vehicles carry a valid PUC Certificates. • Speed of trucks entering or leaving the mine will be limited to moderate speed (20km/hr) to prevent undue noise from empty vehicles. <p>The noise generated by the machinery will be reduced by proper lubrication of the machinery and other equipments.</p> <ul style="list-style-type: none"> • It is proposed to plant 2250 Nos. of native species (Neem, Mandharai, Athi, Tamarind, Ashoka,

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		<p>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. 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 juliflora were present.

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Planting of trees	Development of afforestation in the mine lease area will have a positive impact as the land was initially a barren.	10 m safety distance will be provided all along the boundary of the mine lease area and safety. Around 0.82.8 Ha of land is utilized for greenbelt development (2250 Nos – 5 years). This will attract avifauna thus enhancing the existing ecological environment.
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4.7 SOCIO ECONOMIC ENVIRONMENT:

Aspect	Impact	Mitigation Measures
Proposed implementation of Mining activity	Land acquisition for the implementation of the project may result in loss of assets, which in return will make the PAP to shift, losing their normal routine and livelihood	The proposed project is a Government Poramboke land and the land is vacant where there are no human settlement within 300m radius. Hence the project does not involve Rehabilitation and resettlement
Drilling, Blasting, Loading and Transportation of the mined out mineral	The mining activities may cause dust emission, noise pollution thereby causing disturbance to the local habitat	No human activity is envisaged near the project site. The nearest human settlement is observed in Ayarnapalli village which is 0.58 km – North direction from proposed project 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., 10.0 Lakhs will be allocated. Government Higher Secondary School, Uddanapalli, Krishnagiri – 635119, Provision of To construct Auditorium or Canteen for students And amenities such as Environmental awareness books (Tamil) in Library for students, Green Belt development, Hygienic Toilet and maintenance of toilet upto lease period & Conservation activity to Cauvery North wildlife sanctuary

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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 alternatives 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 & mine closure plan has been approved by the Deputy Director, Department of Mining & Geology, Krishnagiri District prior to submission of the Form-1 & PFR.

ToR issued by the SEIAA-TN vide Letter No. SEIAA-TN/F. No. 10220/2023/SEAC/ToR-1593/2023 Dated: 30.10.2023. 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	Opencast mechanized

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			mining	Involving drilling and blasting are preferred. Benefits: Material is hard so to make it loose and to bring it to appropriate size.
2.	Employment	Local employment.	Outsource employment	Local employment is preferred. Benefits: Provides employment to local people along with financial benefits No residential building/ housing is required.
3.	Labour transportation	Public transport	Private transport	Local labours will be deployed from Thuppuganapalli village so they will either reach mine site by bicycle or by foot. Benefits: Cost of transportation of labors will be negligible

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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 Ayarnapalli village which is 0.58 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	7 locations	24 hourly twice a week 4 hourly.	1. Project site 2. GH, Shoolagiri 3. Govt Higher Secondary, School, Uddanapalli

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SO ₂ NO _x		Twice a week, One non monsoon season 8 hourly, twice a week 24 hourly, twice a week	4. Mandu Mariyamman Temple, Koppagarai 5. Sri Varadaraja Swamy Temple, Pathakotta 6. Jama Masjid, Mosque, Thirumalaigowni kotta 7. St Anthony's Church Nagamangalam, Ayaranapalli, Tamil Nadu 635119
Noise	7 locations	24 hourly Once in 7 locations	1. Project site 2. GH, Shoolagiri 3. Govt Higher Secondary, School, Uddanapalli 4. Mandu Mariyamman Temple, Koppagarai 5. Sri Varadaraja Swamy Temple, Pathakotta 6. Jama Masjid, Mosque, Thirumalaigowni kotta 7. St Anthony's Church Nagamangalam, Ayaranapalli, Tamil Nadu 635119
Water (Ground water) • pH • Temperature • Turbidity • Magnesium Hardness • Total Alkalinity • Chloride • Sulphate	7 locations	Once in 7 locations	1. Project site 2. GH, Shoolagiri 3. Govt Higher Secondary, School, Uddanapalli 4. Mandu Mariyamman Temple, Koppagarai 5. Sri Varadaraja Swamy Temple, Pathakotta

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<ul style="list-style-type: none"> • Fluoride • Nitrate • Sodium • Potassium • Salinity • Total nitrogen • Total Coliforms • Fecal Coliforms 			<p>6. Jama Masjid, Mosque, Thirumalaigowni kotta</p> <p>7. St Anthony's Church Nagamangalam, Ayaranapalli, Tamil Nadu 635119</p>
<p>Water (surface water)</p> <ul style="list-style-type: none"> • pH • Temperature • Turbidity • Magnesium Hardness • Total Alkalinity • Chloride • Sulphate • Fluoride • Nitrate • Sodium • Potassium • Salinity • Total nitrogen • Total Coliforms • Fecal Coliforms 	<p>Sample from nearby lakes/river</p>	<p>One time Sampling</p>	<p>1. Ponnaiyar River – 0.58 km, NE</p> <p>2. Obeapalayam Lake – 4.60 km, SW</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>	<p>1. Project site</p> <p>2. GH, Shoolagiri</p> <p>3. Govt Higher Secondary, School, Uddanapalli</p> <p>4. Mandu Mariyamman Temple, Koppagarai</p> <p>5. Sri Varadaraja Swamy Temple, Pathakotta</p>

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			6. Jama Masjid, Mosque, Thirumalaigowni kotta 7. St Anthony's Church Nagamangalam, Ayaranapalli, Tamil Nadu 635119
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

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4.	Soil Quality	(Organic matter, Texture, pH, Electrical Conductivity, Permeability, Water holding capacity, Porosity)	Half yearly	Project Site
5.	Noise Level Monitoring	Noise level in dB(A) Quarterly/half yearly	Half yearly	Project Site

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7 Additional Studies

7.1 GENERAL

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

7.1.1 *Public Hearing:*

As the proposed mining project falls under 1(a), Category B1 – Cluster Mining (includes **Existing Quarries** –

1. M/s. AVS Building Solutions India Private Limited – 4.50.0 Ha
2. S.Sundraiah – 3.00.0 Ha

Abandoned / Old quarries:

1. Thiru.R.Rathinam – 5.00.0 Ha

Proposed Quarries: –

1. Thiru.Anand – 4.50.0 Ha
2. M/s. Sri Vari Infrastructure – 2.95.0 Ha
3. Thiru.Anand – 4.00.0 Ha
4. M/s.AVS Building Solutions India Private Limited – 4.90.0 Ha

The Total extent of the Existing / Proposed quarries are 23.35.0 Ha.

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

7.1.2 *Risk assessment:*

For mining projects to be successful, it should meet not only the production requirements, but also maintain the highest safety standards for all the workers. The industry has to identify the hazards, assess the associated risks and bring the risks to tolerable level regularly. Mining has considerable safety risk to miners. Unsafe conditions and practices in mines lead to a number of accidents and causes loss and injury to human lives, damage property, interrupt production etc. Risk assessment is a systematic

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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.

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 0.58 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

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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
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 6 Nos.
- Loading Equipment – Excavator of 1.2 Cum Bucket Capacity (with Bucket attachment)
- Transportation (includes within the mine and mine to destination) – Tipper 3 Nos. of 10 M.T capacity (from quarry to needy peoples and local crushers)

a. Risk:

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

b. Mitigation measures to minimize the risk

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

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- All the mining machineries will be regularly maintained and checked such as brakes, lights and horns to keep in the efficient working order.

7.1.4 General Precautionary measures for the Risk involved in the 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 (18 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

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their duties and responsibilities. The safety officer will be responsible for identification of the hazardous conditions and unsafe acts of workers and advice on corrective actions, conduct safety audit, organize training programs and provide professional expert advice on various issues related to occupational safety and health. Organizing safety training will be conducted to employees and contractor labors periodically.

7.1.6 Emergency Control Centre

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

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based on the observations of emergency mock drills and experience of handling actual emergencies.

Major objectives of this onsite – offsite emergency plan are:

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

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

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

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

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 honeybees 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.

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- Workers will be trained for the precautions to be taken during natural disasters like heavy rain, floods, earthquake and cyclone.
- All escape routes from mines to the assembly point or any other safe location will be made and the escape plan will be displayed in many places in the mine area

7.2.3 *Emergency Control:*

- Shut down of mining operations: Raising the alarm or siren followed by immediate safe shut down of the power supply, and isolation of affected areas.
- Treatment of injured: First aid and hospitalization of injured persons
- 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 resources for construction. Due to demand supply chain, excavated mineral (Rough stone) will be 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 the 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 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., 10 Lakhs will be allocated. The detailed agenda which is to be executed has been framed. The salient features of the programmes are as follows:

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To construct Additional Toilets and water tank and Basic amenities such as Environmental books for library (in Tamil language), Greenbelt development, Hygienic Toilet and maintenance of toilet upto lease period and Conservation activity to Cauvery North Wildlife Sanctuary.

8.3 PROJECT COST / INVESTMENT DETAILS

1	<p><u>D. Fixed Asset Cost:</u></p> <ul style="list-style-type: none"> • Land Cost : Rs. 60,00,000/- (Leased tender amount for Government Poramboke Land) • Labour Shed : Rs. 60,000/- • Sanitary Facility : Rs. 50,000/- • Refilling/Fencing cost : Rs. 1,50,000/- <p>Total=</p> <p style="text-align: right;">Rs.62,60,000/-</p>	
2	<p><u>E. Operational Cost:</u></p> <p><u>Machinery cost</u></p>	: Rs.20,00,000/-
3	<p><u>F. EMP Cost:</u></p> <p>Display board in site; Monitoring- Air, Water, Noise; Dust Supression -Water sprinkling by own water tankers; Vehicle Tyres Wash; Green Belt Development; Road Development & Management; Occupational Health And Safety; Solid Waste Management; Strom Water; Renewable Energy, CCTV Installation, Salary for mines manager and blaster</p>	: Rs. 83,72,336/- for the period of five years.
	Total Project Cost (A+B)	: Rs. 82,60,000/-

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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.,

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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 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.K.P.Anand will work in association with M/s. Ecotech Labs Pvt Ltd.

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	Provision of urinals/Latrines along with septic tank followed by soak pit arrangement will be provided in the Mine Lease

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			the site thereby causing health impacts to the labors	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 <ul style="list-style-type: none"> ✓ By complying with the safety procedures, norms and guidelines (as applicable) as outlined in the

Project	Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
Project Proponent	Thiru.K.P.Anand	
Project Location	Thiru.K.P.Anand Village, Shoolagiri Taluk, Krishnagiri District	

				<p>National Building Code of India, Bureau of Indian Standards.</p> <ul style="list-style-type: none"> ✓ Provide adequate number of decentralized latrines and urinals ✓ Providing Septic tank along with Soak pit arrangement ✓ Providing First Aid room, conducting frequent health checkups to labor and conducting free medical camps ✓ Providing safety helmet, Gloves, Jacket & Boots ✓ Providing measures to prevent fires. Firefighting extinguishers and buckets of sand will be provided in the construction site
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<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thiru.K.P.Anand Village, Shoolagiri Taluk, Krishnagiri District</i>	

6.	Building materials resource conservation	Building Material consumption	Use of farfetched construction materials than the locally available construction materials may lead to over exploitation of natural resources & increase in carbon footprint.	<ul style="list-style-type: none"> • Use of locally available construction materials.
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Table 9-2: Budgetary Allocation for EMP during Mining

Year	Description	Cost (Rs)
10 Years	Display board in site; Monitoring-Air, Water, Noise; Dust Supression -Water sprinkling by own water tankers; Vehicle Tyres Wash; Green Belt Development; Road Development & Management; Occupational Health And Safety; Solid Waste Management; Strom Water; Renewable Energy, CCTV Installation, Salary for mines manager and blaster	83,72,336/-

<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppugnapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

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.K.P. Anand site is a cluster of seven mining projects. The individual mine lease area is 4.50.0 Ha of Rough Stone Quarry located at S.F.Nos. 637 (Part-II) of Thuppuganapalli Village, Shoolagiri Taluk in Krishnagiri District.

10.2 PROJECT OVERVIEW

Table 10-1: Project Overview

S. No.	Description	Details
1	Project Name	Rough Stone Quarry - 4.50.0 ha
2	Proponent	Thiru.K.P. Anand
3	Mining Lease Area Extent	4.50.0 Ha
4	Location	S.F.Nos. 637 (Part-II) Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District.
5	Latitude	12° 37' 39.82" N To 12° 37' 50.19" N
6	Longitude	77° 57' 12.63" E To 77° 57' 20.49" E
7	Topography	Hilly terrain
8	Site Elevation above MSL	The altitude of the area is Maximum 813m and Minimum 768m above MSL
9	Topo sheet No.	57- H/14
10	Minerals of Mine	Rough Stone Quarry
11	Proposed production of Mine	6,03,365m ³ of Rough Stone and 22,440m ³ of Topsoil

Project	Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
Project Proponent	Thiru.K.P.Anand	
Project Location	Thuppugnapalli Village, Shoolagiri Taluk, Krishnagiri District	

12	Ultimate depth of Mining	49 m (AGL)
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	18 Nos.
17	Mining Lease	Precise Area Communication Letter received from District Collector, Krishnagiri vide letter Roc.No.210/2018 Mines dated 09.03.2018.
18	Mining Plan Approval	Mining Plan was approved by the Deputy Director, Geology & Mining, Krishnagiri vide letter Rc.No.210/2018 Mines dated 07.05.2018.
19	Production details	Geological resources: 1417155m ³ Proposed year wise recoverable reserves: 603365m ³ of Rough Stone
20	Boundary Fencing	10 m barrier all along the boundary Fencing will be provided.
21	Disposal of overburden	The entire lease area covers 1.0m of Topsoil and estimated quantity of Topsoil is 22440m ³ . Topsoil formation will be removed and transported to the needy users, only after obtaining permission and paying necessary seigniorage fees to the Government.
22	Ground water	The quarry operation is proposed up to a depth of 49m (AGL). The water table is below 90m from ground level which is

<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppugnapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

		observed from the nearby open wells and bore wells. Hence the ground water will not be affected in any manner due to the quarrying operation during the entire lease period.
23	Habitations within 300m radius of the Project Site	There is no Habitation within 300m radius of the project site.
24	Drinking water	Water will be supplied through tankers from Ayranapalli village which is 0.58 Km – West 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

<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppugnapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

vegetation. In addition to that, geological resources of rough stone is abundant in the lease area which is evident from the mine activities carried out in the nearby sites.

Table 10-2: Anticipate Impacts & Appropriate Mitigation Measures

S. No.	Potential Impact	Mitigation Measure
1	The main impact in the air environment is dust emission during various mining activities such 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	Periodical monitoring of noise will be done. No other equipments except the transportation vehicles and Excavator (as

<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppugnapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

	movement of vehicles. This may impact the health condition of the workers by creating headache	<p>& when required) for loading will be allowed at site.</p> <p>Noise generated by these equipments shall be intermittent and does not cause much adverse impact.</p> <p>Plantation will be carried out along approach roads. The plantation minimizes propagation of noise and also arrest dust.</p>
4	Solid waste will be generated from the mining activity as there will be refuse after 95% recovery and also generation of domestic waste	The 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.
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- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppugnapalli Village, Shoologiri 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.

<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppugnapalli Village, Shoolagiri Taluk, Krishnagiri District</i>	

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

Declaration by Experts contributing to the EIA of Rough Stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand at S.F.No. 637 (Part-II), Thuppuganapalli 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


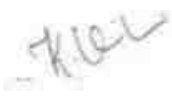

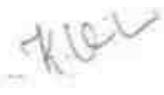
Project	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	Draft EIA Report
Project Proponent	<i>Thiru.K.P.Anand</i>	
Project Location	<i>Thuppugnapalli Village, Shoologiri Taluk, Krishnagiri District</i>	

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><i>Period: December 2021 – Till now</i></p>	
2	WP	Dr. A. Dhamodharan	<p>1. Selection of baseline Monitoring Locations for Ground water analysis and also identifying nearest surface water to be studied.</p> <p>2. Interpretation of baseline data collected</p> <p>3. Identification of impacts based on the baseline study conducted and also to the ground water and nearby surface water due to the proposed project</p> <p>4. Preparation of suitable and appropriate mitigation plan.</p> <p><i>Period: December 2021 – Till now</i></p>	
3	SHW	Dr. A. Dhamodharan	<p>1. Identification of nature of solid waste generated</p> <p>2. Categorization of the generated waste and estimating the quantity of waste to be generated based on the per capita basis. Identification of impacts of SHW on Environment</p> <p>3. Suggesting suitable mitigation measures by recommending appropriate disposal method for each category of waste generated</p> <p>4. Top soil and refuse management</p> <p><i>Period: December 2021 – 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>	

Project	Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand	Draft EIA Report
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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>	

<i>Project</i>	<i>Rough stone Quarry- 4.50.0 Ha by Thiru.K.P.Anand</i>	<i>Draft EIA Report</i>
<i>Project Proponent</i>	<i>Thiru.K.P.Anand</i>	
<i>Project Location</i>	<i>Thuppugnapalli Village, Shoologiri Taluk, Krishnagiri District</i>	

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

I, Dr. A. Dhamodharan, hereby, confirm that the above-mentioned experts prepared the EIA report of mining project at Survey Numbers. 637 (Part-II) Thuppuganapalli Village, Shoologiri 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.10220/2023/SEAC/ToR-1593/2023 Dated:30.10.2023.

To

Thiru K.P.Anand
S/o. V.P.Perumal
No.2/10, Velampatti Post,
Pennagaram Taluk,
Dharmapuri District - 636 809

Sir / Madam,

Sub: SEIAA, Tamil Nadu – Terms of Reference with public Hearing (ToR) for the Proposed Rough stone Quarry over an extent of 4.50.0Ha at SF. No. 637(Part-II) of Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu by Thiru K. P. Anand- 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/430604/2023, dated:24.05.2023.
 2. Your application submitted for Terms of Reference dated:17.07.2023.
 4. Minutes of the 407th SEAC meeting held on 07.09.2023.
 5. Minutes of the 658th SEIAA meeting held on 26.09.2023 & 27.09.2023.
 6. Reply by the Project Proponent Dated:13.10.2023.
 7. Minutes of the 666th SEIAA meeting held on 30.10.2023.

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

The proponent, Thiru K. P. Anand has submitted application for Terms of Reference (ToR) in Form-I, Pre- Feasibility report Proposed Rough stone Quarry over an extent of 4.50.0Ha at SF. No. 637(Part-II) of Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu.


MEMBER SECRETARY
SEIAA-TN

Discussion by SEAC and the Remarks:-

Proposed Rough stone Quarry over an extent of 4.50.0Ha at SF. No. 637(Part-II) of Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu by Thiru K. P. Anand- For Terms of Reference.

(SIA/TN/MIN/430604/2023, Dated:24.05.2023)

The proposal was placed in the 407th SEAC Meeting held on 07.09.2023. The details of the project furnished by the proponent are given on the website (parivesh.nic.in).

The SEAC noted the following:

1. The Project Proponent, Thiru.K.P.Anand has applied for Terms of Reference for the Proposed Rough stone Quarry over an extent of 4.50.0Ha at SF.No. 637(Part-II) of Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District,Tamil Nadu.
2. The project/activity is covered under Category "B1" of Item 1(a) " Mining of mineral of the Schedule to the EIA Notification, 2006.
3. As per the mining plan the lease period is for 5 years. The mining plan is for the period of Five years & the production should not exceed 6,03,365m³ of rough stone & 22,440m³ of Topsoil with an ultimate depth of mining is 49m BGL. The annual peak production is 1,22,820m³ of rough stone (1st Year) & 22,440m³ of Topsoil (1st Year).
4. Earlier, the PP has obtained Environmental Clearance from DEIAA vide Lr. No. 3/DEIAA-KGI/Ec.No.56/2018/Mines, Dt:27.08.2018.

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

1. **The proponent shall give an Affidavit before the issuance of ToR from SEIAA-TN stating that the mining operations will remain suspended from the date of publication of MoEF & CC OM F.No. IA3-22/11/2023-IA.III (E-208230), dated. 28.04.2023 till they obtain the EC granted by the SEIAA after the reappraisal process for carrying out remedial actions subsequently.**
2. For the existing quarry, the PP shall obtain a letter from the concerned AD (Mines) which shall stipulate the following information:


MEMBER SECRETARY
SEIAA-TN

- i. Original pit dimension of the existing quarry
 - ii. Quantity achieved Vs EC Approved Quantity
 - iii. Balance Quantity as per Mineable Reserve calculated.
 - iv. Mined out Depth as on date Vs EC Permitted depth
 - v. Details of illegal/illicit mining carried out, if any
 - vi. Non-compliance/Violation in the quarry during the past working.
 - vii. Quantity of material mined out outside the mine lease area (or) in the adjacent quarry/land.
 - viii. Existing condition of Safety zone/benches
 - ix. Details of any penalties levied on the PP for any violation in the quarry operation
3. The PP shall furnish the Certified Compliance Report (CCR) obtained from IRO(SZ), MoEF&CC and the PP shall also furnish mitigation measures/action plan for the non-compliance stated in the Certified Compliance Report (CCR).
 4. The project proponent shall furnish documentary evidence from the concerned District Forest Officer showing the distance between the nearest R.F and the proposed quarry site.
 5. The PP shall provide the cost estimate for carrying out the mitigation measures after consulting the concerned DFO.
 6. The PP shall furnish ownership details of all survey numbers in EIA report.
 7. The PP shall submit the 'Action Plan' on the issues raised during the Public Hearing with budgetary provisions for the same.
 8. The PP shall submit the controlled blasting measures for reducing the impacts due to the blasting operation in the proposed quarries within 1 km of the proposed quarry.
 9. The PP shall submit a 'Conceptual Mining Plan' indicating the accessible ramp from the surface to the pit bottom keeping the benches intact for the dimension as stipulated in the Approved Mining Plan.
 10. The PP shall submit the nature of buildings/structures, occupants and their profession, etc located within 500 m radius of the proposed quarry.
 11. In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following:
 - (i) Original pit dimension
 - (ii) Quantity achieved Vs EC Approved Quantity


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SEIAA-TN

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

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Secretary
MEMBER SECRETARY
SEIAA-TN

- measures during the time of appraisal for obtaining the EC.
18. However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.
19. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.
20. The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.
21. 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.
22. 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,
23. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?
24. Quantity of minerals mined out.
- Highest production achieved in any one year
 - Detail of approved depth of mining.
 - Actual depth of the mining achieved earlier.
 - Name of the person already mined in that leases area.
 - If EC and CTO already obtained, the copy of the same shall be submitted.
 - Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.
25. 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).
26. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,
27. The proponent shall furnish photographs of adequate fencing, green belt along the periphery


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including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.

28. 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.
29. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.
30. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.
31. 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.
32. 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.
33. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.
34. 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.


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- Impact, if any, of change of land use should be given.
35. 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.
 36. 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.
 37. 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.
 38. Impact on local transport infrastructure due to the Project should be indicated.
 39. 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.
 40. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.
 41. 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.
 42. 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.
 43. Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner


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44. 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.
45. 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.
46. 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.
47. 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.
48. 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.
49. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
50. 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.
51. 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.
52. 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.
53. Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.


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Appendix - I
List of Native Trees Suggested for Planting

No	Scientific Name	Tamil Name	Tamil Name
1	<i>Aegle marmelos</i>	Vilvam	வில்லம்
2	<i>Adenanthera pavonina</i>	Manjadi	மஞ்சாடி, ஆனைக்குன்றிமணி
3	<i>Albizia lebbek</i>	Vaagai	வாகை
4	<i>Albizia amara</i>	Usil	உசில்
5	<i>Bauhinia purpurea</i>	Mantharai	மந்தாரை
6	<i>Bauhinia racemosa</i>	Aathi	ஆத்தி
7	<i>Bauhinia tomentosa</i>	Iruvathi	இருவாத்தி
8	<i>Buchanania axillaris</i>	Kattuma	காட்டுமா
9	<i>Borassus flabellifer</i>	Panai	பனை
10	<i>Butea monosperma</i>	Murukkamaram	முருக்கமரம்
11	<i>Bobax ceiba</i>	Ilavu, Sevvilavu	இலவு
12	<i>Calophyllum inophyllum</i>	Punnai	புன்னை
13	<i>Cassia fistula</i>	Sarakondrai	சரங்கொன்றை
14	<i>Cassia roxburghii</i>	Sengondrai	செங்கொன்றை
15	<i>Chloroxylon swietenia</i>	Purasamaram	புரசு மரம்
16	<i>Cochlospermum religiosum</i>	Kongu, Manjallavu	கோங்கு, மஞ்சள் இலவு
17	<i>Cordia dichotoma</i>	Naruvuli	நருவுளி
18	<i>Creteva adansonii</i>	Mavalingum	மாவிலங்கம்
19	<i>Dillenia indica</i>	Uva, Uzha	உசா
20	<i>Dillenia pentagyna</i>	SiruUva, Sitruzha	சீறு உசா
21	<i>Diospyro sebenum</i>	Karungali	கருங்காலி
22	<i>Diospyro schloroxylon</i>	Vaganai	வாகனை
23	<i>Ficus amplissima</i>	Kalltchi	கல் திச்சி
24	<i>Hibiscus tiliaceou</i>	Aatrupoovarasu	ஆற்றுப்பூவரசு
25	<i>Hardwickia binata</i>	Aacha	ஆச்சா
26	<i>Holoptelia integrifolia</i>	Aayili	ஆயா மரம், ஆயிலி
27	<i>Lansea coromandelica</i>	Odhiam	ஒதியம்
28	<i>Lagerstroemia speciosa</i>	Poo Marudhu	பூ மருது
29	<i>Lepisanthus tetraphylla</i>	Neikottaimaram	நெய் கொட்டை மரம்
30	<i>Limonia acidissima</i>	Vila maram	விலா மரம்
31	<i>Litsea glutinos</i>	Pisinpattai	அரம்பா. பிசின்பட்டை
32	<i>Madhuca longifolia</i>	Illuppai	இலுப்பை
33	<i>Mamilkara hexandra</i>	UlakkaiPaalai	உலக்கை பாலை
34	<i>Mimusops elongi</i>	Magizhamaram	மகிழ்மரம்
35	<i>Mitrasyna parvifolia</i>	Kadambu	கடம்பு
36	<i>Morinda pubescens</i>	Nuna	நுணா
37	<i>Morinda citrifolia</i>	Vellai Nuna	வெள்ளை நுணா
38	<i>Phoenix sylvestre</i>	Eachai	ஈச்சமரம்
39	<i>Pongamia pinnat</i>	Pungam	புங்கம்

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40	<i>Premna mollissima</i>	Munnai	முள்ளை
41	<i>Premna serratifolia</i>	Narumuruai	நடு முள்ளை
42	<i>Premna tomentosa</i>	Malaipoovarasu	மலை பூவா
43	<i>Prosopis cinerea</i>	Vanni maram	வாணி மரம்
44	<i>Pterocarpus marsupium</i>	Vengai	வேங்கை
45	<i>Pterospermum canescens</i>	Vennangu, Tada	வேண்டாங்கு
46	<i>Pterospermum xylocarpum</i>	Polavu	பூவா
47	<i>Pithecolobium roxburghii</i>	Karipala	கரிபாலா
48	<i>Salvadora persica</i>	Ugaa Maram	உகா மரம்
49	<i>Sapindus omarginatus</i>	Manipungan, Soapukai	மண்பூவா சோபுகாய்
50	<i>Saraca asoca</i>	Asoca	அசோகா
51	<i>Strobilus asper</i>	Piray maram	பிராய் மரம்
52	<i>Strychnos nuxvomica</i>	Yetti	எட்டி
53	<i>Strychnos potatorum</i>	Therthang Kottai	தேத்தாங் கெட்டை
54	<i>Syzygium cumini</i>	Naval	நாவல்
55	<i>Terminalia belleric</i>	Thandri	தாந்தரி
56	<i>Terminalia arjuna</i>	Ven marudhu	வேன் மருது
57	<i>Toona ciliata</i>	Sandharu vembu	சந்தாரு வேம்பு
58	<i>Thespesia populnea</i>	Puvarasu	பூவா
59	<i>Walsuratrifoliata</i>	valsura	வால்சூரா
60	<i>Wrightia tinctoria</i>	Veppalai	வேப்பலை
61	<i>Pithecolobium dulce</i>	Kodukkapuli	கொடுக்காபுளி

Discussion by SEIAA and the Remarks:-

The subject was placed in the 658th Authority meeting held on 26.09.2023 & 27.09.2023. The Authority noted that the subject was appraised in the 407th Meeting of SEAC held on 07.09.2023. Based on the presentation and documents furnished by the project proponent, SEAC decided to grant ToR with Public Hearing subject to the conditions stated therein.

After detailed discussions, the Authority decided to request the Member Secretary, SEIAA-TN to obtain the following details and place before the Authority for further course of action.

1. As stated in SEAC minutes, the PP shall furnish an affidavit stating that the mining operations will remain suspended from the date of publication of MoEF &CC OM F.No. IA3-22/11/2023-IA.III (E-208230), dated. 28.04.2023 till they obtain the EC granted by the SEIAA after the reappraisal process for carrying out remedial actions subsequently.

In view of the above, Authority decided to request the Member Secretary, SEIAA to communicate the minutes to the project proponent.

Subsequently the proposal was placed in the 666th Authority meeting held on 30.10.2023. The authority noted that this proposal was placed for appraisal in 407th meeting of SEAC held on

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07.09.2023, the committee has furnished its recommendations for granting ToR with Public hearing subject to the conditions stated therein. After detailed discussions, the Authority accepts the recommendation of SEAC and decided to grant **Terms of Reference (ToR) along with Public Hearing** under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC & normal conditions in addition to the conditions in '**Annexure B**' of this 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.,
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.


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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
- Soil health & soil biological, physical land chemical features .
 - Climate change leading to Droughts, Floods etc.
 - Pollution leading to release of Greenhouse gases (GHG), rise in Temperature, & Livelihood of the local people.
 - Possibilities of water contamination and impact on aquatic ecosystem health.
 - Agriculture, Forestry & Traditional practices.
 - Hydrothermal/Geothermal effect due to destruction in the Environment.
 - Bio-geochemical processes and its foot prints including environmental stress.
 - Sediment geochemistry in the surface streams.

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.


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21. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.
22. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.

Water Environment

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

Energy

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


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Climate Change

32. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.
33. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.

Mine Closure Plan

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

EMP

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

Risk Assessment

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

Disaster Management Plan

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

Others

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


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

A. STANDARD TERMS OF REFERENCE

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


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the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.

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


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


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

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


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present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.

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


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zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.

- 37) Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
- 38) Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed:-
 - a) Executive Summary of the EIA/EMP Report
 - b) All documents to be properly referenced with index and continuous page numbering.
 - c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
 - d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
 - e) Where the documents provided are in a language other than English, an English translation should be provided.
 - f) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.
 - g) While preparing the EIA report, the instructions for the Proponents and instructions for


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the Consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA. II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.

- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
- i) As per the circular no. J-11011/618/2010-IA. II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
- j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

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

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

1. Project name and location (Village, District, State, Industrial Estate (if applicable)).
2. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes.
3. Measures for mitigating the impact on the environment and mode of discharge or disposal.
4. Capital cost of the project, estimated time of completion.
5. The proponent shall furnish the contour map of the water table detailing the number of wells located around the site and impacts on the wells due to mining activity.
6. A detailed study of the lithology of the mining lease area shall be furnished.
7. Details of village map, "A" register and FMB sketch shall be furnished.
8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be submitted along with EIA report.
9. Obtain a letter /certificate from the Assistant Director of Geology and Mining standing that there

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- 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)
 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


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the operations of the mines.

29. A specific study should include impact on flora & fauna, disturbance to migratory pattern of animals.
30. Reserve funds should be earmarked for proper closure plan.
31. A detailed plan on plastic waste management shall be furnished. Further, the proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throw away plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986. In this connection, the project proponent has to furnish the action plan.

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

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


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- 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 4.50.0 Ha

COMPLIANCE OF TOR CONDITIONS

Point wise compliance of ToR points issued by SEIAA, TN vide Lr No. SEIAA-TN/F. No. 10220/2023/SEAC/ToR-1593/2023 Dated: 30.10.2023 for Mining of Minor Minerals in the Mine of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha at S.F.No.637(Part-2) of Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu State.

ToR Ref.	Description	Response	Page Ref. in EIA Report
1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 1994 came into force w.r.t. the highest production achieved prior to 1994.	<p>This is a existing mining project of Proposed Rough stone quarry.</p> <p>Precise Area Communication Letter received from District Collector, Krishnagiri vide letter Roc.No.210/2018 Mines dated 09.03.2018.</p> <p>Mining Plan was approved by the Deputy Director, Geology & Mining, Krishnagiri vide letter Rc.No.210/2018 Mines dated 07.05.2018.</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</p>	<p>Chapter-2</p> <p>Table No.2.9</p> <p>Page No.49</p>

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

		EIA/EMP in chapter no-2.															
		<table border="1"> <thead> <tr> <th>Year</th> <th>Rough stone (m³)</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>91240 & 22440 cbm Topsoil</td> </tr> <tr> <td>II</td> <td>46505</td> </tr> <tr> <td>III</td> <td>58460</td> </tr> <tr> <td>IV</td> <td>238660</td> </tr> <tr> <td>V</td> <td>168500</td> </tr> <tr> <td>Total</td> <td>603365</td> </tr> </tbody> </table>	Year	Rough stone (m ³)	I	91240 & 22440 cbm Topsoil	II	46505	III	58460	IV	238660	V	168500	Total	603365	
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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 4.50.0 hectare in Thuppuganapalli Village for Rough stone quarry approved by Deputy Director, Geology & Mining, Krishnagiri vide letter Rc.No.210/2018 Mines dated 07.05.2018.	Annexure - III														
3	All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.	All the documents i.e., Mining Plan, EIA and public hearing are compatible with each other in terms of ML area production levels, waste generation and its management and mining technology are compatible with one another. The mining plan of the project site has been submitted to The Assistant Director, Dept. of Geology & Mining, Krishnagiri.	Annexure-VI Chapter- II														
4	All corner coordinates of the mine lease area, superimposed on a	Details of coordinates of all corners of proposed mining lease area have	Chapter-2, Fig no. 2.2														

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

	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).	been incorporated in mining plan and Chapter 2 of EIA/ EMP Report.	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 bodies, streams and rivers and soil characteristics	Topo map as attached in Chapter-2	Chapter-2, Fig no. 2.4 Page. no. 40
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 given in Chapter 2.	Chapter-2 Page 42
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	Noted.	

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

	<p>forest norms/ conditions?</p> <p>The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large may also be detailed in the EIA report.</p>		
8	<p>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.</p>	<p>It is an open cast mining project. Blasting details are incorporated in chapter 2.</p>	<p>Chapter-2, Page no.52</p>
9	<p>The study area will comprise of 15 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.</p>	<p>Study area comprises of 15 km radius from the mine lease boundary. Key Plan showing core zone (ML area).</p>	<p>Chapter-2 Fig no. 2.5 Page no.41</p>
10	<p>Land use of the study area delineating forest area, agricultural land, grazing land,</p>	<p>Land Use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary,</p>	<p>Chapter-2, Table no. 2.4 Page no.42</p>

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

	<p>wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated.</p> <p>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.</p>	<p>National Park, migratory routes of fauna, water bodies, human settlement and other ecological features has been prepared and incorporated in Chapter-3 of EIA/EMP Report.</p> <p>There is no wildlife sanctuary and national park, migratory routes of fauna in the study area.</p>	
11	<p>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.</p>	<p>The entire lease area covers 2.0m of Topsoil and estimated quantity of Topsoil is 38740m³. Topsoil formation will be removed and transported to the needy users, only after obtaining permission and paying necessary seigniorage fees to the Government.</p>	<p>Chapter-2, Page no.50</p>
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</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 4.50.0 Ha

	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.	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

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

16	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required, should be worked out with cost implications and submitted.	There is a relatively poor sighting of animals in the core and buffer areas of the mining lease. No significant impact is anticipated	
17	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves/ (existing as well as proposed), if any, within 10km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished	There is no National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger / Elephant Reserves / Critically Polluted areas within 10 km radius of the mining lease area.	
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	Details biological study (flora & fauna) within 10 km radius of the project site have been incorporated in Chapter-3 of EIA/ EMP Report.	

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

	<p>be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.</p>	<p>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 Pg No. 101</p>
19	<p>Proximity to Areas declared as ‘Critically Polluted’ or the Project areas likely to come under the ‘Aravali Range’, (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered.</p>	<p>The proposed mining lease area is not falling under critically polluted area.</p>	
20	<p>Similarly, for coastal projects, A CRZ map duly authenticated by</p>	<p>There is no Coastal Zone within 15km radius of the project site.</p>	

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

	<p>one of the authorized agencies Similarly, for coastal projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority)</p>		
21	<p>R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly</p>	<p>There is no Rehabilitation and resettlement is involved. Land classified as Government Poramboke land</p>	

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

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

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

	PM10, particularly for free silica, should be given.		
23	<p>Air quality modelling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be 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>Air quality modelling & Impact of Air quality will be furnished in Final EIA report.</p> <p>Transportation of mineral during operation of mines will be done by road & 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>	<p>Chapter-4</p> <p>Page No.109</p>
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.	<p>Total water requirement: 2.0 KLD</p> <p>Dust Suppression: 0.5 KLD</p> <p>Domestic Purpose: 1 KLD</p> <p>Plantation :0.5 KLD</p> <p>Domestic Water will be sourced from nearby Ayarnapalli which is about 0.54 Km from the site.</p>	<p>Chapter-2</p> <p>Page no.53</p>
25	Necessary clearance from the Competent Authority for drawl of requisite quantity of	<p>Not Applicable</p> <p>Water will be taken from nearby villages</p>	

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

	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.	At the last stage of mining operation, almost complete area will be worked to restore the land to its optimum reclamation for future use as water reservoir.	
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.108
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: 49m (1m Topsoil + 48m Rough stone) AGL The ground Water Level is noticed at the depth of 90m below Ground Level by monitoring nearby bore hole, Mining depth taken as 49m (Surface Ground Level Above). Now, the proposed quarry depth is above the water table. Hence, quarrying may not affect the ground water.	Chapter-2 Page no. 36
29	Details of any stream, seasonal or otherwise, passing through the lease	There is no any stream crossing in the proposed quarry.	Executive Summary

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	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.	The altitude of the area is Maximum 813m and Minimum 768m above MSL. The ground Water Level is noticed at the depth of 90m BGL.	Chapter-2 Table no. 2.2 Page no. 35
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

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32	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project proponent shall conduct impact of Transportation study as per Indian Road Congress Guidelines	Impact on local transport infrastructure due to the project has been assessed. There shall not be much impact on local transport. Traffic density from the proposed mining activity has been incorporated in EIA/EMP report.	Chapter-3 Page No.103
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 VII
35	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures	Suitable measure will be adopted to minimize occupational health impacts of the project. The project	Chapter-10 Pg No. 146

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	spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project in the mining area may be detailed	shall have positive impact on local environment. Details are given in chapter-10 of EIA/EMP.	
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. 146
37	Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	Suitable measures have been discussed in Chapter 3	Chapter-4 Pg No. 106
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. 141
39	Public hearing points raised and	Public Hearing proceedings will be	

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	commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and incorporated in the final EIA/EMP Report of the Project.	furnished in Final EIA report																
40	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.	Not applicable No. litigation is pending against the project in any court.																
41	The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.	<table border="1"> <thead> <tr> <th>S. No</th> <th>Description</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Fixed Asset Cost</td> <td>62,60,000/-</td> </tr> <tr> <td>2</td> <td>Operational Cost</td> <td>20,00,000/-</td> </tr> <tr> <td>3</td> <td>EMP</td> <td>83,72,336/-</td> </tr> <tr> <td></td> <td>Total</td> <td>82,60,000/-</td> </tr> </tbody> </table>	S. No	Description	Cost	1	Fixed Asset Cost	62,60,000/-	2	Operational Cost	20,00,000/-	3	EMP	83,72,336/-		Total	82,60,000/-	Chapter-8 Pg No. 140
S. No	Description	Cost																
1	Fixed Asset Cost	62,60,000/-																
2	Operational Cost	20,00,000/-																
3	EMP	83,72,336/-																
	Total	82,60,000/-																
42	Disaster Management Plan	Disaster Management and Risk Assessment has been incorporated in Chapter-7	Chapter-7 Pg No. 125															
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. 140															
44	Besides the above, the below																	

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	mentioned general points are also to be followed:		
(a)	Executive Summary of the EIA/EMP report	Executive Summary of EIA Report is given from page No.10 - 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 submitted.	The complete questionnaire has been prepared	
(g)	While preparing the EIA report,	The EIA report has been	

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	<p>the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA. II(I) dated 4th August 2009, which are available on the website of this Ministry, should also be followed.</p>	<p>prepared and complying with the circular issued by MoEF vide O.M. No. J-11013/41/2006-IA. II(I) dated 4th August 2009.</p>	
(h)	<p>Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation</p>	<p>There are no changes in prepared EIA as per submitted Form-1 & PFR</p>	
(i)	<p>As per the circular no. J-11011/618/2010-IA. II(I) dated 30.5.2012, report on the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project by the Regional Office of Ministry of</p>	<p>Will be complied after grant environment clearance from SEIAA, Tamilnadu</p>	

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	Environment & Forests, if applicable.		
(j)	The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections (iii) sections of mine pit and external dumps, if any clearly showing the features of the adjoining area.	All Sectional Plates of Quarry is enclosed in Mining Plan.	

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Additional ToR Compliance

S.No.	Condition	Compliance
1.	The proponent shall give an Affidavit before the issuance of ToR from SEIAA-TN stating that the mining operations will remain suspended from the date of publication of MoEF &CC OM F.No. IA3-22/11/2023-IA.III (E-208230), dated. 28.04.2023 till they obtain the EC granted by the SEIAA after the reappraisal process for carrying out remedial actions subsequently.	Complied.
2.	For the existing quarry, the PP shall obtain a letter from the concerned AD (Mines) which shall stipulate the following information: <ol style="list-style-type: none"> i. Original pit dimension of the existing quarry ii. Quantity achieved Vs EC Approved Quantity iii. Balance Quantity as per Mineable Reserve calculated. iv. Mined out Depth as on date Vs EC Permitted depth. v. Details of illegal/illicit mining carried out, if any vi. Non-compliance/Violation in the quarry during the past working. vii. Quantity of material mined out outside the mine lease area (or) in the adjacent quarry/land. 	We will submit the letter during Final EIA presentation.

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	viii. Existing condition of Safety zone/benches ix. Details of any penalties levied on the PP for any violation in the quarry operation	
3.	The PP shall furnish the Certified Compliance Report (CCR) obtained from IRO(SZ), MoEF&CC and the PP shall also furnish mitigation measures/action plan for the non-compliance stated in the Certified Compliance Report (CCR).	Noted and agreed to comply.
4.	The project proponent shall furnish documentary evidence from the concerned District Forest Officer showing the distance between the nearest R.F and the proposed quarry site.	Noted. Will submit documentary evidence from the concerned District Forest Officer showing the distance between the nearest R.F and the proposed quarry site
5.	The PP shall provide the cost estimate for carrying out the mitigation measures after consulting the concerned DFO.	Noted and agreed to comply.
6.	The PP shall furnish ownership details of all survey numbers in EIA report.	It is a Government Poramboke land and Tender gazette copy has been attached as Annexure.
7.	The PP shall submit the 'Action Plan' on the issues raised during the Public Hearing with budgetary provisions for the same.	Noted and agreed to comply
8.	The PP shall submit the controlled blasting measures for reducing the impacts due to the blasting operation in the proposed quarries within 1 km of the proposed quarry.	Will submit the controlled blasting measures for reducing the impacts due to the blasting operation in the proposed quarries within 1 km of the proposed quarry during Final EIA presentation.
9.	The PP shall submit a 'Conceptual Mining	Will submit during Final EIA

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	Plan' indicating the accessible ramp from the surface to the pit bottom keeping the benches intact for the dimension as stipulated in the Approved Mining Plan.	presentation.
10.	The PP shall submit the nature of buildings/structures, occupants and their profession, etc located within 500 m radius of the proposed quarry.	Noted and agreed to comply.
11.	<p>In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following:</p> <ul style="list-style-type: none"> (i) Original pit dimension (ii) Quantity achieved Vs EC Approved Quantity (iii) Balance Quantity as per Mineable Reserve calculated. (iv) Mined out Depth as on date Vs EC Permitted depth (v) Details of illegal/illicit mining (vi) Violation in the quarry during the past working. (vii) Quantity of material mined out outside the mine lease area (viii) Condition of Safety zone/benches (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m. 	It is a Government Poramboke land. Previous quarrying operation done by some other person.
12.	Details of habitations around the proposed mining area and latest VAO certificate	Complied. VAO certificate has been attached as Annexure-VII in Draft EIA

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	regarding the location of habitations within 300m radius from the periphery of the site.	report.
13.	The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m. (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs indicating the owner of the building, nature of construction, age of the building, number of the residents, their profession and income, etc.,	Noted. Enumerated study report will be submit on Final EIA report.
14.	The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within 1 km of the proposed quarry.	Hydrological report will be furnished in Final EIA report.
15.	The Proponent shall carry out Biodiversity study through reputed Institution and the same shall be included in EIA Report	Ecology and Biodiversity is studied for 10km radius around the project site and incorporated in chapter 3.
16.	The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.	Noted. Will submit with Final EIA report.
17.	In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall prepare and submit an 'Action Plan' for carrying out the realignment of the benches in	It is a new quarry

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	the proposed quarry lease after it is approved by the concerned Asst. Director of Geology and Mining during the time of appraisal for obtaining the EC.	
18.	However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC. when the depth of the working is extended beyond 30 m below ground level	The mining operation involves only 49.0m Surface Above Ground Level.
19.	The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/ Class mines manager appointed by the proponent.	The PP will furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent
20.	The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.	Noted. Agree to comply.
21.	The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidence.	It's a new quarry and newly operated by the proponent.
22.	If the proponent has already carried out the	There is no previous mining activity has

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	mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,	done. We obtained only EC from DEIAA, Krishnagiri.
23.	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?	There is no previous mining activity has done
24.	<p>Quantity of minerals mined out.</p> <ul style="list-style-type: none"> • Highest production achieved in any one year • Detail of approved depth of mining. • Actual depth of the mining achieved earlier. • Name of the person already mined in that leases area. • If EC and CTO already obtained, the copy of the same shall be submitted. • Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches. 	It is an existing quarry.
25.	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)	<p>Complied.</p> <p>All corners with coordinates of the mine lease area have attached with EIA report in chapter 2</p>
26.	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.
27.	The Project Proponent shall furnish	The photographs of fencing and green belt

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	<p>photographs of adequate fencing, green belt along periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.</p>	<p>along periphery will be submitted in final EIA report.</p>
28.	<p>The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justification, the anticipated impacts of the mining operations on the surrounding environment and the remedial measures for the same</p>	<p>The details of Geological reserves, Mineable reserves and Yearwise production reserves are tabulated in Chapter 2. The mining methodology and impacts are followed as on prescribed norms by Government.</p>
29.	<p>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.</p>	<p>Complied. Manpower requirements table attached in EIA report chapter 2</p>
30.	<p>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</p>	<p>Hydro geological study report will be submitted along final EIA report.</p>

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	actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided.	
31.	The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.	The proponent has furnished the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study details attached in EIA report chapter 3
32.	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.
33.	Rainwater harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	Noted. Agree to comply.
34.	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	Current land use of the study area has attached in EIA report chapter 3. Operational and post operational land use will be submitted.

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	prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given	
35.	Details of the land for storage of Overburden/Waste dump (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 1.0m of Topsoil and estimated quantity of Topsoil is 22440m ³ . Topsoil formation will be removed and transported to the needy users, only after obtaining permission and paying necessary seigniorage fees to the Government.
36.	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	The proposed mining lease area is not falling under critically polluted area.
37.	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.
38.	Impact on local transport infrastructure due to the Project should be indicated.	Traffic impact assessment has given in EIA report chapter 3.
39.	A tree survey study shall be carried out (nos.,	No tree species were found inside the

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	name of the species, diameter, etc.) both within the mining lease applied area & 300m buffer zone and its management during mining activity.	project site. only few shrubs and thorny bushes were present. Tree survey study details given in EIA report chapter 3.
40.	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.	Noted. The mining plan and mine closure plan has been approved by the Assistant Director, Department of Mining and Geology, Krishnagiri District
41.	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
42.	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 chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.	Around 2250 (450 per year) trees will be planted in and around the site. The list of trees to be planted are given below: 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
43.	Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted as per the	The green belt plan enclosed with mining plates in Annexure VII

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	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.	
44.	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.
45.	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.
46.	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.	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.
47.	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	Public health implication and remedial measures is given in EIA/EMP report.

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	allocations.	
48.	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.
49.	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.
50.	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
51.	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 an existing quarry. Government Poramboke Land. Earlier operation done by different persons.
52.	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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53.	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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Discussion by SEIAA and the Remarks: -

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.	Noted All the proponents in the cluster is discussed in Chapter-2
2	The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc.,	Green belt development, water sprinkling, tree plantation is discussed in chapter 2
3	The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.	Agreed to comply
4	Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.	Agreed to comply and will be submitted with final EIA report.

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5	The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan	Risk management plan is discussed in Chapter-7
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.
9	The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public.	Health of workers and staff is discussed in chapter 9.
10	The committee shall furnish an action plan to achieve sustainable development goals with reference to water, sanitation & 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	The biodiversity has been studied and discussed in chapter 3. The soil erosion map 10km

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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
15	Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.	The detailed study will be carried out and will be furnished in the Final EIA Report.

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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	Obtained and same has been attached as Annexure.
17	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services	Noted and public hearing details will be included along with final EIA report.
18	The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.	Noted and will be complied in Final EIA report.

Forests

19	The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife.	The biodiversity has been studied and discussed in chapter 3.
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 Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.	The water environment impacts and its mitigation measures has been given in Chapter 4

Water Environment

23	Hydro-geological study considering the contour map of the water table detailing the number of	The EMP details has been given in Chapter 8
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TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

	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	Erosional Control Measures.	Noted and will be complied in Final EIA report.
25	Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water bodies/ Rivers, & any ecological fragile areas.	There is 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. There is no protected areas, National Parks, Corridors and Wildlife pathways near project site.
26	The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.	Noted and will be complied in Final EIA report.
27	The project proponent shall study and furnish the details on potential fragmentation impact on natural environment, by the activities.	Noted. Agree to comply.
28	The PP shall study and furnish the impact on aquatic plants and animals in water bodies and	Noted. Agree to comply.

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

	possible scars on the landscape, damages to nearby caves, heritage site and archaeological sites possible landform changes visual and aesthetic impacts	
29	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	Noted. Agree to comply.
30	The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites	Environmental Impact Assessment study is detailed in Chapter 3.
Energy		
31	The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished.	Noted. Agree to comply.
Climate Change		
32	The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities	Agreed to comply
33	The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock.	A Risk Assessment and management Plan will be prepared and included in the final EIA/EMP 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.

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

EMP		
35	Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued	Environment Management Plan has been described in detail in Chapter-10 of the Draft EIA/EMP Report.
36	The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.	
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.
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.	A disaster management Plan will be prepared and included in the final EIA/EMP Report.
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, odal, vaari, canal, channel, river, lake pond, tank etc.	VAO certificate is enclosed as Annexure.

TOR Reply of Proposed Rough stone Quarry Over an Extent of 4.50.0 Ha

40	As per the MoEF& CC office memorandum F.No 12-65/2017-IA III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan	Agreed to comply
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 freshwater systems due to activities, contemplated during mining may be investigated and reported.	Agreed to comply

ANNEXURE-II
PRECISE AREA COMMUNICATION LETTER



ந.க.எண்.210/2018/கனிமம்

மாவட்ட ஆட்சியர் அலுவலகம்,
(புவியியல் மற்றும் சுரங்கத்துறை),
கிருஷ்ணகிரி மாவட்டம்,
கிருஷ்ணகிரி.
நாள் 02.05.2018

குறிப்பாணை

பொருள்: கனிமங்களும் குவாரிகளும் - சிறுகனிமம் - சாராரண கற்கள் கிருஷ்ணகிரி மாவட்டம் - சூளகிரி வட்டம் - துப்புகானப்பள்ளி கிராமம் அரசு புல எண் 637 (பகுதி-2) ல் 4.50.0 ஹெக்டேர் பரப்பளவில் அரசு நிலத்தில் அமைந்துள்ள சாதாரண கற்குவாரிக்கு டெண்டருடன் இணைந்த ஏல முறையில் குத்தகை வழங்க டெண்டர்/பொது ஏலம் நடத்தப்பட்டது - பொது ஏலத்தில் அதிக தொகை கோரிய திரு.கே.பி. ஆனந்த் த/பெ வி.பி.பெருமாள், பி.வேலம்பட்டி கிராமம், ஒ.ஜி.அள்ளி அஞ்சல், பெண்ணாகரம் வட்டம், தருமபுரி மாவட்டம் என்பவருக்கு சாதாரண கற்குவாரி குத்தகை வழங்குதல் தொடர்பாக அங்கீகரிக்கப்பட்ட சுரங்கத்திட்டம், தமிழ்நாடு மாநில சுற்றுச்சூழல் பாதிப்பு மதிப்பீட்டு ஆணையத்தின் தடையின்மைச் சான்று மற்றும் தமிழ்நாடு மாசு கட்டுப்பாட்டு வாரிய இசைவு ஆகியவற்றை பெற்று வழங்க கோருதல் - தொடர்பாக.

பார்வை:

1. கிருஷ்ணகிரி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.01நாள்: 19.01.2018.
4. 03.02.2018 அன்று தினமணி நாளிதழில் வெளியிடப்பட்ட பத்திரிக்கை செய்தி.
2. திரு.கே.பி. ஆனந்த் த/பெ வி.பி.பெருமாள், பி.வேலம்பட்டி கிராமம், ஒ.ஜி.அள்ளி அஞ்சல், பெண்ணாகரம் வட்டம், தருமபுரி மாவட்டம் என்பவரது டெண்டர் விண்ணப்பம் நாள்: 07.02.2018.

கிருஷ்ணகிரி மாவட்டம், சூளகிரி வட்டம், துப்புகானப்பள்ளி கிராமம் அரசு புல எண் 637 (பகுதி-2) ல் 4.50.0 ஹெக்டேர் பரப்பளவில் அமைந்துள்ள சாதாரண கற்குவாரிக்கு ஐந்து ஆண்டுகளுக்கு குவாரி குத்தகை வழங்குவது தொடர்பாக 07.02.2018 அன்று நடைபெற்ற பொது ஏலத்தில் திரு.கே.பி. ஆனந்த் த/பெ வி.பி.பெருமாள், பி.வேலம்பட்டி கிராமம், ஒ.ஜி.அள்ளி அஞ்சல், பெண்ணாகரம் வட்டம், தருமபுரி மாவட்டம் என்பவர் அரசு நிர்ணயம் செய்த குறைந்தபட்ச குத்தகை தொகையை விட அதிக தொகையான ரூ.60,00,000/- (ரூபாய் ஒரு அறுபது லட்சம் மட்டும்)ஐ பொது ஏலத்தில் கோரியதால் அவருக்கு தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959ன் வதி 8(6)(b)-ன்படி அவருக்கு கீழ்க்கண்ட நிபந்தனைகளுடன் குவாரி குத்தகை வழங்க உத்தேசிக்கப்பட்டுள்ளது.

(i) குவாரி குத்தகை வழங்க உத்தேசிக்கப்பட்டுள்ள குவாரிக்கு அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளியும், அரசு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி செய்யவேண்டும்.



(ii) அருகிலுள்ள கிராம சாலைகளுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும், இதற்கு நெடுஞ்சாலைகளுக்கு 50 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணிகளை செய்யவேண்டும்.

2. எனவே, கிருஷ்ணகிரி மாவட்டம், சூளகிரி வட்டம், துப்புசாலைப்பள்ளி கிராமம் அரசு புல எண் 637 (பகுதி-3) ல் 4.50.0 பரப்பளவில் புல வரைபடத்தில் குறிப்பிட்டுள்ள பகுதியில் குவாரி குத்தகை ஒப்பந்த ஆவணம் நிறைவேற்றும் நாளிலிருந்து ஐந்து ஆண்டுகளுக்கு சாதாரண கற்கள் வெட்டியெடுக்க குவாரி குத்தகை வழங்குதல் தொடர்பாக தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959ன் விதி 41 மற்றும் 42 ஆகியவற்றில் கண்டுள்ள காலவரையறைக்குள் அங்கீகரிக்கப்பட்ட சுரங்கத்திட்டம், தமிழ்நாடு மாநில சுற்றுச்சூழல் பாதிப்பு மதிப்பீட்டு ஆணையத்தின் இசைவு மற்றும் தமிழ்நாடு மாசுக் கட்டுப்பாட்டு வாரிய இசைவு ஆகியவற்றை சமர்ப்பிக்கவேண்டும் என திரு.கே.பி. ஆனந்த் த/பெ வி.பி.பெருமாள் என்பவருக்கு தெரிவிக்கப்படுகிறது.

3. உரிய காலத்தில் மேற்கண்ட ஆவணங்களை சமர்ப்பிக்க தவறினால் விதிகளின்படி உரிய நடவடிக்கை எடுக்கப்படும் எனவும், தெரிவிக்கப்படுகிறது.

4. மேற்கூறிய ஆவணங்களை சமர்ப்பித்த பின்பு குவாரி குத்தகை வழங்கப்பட்டு குவாரி குத்தகை ஒப்பந்த ஆவணம் நிறைவேற்றிய பின்பே மேற்கண்ட புலத்தில் குவாரிப்பணிகளை தொடங்கவேண்டும். தவறினால் தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் 1959ன் விதி 36 (அ)ன்படி உரிய நடவடிக்கை எடுக்கப்படும் எனவும் தெரிவிக்கப்படுகிறது.

இணைப்பு : புல வரைபடம்.

மாவட்ட ஆட்சியர்,
கிருஷ்ணகிரி.

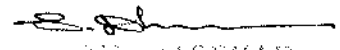
பெறுதல் :

திரு.கே.பி. ஆனந்த்
த/பெ வி.பி.பெருமாள்,
பி.வேலம்பட்டி கிராமம்,
ஓ.ஜி.அள்ளி அஞ்சல்,
பெண்ணாகரம் வட்டம்,
தருமபுரி மாவட்டம்

பதிவஞ்சலில்
அட்டையுடன்

நகல் : 1) தலைவர், கிருஷ்ணகிரி மாவட்ட சுற்றுச்சூழல் பாதிப்பு மதிப்பீட்டு ஆணையம், மாவட்ட ஆட்சியர் அலுவலகம், கிருஷ்ணகிரி.

2) ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, திரு.வி.க. தொழிற்போட்டை, கிண்டி, சென்னை - 32.


D. SASEKAR, District Collector
Puducherry, Tamil Nadu
22/05/2018

ANNEXURE-III
MINING PLAN APPROVED LETTER

From
Thiru L. Suresh, M.Sc.,
Deputy Director,
Geology and Mining,
Collectorate, Krishnagiri.

To
Thiru. K.P.Anand
S/o.V.P.Perumal ,
P.Velampatti village,
O.G.halli post,
Pennagaram Taluk,
Dharmapuri District.

Roc.210/2018/Mines dated .05.2018

Sir,

Sub: Mines and Minerals – Krishnagiri District – Shoolagiri Taluk – Thupukanapalli – Government Land in S.F.No.637(part-2) - Over an extent of 4.50.0 Hectares – Precise area given for the proposed grant of Quarry lease for Rough Stone for a period of 5 years from the date of execution of lease deed to Thiru.K.P.Anand S/o.V.P.Perumal – Draft Mining Plan submitted - Mining Plan approved - reg.

- Ref: 1. The Krishnagiri District Gazette (Extraordinary) No.01 dated 19.01.2018.
2. The District Collector Krishnagiri Memorandum in Rc.No.210/2018/Mines dated 09.03.2018.
3. Thiru.K.P.Anand S/o.V.P.Perumal , P.Velampatti village, O.G.halli post, Pennagaram Taluk, Dharmapuri District letter dated

-oOo-

Thiru.K.P.Anand S/o.V.P.Perumal , P.Velampatti village, O.G.halli post, Pennagaram Taluk, Dharmapuri District had been given precise area over an extent of 4.50.0 hectares in Government Poramboke land in S.F.No.637(part-2) of Thupukanapalli village, Shoolagiri Taluk, Krishnagiri District for a period of **Five years** from the date of execution of lease deed under Tender Cum Auction System under the provisions of Tamil Nadu Minor Mineral Concession Rules, 1959 and he had been directed to submit the approved mining plan and Environmental Clearance from the State Level Environmental Impact Assessment Authority Tamilnadu vide reference 2nd cited.

2. In the reference 3rd cited Thiru.K.P.Anand S/o.V.P.Perumal has submitted draft Mining Plan for approval for the proposed rough stone quarry lease over an extent of 4.50.0 hectares in Government Poramboke land in S.F.No.637(part-2) of Thupukanapalli village, Shoolagiri Taluk, Krishnagiri District for a period **Five years** from the date of execution of lease deed.

3. The Mining Plan submitted by Thiru.K.P.Anand S/o.V.P.Perumal has been scrutinized as per the guide lines/ Instructions issued by the Commissioner of Geology and Mining, Chennai-32 in Rc.No.3868/LC/2012 dated 19.11.2012. The mining plan is prepared in accordance with the guide lines/ instructions issued and tallies with the field conditions.


4. Hence as per the guide lines/ instructions issued by the Commissioner of Geology and Mining, Chennai, the said mining plan is hereby approved subject to the following conditions.

- i) That the mining plan is approved without prejudice to any other law applicable to the quarry lease from time to time whether such laws are made by the Central Government, State Government or any other authority.
- ii) This approval of the mining plan does not in any way imply the approval of the Government in terms of any other provisions of Mines and Minerals (Development and Regulation) Act 1957, or any other connected laws including Forest (Conservation) Act 1957, or any other connected Laws industry Forest (Conservation) Act 1980, Forest Conservation Rules 1981 Environment protection Act 1980, Indian Explosive Act 1884 (Central Act IV of 1884) and the rules made There under, Minor Mineral Conservation and Development Rules, and The Tamil Nadu Minor Mineral Concession rules, 1959.
- iii) That the mining plan is approved without prejudice to any other order or directions from any court of competent jurisdiction.
- iv) The applicant has incorporated all the conditions and details given in the District Collector, Krishnagiri Memorandum in Roc.No.210/2018/ Mines dated 09.03.2018 and the conditions should be adhered without any omission during quarrying.
- v) The applicant should get prior clearance from the State level Environment Impact Assessment Authority, Chennai -15 and should submit it to the District Collector, Krishnagiri.

5. The details of other quarries situated within a radial distance of 500 mts. from the lease granted area is

Sl. No.	Name of the Applicant/Lessee	Taluk / Village	S.F.No.	Extent in Hect	Collector's Proceedings No. & date	Lease period
1	THIRU.K.P.ANAND, S/o V.P.PERUMAL, NO. 2/10, VELAMPATTY POST, PENNAGARAM TALUK, DHARMAPURI DISTRICT - 636 809.	SHOOLAGIRI / THUPPUGANAPALLI	637 (PART-I)	4.00.0	Rc.209/2018/Mines dated 09.03.2018	Instant Proposal
2	HIRU.K.P.ANAND, S/o V.P.PERUMAL, NO. 2/10, VELAMPATTY POST, PENNAGARAM TALUK, DHARMAPURI DISTRICT - 636 809.	SHOOLAGIRI / THUPPUGANAPALLI	637 (PART-II)	4.50.0	Rc.210/2018/Mines dated 09.03.2018	Instant Proposal

3	M/s. AVS TECH BUILDING SOLUTIONS INDIA PRIVATE LIMITED, NO.298, SIPCOT STAFF HOUSING COLONY, MOOKANDAPALLI HOSUR TALUK, KRISHNAGIRI DISTRICT - 635 126.	SHOOLAGIRI / THUPPUGANAPALLI	637 (PART- III)	4.50.0	Rc.211/2018/Mines dated 09.03.2018	Instant Proposal
4	Manangkundram, AlaguGoundanpatti Post, Buthar Natham (via), Manaparai Taluk, Tiruchy.	Thuppuganapalli Hosur Taluk	420 (part-5)	5.00.0	Roc. 91/2008 (Mines-2) Dt. 29.3.2008	3.7.2008 to 2.7.2018
5	Thiru.S.Sundarayya, S/o.Late. Subramaniyam, 14/5, Amman Nagar, Hosur Taluk, Krishnagiri District.	Thuppuganapalli Hosur Taluk	420 (part-2)	3.00.0	Roc. 98/2016 (Mines) Dt. 08.08.2016	07.08.2016 to 06.08.2026
Total =				21.00.0		


 Deputy Director,
 Geology and Mining,
 Krishnagiri.


 2-5-18

Copy submitted to: 1. The Chairman, State Level Environment Impact Assessment Authority, 3rd Panagal maligai, No.1 Jeenes Road, Saidapet, Chennai -15.
 2. The Commissioner of Geology and Mining, Guindy, Chennai -32.

ANNEXURE-IV
500M Radius letter

PFrom

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

To

Thiru.K.P.Anand,
S/o. V.P.Perumal,
P.Velampatti Village,
O.G.Halli Post, Pennagaram Taluk,
Dharmapuri District.

Roc.No.210/2018/Mines Dated: 24.05.2023

Sir,

Sub: Mines and Minerals – Rough stone - Krishnagiri District - Shoolagiri Taluk - Thupukanapalli - Government land S.F.No. 637 (Part - 2) over an extent of 4.50.0 Hects – Tender Cum Auction conducted – Thiru. K.P.Anand declared as highest tenderer - Approved Mining Plan – Other quarry situated in 500 mtrs radial distance - requested – Details furnished - reg.

Ref: 1. The District Collector, Krishnagiri
Proc.Rc.No.210/2018 /Mines dated: 09.03.2018.
2. Mining Plan approved by the Deputy Director of
Geology and Mining, Krishnagiri in
Rc.no.210/2018/Mines dated: 02.05.2018.
3. Thiru. K.P.Anand, letter dated: 24.05.2023.

Kind attention is invited to the references cited above.

2) Tender Cum Auction has been conducted on 07.02.2018 for the grant of quarry lease to quarry rough stone in government lands situated in Krishnagiri district including S.F.No. 637 (Part - 2) over an extent of 4.50.0 Hects of Thupukanapalli Village, Shoolagiri Taluk.

3) Thiru.K.P.Anand has quoted highest lease amount and hence he has been declared as highest tenderer for the grant of quarry lease for quarrying Rough stone over an extent of 4.50.0 Hects of government lands in S.F.No. 637 (Part - 2) in Thupukanapalli Village, Shoolagiri Taluk, Krishnagiri District for a period of 05 (Five) year under the provisions of Rule 8 of Tamil Nadu Minor Mineral Concession Rules, 1959. In this regard, precise area communication has been issued to the applicant vide letter dated: 02.05.2018 with a direction to submit approved mining plan.

4) Accordingly, Thiru.K.P.Anand had submitted 03 copies of draft Mining Plan vide letter dated: 02.05.2018 and the same has been approved vide this office letter dated: 02.05.2018. 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	ROC .NO. dated	Village & Taluk	S.F No.	Extent in Het	Lease period.
1.	M/s. AVS Building Solutions India Private Limited, Plot No.298, Sipcot Staff Housing Colony, Mookandapalli, Hosur 635 126	Rc.No.211/2018 /Mines dated: 25.01.2018	Thupukanapalli, Shoolagiri Taluk	637 (Part - 3)	4.50.0	25.01.2019 to 24.01.2029
2.	S.Sundraiah, S/o Subramaniyam(Late) 14/5 Amman Nagar, Opp to Government ITI, HCF (Post), Hosur	Rc.No.98/2016 /Mines dated: 08.08.2016	Thupukanapalli, Shoolagiri Taluk	420 (Part - 2)	3.00.0	22.08.2016 to 21.08.2026

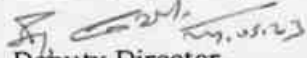
II. Details of abandoned/Old quarries.

Sl. No.	Name of the lessee	ROC dated NO.	Village & Taluk	S.F No.	Extent in Het	Lease period.
1.	Thiru.R.Rathinam, Manangkundram, Alagu Goundanapatti Post, Buthar Natham, Trichy.	Rc.No.91/2008 /Mines dated: 29.03.2018	Thupukanapalli, Shoolagiri Taluk	420 (Part - 5)	5.00.0	03.07.2008 to 02.07.2018


III. Details of other Proposed/applied quarries

Sl. No.	Name of the lessee	ROC.NO. dated	Village & Taluk	S.F No.	Extent in Het	Lease period.
1.	Thiru.Anand, V.P.Perumal, No.2/10, Velampatty Post, Pennagaram Taluk, Dharmapuri District 636809	Rc.No.210/2018 /Mines dated: 09.03.2018	Thupukanapalli, Shoolagiri Taluk	637 (Part - 2)	4.00.0	TCA E.C.Obtained Lease not yet granted
2.	Thiru.Anand, V.P.Perumal, No.2/10, Velampatty Post, Pennagaram Taluk, Dharmapuri District 636809	Rc.No.209/2018 /Mines dated: 09.03.2018	Thupukanapalli, Shoolagiri Taluk	637 (Part - 1)	4.00.0	TCA E.C.Obtained Lease not yet granted

3.	M/s. Sri Vari Infrastructure, Prop. Thiru Adal Arasu S/o, Ramathilagan, D.No.2/389, Poosaripatti Village and Sogathur Post, A. Reddyhalli, Dharmapuri.	Rc.No.231/2019 /Mines dated: 13.06.2019	Thuppugana palli and Agaram Agraharam Village, Shoolagiri Taluk	637 (Part) & 4 (Part)	2.00.0 & 0.95.0	Precise Area given
4.	M/s AVS Building Solutions India Private Limited, Plot No.298, Sipcot Staff Housing Colony, Mookandapalli, Hosur 635 126	Rc.No.230/2019 /Mines dated: 13.06.2019	Thupukanapalli, Shoolagiri Taluk	420 (Part - 5)	4.90.0	Precise Area given


 Deputy Director,
 Dept of Geology and Mining,
 Krishnagiri.

Copy to :-


 24/6/19

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

ANNEXURE - V
PIT DETAILS LETTER FROM AD MINES
&
REVISED MINING PLATES

From

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

To

Thiru.K.P.Anand,
S/o. V.P.Perumal,
P.Velampatti Village,
O.G.Halli Post, Pennagaram Taluk,
Dharmapuri District.

Roc.No. 210/2018/Mines**Dated: 01.09.2023****Sir,**

Sub: Mines and Minerals – Rough stone - Krishnagiri District - Shoolagiri Taluk - Thupukanapalli - Government land S.F.No. 637 (Part - 2) over an extent of 4.50.0 Hects – Tender Cum Auction conducted – Thiru. K.P.Anand declared as highest tenderer – Approved Mining Plan – Pit details requested– Details furnished - reg.

Ref: 1. The District Collector, Krishnagiri Proc.Rc.No.210/2018 /Mines dated: 09.03.2018.
2. Mining Plan approved by the Deputy Director of Geology and Mining, Krishnagiri in Rc.no.210/2018/Mines dated: 02.05.2018.
3. Thiru. K.P.Anand, letter dated: 01.08.2023

Kind attention is invited to the references cited above.

2) Tender Cum Auction has been conducted on 07.02.2018 for the grant of quarry lease to quarry rough stone in government lands situated in Krishnagiri district including S.F.No. 637 (Part - 2) over an extent of 4.50.0 Hects of Thupukanapalli Village, Shoolagiri Taluk.

3) Thiru.K.P.Anand has quoted highest lease amount and hence he has been declared as highest tenderer for the grant of quarry lease for quarrying Rough stone over an extent of 4.50.0 Hects of government lands in S.F.No. 637 (Part - 2) in Thupukanapalli Village, Shoolagiri Taluk, Krishnagiri District for a period of 05 (Five) years under the provisions of Rule 8 of Tamil Nadu Minor Mineral Concession Rules, 1959. In this regard, precise area communication has been issued to

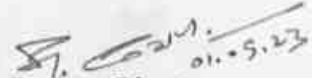
the applicant vide letter dated: 02.05.2018 with a direction to submit approved mining plan.

3) Accordingly, Thiru.K.P.Anand had submitted 03 copies of draft Mining Plan vide letter dated: 02.05.2018 and the same has been approved vide letter dated: 02.05.2018

4) In this connection, the applicant has requested to furnish the pit details of the lease to obtain environmental clearance from SEIAA.

5) In view of the above, the lease proposed area has been inspected by the Sub Inspector of Surveyor (Mines) and reported that mining operation is not yet started as on date since lease was not yet granted.

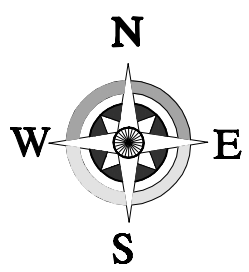
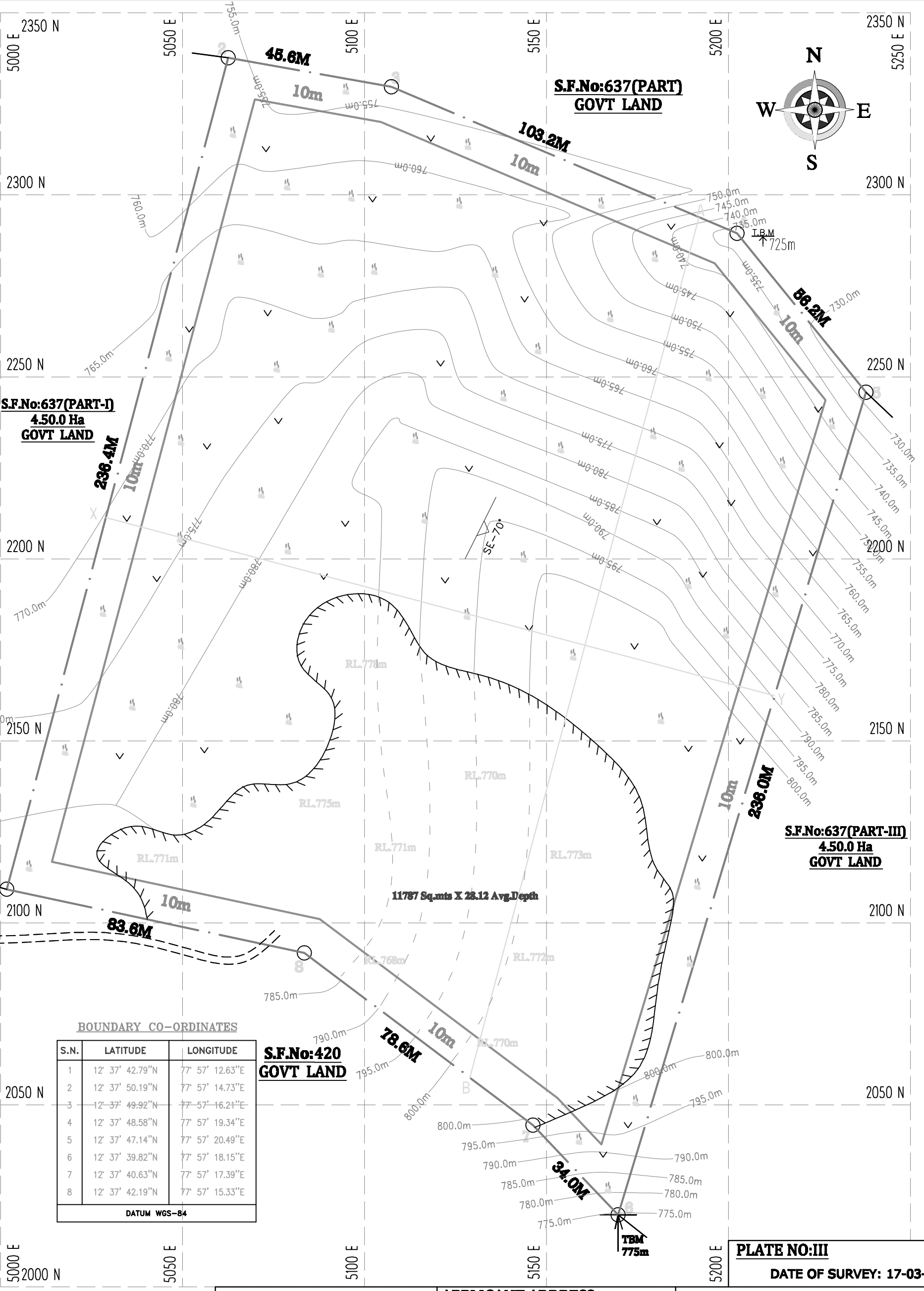
6) Further there is a old pit quarried on the strength of earlier lease granted in S.F.No. 637 (Part-2) vide District Collector's Proceedings Rc.No.89/2008/Mines, dated:07.07.2008 and the lease period was expired on 19.10.2013


Deputy Director,
Dept of Geology and Mining,
Krishnagiri.

Copy to :-


11/9/23

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



S.F.No:637(PART-I)
4.50.0 Ha
GOVT LAND

S.F.No:637(PART)
GOVT LAND

S.F.No:637(PART-III)
4.50.0 Ha
GOVT LAND

S.F.No:420
GOVT LAND

11787 Sq.mts X 28.12 Avg.Depth

BOUNDARY CO-ORDINATES

S.N.	LATITUDE	LONGITUDE
1	12° 37' 42.79"N	77° 57' 12.63"E
2	12° 37' 50.19"N	77° 57' 14.73"E
3	12° 37' 49.92"N	77° 57' 16.21"E
4	12° 37' 48.58"N	77° 57' 19.34"E
5	12° 37' 47.14"N	77° 57' 20.49"E
6	12° 37' 39.82"N	77° 57' 18.15"E
7	12° 37' 40.63"N	77° 57' 17.39"E
8	12° 37' 42.19"N	77° 57' 15.33"E

DATUM WGS-84

PLATE NO:III
DATE OF SURVEY: 17-03-2018

EXISTING PIT DETAILS:
11787 Sq.mts X 28.12 Avg.Depth
= 331450.44 CBM

STRIKE AND DIP	
CONTOUR LINE	
QUARRY ROAD	
SHRUB	

INDEX

QUARRY LEASE BOUNDARY	
10.0m SAFETY DISTANCE	
BOUNDARY PILLARS	
TEMPORARY BENCH MARK	
TOP SOIL	
ROUGH STONE	
EXISTING PIT	

APPLICANT ADDRESS:
THIRU.K.P.ANAND,
S/o.V.P.PERUMAL,
P.VELAMPATTI VILLAGE,
O.G. HALLI POST,
PENNAGARAM TALUK,
DHARMAPURI DISTRICT-636 809.

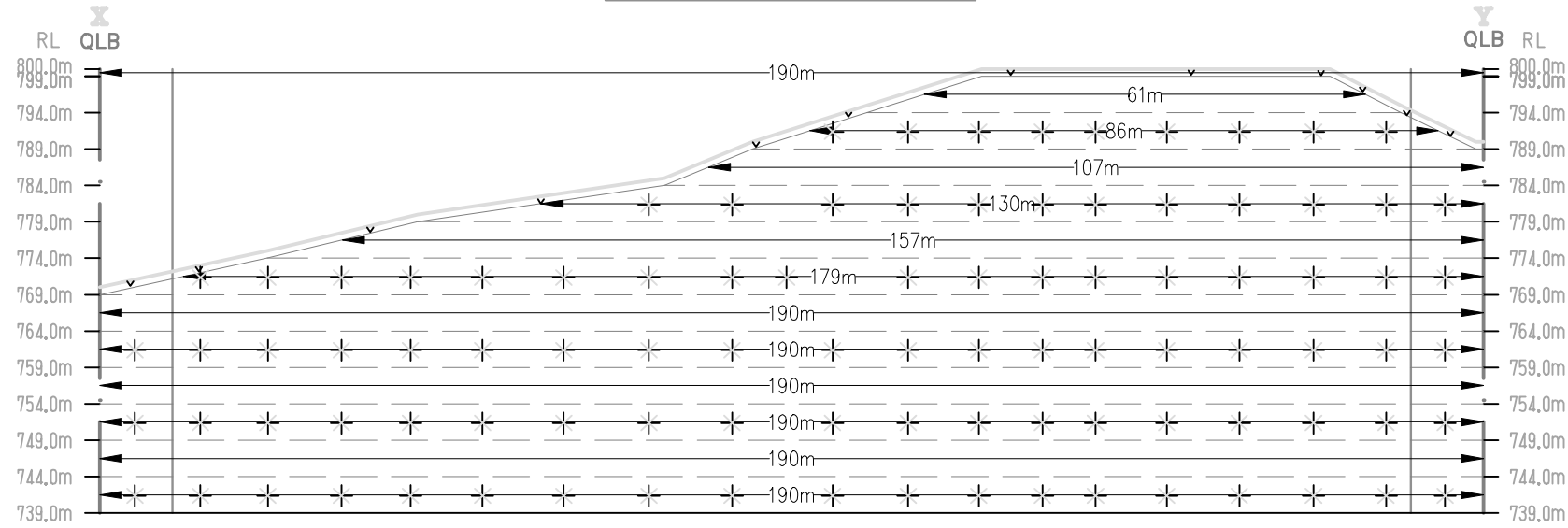
LOCATION OF QUARRY
EXTENT : 4.50.0Ha.
S.F.No : 637(PART-2),
VILLAGE : THUPPUGANAPALLI,
TALUK : SHOOLAGIRI,
DISTRICT : KRISHNAGIRI.

SURFACE & GEOLOGICAL PLAN
SCALE 1 : 1000

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

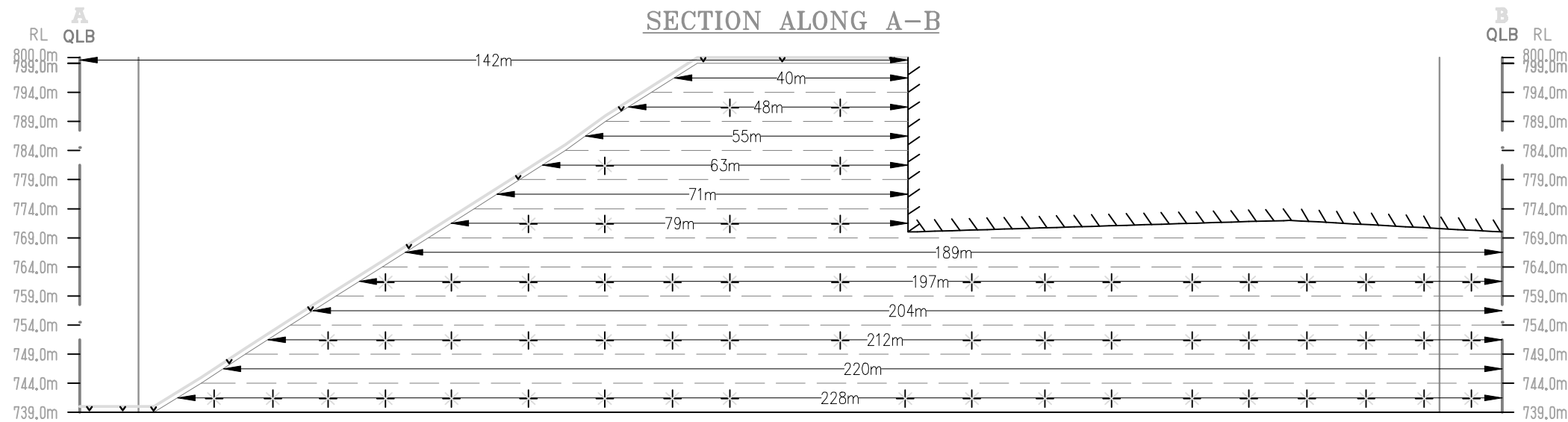
S.DHANASEKAR,M.Sc.,
QUALIFIED PERSON

SECTION ALONG X-Y



TOTAL DEPTH = 61m

SECTION ALONG A-B



GEOLOGICAL RESERVES							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Recoverable Reserve in Cbm(100%)	Topsoil
XY-AB	I	190	142	1			26980
	II	61	40	5	12200	12200	
	III	86	48	5	20640	20640	
	IV	107	55	5	29425	29425	
	V	130	63	5	40950	40950	
	VI	157	71	5	55735	55735	
	VII	179	79	5	70705	70705	
	VIII	190	189	5	179550	179550	
	IX	190	197	5	187150	187150	
	X	190	204	5	193800	193800	
	XI	190	212	5	201400	201400	
	XII	190	220	5	209000	209000	
	XIII	190	228	5	216600	216600	
Total=					1417155	1417155	26980

PLATE NO:III-A

DATE OF SURVEY: 17-03-2018

APPLICANT ADDRESS:

**THIRU.K.P.ANAND,
S/o.V.P.PERUMAL,
P.VELAMPATTI VILLAGE,
O.G. HALLI POST,
PENNAGARAM TALUK,
DHARMAPURI DISTRICT-636 809.**

LOCATION OF QUARRY

**EXTENT : 4.50.0Ha.
S.F.No : 637(PART-2),
VILLAGE : THUPPUGANAPALLI,
TALUK : SHOOLAGIRI,
DISTRICT : KRISHNAGIRI.**

INDEX

- QUARRY LEASE BOUNDARY**
- 10.0m SAFETY DISTANCE**
- TOP SOIL**
- ROUGH STONE**

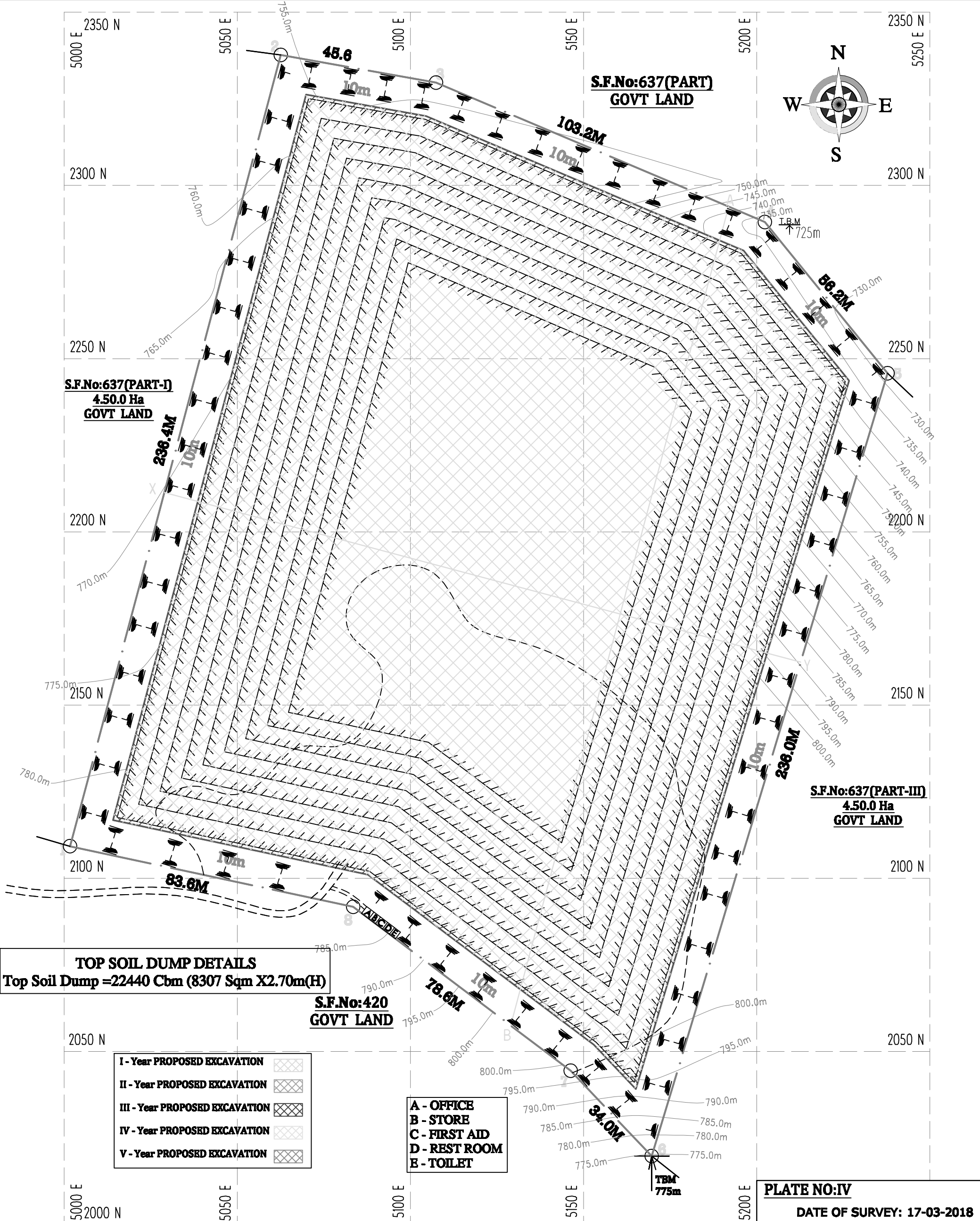
GEOLOGICAL SECTIONS

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



TOP SOIL DUMP DETAILS
 Top Soil Dump = 22440 Cbm (8307 Sqm X 2.70m(H))

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

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

PLATE NO:IV
 DATE OF SURVEY: 17-03-2018

CONTOUR LINE	
QUARRY ROAD	
PROPOSED DUMP	

INDEX	
QUARRY LEASE BOUNDARY	
10.0m SAFETY DISTANCE	
BOUNDARY PILLARS	
TEMPORARY BENCH MARK	
TOP SOIL	
ROUGH STONE	
QUARRY PIT	

APPLICANT ADDRESS:
 THIRU.K.P.ANAND,
 S/o.V.P.PERUMAL,
 P.VELAMPATTI VILLAGE,
 O.G. HALLI POST,
 PENNAGARAM TALUK,
 DHARMAPURI DISTRICT-636 809.

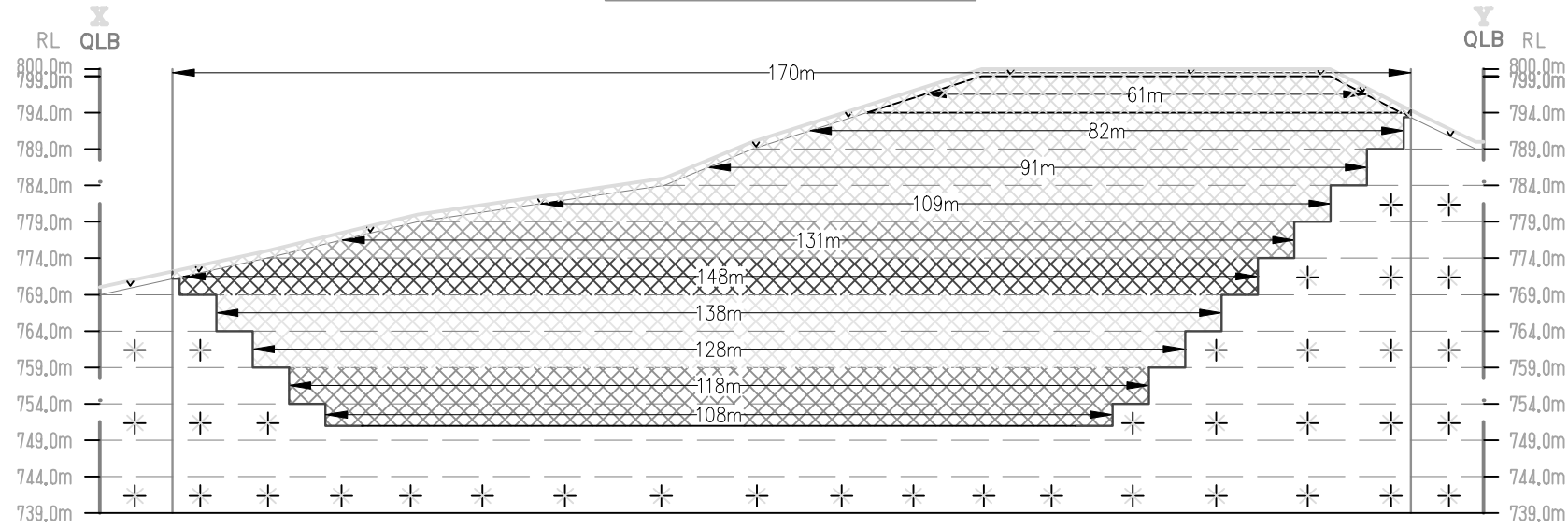
LOCATION OF QUARRY
 EXTENT : 4.50.0Ha.
 S.F.No : 637(PART-2),
 VILLAGE : THUPPUGANAPALLI,
 TALUK : SHOOLAGIRI,
 DISTRICT : KRISHNAGIRI.

YEARWISE DEVELOPMENT AND PRODUCTION PLAN
 SCALE 1 : 1000

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

S.DHANASEKAR,M.Sc.,
 QUALIFIED PERSON

SECTION ALONG X-Y



- I - Year PROPOSED EXCAVATION** [Cross-hatch pattern]
- II - Year PROPOSED EXCAVATION** [Cross-hatch pattern]
- III - Year PROPOSED EXCAVATION** [Cross-hatch pattern]
- IV - Year PROPOSED EXCAVATION** [Cross-hatch pattern]
- V - Year PROPOSED EXCAVATION** [Cross-hatch pattern]

TOTAL DEPTH = 49m

SECTION ALONG A-B

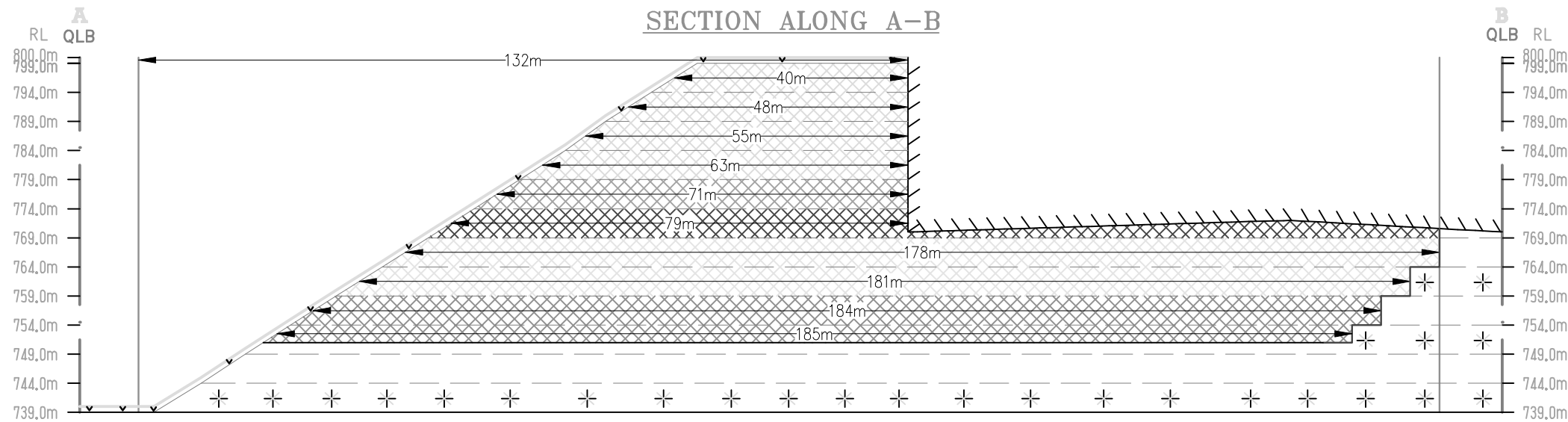


PLATE NO:IV-A

DATE OF SURVEY: 17-03-2018

APPLICANT ADDRESS:

**THIRU.K.P.ANAND,
S/o.V.P.PERUMAL,
P.VELAMPATTI VILLAGE,
O.G. HALLI POST,
PENNAGARAM TALUK,
DHARMAPURI DISTRICT-636 809.**

LOCATION OF QUARRY

**EXTENT : 4.50.0Ha.
S.F.No : 637(PART-2),
VILLAGE : THUPPUGANAPALLI,
TALUK : SHOOLAGIRI,
DISTRICT : KRISHNAGIRI.**

INDEX

- QUARRY LEASE BOUNDARY** [Dashed line symbol]
- 10.0m SAFETY DISTANCE** [Solid line symbol]
- TOP SOIL** [V-shaped symbol]
- ROUGH STONE** [Cross-hatch symbol]

YEARWISE DEVELOPMENT AND PRODUCTION SECTIONS

SCALE 1 : 1000

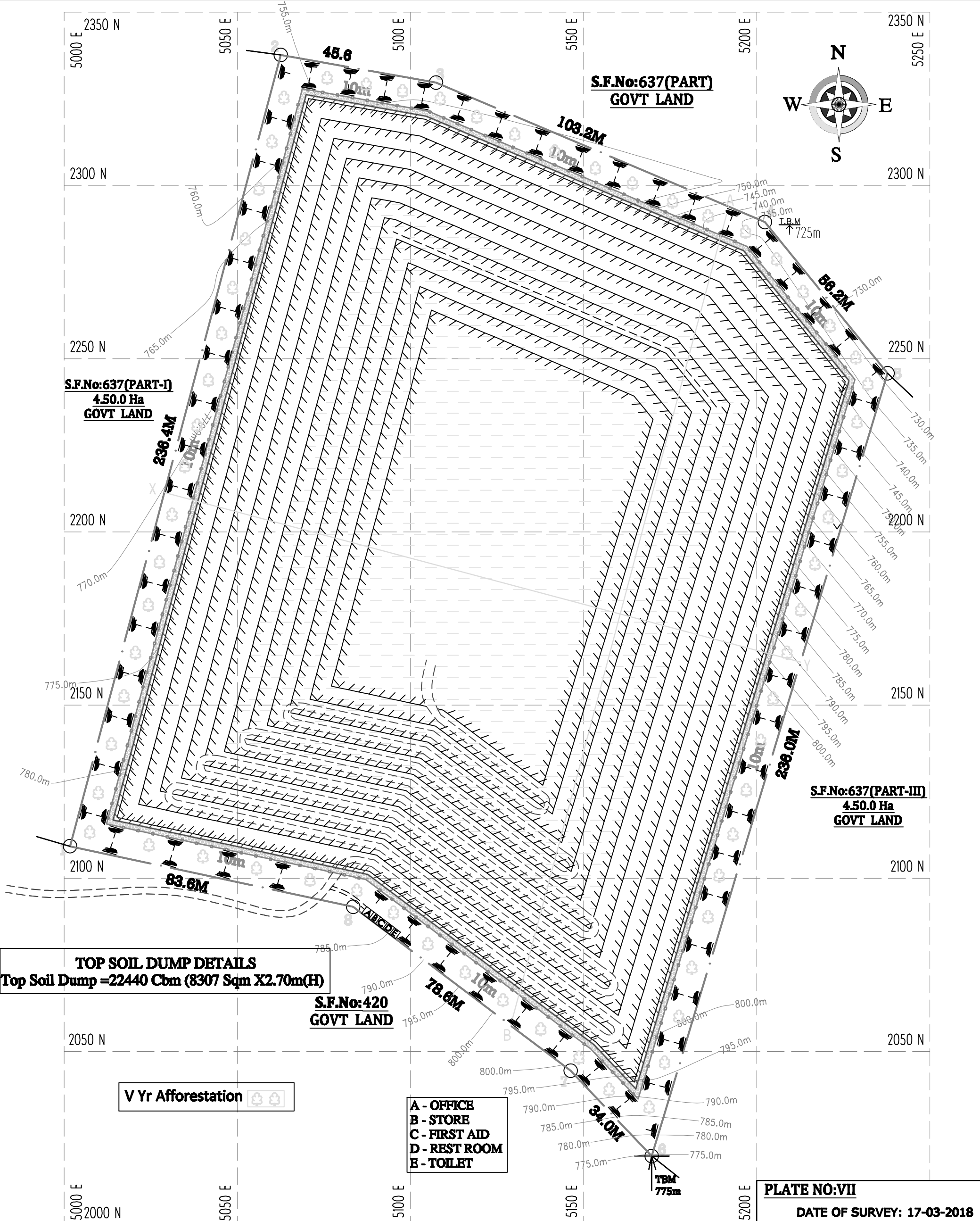
PREPARED BY:

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

S. Dhanasekar
**S.DHANASEKAR,M.Sc.,
QUALIFIED PERSON**

YEARWISE DEVELOPMENT AND PRODUCTION

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Recoverable Reserve in Cbm(100%)	Tops oil	
I-YEAR	XY-AB	I	170	132	1			22440	
		II	61	40	5	12200	12200		
		III	82	48	5	19680	19680		
		IV	91	55	5	25025	25025		
		V	109	63	5	34335	34335		
II-YEAR	XY-AB	VI	131	71	5	46505	46505		
III-YEAR		VII	148	79	5	58460	58460		
IV-YEAR		VIII	138	178	5	122820	122820		
		IX	128	181	5	115840	115840		
V-YEAR		X	118	184	5	108560	108560		
		XI	108	185	3	59940	59940		
Total=						603365	603365	22440	



TOP SOIL DUMP DETAILS
 Top Soil Dump = 22440 Cbm (8307 Sqm X 2.70m(H))

V Yr Afforestation

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

CONTOUR LINE	
TRUCK ROAD (QUARRY ROAD)	
FENCING	
PARAPET WALL	
PROPOSED WATER STORAGE	
ULTIMATE PIT LIMIT	
PROPOSED DUMP	

INDEX	
QUARRY LEASE BOUNDARY	
10.0m SAFETY DISTANCE	
BOUNDARY PILLARS	
TEMPORARY BENCH MARK	
TOP SOIL	
ROUGH STONE	
QUARRY PIT	

APPLICANT ADDRESS:
 THIRU.K.P.ANAND,
 S/o.V.P.PERUMAL,
 P.VELAMPATTI VILLAGE,
 O.G. HALLI POST,
 PENNAGARAM TALUK,
 DHARMAPURI DISTRICT-636 809.

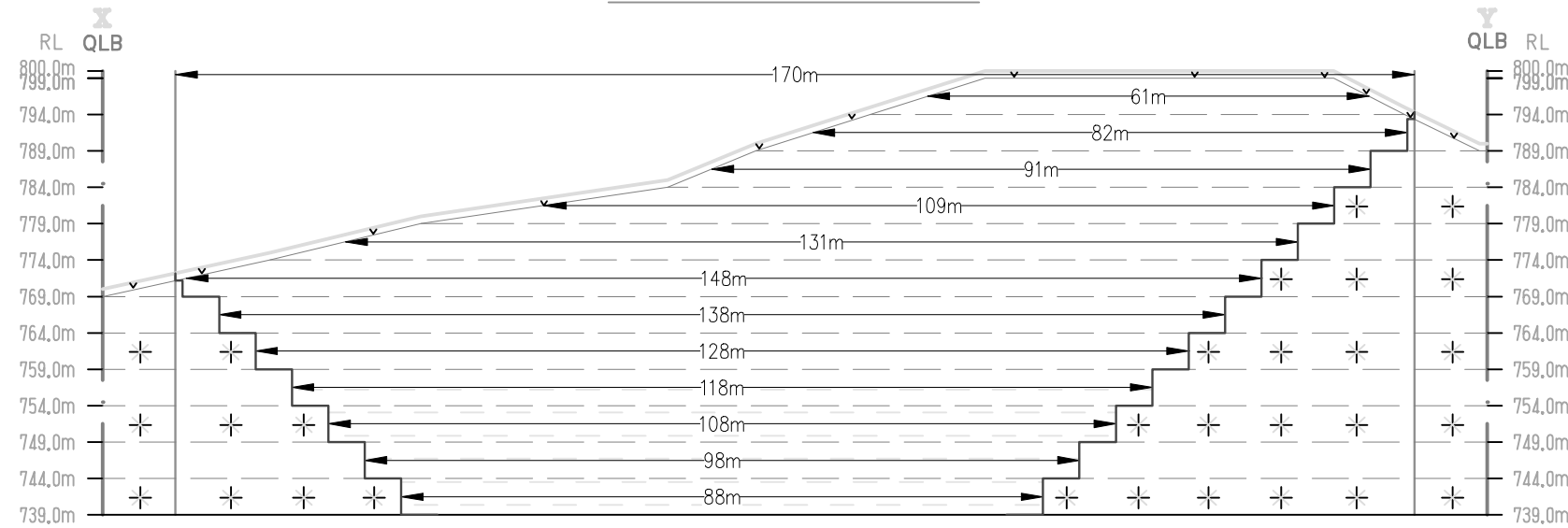
LOCATION OF QUARRY
 EXTENT : 4.50.0Ha.
 S.F.No : 637(PART-2),
 VILLAGE : THUPPUGANAPALLI,
 TALUK : SHOOLAGIRI,
 DISTRICT : KRISHNAGIRI.

CONCEPTUAL / FINAL MINE CLOSURE PLAN
 SCALE 1 : 1000

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

S.DHANASEKAR,M.Sc.,
 QUALIFIED PERSON

SECTION ALONG X-Y



TOTAL DEPTH = 61m

PLATE NO:VII-A

DATE OF SURVEY: 17-03-2018

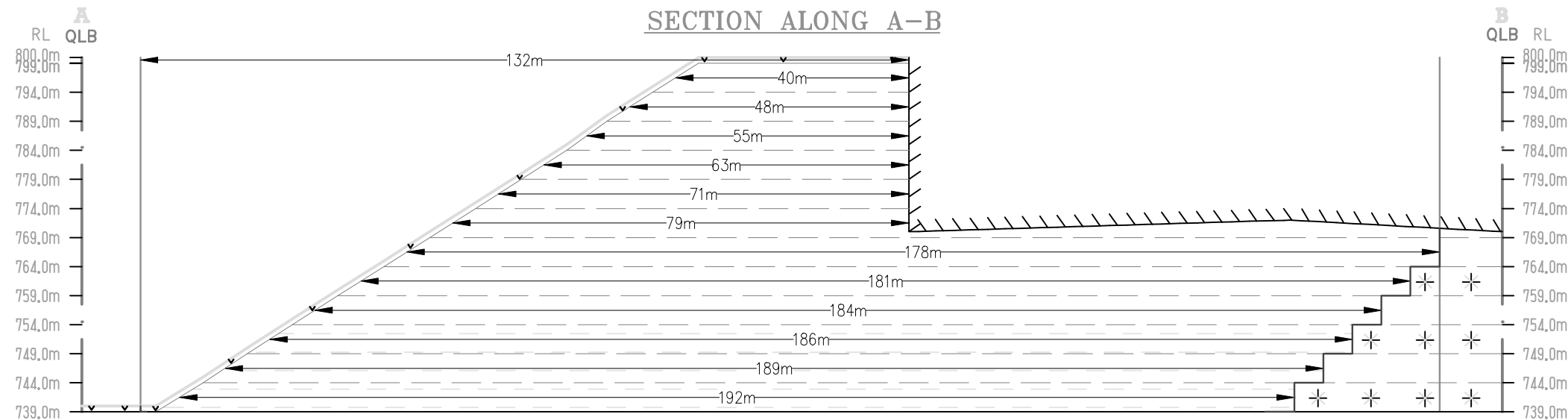
APPLICANT ADDRESS:

**THIRU.K.P.ANAND,
S/o.V.P.PERUMAL,
P.VELAMPATTI VILLAGE,
O.G. HALLI POST,
PENNAGARAM TALUK,
DHARMAPURI DISTRICT-636 809.**

LOCATION OF QUARRY

**EXTENT : 4.50.0Ha.
S.F.No : 637(PART-2),
VILLAGE : THUPPUGANAPALLI,
TALUK : SHOOLAGIRI,
DISTRICT : KRISHNAGIRI.**

SECTION ALONG A-B



INDEX

- QUARRY LEASE BOUNDARY**
- 10.0m SAFETY DISTANCE**
- TOP SOIL**
- ROUGH STONE**
- PROPOSED WATER STORAGE**
- ULTIMATE PIT SLOPE**

MINEABLE RESERVES							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Recoverable Reserve in Cbm(100%)	Tops oil
XY-AB	I	170	132	1			22440
	II	61	40	5	12200	12200	
	III	82	48	5	19680	19680	
	IV	91	55	5	25025	25025	
	V	109	63	5	34335	34335	
	VI	131	71	5	46505	46505	
	VII	148	79	5	58460	58460	
	VIII	138	178	5	122820	122820	
	IX	128	181	5	115840	115840	
	X	118	184	5	108560	108560	
	XI	108	186	5	100440	100440	
	XII	98	189	5	92610	92610	
	XIII	88	192	5	84480	84480	
Total=					820955	820955	22440

**ULTIMATE PIT DIMENSION
= 224.0m(L) X 170.0m(W) Avg X 61.0m(D)**

CONCEPTUAL / FINAL MINE CLOSURE SECTIONS

SCALE 1 : 1000

PREPARED BY:

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

**S.DHANASEKAR, M.Sc.,
QUALIFIED PERSON**

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

MINING PLAN



FOR

GRANT OF ROUGH STONE QUARRY LEASE IN GOVERNMENT PORAMBOKE LAND

PROPOSED PERIOD OF MINING 5 YEARS

(Prepared Under Rule 19 (1) Tamil Nadu Minor Mineral Concession Rules, 1959 & As
Per Amendment Under Rule 41 & 42)

LOCATION OF THE APPLIED AREA

EXTENT : 4.50.0 Ha.

S.F. NO : 637 (PART-II)

VILLAGE : THUPPUGANAPALLI.

TALUK : SHOOLAGIRI.

DISTRICT : KRISHNAGIRI.

STATE : TAMIL NADU.

APPLICANT

THIRU.K.P.ANAND,

S/o V.P.PERUMAL,

NO. 2/10, VELAMPATTY POST,

PENNAGARAM TALUK,

DHARMAPURI DISTRICT – 636 809.

PREPARED BY:

S.DHANASEKAR, M.Sc.,

RQP/MAS/225/2011/A

8/3, KULLAPPAN STREET,

OPP.INDIAN BANK LINE,

OMALUR TALUK – 636 455,

SALEM DISTRICT.

Email: geodhana@yahoo.co.in

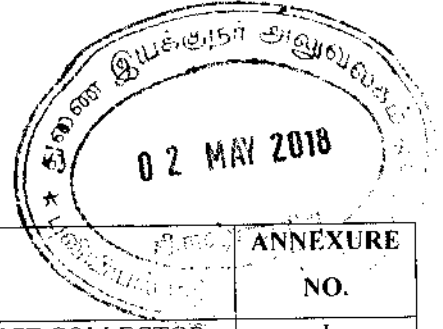
CELL : 98946-28970 & 73733-7470

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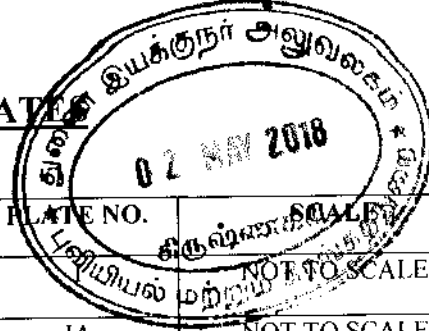
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K.P. ANAND,
S/o. V.P. PERUMAL,
VELAMPATI,
PENNAGARAM TALUK,
DHARMAPURI DISTRICT - 636809.



CONSENT LETTER FROM THE APPLICANT

The Mining Plan in respect of **Rough Stone** quarry over an extent of **4.50.0 Hectares** of **Government Poromboke** land in S.F.Nos. **637 (PART-II)** of **THUPPUGANAPALLI** Village, **SHOOLAGIRI** Taluk and **KRISHNAGIRI** District, Tamil Nadu State has been prepared by Shri. **S. Dhanasekar**, M.Sc., Regn.No. **RQP/MAS/225/2011/A**

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

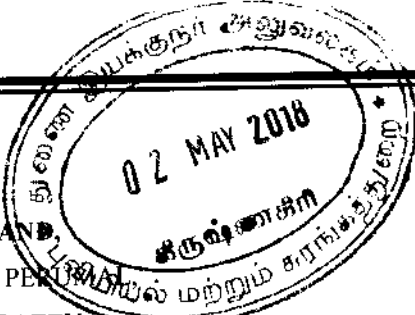
S.DHANASEKAR, M.Sc.,
RQP/MAS/225/2011/A
8/3, Kullappan Street,
Opposite Indian bank Line,
Omalur Taluk - 636455
Salem District.
E-Mail: geodhana@yahoo.co.in
Cell: 98946-28970

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

K.P. ANAND,
Signature of the Applicant

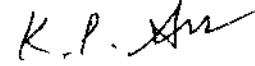
Place: **KRISHNAGIRI**

Date:


K.P. ANAND,
S/o. V.P. PERIYASAMY,
VELAMPATTY,
PENNAGARAM TALUK,
DHARMAPURI DISTRICT - 636809.

DECLARATION

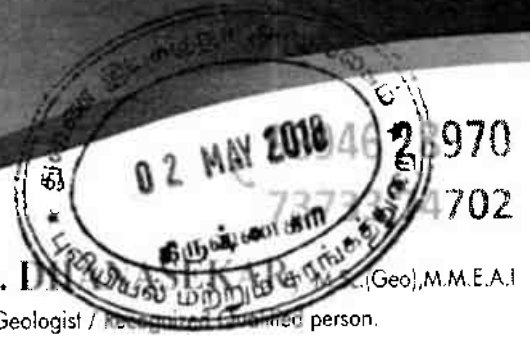
The Mining Plan in respect of **Rough Stone** quarry over an extent **4.50.0 Hectares** of **Government Poromboke** land in **S.F.Nos. 637 (PART-II) of THUPPUGANAPALLI Village, SHOOLAGIRI Taluk and KRISHNAGIRI District**, and Tamil Nadu State has been prepared with my consultation and I have understood the contents and agree to implement the same in accordance with the Mining Laws



K.P.ANAND,
Signature of the Applicant

Place: KRISHNAGIRI

Date:



KRK MEMORIAL MINING SERVICES

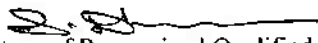
5/30-B, Avvai Nagar, Ponkumar Mines Road, Jagir Ammapalayam, Salem - 636302.
E-mail : krkmemorialminingservices@gmail.com

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** quarry lease over an extent of **4.50.0 Hectares of Government Poromboke land in S.F.Nos. 637 (PART-II) of THUPPUGANAPALLI Village, SHOOLAGIRI Taluk and KRISHNAGIRI District, Tamil Nadu State** obtained by **THIRU.K.P.ANAND** for Fresh quarry lease..

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

Certified


Signature of Recognized Qualified Person.
S.DHANASEKAR.
ROP/MAS/225/2011/A

Place: SALEM

Date:



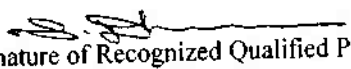
KRK MEMORIAL MINING SERVICES

5/30-B, Avvai Nagar, Ponkumar Mines Road, Jagir Ammapalayam, Salem - 636302.
E-mail : krkmemorialminingservices@gmail.com

CERTIFICATE

Certified that, in preparation of Mining Plan for **Rough Stone** quarry over an extent of **4.50.0 Hectares** of **Government Poromboke** land in S.F.Nos. **637 (PART-II)** of **THUPPUGANAPALLI** Village, **SHOOLAGIRI Taluk and KRISHNAGIRI** District, Tamil Nadu State for **THIRU.K.P.ANAND** 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 Recognized Qualified Person.
S. DHANASEKAR, M.Sc. (Geo)
RQP/MAS/225/2011/A

Place: SALEM

Date:

7. In order to ensure compliance of the order of the Honourable Supreme Court dated 27.02.2012 in I.A. No. 12.13.2011 in Special Leave Petition SLP(c) No 19628-19629/2009, it has been now decided that all mining projects of minor minerals including their renewal irrespective of sizes of the lease area hence forth require prior environmental clearance. Mining project within the lease area upto less than 25 ha including projects or minor mineral with lease area less than 5Ha would be treated as category B as defined in the EIA notification 2006 and will be considered by the state DEIAA notified by MoEF as prescribed procedure prescribed under EIA notification 2006.

8. This Mining Plan is prepared by considering the TNMMCR 1959, and as per the EIA Notification 2006 and it are subsequent amendments and judgments.

9. The lease period available Geological Reserves **5174246M³** and Mineable Reserves is estimated as **4135516M³** and recoverable reserves is estimated as **4135516M³** of **Rough Stone** after leaving necessary safety distance from the lease boundary as indicated in the Lease Granted Proceedings and relevant mining laws in force

10. Production Schedule is proposed an average production of five years about **3006000M³** of **Rough Stone**.

Production Schedule is proposed an average production of **601200M³** of **Rough Stone** per year.

11. 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 Level Environmental Impact Assessment Authority (SEIAA), under B2 Category.

12. Environmental measures to be adopted shall be,

i) Dust Control at source while drilling and Proposed Control Blasting,

ii) Dust suppression at loading point and transport haul roads,

iii) Noise Control in Proposed Control Blasting, control of fly rock missiles and vibration by doing peak particle velocity with in standard as prescribed by the DGMS and MoEF.

iv) Unnecessary land degradation should be avoided or damaged land should be reclaimed or rehabilitated.

v) Avoid uneven rat hole mining and follow scientific and systematic mining by safe bench system of open cast mining.

vi) Mining near major fracture zones if any should be avoided to control ground water fluctuation in the adjacent agricultural lands.

vii) Emission test of vehicles should be in stack to maintain minimum emission level of flue gases.

MINING PLAN FOR MINOR MINERALS
ROUGH STONE QUARRY
PROPOSED PERIOD OF MINING 5 YEARS

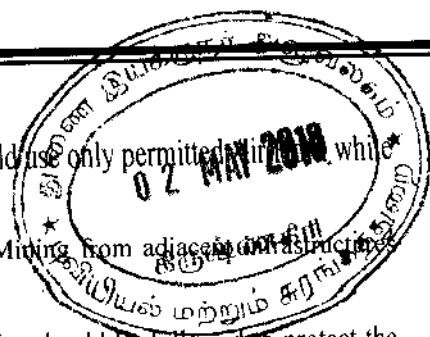
02 MAY 2018

Over an extent of 4.50.0 hectares of Government poromboke land in S.F.Nos. 637 (PART-II) of THUPPUGANAPALLI Village, SHOOLAGIRI Taluk, KRISHNAGIRI District, and Tamil Nadu State.
(Prepared Under Rule 19 (1) Tamil Nadu Minor Mineral Concession Rules, 1959 & As Per Amendment Under Rule 41 & 42)

1.0 INTRODUCTION AND EXECUTIVE SUMMARY:

1. **THIRU.K.P.ANAND, S/o V.P.PERUMAL** residing at VELAMPATTY, PENNAGARAM TALUK, And DHARMAPURI DISTRICT - 636809 has applied for the grant of quarry lease Under Tender/Auction to quarry Rough Stone over an extent of 4.50.0 Hectares of Government Poromboke land in S.F.Nos. 637 (PART-II) of THUPPUGANAPALLI Village, SHOOLAGIRI Taluk, KRISHNAGIRI District of Tamil Nadu State for a period of FIVE Years.
2. The Applicant has been the Successful bidder Highest Bidder Amount Rs. 60, 00,000 /- in a tender cum public action conducted by the Government of Tamilnadu and Rough Stone quarry lease had been granted to **THIRU.K.P.ANAND** in 4.50.0 Hectares of Government Poromboke land in S.F.Nos. 637 (PART-II) of THUPPUGANAPALLI Village, SHOOLAGIRI Taluk, and KRISHNAGIRI District of Tamil Nadu State for a period of FIVE Years Vide Proceeding No. RC.No. 210/2018/MINES dated: 09.03.2018.
3. The District Collector, KRISHNAGIRI in his letter Rc. No. 210/2018/MINES dated: 09.03.2018. Has directed the applicant to produce approved Mining Plan and Environmental Clearance certificate from the District Level Environmental Impact Assessment Authority (DEIAA) for the grant of quarry lease for the applied quarry area.
4. Accordingly, Mining Plan is prepared under Rule 19 (1) Tamil Nadu Minor Mineral Concession Rules, 1959 & As per Amendment under Rule 41 & 42 by incorporating the conditions imposed in the precise area communication letter and by incorporating all the details proposed in the letter No. DEIAA-TN/Minor Minerals / 2017 dated 13.06.2017 of District Level Environmental Impact Assessment Authority.
5. In the above circumstances **THIRU.K.P.ANAND** is here by preparing the Mining Plan for approval for fresh Rough Stone Quarry. And subsequent submission of Form-I and pre Feasibility report to obtain environmental clearance from the DEIAA of Tamil Nadu, Krishnagiri.
6. This Mining Plan is prepared for the Fresh Rough Stone Quarry for a period of Five Years.

- viii) Noise level should not exceed 80db and the vehicles should use only permitted roads while on road near residential areas.
- ix) Safety zones as prescribed by the Department of Geology and Mining from adjacent areas should be strictly adhering to.
- x) And any other conditions as stipulated by the concerned authorities should be followed to protect the environment.



2.0 EXECUTIVE SUMMARY:

a.	Name of the Village	:	THUPPUGANAPALLI
b.	Name of the Panchat / Union	:	THUPPUGANAPALLI / SHOOLAGIRI
c.	The proposed total Movable Reserves	:	4135516M³ (Total Depth of 141m) Top Soil 1m + Rough stone 140m) Ground surface above 64m and below 77m.
d.	The proposed quantity of reserves (level of production) for Five Years to be mined is (Recoverable reserves)	:	3006000M³ (Total Depth of 106m) Top Soil 1m + Rough stone 105m) Ground surface above 64m and below 42m.
e.	Total extent of the area	:	4.50.0 Ha
f.	Proposed Period of mining	:	Five years
g.	Proposed Depth of mining	:	64m from above ground Surface level and 42m from below ground Surface level, Total depth- 106m
h.	Existing Pit Dimension	:	PIT- : 11787 Sq.mt X Avg.28.12m (Depth) = 331450.44 Cbm
i.	Average production per year	:	601200M³
j.	Method of mining / level of mechanization	:	Opencast, Semi-mechanized Mining with a bench height of 7m 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 b. Operational Cost c. EMP Cost	:	Rs.62,60,000/- Rs. 20,00,000/- Rs. 3,70,000/-
m.	The area applied for lease is bounded by four corners and the coordinates are Latitude Longitude North East South East North West South West	:	Toposheet No. 57 - H/14 12° 37' 39.82"N To 12° 37' 50.19"N 77° 57' 12.63"E To 77° 57' 20.49"E 12° 37' 47.17" N 77° 57' 20.49"E 12° 37' 39.85" N 77° 57' 18.15"E 12° 37' 50.22" N 77° 57' 14.72"E 12° 37' 42.82" N 77° 57' 12.62"E

3.0 GENERAL INFORMATION:

3.1	a.	Name of the Applicant	:	THIRU.K.P.ANAND
	b.	Address of the Applicant with phone No and e-mail id if any	:	S/o. V.P. PERUMAL, VELAMPATTY, PENNAGARAM TALUK, DHARMAPURI DISTRICT - 636809.
	c.	Status of the Applicant	:	Individual
3.2	a.	Mineral Which the applicant intends to mine	:	Rough Stone
	b.	Precise area communication letter No. Lease granted Order	:	Re. No. 210/2018/MINES dated: 09.03.2018.
	c.	Period of permission	:	5 Years
	d.	Name and Address of the RQP preparing Mining Plan	:	S.Dhanasekar, M.Sc., RQP/MAS/225/2011/A 8/3, Kullappan Street, Opposite Indian bank Line, Omalur Taluk -636455, Salem District. Email: geodhana@yahoo.co.in
	e.	RQP Regn. No.	:	RQP/MAS/225/2011/A Valid up to 12.01.2021.



4.0 LOCATION: Details Area:

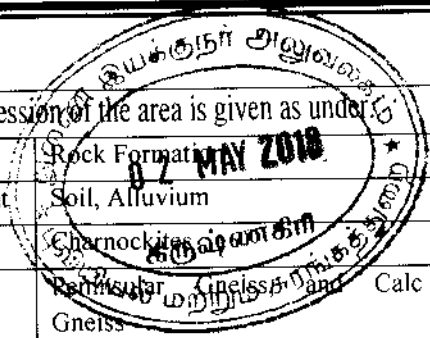
STATE	DISTRICT	PANCHAT / UNION	TALUK	VILLAGE	S.F.NO	EXTENT IN HECTARES
Tamil nadu	Krishnagiri	Thuppuganapalli / Shoolagiri	Shoolagiri	Thuppuganapalli	637 (PART-II)	4.50.0
TOTAL =						4.50.0 HA
b.	Classification of the Area (Ryotwari / poramboke / others)		:	It is a Government Poramboke land, which is not fit for vegetation/cultivation.		
c.	Ownership / Occupancy of the Existing Lease area (Surface rights)		:	It is a Government Poramboke land. The applicant had been given precise area for the proposed grant of Rough Stone Quarry Lease.		
d.	Toposheet No. with Latitude and Longitude		:	Toposheet No. 57 - H/14 : 12° 37' 39.82"N To 12° 37' 50.19"N : 77° 57' 12.63"E To 77° 57' 20.49"E		
e.	Existence of Public Road / Railway line if any nearby the area and approximate distance		:	UDDANAPALLI - SHOOLAGIRI Via (Samanapalli)= 3 Km UDDANAPALLI - SHOOLAGIRI= 10.0 Km UDDANAPALLI - SHOOLAGIRI - KRISHNAGIRI = 42.0 Km Quarry site is located in North Eastern side at a distance of 3 km. from UDDANAPALLI.		

PART - A



5.0 GEOLOGY AND MINERAL RESERVES:

5.1	a. Topography	<p>: 1. The area for fresh quarry lease is Hilly terrain with gentle elevation of 5m above the surface ground level and sloping towards South Eastern side covered with Rough Stone which does not sustain any type of vegetation.</p> <p>2. No major river is found nearby the fresh area.</p> <p>3. Water table is noticed at a depth of 90m from below the surface in the adjacent open wells of the area.</p> <p>4. Temperature of the area is reported to be 18°C to a maximum of 38°C during summer.</p> <p>5. Rainfall of this area is about 800mm to 900 mm during the monsoons in a year.</p>									
	<p>b. Infrastructures nearby the Existing Lease area.</p> <p>1. Post Office</p> <p>2. Police Station</p> <p>3. G.H</p> <p>4. Fire service</p> <p>5. Railway Station</p> <p>6. School</p> <p>7. Airport</p> <p>8. Seaport</p>	<p>: UDDANAPALLI - 3.0 kms</p> <p>: SHOOLAGIRI - 7.5.0kms</p> <p>: SHOOLAGIRI - 7.0kms</p> <p>: SHOOLAGIRI - 7.0kms</p> <p>: KELAMANGALAM - 10.0 kms</p> <p>: UDDANAPALLI - 3.0 kms</p> <p>: BANGALORE - 47 Kms</p> <p>: CHENNAI - 264 kms</p>									
	c. Regional Geology	<p>: 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 of the geological formations met within this District is as follows.</p> <table border="1" data-bbox="734 1523 1495 1713"> <thead> <tr> <th></th> <th>Age</th> <th>Rock Formation</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Recent to Sub recent</td> <td>Soil, Alluvium</td> </tr> <tr> <td>2.</td> <td>Archaean</td> <td>Granites, basic granulites, Peninsular Gneiss, Calc Gneiss and Charnockite</td> </tr> </tbody> </table>		Age	Rock Formation	1.	Recent to Sub recent	Soil, Alluvium	2.	Archaean	Granites, basic granulites, Peninsular Gneiss, Calc Gneiss and Charnockite
	Age	Rock Formation									
1.	Recent to Sub recent	Soil, Alluvium									
2.	Archaean	Granites, basic granulites, Peninsular Gneiss, Calc Gneiss and Charnockite									
	d. Geology of the Lease Area	<p>: 1. The area is mainly composed of Archaean crystalline metamorphic complex.</p> <p>2. The rock type noticed in the area for lease is Granite Gneiss which contains mostly Quartz and Feldspar with some ferromagnesian minerals.</p> <p>3. The Granite Gneiss is part of peninsular Gneisses, a high grade metamorphic rock.</p> <p>4. The general trend of formation is N 60° E – S 60° W and dip towards SE-60°.</p>									



The general geological succession of the area is given as under:

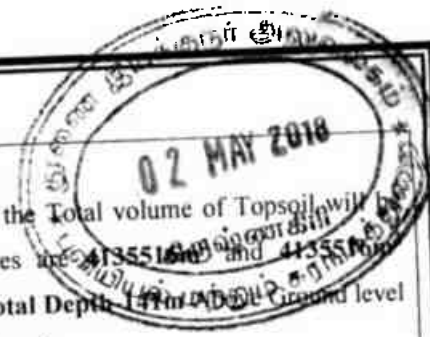
	Age	Rock Formation
1.	Recent to Sub recent	Soil, Alluvium
2.	Archaean	Charnockites
3.	Archaean	Granular Gneiss and Calc Gneiss

5.2 Details of Exploration already carried out if any :
 1. Since the **Rough Stone** is seen from the Surface itself, and seen in the existing pit, already exploration was done.
 2. However, the area was personally examined by the Geologist who prepared the Mining Plan.

5.3 a. Already excavated in pit dimensions : **PIT- : 11787 Sq.mt X Avg.28.12m (Depth) = 331450.44 Cbm**

b. Geological Reserves:
Top Soil: The Thickness of Top soil in this area is 1.0m and the total volume of topsoil will be 26980m³. The Available Geological reserve is estimated as 5174246m³ respectively, at the rate of 100% recovery upto a depth of wise. The Geological reserve of Rough stone and Top soil is calculated upto a depth of 64m from above surface ground level and 77m from below surface ground level, **Total Depth-141m (1m top soil + 140m Rough Stone).**

GEOLOGICAL RESERVES							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Recoverable Reserve in Cbm(100%)	Topsoil
XY-AB	I	190	142	1			26980
	II	66	42	7	19404	19404	
	III	102	53	7	37842	37842	
	IV	130	63	7	57330	57330	
	V	165	74	7	85470	85470	
	VI	190	187	7	248710	248710	
	VII	190	198	7	263340	263340	
	VIII	190	209	7	277970	277970	
	IX	190	220	7	292600	292600	
	X	190	231	7	307230	307230	
	XI	190	245	7	325850	325850	
	XII	190	245	7	325850	325850	
	XIII	190	245	7	325850	325850	
	XIV	190	245	7	325850	325850	
	XV	190	245	7	325850	325850	
	XVI	190	245	7	325850	325850	
	XVII	190	245	7	325850	325850	
	XVIII	190	245	7	325850	325850	
	XIX	190	245	7	325850	325850	
	XX	190	245	7	325850	325850	
	XXI	190	245	7	325850	325850	
Total=					5174246	5174246	26980

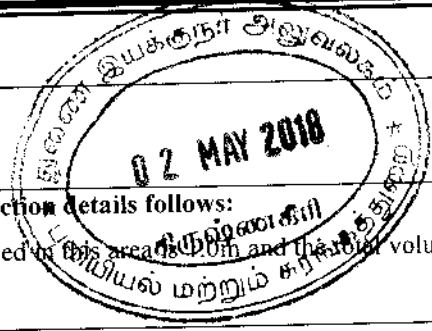


d. Recoverable Reserves:
Top soil: The Thickness of Top soil in this area is 1.0mts and the Total volume of Topsoil will be 26980m³. The mineable reserves and the recoverable reserves are 4135516m³ and 4135516m³ respectively, at the rate of 100% recovery upto a depth of wise. Total Depth 141m Above Ground level 64m and Below Ground Level 77m. (1m top soil + 140m Rough Stone).

MINEABLE RESERVES							
Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Recoverable Reserve in Cbm(100%)	Topsoil
XY-AB	I	190	142	1			26980
	II	66	42	7	19404	19404	
	III	102	53	7	37842	37842	
	IV	130	63	7	57330	57330	
	V	165	74	7	85470	85470	
	VI	190	187	7	248710	248710	
	VII	190	198	7	263340	263340	
	VIII	190	209	7	277970	277970	
	IX	190	220	7	292600	292600	
	X	190	231	7	307230	307230	
	XI	190	224	7	297920	297920	
	XII	190	214	7	284620	284620	
	XIII	190	204	7	271320	271320	
	XIV	190	194	7	258020	258020	
	XV	190	184	7	244720	244720	
	XVI	190	174	7	231420	231420	
	XVII	190	164	7	218120	218120	
	XVIII	190	154	7	204820	204820	
	XIX	190	144	7	191520	191520	
	XX	190	134	7	178220	178220	
	XXI	190	124	7	164920	164920	
Total=					4135516	4135516	26980

6.0 MINING:

6.1	Method of Mining	:	<ol style="list-style-type: none"> Opencast method of semi mechanized mining will be adopted to extract Rough Stone of required size. Machineries like Tractor mounted compressor attached with Jack hammers is proposed to drilling and Proposed Control Blasting. Excavators are proposed for quarrying of Rough Stone and Tippers / Lorries are proposed for the transportation of Rough Stone 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, smooth Proposed Control Blasting, block lifting using cranes and waste and are removal using Hydraulic excavator and loaded directly to the tippers and transported to the crushing plants into required size in the crushing plants from 75mm jelly to 10mm chips.



6.3	Proposed bench height & Width	:	Bench height = 7mts. Bench width = 5mts
6.4	Details of Overburden / Mineral Production proposed for Five year	:	Top Soil/ Overburden production details follows: The Thickness of topsoil noticed in this area is 0.08m and the total volume of topsoil will be 26980m ³ .

Year wise reserves calculations :

Rough stone production details as follows:

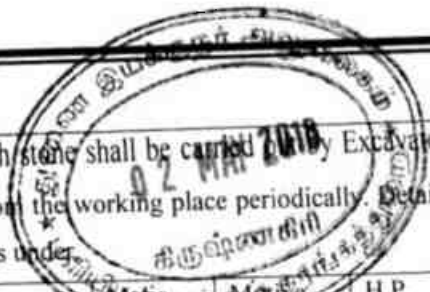
The average proposed rate of production of **Rough Stone** is about 3006000m³ for five years. The average proposed rate of production of **Rough Stone** is about 601200m³ per year. at the rate of 100% recovery upto a 106m depth (1m Top soil + 105m Rough Stone) Above Ground level 64m and Below Ground Level 42m. Proposed Production of five Years.

YEARWISE RESERVES

Section	Year	Bench	Length in (m)	Width in (m)	Depth in (m)	Volume in (Cu.m.)	Recoverable Reserve in Cbm (100%)	Topsoil
XY-AB	I-YEAR	I	190	142	1			26980
		II	66	42	7	19404	19404	
		III	102	53	7	37842	37842	
		IV	130	63	7	57330	57330	
		V	165	74	7	85470	85470	
		VI	190	187	7	248710	248710	
		VII	190	198	7	263340	263340	
	II-YEAR	VIII	190	209	7	277970	277970	
		IX	190	220	7	292600	292600	
	III-YEAR	X	190	231	7	307230	307230	
		XI	190	224	7	297920	297920	
	IV-YEAR	XII	190	214	7	284620	284620	
		XIII	190	204	7	271320	271320	
	V-YEAR	XIV	190	194	7	258020	258020	
		XV	190	184	7	244720	244720	
			XVI	48.854	174	7	59504	59504
Total=						3006000	3006000	26980

6.5 a. Mining : Drilling of shot holes will be carried out using compressor and jack hammer. Depth of holes shall be 1 to 2m bench height and spacing shall be 0.75m and burden shall be 0.60m from the preface. Details of drilling equipments are given below.

Type	Nos	Dia of hole	Size / Capacity	Make	Motive power	H.P.
Jack Hammer	6	25.5 mm	Hand held	Atlas copco 2Nos	Diesel	60



b Loading : Loading of waste and rough stone shall be 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 Tipper of 10 tonnes

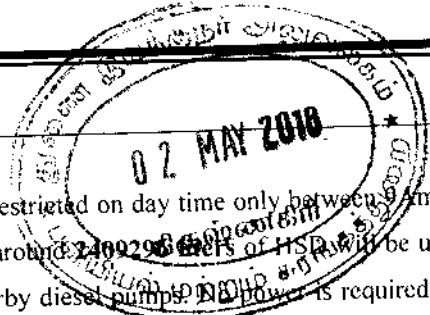
Type	Nos	Size / Capacity	Make	Motive power	H.P.
Tipper	3	10 M.T	Ashok Leyland	Diesel	110

6.6 Disposal of Overburden : The top soil of the lease area is 26980m³. Topsoil formation will be removed and Dumping to All Side of the 10.0m boundary barrier of the lease area, this will be done only after obtaining permission and paying necessary seignior age fees to the Government.

Proposed Dump Dimensions:
Top Soil-4012 Sqm X 6.72m(H) = 26980m³

6.7 Brief Note on Conceptual Mining Plan for the entire lease period : Conceptual Mining Plan is prepared with an object of Five year of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructures etc., Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc. Afforestation has been proposed on the boundary barrier by planting trees. All the baseline information studies like Air Quality monitoring, Noise and Vibration monitoring, Water Analysis studies will be carried out every year as per the MOEF norms. Average Ultimate Pit dimension in given as Under,

ULTIMATE PIT DIMENSION				
Section	Bench	Length in (m)	Width in (m)	Depth in (m)
XY-AB	I	190	142	1
	II	66	42	7
	III	102	53	7
	IV	130	63	7
	V	165	74	7
	VI	190	187	7
	VII	190	198	7
	VIII	190	209	7
	IX	190	220	7
	X	190	231	7
	XI	190	224	7
	XII	190	214	7
	XIII	190	204	7
	XIV	190	194	7
	XV	190	184	7
	XVI	48.854	174	7



Energy:

Electricity for mines and lights only at nights (working is restricted on day time only between 9 am to 5Pm). Diesel (HSD) will be used for quarrying machines around 2409296 liters of HSD will be used for the entire project life. Diesel will be brought from nearby diesel pumps. No power is required for the project. Lightings on the night will be taken from nearby electric poles after obtaining permission from concerned authorities.

For Top soil:

Per hour excavator will consume = 10 liters / hour
 Per hour excavator will excavate = 60m³ of Top soil
 For 26980m³ = 26980/60
 = 449.66 hours
 Diesel consumption 449.66 working hours = 449.66 x 10 liters
Total diesel consumption = 4496 liters of HSD will be utilized for top soil

For Rough stone:

Per hour excavator will consume = 16 liters / hour
 Per hour excavator will excavate = 20m³ of rough stone
 For 3006000m³ = 3006000/20
 = 150300 hours
 Diesel consume 150300 working hours = 150300 hours x 16 liters
Total diesel consumption = 2404800 liters of HSD will be utilized for rough stone

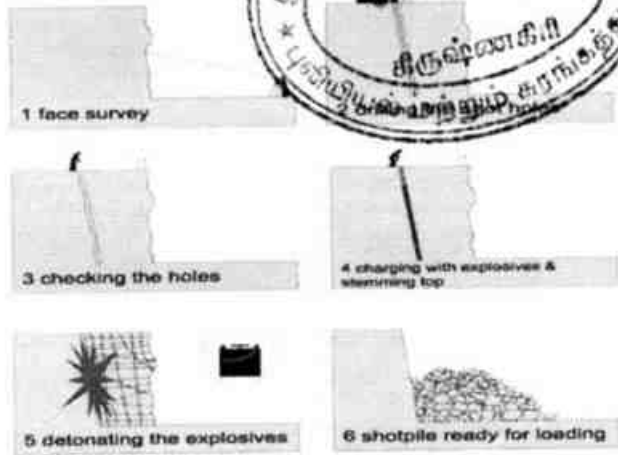
Total diesel consumption is around = 2409296 liters of HSD for the entire period of life

7.0 BLASTING:

7.1	Proposed Control Blasting Pattern :	<p>The massive formation shall be broken into pieces of portable size by drilling and Proposed Control Blasting using jack hammers and shot hole Blasting. Powder factor of explosives for breaking such hard rock shall be in the order of 6 to 7 tonnes per K.g of explosives. Proposed Control Blasting parameters are as follows.</p> <table border="1" data-bbox="758 1568 1508 2049"> <tr><td>Diameter of the hole</td><td>:</td><td>32-36 mm</td></tr> <tr><td>Spacing</td><td>:</td><td>60 Cms</td></tr> <tr><td>Depth</td><td>:</td><td>1 to 1.5m</td></tr> <tr><td>Charge / Hole</td><td>:</td><td>D.Cord with water or 70 gms of gun powder or Gelatine.</td></tr> <tr><td>Pattern of hole</td><td>:</td><td>Zig Zag</td></tr> <tr><td>Inclination of hole</td><td>:</td><td>70° from the horizontal.</td></tr> <tr><td>Quantity of rock broken</td><td>:</td><td>0.45 MT x 2.6 = 1.17 MT</td></tr> <tr><td>Control Blasting efficiency @ 90%</td><td>:</td><td>1.17 x 90% = 1.05MT / hole</td></tr> <tr><td>Charge per hole</td><td>:</td><td>140 gms of 25mm dia cartridge</td></tr> <tr><td>Quantity of rock broken per day</td><td>:</td><td>2004M³.</td></tr> </table>	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	:	2004M ³ .
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ROCK BLASTING



7.2 Types of Explosives

Following explosives are recommended for efficient Proposed Control Blasting with safe practice.

S. No	Description	Class / Division	Type	Size
1.	Slurry	Class - 3	Nitro Compound	25 x 200
2.	Nitrate Mixture	Class - 2	ANFO (Ammonium nitrate with 12% diesel)	Prepared at the site.
3.	Detonators	Class - 3	Ordinary and elec (OD & ED)	6.5 x 32
4.	Safety fuse	Class - 6	Blue sump fuse coils of 10mts each	

The applicant will approach the District Collector for grant of explosives license as the quantity of daily consumption is very low, i.e., less than 5Kgs.

7.3 Measures proposed to minimize ground vibration due to Proposed Control Blasting

The following steps shall be adopted to control ground vibration due to Proposed Control Blasting.

1. The minimum recommended delay time of 8ms was introduced to minimize ground vibration to avoid constructive interference of blast vibration waves and hence its impact or amplitude.
2. In case of electronic detonators, which are inherently much more accurate delays (+/- 0.2 milliseconds delay) to minimizes the ground vibration.
3. Use of Ammonium nitrate fuel oil mixture for shot holes may be avoided because which cause for high fly of rocks in view critical diameter problem. Only high strength explosives like slurry will be used in the form of cartridge.
4. Charge per hole should exceed the powder factor designed for each hole based on the quantum of Proposed Control Blasting, strength of rocks, fracture pattern etc.

7.4	Storage of Explosives and safety measures to be taken while Proposed Control Blasting.	<ol style="list-style-type: none"> 1. The applicant is advised to store 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 of any other quantity permitted by the concerned authorities in a portable magazine of S & B types. 3. The applicant is advised to engage an authorized explosive agency to carry out Proposed Control Blasting. 4. The Proposed Control Blasting time at a day is proposed to be 5 PM to 6 PM. 5. First Aid Box will be keeping ready at all the time. 6. Necessary precautionary announcement will be carried out before the Proposed Control Blasting operation.
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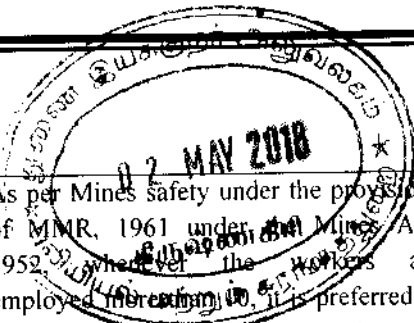
8.0 MINE DRAINAGE:

8.1	Depth of Water table	<p>The ground water table is reported as 90m below ground level in nearby wells of this area. (Mining depth taken as 64m from above ground Surface level and 42m from below ground Surface level, Total depth-106m). Now, the present quarry shall be proposed above the water table. Hence, quarrying may not affect the ground water.</p>
8.2	Arrangement and Places where the mine water is finally proposed to be discharged	<p>The ground water may not rise immediately in this type of mining. However, the rain water percolation and collection of water from the seepage shall be less than 300 lpm and it shall be pumped about periodically by a stand by diesel powered Centrifugal pump motivated with 7.5 H.P. Motor. The quality of water is potable and it is not contaminated with any hazardous things.</p>

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 follows																				
			<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>KEERANAPALLI</td> <td>1.5Kms</td> <td>200</td> </tr> <tr> <td>East</td> <td>SAMANAPALLI</td> <td>2.5Kms</td> <td>220</td> </tr> <tr> <td>South</td> <td>UDDANAPALLI</td> <td>3.0kms</td> <td>250</td> </tr> <tr> <td>West</td> <td>THUPPUGANAPALLI</td> <td>3.0Kms</td> <td>230</td> </tr> </tbody> </table>	Direction	Village	Distance in Kms	Population	North	KEERANAPALLI	1.5Kms	200	East	SAMANAPALLI	2.5Kms	220	South	UDDANAPALLI	3.0kms	250	West	THUPPUGANAPALLI	3.0Kms	230
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9.2	Power lines (HT/LT)	:	There is no power lines located within the safety distance prescribed under Tamil Nadu Minor Minerals Concession Rules, 1959.																				
9.3	Water bodies (River, Pond, Lake, Odai, Channel etc)	:	There is NO kulam/kanmoi are 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)	:	UDDANAPALLI – SHOOLAGIRI Via (Samanapalli)= 3 Km UDDANAPALLI - SHOOLAGIRI= 10.0 Km UDDANAPALLI – SHOOLAGIRI - KRISHNAGIRI = 42.0 Km Quarry site is located in North Eastern side at a distance of 3 km. from UDDANAPALLI.																				
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.,	:	There are no Reserved Forest / Forest / Social Forest / Wild Life Sanctuary etc within a radius of 500m.																				
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 10 kms. North Cauvery Wild life Sanctuary located within the distance of about 10.05 Kms Form fresh lease area. Wildlife Boundary GPS (12°32'19.40"N - 77°56' 30.03"E) Quarry Boundary GPS (12° 37 42.82"N - 77° 57' 12.62"E)																				
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 in a mine, 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 during the five years period to achieve the proposed production and to comply the provisions of the Government norms.</p> <table border="1" data-bbox="890 645 1445 1025"> <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 / Labours</td> <td>5 Nos</td> </tr> <tr> <td></td> <td></td> <td>Cleaners</td> <td>3Nos</td> </tr> <tr> <td></td> <td></td> <td>Office Boy</td> <td>1No</td> </tr> <tr> <td>4.</td> <td>Management & Supervisory staff</td> <td></td> <td>3No.</td> </tr> <tr> <td></td> <td>Total =</td> <td></td> <td>18Nos</td> </tr> </table>	1.	Skilled	Operator	2 No.			Mechanic	1 No.			Blaster/Mat	1 No.	2.	Semi - skilled	Driver	2 Nos	3.	Unskilled	Musdoor / Labours	5 Nos			Cleaners	3Nos			Office Boy	1No	4.	Management & Supervisory staff		3No.		Total =		18Nos
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4.	Management & Supervisory staff		3No.																																			
	Total =		18Nos																																			
10.2	Welfare Measures																																					
	a. Drinking Water	: Drinking water at the rate of 2Ltrs 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. Labour Health	: As per Mines Rule, Periodic medical examination has to be 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	<p>Safety provisions like helmet, goggles, safety shoes, Dust mask, Ear muffs etc have to be provided as per the circular orders issued made for Mine labour under the guidance of DGMS being a mechanized operation.</p> <p>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.</p>
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PART - B

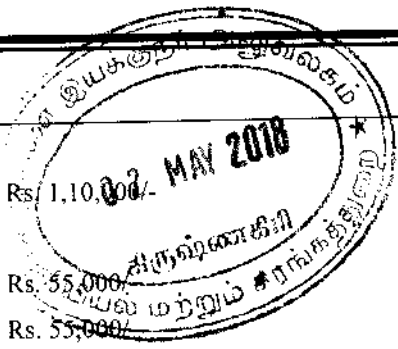
11.0 ENVIRONMENTAL MANAGEMENT PLAN:

11.1	Existing Land Use Pattern	<p>The existing land use pattern is given as under.</p> <table border="1" data-bbox="710 750 1412 1120"> <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>Quarrying Pit</td> <td>1.17.9</td> <td>4.30.9</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>0.01.0</td> <td>0.02.0</td> </tr> <tr> <td>4.</td> <td>Green Belt & dump</td> <td>NIL</td> <td>0.16.1</td> </tr> <tr> <td>5.</td> <td>Unutilized</td> <td>3.31.1</td> <td>NIL</td> </tr> <tr> <td></td> <td>Total =</td> <td>4.50.0Ha</td> <td>4.50.0Ha</td> </tr> </tbody> </table>	Sl. No.	Land Use	Present Area (Hect)	Area in use during the quarrying period (Hect)	1.	Quarrying Pit	1.17.9	4.30.9	2.	Infrastructure	NIL	0.01.0	3.	Roads	0.01.0	0.02.0	4.	Green Belt & dump	NIL	0.16.1	5.	Unutilized	3.31.1	NIL		Total =	4.50.0Ha	4.50.0Ha
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11.	Water Regime	<p>The ground water table is reported as 90m below ground level in nearby wells of this area. (Mining depth taken as 64m from above ground Surface level and 42m from below ground Surface level, Total depth- 106m). Now, the present quarry shall be proposed above the water table. Hence, quarrying may not affect the ground water.</p>																												
11.3	Flora and Fauna	<p>Except acacia bushes, no other valuable trees are noticed in the fresh 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 18°C during winter and to a maximum of 38°C during the summer.</p>																												

11.5	Human Settlement	<p>The nearest habitations with the population is given as under</p> <table border="1" data-bbox="703 248 1437 472"> <thead> <tr> <th data-bbox="703 248 842 315">Direction</th> <th data-bbox="842 248 1161 315">Village</th> <th data-bbox="1161 248 1289 315">in Kms</th> <th data-bbox="1289 248 1437 315">Population</th> </tr> </thead> <tbody> <tr> <td data-bbox="703 315 842 360">North</td> <td data-bbox="842 315 1161 360">KEERANAPALLI</td> <td data-bbox="1161 315 1289 360">1.5Kms</td> <td data-bbox="1289 315 1437 360">220</td> </tr> <tr> <td data-bbox="703 360 842 405">East</td> <td data-bbox="842 360 1161 405">SAMANAPALLI</td> <td data-bbox="1161 360 1289 405">2.5Kms</td> <td data-bbox="1289 360 1437 405">220</td> </tr> <tr> <td data-bbox="703 405 842 450">South</td> <td data-bbox="842 405 1161 450">UDDANAPALLI</td> <td data-bbox="1161 405 1289 450">4.0Kms</td> <td data-bbox="1289 405 1437 450">250</td> </tr> <tr> <td data-bbox="703 450 842 472">West</td> <td data-bbox="842 450 1161 472">THUPPUGANAPALLI</td> <td data-bbox="1161 450 1289 472">3.0Kms</td> <td data-bbox="1289 450 1437 472">230</td> </tr> </tbody> </table>	Direction	Village	in Kms	Population	North	KEERANAPALLI	1.5Kms	220	East	SAMANAPALLI	2.5Kms	220	South	UDDANAPALLI	4.0Kms	250	West	THUPPUGANAPALLI	3.0Kms	230
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11.6	Plan for Air, Dust Suppression	<p>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.</p> <p>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.</p>																				
11.7	Plan for Noise Control	<p>Quarrying of Rough Stone will be carried out by drilling and Proposed Control Blasting by using low power explosives, and hence, noise will be very minimum. However, periodical noise level monitoring will be carried out to check the noise level in and around the quarry site.</p> <p>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).</p>																				
11.8	Environmental Impact Assessment Statement Describing Impact on mining on the next five years	<p>Factors to be considered for EIA are,</p> <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	<p>Dust is expected to be generated from drilling, hauling roads; place of excavation etc and it will be suppressed by periodical wetting of lands.</p>																				
	b. Land degradation	<p>Land degradation is by means of cutting the trees and removal of fertile soil does not arise. Proposed usage of land for the next five years hall is less than 4.50.0Ha Afforestation will be started during the first year of mining operation itself.</p>																				

	c. Stabilization and vegetation of dumps	:	The topsoil 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 Proposed Control 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	:	<p>The top soil of the lease area is 26980m³. Topsoil formation will be removed and Dumping to All Side of the 10.0m boundary barrier of the lease area, this will be done only after obtaining permission and paying necessary seignior age fees to the Government.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="2">Proposed Dump Dimensions:</td> </tr> <tr> <td>Top Soil-</td> <td>4012 Sqm X 6.72m(H) = 26980m³</td> </tr> </table>	Proposed Dump Dimensions:		Top Soil-	4012 Sqm X 6.72m(H) = 26980m ³
Proposed Dump Dimensions:							
Top Soil-	4012 Sqm X 6.72m(H) = 26980m ³						
11.10	Proposal of Reclamation of Land affected during mining activities and at the end of mining.	:	The present mining is proposed to an average depth of 64m from above ground Surface level and 42m from below ground Surface level, Total depth- 106m . 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 will be planted along the lease boundary and avenues as well as over non active dumps at a rate 40 trees per annum with an interval of 5m. The rate of survival expected to be 80% in this area.				
11.12	Proposed Financial Estimate / Budget for (EMP) Environment Management	:					
	Fixed Asset Cost:						
	1. Land Cost	:	Rs.60,00,000/- (Leased Tender Amount for Government Poramboke Land)				
	2. Labour Shed	:	Rs. 60,000/-				
	3. Sanitary Facility	:	Rs. 50,000/-				
	4. Fencing cost	:	Rs. 1,50,000/-				
	Total=		Rs. 62,60,000/-				
	Operational Cost:						
	Machinery cost	:	Rs.20,00,000/-				

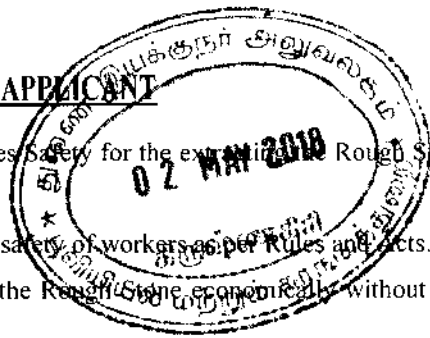
EMP Cost:		
1. Drinking water facility	: Rs. 1,10,000/-	
2. Safety kids	: Rs. 55,000/-	
3. Water sprinkling	: Rs. 55,000/-	
4. Afforestation	: Rs. 25,000/-	
5. Water quality test	: Rs. 50,000/-	
6. Air quality test	: Rs. 25,000/-	
7. Noise/vibration test	: Rs. 25,000/-	
8. Cost towards charity	: Rs. 25,000/-	
Total=	Rs. 3,70,000/-	
Total Project Cost	: Rs. 86,30,000/-	



12.0 MINE CLOSURE PLAN:

12.1	Steps proposed for phased restoration, reclamation of already mined out area.	: The present mining is proposed to an average depth of 64m from above ground Surface level and 42m from below ground Surface level, Total depth- 106m . 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 40 trees per year will be proposed.
12.3	Mitigation measures to be undertaken for safety and restoration/ reclamation of the already mined out area	: The pits were already opened by earlier Quarrying. Hence, the quarrying operation will be continued in the existing pit after making proper benches within 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 the expansion of Rough Stone from the Boundary barriers and for 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 economically without any wastage and to improve the environment and ecology.
- (iv) The District Collector, KRISHNAGIRI in his letter **Re. No. 210/2018/MINES** dated: **09.03.2018**. has directed the applicant to produce approved Mining Plan and Environmental Clearance certificate from the District Level Environmental Impact Assessment Authority (DEIAA) for the grant of quarry lease for the applied quarry area.
- (v) Accordingly, Mining Plan is prepared under Rule 19 (1) Tamil Nadu Minor Mineral Concession Rules, 1959 & As per Amendment under Rule 41 & 42 by incorporating the conditions imposed in the precise area communication letter and by incorporating all the details proposed in the letter No. DEIAA-TN/Minor Minerals / 2017 dated 13.06.2017 of District Level Environmental Impact Assessment Authority.
- (vi) In the above circumstances **THIRU.K.PANAND** is here by preparing the Mining Plan for approval for fresh Rough Stone Quarry. And subsequent submission of Form-I and pre Feasibility report to obtain environmental clearance from the DEIAA of Tamil Nadu, Krishnagiri.
- (vii) This Mining Plan is prepared for the freshs Rough Stone Quarry for a period of Five Years.
- (viii) The average proposed production of Rough stone for Five Years is **3006000m³** and average production per year is **601200m³**.

S. Dh
S.DHANASEKAR, P.S.O.
 ROF/MAS/225/2011/A

This Mining Plan is approved based on guidelines / instruction issued and in compliance of the particulars specified in the letter No. 210/2018 dated 2-5-2018 of the Deputy Director of Mining, Tamil Nadu, and subject to further to the conditions imposed in the letter No. 210/2018 dated 2-5-2018 under Tamil Nadu Minor Mineral Concession Rules, 1959 and 2001 and Environmental Protection and Development Rule 2018.

Deputy Director of Mining
[Signature]
 2-5-18

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

Letter Rec. No. 210/2018 dated 2-5-2018



ந.க.எண்.210/2018/கனிமம்

மாவட்ட ஆட்சியர் அலுவலகம்,
(புவியியல் மற்றும் சுரங்கத்துறை),
கிருஷ்ணகிரி மாவட்டம்,
கிருஷ்ணகிரி.
நாள் 02.05.2018

குறிப்பாணை

பொருள்: கனிமங்களும் குவாரிகளும் - சிறுகனிமம் - சாராரண கற்கள் கிருஷ்ணகிரி மாவட்டம் - சூளகிரி வட்டம் - துப்புகானப்பள்ளி கிராமம் அரசு புல எண் 637 (பகுதி-2) ல் 4.50.0 ஹெக்டேர் பரப்பளவில் அரசு நிலத்தில் அமைந்துள்ள சாதாரண கற்குவாரிக்கு டெண்டருடன் இணைந்த ஏல முறையில் குத்தகை வழங்க டெண்டர்/பொது ஏலம் நடத்தப்பட்டது - பொது ஏலத்தில் அதிக தொகை கோரிய திரு.கே.பி. ஆனந்த் த/பெ வி.பி.பெருமாள், பி.வேலம்பட்டி கிராமம், ஒ.ஜி.அள்ளி அஞ்சல், பெண்ணாகரம் வட்டம், தருமபுரி மாவட்டம் என்பவருக்கு சாதாரண கற்குவாரி குத்தகை வழங்குதல் தொடர்பாக அங்கீகரிக்கப்பட்ட சுரங்கத்திட்டம், தமிழ்நாடு மாநில சுற்றுச்சூழல் பாதிப்பு மதிப்பீட்டு ஆணையத்தின் தடையின்மைச் சான்று மற்றும் தமிழ்நாடு மாசு கட்டுப்பாட்டு வாரிய இசைவு ஆகியவற்றை பெற்று வழங்க கோருதல் - தொடர்பாக.

பார்வை:

1. கிருஷ்ணகிரி மாவட்ட அரசிதழ் சிறப்பு வெளியீடு எண்.01நாள்: 19.01.2018.
4. 03.02.2018 அன்று தினமணி நாளிதழில் வெளியிடப்பட்ட பத்திரிக்கை செய்தி.
2. திரு.கே.பி. ஆனந்த் த/பெ வி.பி.பெருமாள், பி.வேலம்பட்டி கிராமம், ஒ.ஜி.அள்ளி அஞ்சல், பெண்ணாகரம் வட்டம், தருமபுரி மாவட்டம் என்பவரது டெண்டர் விண்ணப்பம் நாள்: 07.02.2018.

கிருஷ்ணகிரி மாவட்டம், சூளகிரி வட்டம், துப்புகானப்பள்ளி கிராமம் அரசு புல எண் 637 (பகுதி-2) ல் 4.50.0 ஹெக்டேர் பரப்பளவில் அமைந்துள்ள சாதாரண கற்குவாரிக்கு ஐந்து ஆண்டுகளுக்கு குவாரி குத்தகை வழங்குவது தொடர்பாக 07.02.2018 அன்று நடைபெற்ற பொது ஏலத்தில் திரு.கே.பி. ஆனந்த் த/பெ வி.பி.பெருமாள், பி.வேலம்பட்டி கிராமம், ஒ.ஜி.அள்ளி அஞ்சல், பெண்ணாகரம் வட்டம், தருமபுரி மாவட்டம் என்பவர் அரசு நிர்ணயம் செய்த குறைந்தபட்ச குத்தகை தொகையை விட அதிக தொகையான ரூ.60,00,000/- (ரூபாய் ஒரு அறுபது லட்சம் மட்டும்)ஐ பொது ஏலத்தில் கோரியதால் அவருக்கு தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959ன் வதி 8(6)(b)-ன்படி அவருக்கு கீழ்க்கண்ட நிபந்தனைகளுடன் குவாரி குத்தகை வழங்க உத்தேசிக்கப்பட்டுள்ளது.

(i) குவாரி குத்தகை வழங்க உத்தேசிக்கப்பட்டுள்ள குவாரிக்கு அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீட்டர் பாதுகாப்பு இடைவெளியும், அரசு நிலங்களுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணி செய்யவேண்டும்.



(ii) அருகிலுள்ள கிராம சாலைகளுக்கு 10 மீட்டர் பாதுகாப்பு இடைவெளியும், இதற்கு நெடுஞ்சாலைகளுக்கு 50 மீட்டர் பாதுகாப்பு இடைவெளியும் விட்டு குவாரிப்பணிகளை செய்யவேண்டும்.

2. எனவே, கிருஷ்ணகிரி மாவட்டம், சூளகிரி வட்டம், துப்புக்காண்டியூர் கிராமம் அரசு புல எண் 637 (பகுதி-3) ல் 4.50.0 பரப்பளவில் புல வரைபடத்தில் குறிப்பிட்டுள்ள பகுதியில் குவாரி குத்தகை ஒப்பந்த ஆவணம் நிறைவேற்றும் நாளிலிருந்து ஐந்து ஆண்டுகளுக்கு சாதாரண கற்கள் வெட்டியெடுக்க குவாரி குத்தகை வழங்குதல் தொடர்பாக தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959ன் விதி 41 மற்றும் 42 ஆகியவற்றில் கண்டுள்ள காலவரையறைக்குள் அங்கீகரிக்கப்பட்ட சுரங்கத்திட்டம், தமிழ்நாடு மாநில சுற்றுச்சூழல் பாதிப்பு மதிப்பீட்டு ஆணையத்தின் இசைவு மற்றும் தமிழ்நாடு மாசுக் கட்டுப்பாட்டு வாரிய இசைவு ஆகியவற்றை சமர்ப்பிக்கவேண்டும் என திரு.கே.பி. ஆனந்த் த/பெ வி.பி.பெருமாள் என்பவருக்கு தெரிவிக்கப்படுகிறது.

3. உரிய காலத்தில் மேற்கண்ட ஆவணங்களை சமர்ப்பிக்க தவறினால் விதிகளின்படி உரிய நடவடிக்கை எடுக்கப்படும் எனவும், தெரிவிக்கப்படுகிறது.

4. மேற்கூறிய ஆவணங்களை சமர்ப்பித்த பின்பு குவாரி குத்தகை வழங்கப்பட்டு குவாரி குத்தகை ஒப்பந்த ஆவணம் நிறைவேற்றிய பின்பே மேற்கண்ட புலத்தில் குவாரிப்பணிகளை தொடங்கவேண்டும். தவறினால் தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் 1959ன் விதி 36 (அ)ன்படி உரிய நடவடிக்கை எடுக்கப்படும் எனவும் தெரிவிக்கப்படுகிறது.

இணைப்பு : புல வரைபடம்.

மாவட்ட ஆட்சியர்,
கிருஷ்ணகிரி.

பெறுதல் :

திரு.கே.பி. ஆனந்த்
த/பெ வி.பி.பெருமாள்,
பி.வேலம்பட்டி கிராமம்,
ஓ.ஜி.அள்ளி அஞ்சல்,
பெண்ணாகரம் வட்டம்,
தருமபுரி மாவட்டம்

பதிவஞ்சலில்
அட்டையுடன்

நகல் : 1) தலைவர், கிருஷ்ணகிரி மாவட்ட சுற்றுச்சூழல் பாதிப்பு மதிப்பீட்டு ஆணையம், மாவட்ட ஆட்சியர் அலுவலகம், கிருஷ்ணகிரி.

2) ஆணையர், புவியியல் மற்றும் சுரங்கத்துறை, திரு.வி.க. தொழிற்போட்டை, கிண்டி, சென்னை - 32.

சென்னை
25/05/2018
25/05/2018

தமிழ்நாடு அரசு
2017

39



கிருஷ்ணகிரி மாவட்ட அரசுத் துறை

சிறப்பு வெளியீடு

ஆணையின்படி வெளியிடப்பட்டது

கிருஷ்ணகிரி, டிசம்பர் 30, 2017 [எண் 24]
[வேலிளம்பி, மார்ச்சு 15 - திருவள்ளூர் ஆண்டு 2048]

மாவட்ட ஆட்சியர் அறிவிக்கை

[ந.க. எண். 72/2017 (கனிமம்), நாள் 27-12-2017]

கிருஷ்ணகிரி மாவட்டத்தில் அரசு புறம்போக்கு நிலங்களில் அமைந்துள்ள கல் குவாரிகளிலிருந்து சாதாரண கல் உடைக்க குத்தகை உரிமம் பெற முன்னுரிமை அடிப்படையில் பொன் விழா கிராம சுய வேலைவாய்ப்புத் திட்டத்தின் கீழ் பதிவு செய்யப்பட்ட சுய உதவி குழுக்கள் (SGSY) மற்றும் விடுவிக்கப்பட்ட கொத்தடிமை தொழிலாளர் சங்கங்களிடமிருந்து நேரடியாக விண்ணப்பங்களை வரவேற்கும் அறிவிக்கை.

1959 ஆம் ஆண்டு தமிழ்நாடு சிறு கனிமச் சலுகை விதிகளின் விதி 8 (10-A) ன்படி கிருஷ்ணகிரி மாவட்டத்தில் இயல்புநிலைகையுடன் இணைக்கப்பட்ட அட்டவணையில் குறிப்பிட்டுள்ள அரசு புறம்போக்கு நிலங்களில் அமைந்துள்ள சாதாரண கற்குவாரிகளிலிருந்து கட்டுமானப்பணிகளுக்கு உபயோகப்படுத்தப்படும் சாதாரண கட்டுக்கல், சக்கைகல், வேலிகல் ஜல்லி ஆகியவற்றை குவாரி செய்வதற்காக குத்தகை உரிமம் பெற விரும்பும் உள்ள உரிய அங்கீகாரம் பெற்ற பொன்விழா கிராம சுய வேலைவாய்ப்புத் திட்டத்தின் கீழ் பதிவு செய்யப்பட்ட சுய உதவி குழுக்கள் (SGSY) மற்றும் விடுவிக்கப்பட்ட கொத்தடிமை தொழிலாளர் சங்கங்கள் ஆகியவற்றிற்கு கீழ்க்கண்ட நிபந்தனைகளுக்குட்பட்டு நேரடியாக குத்தகை உரிமம் வழங்கும் பொருட்டு விண்ணப்பங்கள் 2018 ஆண்டு ஜனவரி மாதம் 17-ஆம் தேதி மாலை 15.00 மணிவரை வரவேற்கப்படுகிறது.

இந்த அரசிதழ்மூலம் இணைக்கப்பட்டுள்ள தமிழ்நாடு சிறு கனிமச் சலுகை விதிகளின் இணைப்பு VI-B ல் கண்டுள்ள படிவத்தில் பூர்த்தி செய்த விண்ணப்பங்கள் மேற்கண்ட நாள், நேரத்திற்குள் நேரிலோ, தபாலிலோ, கிருஷ்ணகிரி மாவட்ட ஆட்சியர் அலுவலகத்தின் அறை எண். 30 ல் உள்ள கிருஷ்ணகிரி மாவட்ட புலியியல் மற்றும் கிரங்கத்துறை, துணை இயக்குநர் அலுவலகத்திற்கு வந்து சேருமாறு அனுப்ப வேண்டும். மேலே குறிப்பிட்டுள்ள கால கெடுவிற்கு பிறகு தாமதமாக வந்து சேரும் மனுக்கள் எவ்வித காரணம் கொண்டும் ஏற்றுக்கொள்ளப்படமாட்டாது.

நிபந்தனைகள்

01. மேற்கண்ட குழு மற்றும் சங்கங்கள் தமிழ்நாடு கூட்டுறவு சங்கங்களின் சட்டம் 1983 (தமிழ்நாடு சட்டம் 30/1983) அல்லது தமிழ்நாடு சங்கங்களின் பதிவு சட்டம் 1975 (தமிழ்நாடு சட்டம் 27/1975) ஆகியவகளின் கீழ் பதிவு பெற்றிருக்க வேண்டும்.

02. சங்கம் பதிவு செய்யப்பட்ட பதிவுச்சான்றின் சான்றொப்பமிட்ட நகல் மனுவுடன் இணைக்கப்பட வேண்டும்.

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எல்லைக்குள்:

03. சங்கத்தின் செயல்பாட்டு எல்லை சங்கவிதிகளில் (Bye-law) வரைமுறை செய்யப்பட்டு இருக்க வேண்டும். இந்த விதியின்கீழ் விண்ணப்பிக்கும் போது மேற்படி சங்கத்தின் செயல்பாட்டிற்கென வரைமுறை செய்யப்பட்டுள்ள பஞ்சாயத்து எல்லைக்குள் அமைந்துள்ள குவாரிகளுக்கு மட்டுமே விண்ணப்பித்தல் வேண்டும். சங்கத்தின் தலைவரின் தலைமையில் இணைக்கப்படவேண்டும்.

04. சங்கங்களில் உள்ள அனைத்து உறுப்பினர்களும் கல்குவாரிகளில் குறைந்த பட்சம் இரு ஆண்டுகள் வேலை செய்த முன் அனுபவம் பெற்றிருக்க வேண்டும். இதற்கான சான்றிதழை மாவட்ட ஆட்சியரிடமிருந்து பெற்று இணைக்க வேண்டும்.

05. இத்துடன் இணைக்கப்பட்ட விண்ணப்ப படிவம் VI-B வரிசை எண் 9,10-ல் கூறப்பட்டுள்ளபடி வருமான வரி மற்றும் சுரங்க வரி நிலுவையில்லா சான்று அல்லது ரூ 20.00 (ரூபாய் இருபது மட்டும்) மதிப்புள்ள முத்திரைத்தாளில் ஆணை உறுதி வாக்குமூலம் நோட்டரி வழக்குரைஞர் முன்னிலையில் கையொப்பம் பெற்று விண்ணப்பப்படிவத்துடன் இணைக்கப்பட வேண்டும்.

06. ஒவ்வொரு சாதாரண கல்குவாரிக்கும் திரும்ப வழங்க இயலாத விண்ணப்ப கட்டணமாக ரூ 500/- (ரூபாய் ஐநூறு மட்டும்) மாவட்ட கருவூலத்தில் செலுத்தி அசல் செலுத்துச் சீட்டை விண்ணப்பப்படிவத்துடன் இணைக்க வேண்டும்.

07. கல்குவாரிகளுக்கான குவாரிக் குத்தகை உரிய சங்கங்களின் (அல்லது) குழுவினரின் பெயரிலேயே வழங்கப்படும். தனி நபர் பெயரில் வழங்கப்பட மாட்டாது.

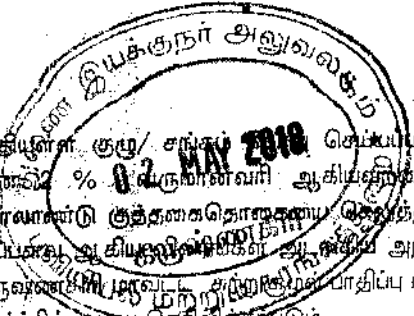
08. மாவட்ட ஆட்சியரை தலைவராக்க கொண்டும், மாவட்ட ஊராட்சி மன்றத் தலைவர் மற்றும் குவாரி அமைந்துள்ள ஊராட்சி ஒன்றியத் தலைவரை உறுப்பினராகக் கொண்டும், ஊரக வளர்ச்சித் துறையின் கூடுதல் ஆட்சியர் பதவிக்கு இணையான அலுவலர் மற்றும் புலியியல் மற்றும் சுரங்கத்துறை துணை இயக்குநரை அலுவல் சார்ந்த உறுப்பினராக கொண்டு அமைந்துள்ள சிறப்பு குழுவினரின் முன்னிலையில் மனுக்கள் பரிசீலிக்கப்பட்டு 60 நாட்களுக்குள் இறுதி ஆணை பிறப்பிக்கப்படும்.

09. இவ்விதியின் கீழ் வழங்கப்படும் குவாரியின் குத்தகை காலம் 05 (ஐந்து) ஆண்டுகளாகும், சூழ்நிலைக் கேற்பவும், போது நலன் கருதியும் கனிமத்தின் அளவைப் பொறுத்தும் குவாரி குத்தகை காலத்தை ஐந்து ஆண்டுகளுக்கு குறைவாக நிர்ணயம் செய்ய மாவட்ட ஆட்சியருக்கு அதிகாரம் உண்டு. தமிழ்நாடு சிறு கனிமச் சலுகை விதிகளின் விதி 8 (10-A) என்படி வழங்கப்படும் இந்த குவாரிக் குத்தகையை புதுப்பிக்க இயலாது.

10. ஒரே குவாரிக்கு குத்தகை கோரி சுய உதவிக் குழுவும் மற்றும் விடுவிக்கப்பட்ட கொத்தடிமைகளால் அமைக்கப்பட்ட தொழிலாளர் கூட்டுறவுச் சங்கமும் மறு செய்திருந்தால் முன்னுரிமை அடிப்படையில் விடுவிக்கப்பட்ட கொத்தடிமை தொழிலாளர் கூட்டுறவுச் சங்கத்திற்கு குவாரிக் குத்தகை அளிக்கப்படும்.

11. குவாரி அமைந்துள்ள பஞ்சாயத்து யூனியன் எல்லைக்குள் ஏற்கனவே பொது ஏலம் அல்லது டெண்டர் வாயிலாக குத்தகை விடப்பட்டிருந்தால் பெறப்பட்ட குத்தகை தொகையின் சராசரி அடிப்படையிலோ அல்லது அவ்வாறு பஞ்சாயத்து யூனியன் எல்லைக்குள் குவாரி ஏதும் டெண்டருடன் இணைந்த ஏலம் மூலம் குத்தகைக்கு விடப்பட வில்லையெனில் மாவட்டம் முழுவதும் ஏலம் விடப்பட்டுள்ள குவாரிகளின் குத்தகை தொகையின் அடிப்படையில் மாவட்ட ஆட்சியர் குத்தகை காலம் முழுமையாக்குமான ஒட்டு மொத்த குத்தகைத் தொகையை நிர்ணயம் செய்வார். அத்தொகையில் 50 % தள்ளுபடி செய்யப்பட்டு மீதி தொகை தற்போது குவாரிக்கான குத்தகைத் தொகையாக நிர்ணயிக்கப்படும். இக்குத்தகைத்தொகையை முதல் ஆண்டில் நான்கு தவணைகளாக செலுத்தப்பட வேண்டும். ஒவ்வொரு தவணைத் தொகையும் உரிய காலாண்டு காலம் ஆரம்பிக்கும் தேதிக்கு 15 நாட்களுக்கு முன்னரே செலுத்தப்பட வேண்டும். அவ்வாறு தொகையை செலுத்தத் தவறினால் அச்சங்கத்திற்கு/குழுவினருக்கு வழங்கப்பட்ட குவாரிக் குத்தகை மாவட்ட ஆட்சியரால் ரத்து செய்யப்படுவதுடன் குழு/ சங்கத்தினர் எதிர்காலத்தில் முன்னுரிமை முறையில் குவாரி குத்தகை பெறும் தகுதியை இழந்தவராவர். அச்சூழ்நிலையில் அவர்கள் மேற்கொண்டு குத்தகை கோரி மனுச் செய்திருந்தால் அம்மனு உடனடியாக தள்ளுபடி செய்யப்படும்.

12. மாண்புமிகு இந்திய உச்சநீதிமன்றம் வழக்கு எண் ஐ.ஏ 12-13/2012 எஸ்.எல்.பி (சி) எண்.19623 - 19629/2009 மற்றும் இவற்றின் மீது 27.02.2012 அன்று வழங்கியுள்ள ஆணைகளின்படியும், இந்திய அரசு சுற்றுச் சூழல் மற்றும் வனத்துறை குறிப்பானை எண். எல்.11011/47/2011 - IA. II(M) நாள் 18.05.2012ன்படியும், 1959-ஆம் வருடத்தைய தமிழ்நாடு சிறுகனிமச் சலுகை திருத்தம் செய்யப்பட்டு சேர்க்கப்பட்ட விதிகள் 41 மற்றும் 42-ல் கண்டுள்ளவாறு அங்கீகரிக்கப்பட்ட சுரங்கத்திட்டம் மற்றும் தமிழ்நாடு மாநில/கிருஷ்ணகிரி மாவட்ட சுற்றுசூழல் பாதிப்பு மதிப்பீட்டு ஆணையத்தின் தடையின்மை சான்று பெற்று சமர்ப்பித்த பின்பு மட்டுமே குவாரி குத்தகை வழங்க முடியும்.



13. எளவே இவ்விதிகளின்படி குவாரி குத்தகை உரிமம் பெற தகுதியுள்ள குழு/சங்கத்தினர் குழு/சங்கத்தினர் ஆகியவர்கள் செலுத்தப்படவுள்ள அலுவலகங்களுக்கு முதல் காலாண்டு குத்தகை தொகை மற்றும் அதற்கானவாசி ஆகியவற்றை உரிய காலத்திற்குள் செலுத்தாமாறு அறிவிக்கை அனுப்பப்படும். அவர்கள் முதல் காலாண்டு குத்தகை தொகையை செலுத்தியவுடன் அவர்களுக்கு குவாரி குத்தகை வழங்கப்பட்ட உள்ள குவாரியின் புல எண் பரப்பளவு ஆகியவற்றை அறிவிக்கை அனுப்பிவைத்து வழங்கப்பட்டு அங்கீகரிக்கப்பட்ட சுரங்கத்திட்டம் மற்றும் தமிழ்நாடு மாநில/கிருஷ்ணகிரி புவியியல் மற்றும் சுரங்கத்துறை துணை இயக்குநரிடம் பாதிப்பு மதிப்பீட்டு ஆணையத்தின் தடையின்மை சான்று ஆகியவற்றை உரிய காலத்திற்குள் சமர்ப்பிக்குமாறு அறிவிக்கப்படும்.

14. மேற்கண்ட அறிவிக்கை பெற்றுக்கொண்ட குழு/சங்கத்தினர் சுரங்கத்திட்டத்தை அங்கீகாரம் பெற்ற தகுதி வாய்ந்த நபர் (RQP) மூலம் அரசு தெரிவித்துள்ள விதிகள் மற்றும் வழிகாட்டுதலின் படி தயாரித்து அறிவிக்கை பெறப்பட்ட நாளிலிருந்து மூன்று மாத காலத்திற்குள் கிருஷ்ணகிரி புவியியல் மற்றும் சுரங்கத்துறை துணை இயக்குநரிடம் அங்கீகாரம் பெற சமர்ப்பிக்க வேண்டும்.

15. மேற்கண்ட குழு/சங்கத்தினர் கிருஷ்ணகிரி புவியியல் மற்றும் சுரங்கத்துறை துணை இயக்குநரால் அங்கீகாரம் வழங்கப்பட்ட சுரங்கத்திட்டத்தை தமிழ்நாடு மாநில/கிருஷ்ணகிரி மாவட்ட சுற்றுக்குழல் பாதிப்பு மதிப்பீட்டு ஆணையத்தின் முன்பு சமர்ப்பித்து தடையின்மை சான்று கோரி விண்ணப்பித்து தடையின்மை சான்று மற்றும் தமிழ்நாடு மாசுட்டுப்பாட்டு வாரிய இசைவு ஆகியவற்றை பெற்று சமர்ப்பிக்க வேண்டும்.

16. அ) குவாரி குத்தகை ஒப்பந்த ஆவணம் நிறைவேற்றம் முன்பு மேற்கண்ட குழு/சங்கத்தினர் மாவட்ட வன அலுவலர் ஓசூர் அவர்களது முன் அனுமதி பெற்று சமர்ப்பிக்க வேண்டும்.

ஆ) இரு மாநில எல்லையிலிருந்து ஐந்து கிலோமீட்டர் தொலைவிற்குள்ளும் வனவிலங்கு சரணாலயத்திலிருந்து பத்து கிலோமீட்டர் தொலைவிற்குள்ளும் அமைந்துள்ள குவாரிகளுக்கு மத்திய அரசு சுற்றுச்சூழல் ஆணையத்தின் முன் அனுமதி பெற்று சமர்ப்பிக்க வேண்டும்.

17. காவோரி வடக்கு வனஉயிரின சரணாலயத்திலிருந்து பத்து கிலோமீட்டர் தொலைவிற்குள் அமைந்துள்ள குவாரிகளுக்கு வனவிலங்கு தேசிய வாரிய நிலைக்குழுவிடமிருந்து (Standing Committee of National Board of Wildlife) தடையின்மை சான்று பெற்று சமர்ப்பிக்க வேண்டும்.

18. அங்கீகரிக்கப்பட்ட சுரங்கத்திட்டம் முதல் ஐந்து ஆண்டு காலத்திற்கு மட்டுமே செல்லத்தக்கதாகும்.

19. மேற்கண்ட ஆவணங்களை சமர்ப்பித்தபின்பு தகுதிவாய்ந்த குழு/சங்கத்தினருக்கு குவாரி குத்தகை வழங்கி மாவட்ட ஆட்சியரால் ஆணையிடப்படும்.

20. அங்கீகரிக்கப்பட்ட சுரங்கத்திட்டம் மற்றும் தமிழ்நாடு மாநில சுற்றுக்குழல் பாதிப்பு மதிப்பீட்டு ஆணையத்தின் தடையின்மை சான்று ஆகியவற்றை குறிப்பிட்ட காலக்கெடுவிற்குள் சமர்ப்பிக்க தவறினால் மாவட்ட ஆட்சியர் அவர்களால் சம்பந்தப்பட்ட சங்க நிர்வாகிகளுக்கு மாவட்ட ஆட்சியர் முன்பு விசாரணைக்கு ஆஜராக வாழ்ப்பளித்து விசாரணை நடத்தப்பட்டு ஏற்கனவே வழங்கப்பட்ட உத்தரவு ரத்து செய்யப்படும்.

21. குவாரி குத்தகை ஆணை வழங்கப்பட்ட பின்பு நிர்ணயிக்கப்பட்ட குத்தகை தொகையில் 10 சதவீதம் அல்லது ரூ 5000/- (ரூபாய் ஐந்தாயிரம் மட்டும்) இவற்றில் எது அதிகமோ அது காப்புத் தொகையாக செலுத்தப்பட வேண்டும் மற்றும் குவாரி குத்தகை வழங்கப்பட்ட பரப்பிற்கான பரப்புலரி செலுத்த வேண்டும் மற்றும் குறிப்பிட்டுள்ள கால கெடுவிற்குள் உரிய முத்திரை தாளில் குத்தகை ஒப்பந்தப்பத்திரம் தயார் செய்து மாவட்ட ஆட்சியர் அவர்களுடன் குத்தகை ஒப்பந்தம் நிறைவேற்றி சமர்ப்பிக்கப்படும். சார் பதிவாளர் அலுவலகத்தில் குத்தகைதாரர் தனது செலவில் பதிவு செய்து மீள சமர்ப்பிக்க வேண்டும்.

22. மாவட்ட ஆட்சியர் அவர்களுடன் ஒப்பந்தப்பத்திரம் நிறைவேற்றிய பின்னரே சம்பந்தப்பட்ட குழு/சங்கத்தினர் குவாரிப்பணி செய்ய அனுமதிக்கப்படுவர்.

23. அங்கீகரிக்கப்பட்ட சுரங்கத்திட்டத்தில் தெரிவித்துள்ளவாறு மட்டுமே குவாரிப்பணிகள் மேற் கொள்ளப்படவேண்டும் அதற்கு மாறாக குவாரிப்பணிகள் மேற்கொள்வது கண்டறியப்பட்டால் குவாரிப்பணியை நிறுத்தி வைப்பதற்கு மாவட்ட ஆட்சியரால் நடவடிக்கை எடுக்கப்படும்.



24. குத்தகை உரிமம் பெற்ற குழுக்கள்/ சங்கங்கள் குவாரிக்காக நிர்ணயிக்கப்பட்ட குத்தகை தொகை பட்டியலின் குத்தகை உரிமம் வழங்கப்பட்ட குவாரியில் இருந்து எடுத்துச் செல்லப்படும் அனைத்து வகையான கட்டிடங்களும் 1959 ஆம் ஆண்டு சிறு கனிமச்சலுகை விதிகள் இணைப்பு - II இல் உள்ளவாறு செயல்படுத்தப்படும். கனிமங்களை எடுத்துச் செல்ல, கிருஷ்ணகிரி மாவட்ட புவியியல் மற்றும் சுரங்கத்துறை துணை இயக்குநர் அலுவலகம் மூலம் கனிமங்களை சீட்டில் மேலொப்பம் பெற்று குவாரியிலிருந்து கனிமங்களை ஏற்றிச் செல்லும் ஒவ்வொரு வாகனத்திற்கும் முறையாக பூர்த்தி செய்து கொடுக்க வேண்டும் குத்தகை அனுமதி வழங்கப்பட்ட நிலத்திலிருந்து வெட்டி எடுக்கப்படும், வெளியேற்றும் மற்றும் இருப்புள்ள கனிமங்களுக்கும் கற்களுக்கும் முறையான கணக்குகளை சுரங்ககளத்தில் பதிவேட்டில் முறையாக பராமரித்தல் வேண்டும். அவற்றை சம்பந்தப்பட்ட அலுவலர்கள் தனிக்கைக்கு ஆஜர்படுத்த கோரினால் தவறாது சமர்ப்பிக்க வேண்டும்.

25. குவாரிகளுக்கு அருகில் உள்ள அங்கீகரிக்கப்பட்ட குடியிருப்புகளுக்கு 300 மீட்டரும் தேசிய நெடுஞ்சாலைகள், ரயில்பாதைகள், மின்கம்பங்கள் ஆகியவற்றிற்கு 50 மீட்டரும் பஞ்சாயத்து சாலைகளுக்கு 10 மீட்டரும் பாதுகாப்பு இடைவெளிவிட்டு மீதமுள்ள இடத்திற்குள் மட்டுமே குவாரிப் பணி செய்யவேண்டும். பொது மக்கள் உபயோகிக்கும் இடம், குடியிருப்புகள், பட்டா நிலங்கள் அல்லது பொதுச் சொத்துகளுக்கு ஏதேனும் சேதம் ஏற்படின் அதற்கு குத்தகைதாரரே முழுப்பொறுப்பு ஏற்க வேண்டும்.

26. மேற்படி கல் குவாரிகளில் சாதாரண கல், சக்கைக்கல், கட்டுக்கல், ஐஸ்கற்கள் ஆகியவற்றை மட்டும் குவாரி செய்ய வேண்டும் வெளிநாட்டிற்கு ஏற்றுமதி செய்வதற்கும் பெருகேற்ற பயன்படும் வகையிலும் உள்ள பெரிய அளவிலான கந்துண்டங்களை எக்காரணத்தை முன்னிட்டும் உற்பத்தி செய்யக்கூடாது.

27. குத்தகைக்கு விடப்படும் கல் குவாரிகளுக்கு அரசு நிலங்களில் பாதை இல்லாத பட்சத்தில் குத்தகை எடுப்பவரே தமது சொந்த பொறுப்பில் பாதை ஏற்படுத்திக் கொள்ள வேண்டும்.

28. வழங்கப்பட்ட குத்தகை உரிமத்திற்கு பொது மக்கள் மற்றும் அரசு துறை மூலம் கடுமையான ஆட்சேபம் இருப்பின் பொது நன்மையை கருதி மாவட்ட ஆட்சியர் குத்தகையை ரத்துச் செய்ய நேரிட்டால் அதனால் ஏற்படும் இழப்பிற்கு ஈடுகோர குத்தகைதாரருக்கு எவ்வித உரிமையும் இல்லை.

29. குவாரிக் குத்தகையை வேறுயாருக்கும் மாற்றவோ உள் குத்தகைக்கு விடவோ கூடாது. அப்படி ஏதாவது செய்திருப்பது தெரியவந்தால் மேற்படி குத்தகை ரத்துச் செய்யப்படுவதுடன் குத்தகைதாரர் செலுத்திய தொகையும் அரசுக்கு ஆதாயம் செய்யப்படும்.

30. சிறு கனிமத்திற்கு உரிய அனுப்புகை சீட்டை குத்தகை வழங்கப்பட்ட குவாரியிலிருந்துதான் வாகனங்களுக்கு கொடுத்து அனுப்ப வேண்டும். அனுப்புகை சீட்டை வேறு இடங்களிலிருந்தோ அல்லது வேறு குவாரிகளிலிருந்தோ கொடுத்து அனுப்பினால் குத்தகை உரிமம் ரத்துச் செய்யப்பட்டு அனைத்து தொகைகளும் அரசுக்கு ஆதாயம் செய்யப்படும்.

31. ஒப்புதல் பெறப்படாத அனுப்புகை சீட்டுடன் கொண்டு செல்லப்படும் சிறுகனிமங்கள் முறையற்ற வகையில் எடுத்ததாக கருதப்பட்டு உரிய சட்டத்தின்படி உரிய அலுவலர்களால் கைப்பற்றப்பட்டு அபராதம் விதிக்கப்படும்.

32. அனுப்புகை சீட்டில் உள்ள கலங்கள் பூர்த்தி செய்யப்படாமலோ அல்லது தவறாக எழுதப்பட்டு வாகனங்களுக்கு கொடுக்கப்பட்டிருந்தாலோ சிறுகனிமம் கொண்டு செல்லும் வாகன உரிமையாளருக்கு அபராதம் விதித்து வசூல் செய்யப்படும். குவாரிகுத்தகையை ரத்து செய்ய நடவடிக்கை மேற்கொள்ளப்படும்.

33. குத்தகை நிபந்தனை மீறப்பட்டால் குத்தகையை ரத்துச் செய்யவோ செய்யப்பட்ட தவறுகளுக்கு குத்தகைதாரருக்கு தண்டனை விதிக்கவோ கிரிமினல் வழக்கு தொடரவோ மாவட்ட ஆட்சியருக்கு முழு அதிகாரம் உண்டு. குத்தகை ரத்துச் செய்யப்பட்டால் காப்புத் தொகை உள்பட அனைத்து தொகைகளும் அரசுக்கு ஆதாயம் செய்யப்படும். மாவட்ட ஆட்சியர் எக்காரணத்திற்காவது குவாரி குத்தகையை ரத்துச் செய்யும் பட்சத்தில் அதனால் ஏற்படும் எவ்வித நட்டங்களுக்கும் அரசு பொறுப்பில்லை. குத்தகை எடுத்தவர் எந்த காரணத்தை முன்னிட்டும் தனக்கு இழப்பு ஏற்பட்டால் நஷ்டஈடு கேட்கக்கூடாது.

34. குவாரிகளின் எல்லைகள் பற்றி பிரச்சனைகள் ஏற்பட்டால் மாவட்ட ஆட்சியரின் தீர்ப்பே இறுதியானது.

35. கற்குவாரி குத்தகை உரிமம் வழங்கப்பட்ட பின்னர் அக்கற்குவாரியின் ஏதாவது ஒரு பகுதி வரலாற்று முக்கியத்துவ வாய்ந்த புரதானக்கால கல்வெட்டுக்கள், சிற்ப வடிவமைப்புகள் போன்றவைகள் காணப்பட்டால் அது குறித்து அரசுக்கு தகவல் தரவேண்டும். மேலும் அப்பகுதியில் கற்கள் உடைப்பது நிறுத்தப்பட்டு அப்பராதம் சின்னங்கள் பாதுகாக்கப்பட வேண்டும்.

36. குத்தகைதாரர் குத்தகை வழங்கப்பட்ட குவாரி முகப்பில் குவாரியின் புல எண் பரப்பு, குத்தகைதாரர் பெயர், குத்தகை வழங்கப்பட்ட மாவட்ட ஆட்சியர் செயல்முறை எண், குத்தகை தொகை மற்றும் குத்தகை காலம் பொருள்வரிகள் குறிக்கப்பட்ட தகவல் பலகையை இவ்வறிவிக்கையில் இணைக்கப்பட்ட இணைப்பு 4ல் கண்ட படிவத்தில் தனது சொந்த செலவினம் வந்து குத்தகை காலம் முழுவதும் நல்ல முறையில் பராமரிக்கவேண்டும்.

37. குத்தகைதாரர் குவாரியின் எல்லைகளை தெளிவாக தெரியுபபடி வண்ணம் அடையாளம் குறிக்கப்பட்ட இவ்வறிவிக்கையின் குவாரிசெய்ய வேண்டும். எல்லைகளை குத்தகை காலம் முழுவதும் தனது சொந்த செலவினம் வந்து பராமரிக்க வேண்டும்.

38. அரசு, ஆணையர் புவியியல் மற்றும் சுரங்கத்துறை மற்றும் மாவட்ட ஆட்சியரால் இது தொடர்பாக ஏற்படுத்தப்பட்டுள்ள மற்றும் அவ்வப்போது ஏற்படுத்தப்படும் சட்ட திட்டங்களுக்கும் நிபந்தனைகளுக்கும் குத்தகைதாரர் கட்டுப்பட்டு நடக்க வேண்டும்.

39. இக்குவாரி குத்தகை தொடர்பான நடவடிக்கைகள் அனைத்தும் தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 1959 இல் உள்ள அனைத்து விதிகளுக்கும் 1957 ஆம் ஆண்டு சுரங்கங்கள் மற்றும் கனிமங்கள் (முறைப்படுத்துதல் மற்றும் மேம்படுத்துதல்) சட்டம் மற்றும் தமிழ்நாடு அரசு அவ்வப்போது பிறப்பிக்கும் சட்டம் மற்றும் விதி முறைகளுக்கும் கட்டுப்பட்டதாகும்.

40. 1961ம் ஆண்டின் மெட்டாஸிபெரஸ் மைன்ஸ் ரெகுலேஷன்ஸ், 1936 ஆம் ஆண்டின் சம்பளம் வழங்குதல் சட்டம், 1984 ஆம் ஆண்டின் இந்திய வெடிப்பொருட்கள் சட்டம், 1954 ஆம் ஆண்டு குறைந்தபட்ச ஊதியச்சட்டம் ஆகியவற்றிற்கு உட்பட்டு குத்தகைதாரர் கனிமங்கள் வெட்ட வேண்டும்.

41. குத்தகை கோரும் விண்ணப்பத்தினை பரிசீலித்து ஏற்றுக்கொள்ளவோ, நிராகரிக்கவோ மாவட்ட ஆட்சியருக்கு பூரண அதிகாரம் உள்ளது. குத்தகை உரிமம் வழங்குதல் தொடர்பாக மாவட்ட ஆட்சியரின் முடிவே இறுதியானதாகும்.

42. காலம் கடந்து பெறப்படும் மனு, அறிவிப்பு செய்யப்படாத குவாரிகளுக்கான மனு, முறையாக பூர்த்தி செய்யப்படாத மனு மற்றும் தேவையான இணைப்புகளுடன் பெறப்படாத மனு ஆகியவை நிராகரிக்கப்படும்.

43. குழந்தை தொழிலாளர் சுகாதார சேவைகளைக் கொண்டும் குவாரி பணியில் ஈடுபடுத்தக்கூடாது.

44. குத்தகைதாரர் வருமானவரி நிரந்தர கணக்கு எண் பெற்று குவாரிக்கு செலுத்தப்படும் குத்தகை தொகைக்கும், சீரியரேஜ் தொகைக்கும் 2.00 சதவீதம் வருமான வரி செலுத்த வேண்டும்.

45. இந்த அறிவிப்பில் கண்டுள்ள எந்த குவாரியையும் முன் அறிவிப்பின்றி நீக்க மாவட்ட ஆட்சியருக்கு அதிகாரம் உண்டு.

46. குத்தகை ஒப்பந்த பத்திரத்தில் உள்ள நிபந்தனைகளை மாற்றவோ அல்லது புதிய நிபந்தனைகளை சேர்க்கவோ மாவட்ட ஆட்சியருக்கு முழு அதிகாரம் உண்டு.

47. இந்த அறிவிப்பு பிரசுரிக்கப்பட்ட பின்னரோ, குத்தகை உறுதி ஆணை பிறப்பிப்பதற்கு முன்னரோ அல்லது பின்னரோ நிபந்தனைகளை மாற்றவோ, ரத்து செய்யவோ மற்றும் பட்டியலில் கண்டுள்ள எல்லா குவாரிகளின் குத்தகை உரிமம் கோரும் விண்ணப்பத்தை எக்காரணமின்றி ரத்து செய்யவோ மாவட்ட ஆட்சியருக்கு முழு அதிகாரம் உண்டு. அதற்கு விண்ணப்பதாரர் நஷ்ட ஈடு கோர உரிமை இல்லை.

48. இவ்வறிவிக்கையின் கீழ் வழங்கப்படும் குத்தகை உரிமங்கள் புதுப்பிக்கப்படமாட்டாது, மற்றும் எக்காரணத்தைக் கொண்டும் கால நீட்டிப்பு வழங்கப்படமாட்டாது.

49. குத்தகை காலம் முடிந்தவுடன் அல்லது உரிமம் ரத்து செய்யப்பட்டால் குத்தகை இடத்தை குத்தகைதாரர் மறு தினமே சம்மந்தப்பட்ட வட்டாட்சியரிடம் ஒப்படைத்து அதற்கான அத்தாட்சியை பெற்றுக் கொள்ள வேண்டும். இதனை மீறுபவர்கள் மீது தமிழ்நாடு சிறுகனிமச் சலுகை விதிகள் 1959ன் விதி 36 (அ)வின் படி உரிய தண்டனைக்குள்ளாவார்கள்.

50. குத்தகைதாரர் இவ்வறிக்கையின் இணைப்பு (2)ல் கண்டுள்ள படிவத்தில் கண்டுள்ளபடி குவாரியில் பதிவேடுகளை பராமரிக்க வேண்டும்.

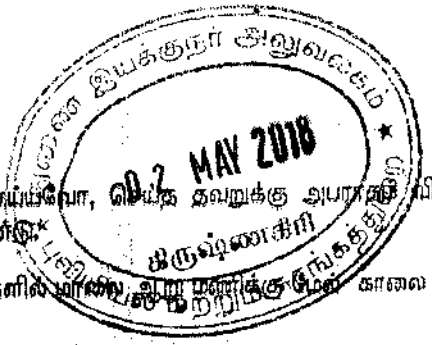
51. குத்தகைதாரர் ஒவ்வொரு மாதமும் குவாரி செய்த கனிமத்திற்குரிய கணக்குகளை பிரதி மாதம் 5ஆம் தேதிக்குள் துணை இயக்குநர் புவியியல் மற்றும் சுரங்கத்துறை கிருஷ்ணகிரி அவர்களுக்கு இவ்வறிக்கையின் இணைப்பு 3ல் கண்டுள்ள படிவத்தில் தணிக்கைக்கு ஆஜர் செய்ய வேண்டும்.

52. குத்தகை காலத்திலோ அதற்குப் பின்னரோ கிரமம் தவறி குத்தகையை பயன்படுத்துவது எல் ஏற்படும் சுகல நஷ்டங்களுக்கும் குத்தகைதாரர் பொறுப்பு ஏற்க வேண்டும். இதற்காக விதிக்கப்படும் அபராதமும் செலுத்த வேண்டும்.

53. குவாரி குத்தகை வழங்கப்பட்ட பகுதியில் குழு/சங்க உறுப்பினர்கள் மட்டுமே குவாரிப்பணி செய்ய வேண்டும்.

54. குவாரியில் வேலை செய்யும் தொழிலாளர்கள் மற்றும் இதர நபர்களுக்கு விபத்து ஏற்படின் அதற்கான முழுப் பொறுப்பையும் குத்தகைதாரரே ஏற்க வேண்டும். இதற்கு எவ்வகையிலும் அரசு பொறுப்பாகாது.

138C/12 (ஆ) சி.வெ. 24-2.



55. குத்தகை நிபந்தனைகள் மீறப்பட்டால் குத்தகையை ரத்து செய்யப்போ, பெய்த தவறுக்கு அபராத விதிக்கவோ, கிரிமினல் வழக்குகள் தொடரவோ மாவட்ட ஆட்சியருக்கு அதிகாரம் உண்டு.

56. குவாரிகளில் நவம்பர், டிசம்பர், ஜனவரி மற்றும் பிப்ரவரி மாதங்களில் மாலை ஆறு மணிக்கு மேல் காலை ஆறு மணி வரை பாறைகளை வெடி வைத்து தகர்க்க கூடாது.

57. குவாரிகளில் இருந்து நவம்பர், டிசம்பர், ஜனவரி மற்றும் பிப்ரவரி மாதங்களில் மாலை ஆறு மணிக்கு மேல் காலை ஆறு மணி வரை உடை கற்களை வெளியில் எடுத்துச் செல்லக் கூடாது.

58. குவாரி தொடர்பான அனைத்து பணிகளும் மாலை 6.00 மணி முதல் காலை 6.00 மணி வரை நிறுத்தப்பட வேண்டும்.

59. குவாரி குத்தகை வழங்கப்படும் பகுதியை சுற்றி குறைந்த பட்சம் 100 மரக்கன்றுகளாவது நடவுசெய்து பாதுகாத்து பராமரித்து பசுமை வளையம் அமைக்கப்படவேண்டும்.

60. ஆய்வுகளை கிணறு அமைக்கும் வாகனம் கொண்டு குழிகள் அமைத்து வெடிவைக்க கூடாது.

61. அங்கீகரிக்கப்பட்ட சுரங்க திட்டத்தின்படி குவாரி பணி செய்யப்பட வேண்டும். குத்தகை காலத்தில் அங்கீகரிக்கப்பட்ட சுரங்க திட்டத்தில் குறிப்பிட்ட அளவை விட அதிகமான கனிமத்தை குவாரி செய்ய வேண்டியிருப்பின் திருத்தப்பட்ட சுரங்க திட்டம் சமர்ப்பித்து அங்கீகாரம் பெற்று அதற்கான சுற்றுச் சூழல் தடையின்மை சான்று சமர்ப்பித்த பின்பே அதனை செய்ய வேண்டும்.

62. குவாரி ஆரம்பிப்பது தொடர்பான அறிவிப்பை (Notice of Opening) இந்திய அரசு பெங்களூரு மண்டல சுரங்க பாதுகாப்பு துறை இயக்குநர் அவர்களுக்கு சமர்ப்பிக்க வேண்டும்.

63. குவாரியில் அங்கீகாரம் பெற்ற மைன்ஸ் மேனேஜர்/ மைன்ஸ் மேட்/ பிளாஸ்டர் ஆகியோர்களை பணியமர்த்திய பின்பே குவாரிப் பணியை தொடங்க வேண்டும்.

64. குவாரிப் பகுதியில் மைன்ஸ் மேட் கண்காணிப்பிலேயே வெடிவைத்து வெடிக்கும் பணியை செய்ய வேண்டும்.

65. குவாரிப் பகுதியில் விபத்து ஏதும் ஏற்பட்டால் அதனை உடனடியாக இந்திய அரசு பெங்களூரு மண்டல சுரங்க பாதுகாப்பு துறை இயக்குநர் அவர்களுக்கும் கிருஷ்ணகிரி மாவட்ட ஆட்சியர் அவர்களுக்கும் தெரிவிக்க வேண்டும். குவாரிப் பகுதியில் ஏற்படும் விபத்துக்கு குவாரி குத்தகை தாரரே முழு பொறுப்பவார்.

66. கீழ்க்கண்ட அட்டவணையில் குறிப்பிட்டுள்ள கல்குவாரிகளுக்கான குத்தகை காலம், குத்தகை ஒப்பந்தப்பத்திரம் நிறைவேற்றப்பட்ட நாளிலிருந்து 5 ஆண்டுகள் ஆகும். ஆனால் சரியான காரணங்களின் அடிப்படையில் குத்தகைக்க காலத்தை குறைவாகவும் நிர்ணயிக்க மாவட்ட ஆட்சியருக்கு அதிகாரமுண்டு.

அட்டவணை -1

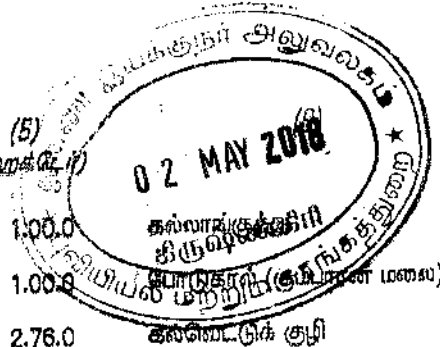
சாதாரண கற்குவாரி பட்டியல்.

(1) கிருஷ்ணகிரி வருவாய் கோட்டம்.

கிருஷ்ணகிரி வட்டம்

வ.எண்	கிராமம்	ச.எண்	மொத்த பரப்பு	குவாரி குத்தகை வழங்கும் பரப்பு	வகைப்பாடு
(1)	(2)	(3)	(4)	(5)	(6)
			(ஹெக்டேர்)	(ஹெக்டேர்)	
1	கல்லுக்குறுக்கி	701(பகுதி-1)	83.60.5	2.00.0	மலை
2	கல்லுக்குறுக்கி	701(பகுதி-2)	83.60.5	2.00.0	மலை
3	கல்லுக்குறுக்கி	701(பகுதி-3)	83.60.5	2.00.0	மலை

(1)	(2)	(3)	(4) (ஹெக்டேர்)	(5) (ஹெக்டேர்)	(6)
4	கல்லுக்குறுக்கி	398/1 (பகுதி-B)	13.62.0	1.00.0	கல்லாங்குத்து
5	கல்லுக்குறுக்கி	255(பகுதி)	2.48.0	1.00.0	கல்லாங்குத்து
6	சரியசாகரம் தலாவ்	50(பகுதி)	4.51.5	2.76.0	கல்லெட்டுக் குழி
7	கிருஷ்ணகிரி டவுன்	வார்டு -பி: பிளாக்: 5/1(பகுதி-1)	49.67.0	2.50.0	பைர மலை புறம்போக்கு
8	கிருஷ்ணகிரி டவுன்	வார்டு-பி: பிளாக்: 5/1(பகுதி-2)	49.67.0	2.50.0	பைர மலை புறம்போக்கு
9	கொண்டப்பநாயனப்பள்ளி	63(பகுதி)	1.90.0	1.50.0	கல்லெட்டு குழி
10	கொண்டப்பநாயனப்பள்ளி	202/1(பகுதி-ஏ)	15.61.5	3.00.0	தீ.ஏ.த பாறை
11	கொண்டப்பநாயனப்பள்ளி	202/1(பகுதி-பி)	15.61.5	3.00.0	தீ.ஏ.த பாறை
பர்சூர் வட்டம்					
12	சிகரலப்பள்ளி	366(பகுதி-1)	10.05.5	2.00.0	மலை
13	சிகரலப்பள்ளி	366(பகுதி-2)	10.05.5	2.00.0	மலை
14	பர்சூர்	63(பகுதி-பி)	10.78.5	4.40.0	கல்லாங்குத்து
15	குலாமலை	54 (பகுதி)	16.45.0	2.00.0	பாறை
16	பி.ஆர்.ஜி.மாதேப்பள்ளி	271(பகுதி)	3.56.0	3.00.0	போடுகால்
17	மல்லப்பாடி	652(பகுதி)	12.60.5	3.00.0	ஆரசு புறம்போக்கு
ஒசூர் வருவாய் கோட்டம்.					
ஒசூர் வட்டம்					
18	கோபனப்பள்ளி	327/3	1.33.5	1.33.5	போடு கால்
19	அச்செட்டிப்பள்ளி	881	1.26.5	1.26.5	தீ.ஏ.த, கல்லாங்குத்து
		884	2.22.0	2.22.0	
		885	0.81.0	0.81.0	
			4.29.5	4.29.5	
20	அச்செட்டிப்பள்ளி	886 (பகுதி)	8.85.0	3.00.0	தீ.ஏ.த,
21	அச்செட்டிப்பள்ளி	888 (பகுதி)	0.67.5	0.33.55	தீ.ஏ.த, கல்லாங்குத்து
		889	1.71.0	1.71.0	
		890 (பகுதி)	1.37.0	1.04.5	
		891(பகுதி)	2.12.5	1.00.0	
			5.88.0	4.09.0	
22	பஞ்சாட்சிபுரம்	603/1 (பகுதி-A)	21.20.5	2.50.0	தீ.ஏ.த
23	பஞ்சாட்சிபுரம்	603/1(பகுதி - B)	21.20.5	2.50.0	தீ.ஏ.த



(1)	(2)	(3)	(4) (ஹெக்டேர்)	(5) (ஹெக்டேர்)	(6)
24	அச்செட்டிப்பள்ளி	1050/1 A	2.17.5	2.17.5	
25	நாரிகாண்டூர்	40 (பகுதி)	2.24.0	1.80.0	
26	கோபனப்பள்ளி	327/1 (பகுதி)	24.31.5	2.62.0	
27	ஆலூர்	809(பகுதி-3)	11.25.0	1.46.0	தீ.ஏ.த
28	ஆலூர்	588(பகுதி)	17.42.5	3.35.0	அரசுபறம்போக்கு முத்தம்பன்கரடு
குளகிரி வட்டம்					
29	பன்னப்பள்ளி	75/6(பகுதி)	2.52.0	1.85.0	தீ.ஏ.த.பாறை
30	மினந்தொட்டி	103/4	1.81.5	1.81.5	தீ.ஏ.த.பாறை
31	மினந்தொட்டி	106/3	0.86.0	0.86.0	தீ.ஏ.த.பாறை
32	வெங்கடேசபுரம்	86(பகுதி-5)	60.86.0	4.20.0	தீ.ஏ.த. கரடு
33	மருதாண்டப்பள்ளி	109 (பகுதி-1)	7.52.0	2.00.0	தீ.ஏ.த. கரடு
34	மருதாண்டப்பள்ளி	109 (பகுதி-2)	7.52.0	1.20.0	தீ.ஏ.த. கரடு
35	பி.எஸ்.திம்மசுத்திரம்	89/1 (பகுதி-2)	12.79.0	3.50.0	தீ.ஏ.த. பாறை
36	காமன்தொட்டி	616/3(பகுதி)	7.65.5	3.77.0	தீ.ஏ.த.
37	காமன்தொட்டி	754 & 760 (பகுதி-1)	36.46.5	1.80.0	தீ.ஏ.த.மலை
38	காமன்தொட்டி	754 & 760 (பகுதி-2)	36.46.5	2.10.0	தீ.ஏ.த.மலை
39	காமன்தொட்டி	754 & 760 (பகுதி-3)	36.46.5	3.66.0	தீ.ஏ.த.மலை
40	காமன்தொட்டி	754 & 760 (பகுதி-4)	36.46.5	3.50.0	தீ.ஏ.த.மலை
41	காமன்தொட்டி	754 & 760 (பகுதி-5)	36.46.5	4.30.0	தீ.ஏ.த.மலை
42	காமன்தொட்டி	1151,1155, 1212 to,1219, 1222,1225, 1226/A (பகுதி-1)	14.68.5	2.70.0	தீ.ஏ.த
43	காமன்தொட்டி	1151,1155, 1212 to,1219, 1222,1225, 1226/A (பகுதி-2)	14.68.5	2.87.0	தீ.ஏ.த
44	காமன்தொட்டி	1151,1155, 1212 to,1219, 1222,1225, 1226/A (பகுதி-3)	14.68.5	2.82.0	தீ.ஏ.த
45	காமன்தொட்டி	1151,1155, 1212 to,1219, 1222,1225, 1226/A (பகுதி-4)	14.68.5	2.23.0	தீ.ஏ.த





(1)	(2)	(3)	(4) (மொக்டேர்)	(5) (மொக்டேர்)	(6)
46	காமன்தொட்டி	1151,1155, 1212 to,1219, 1222,1225, 1226/A (பகுதி-5)	14.68.5		
47	தோரிப்பள்ளி	144(பகுதி)	3.41.5	2.30.0	தீ.ஏ.த. பாறை
48	தோரிப்பள்ளி	152/2(பகுதி)	4.23.0	2.00.0	தீ.ஏ.த. பாறை
49	துப்புகாணப்பள்ளி	637 (பகுதி-1)	25.27.0	4.00.0	தீ.ஏ.த.கரடு
50	துப்புகாணப்பள்ளி	637 (பகுதி-2)	25.27.0	4.50.0	தீ.ஏ.த.கரடு
51	துப்புகாணப்பள்ளி	637 (பகுதி-3)	25.27.0	4.50.0	தீ.ஏ.த.கரடு
52	சென்னப்பள்ளி	242/4(பகுதி)	1.87.5	1.00.0	தீ.ஏ.த.கரடு
53	பஸ்தலப்பள்ளி	130 (பகுதி)	16.90.0	4.66.0	தீ.ஏ.த.கரடு
54	துப்புகாணப்பள்ளி	314(பகுதி-3)	36.64.0	4.94.32	தீ.ஏ.த.கரடு
55	வெங்கடேசபுரம்	294(பகுதி-1)	18.36.5	3.00.0	தீ.ஏ.த.கரடு
56	வெங்கடேசபுரம்	294(பகுதி-2)	18.36.5	3.75.0	தீ.ஏ.த.கரடு
57	வெங்கடேசபுரம்	196(பகுதி-1)	9.70.0	2.00.0	தீ.ஏ.த.கரடு
58	வெங்கடேசபுரம்	196(பகுதி-2)	9.70.0	3.25.0	தீ.ஏ.த.கரடு
59	வெங்கடேசபுரம்	136(பகுதி-3)	69.36.0	4.10.0	தீ.ஏ.த.கரடு
60	வெங்கடேசபுரம்	136(பகுதி-12)	69.36.0	2.70.0	தீ.ஏ.த.கரடு
தேன்கனிக்கோட்டை வட்டம்					
61	ஓசபுரம்	96 (பகுதி)	2.13.5	0.82.0	தீ.ஏ.த கல்லாங்குத்து
		97(பகுதி)	1.04.5	0.28.0	
			3.18.0	1.10.0	
62	மதகொண்டப்பள்ளி	265 (பகுதி-1)	8.73.0	2.50.0	தீ.ஏ.த கல்லாங்குத்து
63	மதகொண்டப்பள்ளி	265 (பகுதி-2)	8.73.0	2.50.0	தீ.ஏ.த கல்லாங்குத்து
64	மதகொண்டப்பள்ளி	265 (பகுதி-3)	8.73.0	1.60.0	தீ.ஏ.த கல்லாங்குத்து
65	மதகொண்டப்பள்ளி	265 (பகுதி-4)	8.73.0	1.46.0	தீ.ஏ.த கல்லாங்குத்து
66	கல்கொண்டப்பள்ளி	360 (பகுதி)	0.62.5	0.62.5	தீ.ஏ.த
67	நாகவங்கலம்	829 (பகுதி)	186.50.0	4.00.0	தீ.ஏ.த கல்லாங்குத்து
68	கோட்டுர்	144	2.00.5	2.00.5	தீ.ஏ.த கல்லாங்குத்து
69	தண்டரை	733 (பகுதி-2)	61.77.0	3.00.0	மலை புறம்போக்கு

கிருஷ்ணகிரி,
29-12-2017.

சி. கதிரவன்
மாவட்ட ஆட்சியர்,
கிருஷ்ணகிரி மாவட்டம்.

தமிழ்நாடு எழுதப்பொருள் மற்றும் அச்சத்துறை இயக்குநரால் சேலம் அரசிவர் டிளை அச்சத்தில் அச்சிடப்பட்டு மாவட்ட ஆட்சியரால் வெளியிடப்பட்டது.

இணைப்பு - I

இணைப்பு - VI B

(தமிழ்நாடு சிறுவகைக் கனிமச்சலுகை விதிகள் 1959-ன் விதி 8 (10-A) ஐக் காணவும்)

அரசு புறம்போக்கு நிலங்களில் உள்ள சாதாரண கற்குவாரிகளை, விடுவிக்கப்பட்ட கொத்தடிமைத் தொழிலாளர்களால் அமைக்கப்பட்ட சங்கம் / (SGSY) பொன்விழா கிராம ஆய்வு உதவிக்குழுக்கள் ஆகியவற்றுக்கு குத்தகை உரிமம் வழங்கக் கோரும் மனு.

(அசல் மற்றும் இரண்டு நகல்களில் இணைப்புகளுடன் கொடுக்க வேண்டும்)

நாள் -2018

அனுப்பவர்

பெறுவர்

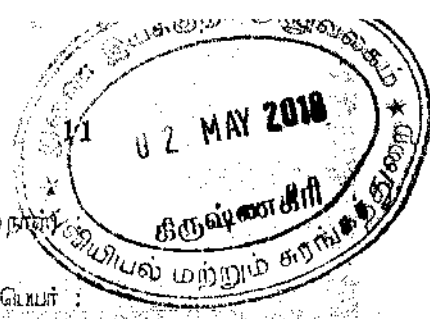
மாவட்ட ஆட்சியர்,
கிருஷ்ணகிரி மாவட்டம்,
கிருஷ்ணகிரி.

ஆய்வு,

நான் / நாங்கள் 1959 ஆம் வருட தமிழ்நாடு சிறுகனிமச் சலுகை விதி 8-ன் சார்பு விதி 10 ஏ-ன்படி எங்கள் கய உதவிக்குழுவிற்கு / விடுவிக்கப்பட்ட கொத்தடிமை தொழிலாளர் சங்கத்திற்கு சாதாரண கற்கள் வெட்டி எடுக்க கல் குவாரி குத்தகை உரிமம் வேண்டி கிருஷ்ணகிரி மாவட்ட அரசிதழில் வெளியான _____ நாளிட்ட அறிவிக்கை எண். _____ ன்படி விண்ணப்பித்தினை சமர்ப்பிக்கின்றேன்.

மனு தொடர்பான விவரங்கள் கீழே கொடுக்கப்பட்டுள்ளன.

1. (SGSY) பொன்விழா கிராம கய வேலை வாய்ப்பு திட்டக்குழு : விடுவிக்கப்பட்ட கொத்தடிமை சங்கத்தின் சரியான அலுவலக பெயரும் முகவரியும்
 2. (அ) குழு மற்றும் சங்கங்கள் தமிழ்நாடு கூட்டுறவு சட்டம் 1983 : (தமிழ்நாடு சட்டம் 30/1983) அல்லது தமிழ்நாடு சங்கங்களின் பதிவு சட்டம் 1975 (தமிழ்நாடு சட்டம் 27/1975) ஆகியவைகளின்கீழ் பதிவு செய்யப்பட்ட விவரம் மற்றும் சான்றிதழ் இணைக்கப்பட்ட வேண்டும்
- (ஆ) குழு / சங்க உறுப்பினர் பெயர் மற்றும் முகவரி பட்டியல் : (உறுப்பினர் பற்றிய விவரம் மற்றும் உறுப்பினர் எண் விவரம் இணைக்கப்பட்ட வேண்டும்).
- (இ) குழு / சங்கம் செயல்பட அனுமதிக்கப்பட்டுள்ள பஞ்சாயத்து விவரம்.



3. மனுக்கட்டணம் செலுத்திய விவரம் (சலான் என்ச மற்றும் நான்) :
4. குழு / சங்கம் குவாரி செய்ய விரும்பும் சிறுகனிமத்தின் பெயர் :
5. கல் குவாரி செய்ய தேவைப்படும் குத்தகை கால அளவு :
6. கல் குவாரி செய்ய விண்ணப்பிக்கும் மொத்த பரப்பு :
7. குத்தகைக்கு மனு செய்யப்படும் புலம் பற்றிய விவரம் :

மாவட்டம் (1)	வட்டம் (2)	கிராமம் (3)	பஞ்சாயத்து (4)	புல எண். (5)	பரப்பளவு (ஹெக்டேர்) (6)
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8. ஏற்கனவே மனுதாரர் குழு / சங்கத்திற்கு தமிழ்நாட்டில் நடைமுறையில் குவாரி குத்தகை இருந்தால் அதன் விவரம் :

9. குழு / சங்கத்திற்கான வருமானவரி, நிலுவையின்மை சான்று இணைக்கப்பட்டுள்ளதா, இல்லையெனில் கீழ்க்கண்டவற்றுக்கான உறுதி மொழி ஆவணம் இணைக்கப்பட்டுள்ளதா. :

(அ) நடப்பு ஆண்டு வரை வருமானவரி விவரப்பட்டியல் அத்துறைக்கு கொடுக்கப்பட்டு உள்ளதா (அல்லது) :

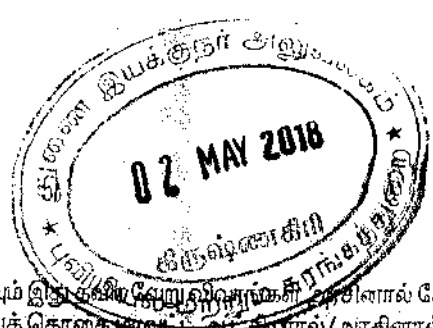
(ஆ) துறையினரால் கணக்கிடப்பட்ட வருமானவரி செலுத்தப்பட்டுள்ளதா (அல்லது) :

(இ) 1961 ஆம் வருடத்திய வருமான வரி செலுத்தப்பட்டுள்ளதா (அல்லது) :

10. (அ) மனுதாரர் குழு / சங்கத்தின் உறுப்பினர் அனைவரும் சரங்கவரி நிலுவை இல்லை என்பதற்கான சான்று பெற்றுள்ளனரா, ஆம் எனில் நகல் இணைக்கவும் :

(ஆ) இந்த மனு கொடுக்கப்படும் நாளில் உறுப்பினர்களுக்கு குத்தகை இல்லை எனில் அதற்கான உறுதிமொழி தனித்தனியாக கொடுக்கப்பட்டு இணைக்கப்பட்டுள்ளதா. :

11. இதுதவிர மனுதாரர் வேறு விவரங்கள் ஏதேனும்
கொடுக்க விரும்பினால் இங்கு குறிப்பிடவும்.



மேலே கொடுக்கப்பட்டுள்ள விவரங்கள் யாவும் உண்மைபெளவும் இது க்குரிய வேறு விவரங்கள் அரசினால் கோரப்படுமானால் அதனை அளிக்க தயாராக உள்ளேன் எனவும் உறுதியளிக்கிறேன். காப்புத் தொகை யாவும் அரசினால் (அரசினால்) கோரப்பட்டால் அதனை செலுத்தத் தயாராக உள்ளேன் என உறுதியளிக்கிறேன். குத்தகை பெறுவது தொடர்பாகவும் குவாரியில் சாதாரணகற்கர்கள் வெட்டுவது தொடர்பாகவும் 1959 ஆம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகளையும் மாவட்ட அரசிதழில் வெளியிடப்பட்டுள்ள விதிகளையும் நன்கறிவோம் என்று உறுதியளிக்கின்றேன். சாதாரணகற்கர்கள் வெட்ட வழங்கப்பட்ட கல்குவாரியில் மெருகேற்றி அழகுபடுத்தப் பயன்படும் வகையில் எந்த அளவிலும் கிராண்ட் கந்துண்டங்கள் வெட்ட மட்டும் எனவும் உறுதியளிக்கிறேன்.

இப்படிக்கு,
தங்கள் உண்மையுள்ள,

இயம்
நாள்

குவாரியில் பராமரிக்கப்பட வேண்டிய பதினாறு படிவம்

நாள் முன்னிருப்பு உற்பத்தி மொத்தம் வெளியேற்றம் மீதி இருப்பு வகைத்தின் மொத்தம் தோம் குறிப்பு

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

இணைப்பு-3

திங்கள் தோறும் குவாரியில் இருந்து எடுக்கப்பட வேண்டிய கனிமங்கள் குறித்து அனுப்பப்பட வேண்டிய கணக்குப் படிவம்

1. குத்தகைதாரரின் பெயர் மற்றும் முகவரி :
2. குவாரி அமைந்துள்ள வட்டம் :
கிராமம் :
புல எண். :
பரப்பளவு :
3. மாவட்ட ஆட்சியரின் ஆணை எண் மற்றும் நாள் :
4. குத்தகை காலம் :
5. குவாரியில் வேலை செய்பவர்களுடைய ஆட்களின் விவரம் :
ஆண்கள் :
பெண்கள் :
6. குத்தகைத் தொகை செலுத்திய விவரம் :
7. நடப்புத் திங்களில் எடுக்கப்பட்ட கனிமத்தின் அளவு :
8. வெளியே அனுப்பப்பட்ட கனிமத்தின் அளவு :
9. மீதி இருப்பில் உள்ள கனிமத்தின் அளவு :



1. குத்தகைதாரரின் பெயர் மற்றும் முகவரி

2. குவாரி அமைந்துள்ள வட்டம்

கிராமம்


புல எண்.

பரப்பளவு

3. மாவட்ட ஆட்சியரின் ஆணை எண் மற்றும் நாள்

4. குத்தகை காலம்

5. குத்தகை மொத்த தொகை


S. DHANASEKAR, M.Sc. (Geo)
02/MAY/2018/A

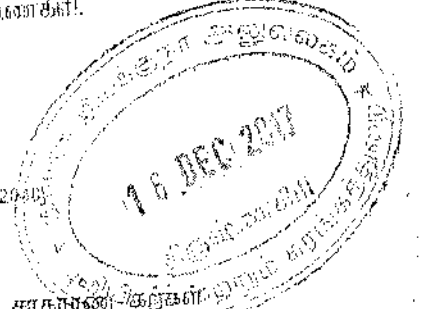
மாண்புமிகு



அனுப்பதில்
திரு. தீபக் எஸ். பில்கி இ.வ.ப.,
மாவட்ட வன அலுவலர்,
ஒரூர் கால்நடை பண்ணை அஞ்சல்,
மத்திகிரி, ஒரூர் - 635 110.
தொலைபேசி எண். 04344-262253.

மாண்புமிகு
மாவட்ட ஆட்சித் தலைவர்,
கிருஷ்ணகிரி மாவட்டம்,
கிருஷ்ணகிரி.

நகராண்மை, 620/2017-எஸ். நாள். 12.12.2017
கிருஷ்ணகிரி வறட்சி கட்டுப்பாட்டு கமிட்டி ஆண்டு 2017



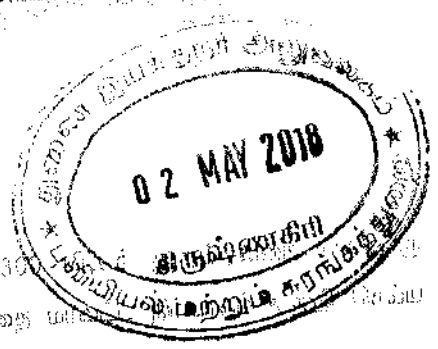
அய்யம்,

பொருள் : களமங்களும் குளங்களும் - கிருஷ்ணகிரி - சாதாரண கற்கள் வெட்டி
கிருஷ்ணகிரி மாவட்டத்தில் உள்ள அரசு புறம்போக்கு நிலங்களில்
உள்ள சாதாரண கற்கள் வெட்டியெடுக்க டெண்டருடன் இணைந்த
ஏலமுறையில் குவாரி குத்தகை வழங்குதல் வனத்துறை சார்பாக
பரிந்துரை செய்ய கோரியது -- வனத்துறை நோக்கிலான கருத்து
தொடர்பாக.

மாண்புமிகு ஆட்சித் தலைவர், கிருஷ்ணகிரி மாவட்டம்
நகராண்மை, 72/2017(கனிமம்) நாள். 05.09.2017 மற்றும் 15.11.2017.

பார்வையில் கண்ட கிருஷ்ணகிரி மாவட்ட ஆட்சித் தலைவர் அவர்களது கடிதத்தில்,
கிருஷ்ணகிரி மாவட்டத்தில் உள்ள அரசு புறம்போக்கு நிலங்களில் சாதாரண கற்கள் வெட்டி
எடுக்க டெண்டர் / பொது ஏலம் மூலம் குத்தகைக்கு வழங்க, வனத்துறை நோக்கிலான கருத்து
மற்றும் வனத்துறையின் தடையின்மையினை ஏற்று வழங்க வேண்டி தெரிவிக்கப்பட்டுள்ளது.

கிருஷ்ணகிரி மாவட்டத்தில் அரசு புறம்போக்கு நிலங்களில் சாதாரண கற்கள் வெட்டி
எடுக்க டெண்டர் / பொது ஏலம் மூலம் குத்தகைக்கு விட்டு தரும் மூலம் அரசுக்கு வரலாய் எட்டிட,
வனத்துறையின் தடையின்மையினை ஏற்று வழங்க, கிருஷ்ணகிரி மாவட்ட ஆட்சித் தலைவர்
கேட்டுக்கொண்டதறிவிப்பாக, வனச்சரக அலுவலர்கள் மற்றும் கனிமாளர்கள், ஒரூர்,
ஜவனகிரி, இராயக்கோட்டை மற்றும் கிருஷ்ணகிரி ஆகியோருடன் குவாரி, பகுதிகளை
தனித்தனிக் செய்யப்பட்டது கீழ்க்கண்ட பட்டியல் 1-ல் குறிப்பிட்டுள்ள 1 முதல் 55 வரையிலான
உத்தேச கற்குவாசிகளுக்கு கீழ்க்கண்ட நிபந்தனைகளுடன் வனத்துறை நோக்கிலான கருத்து
தொரிவிக்கப்படுகிறது.



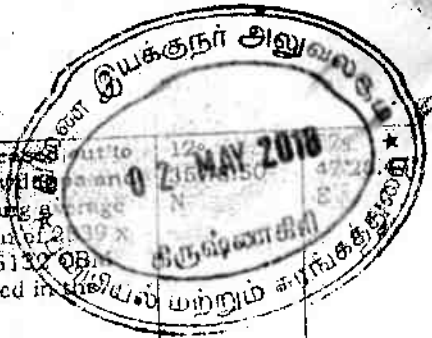
விநாயகப் பகுதிகளில் குடிநீர் கிணறுகளை அமைப்பதற்கான பகுதிகளைக் குறிப்பிட்டுள்ள பட்டியலை இதுக்கீழ்க்கண்டது என்பதை மறுக்காமல் வேண்டுகிறேன்.

பட்டியல் 1

சுற்றுச்சூழல் பாதிப்பு ஏற்படுத்தக்கூடிய பகுதிகளின் பட்டியல். 1 (முதல் 65 வகுப்பிலுள்ள குவார்டிள் பகுதிகளின் பட்டியல்).

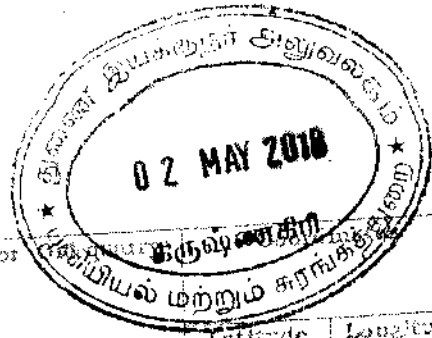
House Tracts

Sl. No.	Village	S.F. No.	Total Extent	Extent proposed for quarry lease	Character of land	Type of Old quarry	Coordinates	
							Latitude	Longitude
	Goburupalli	327/3	1.33.5 Hects.	1.33.5	Podugal	Virgin	12°53'05.08"N	77°48'51.48"E
2	Achetupalli	881 884 885	1.26.5 2.22.0 0.81.0	4.29.5	UAW Kallan kuthu	Small age old pit observed in S.F.No.884 with average dimension of 1709 x 2.5 Mts = 4272.5 CBM without any fresh cutting	12°39'16.66"N	77°48'45.72"E
3	Achetupalli	885 (Part)	3.85.0	3.00.0	UAW Kallan kuthu	Virgin	12°38'59.31"N	77°43'58.50"E
4	Achetupalli	888 (P) 889 890 (P)	0.67.5 1.71.0 1.37.0 2.12.5 5.88.0	0.33.5 1.71.0 1.04.5 1.00.0 4.09.0	UAW - Kallankuthu	Virgin	12°39'14.14"N	77°48'52.61"E
5	Panchatchiparasi	602/1 (Part-A)	21.20.5	2.50.0	UAW	Already leased out to Thiru Gowdappa and a pit having average dimension of 14005 x 18.6 = 260493 CBM is observed in the area.	12°35'06.32"N	77°47'29.59"E

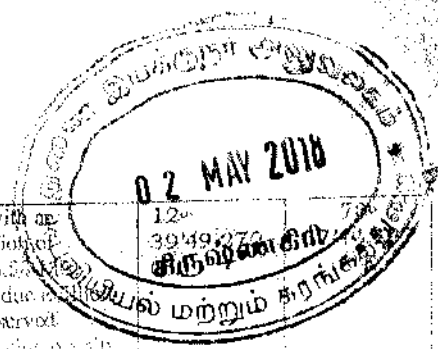


6	Panchatubipuram	603/1 (Part-B)	21.20.5	2.50.0	DAW	Already less than a pit having a dimension of 2.5.33 = 15132 OB is observed in the area.		
7	Pannapalli	75/6	2.52.0	1.85.0		Virgin	12° 47' 27.619" N	78° 01' 7.3" E
8	Acheupalli	1050/1A	2.17.5	2.17.5	Podugal Anathenam	Two age old pits are observed on the south east and south west side of the area.	12° 39' 8.12" N	77° 49' 8.84" E
9	Nariganapuram	40 (part)	2.24.0	1.80.0		Virgin	12° 47' 47.83" N	77° 56' 30.36" E
10	Nandhumangalam	680/1 (Part)	2.90.0	2.00.0	Podugal	Virgin	12° 36' 55.74" N	77° 55' 16.53" E
11	Meenandoddi	106/3	0.86.0	0.86.0	Govt - Tharisu	Virgin	12° 46' 44.30" N	78° 00' 37.46" E
12	Meenandoddi	103/4	1.81.5	1.81.5	Govt - Tharisu	Virgin	12° 46' 52.63" N	78° 00' 40.35" E
13	Gobanapalli	327/1 (Part-3)	24.31.5	2.62.0	U.A.W	Virgin	12° 38' 41.01" N	77° 48' 47.56" E

Shoolagiri Taluk



Sl. No.	Village	S.F.No.	Total Extension	Extent proposed for quarry lease	Classify	Virgin or	Latitude	Longitude
14	Venketesapuram	66 (Part-5)	66.86.0	4.25.0	UAW - Karadu	Already leased out to Thiru Srinivasan and two pits having average dimension of 12390x16.83 = 208524 and 16060 x 12.56 = 203320 CBM is observed in the area.	12° 45'10.24" N	77° 56'40.48" E
15	Maruthandapalli	102 (Part-1)	7.52.0	0.00.0	UAW-Paral	Virgin	12° 42'1.84" N	78° 00'48.95" E
16	Maruthandapalli	109 (Part-2)	7.52.0	1.20.0	UAW-Paral	Virgin	12° 47'25.473 9"N	78° 00'44.454 5"E
17	B.S.Thimmaseenar	88/1 (Part-2)	12.79.0	3.50.0	UAW-Paral	Virgin illicit pit having an average dimension of 25x27Sq.m. = 675 Mts. = 18711 CBM and penalty had already been levied.	12° 50'37.440 0"N	77° 57'29.990 1"E
18	Kannandudi	616/S (PART)	14.81.0	3.77.0	UAW	Old quarry already leased out to Thiru.Venkatta Reddy. Old pit with an average dimension of 21441 Sq.m. X 24.53 Mts. = 521660 CBM observed in the area.	12° 40'1.46"N	77° 50'53.73" E
19	Kannandudi	754 & 760 (Part-1)	15.00.0	1.80.0	UAW	Virgin old pit with an average dimension of 27.58x18Sq.m. = 49644 CBM due to illicit quarrying is observed. proposal for levying penalty forwarded.	12° 39'53.226 4"N	77° 57'45.238 6"E



20	Kannuraddi	754 & 700 (Part-2)	36.46.5	2.10.0	Male	Virgin old pit with an average dimension of 80018cm X16.5m =13257 CBM due to illicit quarrying is observed. Proposal for levying penalty forwarded.	12° 39'49.072" N	77° 57'42.103" E
21	Kannuraddi	754 & 700 (Part-1)	36.46.5	3.50.0	Male	Virgin old pit with following dimension observed due to illicit quarrying. 1.446X8=3568 2.2452X10= 24520 3.4330X6.16= 26673 4.575X8=4600 5.616x7=4512 Total = 63643 CBM Proposal for levying penalty forwarded.	12° 39'38.671" N	77° 57'43.801" E
22	Kannuraddi	754 & 700 (Part-1)	36.46.5	4.30.0	Male	Virgin old pit with an average dimension of 1.620X10 =6200 2.1964X9 =17676 3.1179x10=11790 4.1023X7 =7161 Total 42827 CBM due to illicit quarrying is observed. proposal for levying penalty forwarded.	12° 39'33.863" N	78° 57'42.665" E
23	Kannuraddi	1151, 1155, 1212 to 1214, 1216, 1218, 1220, 1222, 1224, 1226A (Part-1)	14.08.5	1.30.0	UAV	Virgin old pit with an average dimension of 1.8348X14.25 =118959 2.1648X17 =28016 3.5170x17.5 =90475 4.4063X15.5 =110996 Total 348446 CBM due to illicit quarrying is observed. proposal for levying penalty forwarded.	12° 39'39.73" N	77° 57'51.23" E
24	Kannuraddi	1151, 1155, 1212 to 1214, 1216, 1218, 1220, 1222, 1224, 1226A (Part-1)	14.08.5	2.87.0	UAV	Virgin old pit with an average dimension of 1.6371X15 =25653 2.1578X12.5 =13725 3.1257x11 =13827 Total 129207CBM due to illicit quarrying is observed. Proposal for levying penalty forwarded.	12° 39'36.577" N	77° 57'51.761" E



No	Location	Area (Part)	Area (sq. m)	Volume (CBM)	Remarks	Coordinates
29	Kannur	1151, 1155, 1212 to 1219, 1225, 1230 (Part-4)	14.68.5	2.23.0	Virgin old pit with an average dimension of 1772x4 = 3068 2.1310x13 = 17030 3.1637x14 = 22918 Total 43036CBM due to illicit quarrying is observed. Proposal for levying penalty forwarded.	12° 39' 29.831 2°N 77° 52.444 3°E
29	Kannur	1151, 1155, 1212 to 1219, 1222, 1225, 1226/A (Part-5)	14.68.5	1.27.0	Virgin old pit with an average dimension of 530x7 = 3710 due to illicit quarrying is observed. Proposal for levying penalty forwarded.	12° 39' 26.559 0°N 77° 53.206 0°E
30	Thirupathi	154 (Part)	3.41.5	2.30.0	Old quarry Already leased out to Tmt. Marjula Old quarried pit with average dimension of 15147Sq.m x14.3 = 216602 CBM observed in the field.	12° 42' 24.176 7°N 77° 57' 32.699 2°E
30	Thirupathi	152/2 (Part)	4.23.0	2.00.0	Virgin area	12° 42' 18.044 8°N 77° 57' 35.232 9°E
31	Thuppuvayal	687 (Part-1)	25.27.0	4.00.0	Virgin	12° 37' 50.129 4°N 77° 57' 14.725 6°E



38	Verkatesapuram	Verkatesapuram (Part-1)	18.35	3.00.0		Virgin	12°	77°
39	Verkatesapuram	Verkatesapuram (Part-1)	9.70.0	2.00.0	Karadu	Already leased out area with old pit dimension 11616 Sq.M. x 21.54 Mts. = 250209 CBM	12° 44'11.6300" N	77° 55'24.4781" E
40	Verkatesapuram	Verkatesapuram (Part-2)	9.70.0	3.75.0	Karadu	Already leased out area with old pit dimension 18894 Sq.M. x 27.61 Mts. = 521587 CBM	12° 44'06.6223" N	77° 55'22.6168" E
41	Verkatesapuram	Verkatesapuram (Part-2)	18.35.5	3.75.0		Virgin	12° 45'21.85" N	77° 57'29.27" E
42	Ahar	Ahar (part)	17.42.5	3.35.0	Ge. Paramboku-Muchanur Karadu	Virgin	12° 42'44.36" N	77° 55'46.27" E

Denbankkottai Taluk

Sl. No.	Village	S.F.No.	Total Extent	Extent proposed for quarry lease	Classification	Virgin or Old quarry	Coordinates	
							Latitude	Longitude
43	Hosurapuram	96 (Part), 97 (Part)	2.13.5 1.04.5 3.18.0	0.82.0 0.28.0 1.10.0	UAW-Kallankuthu	Virgin	12° 37'4.70"N	77° 49'22.29"E



44	Mathakondapalli	265/1 (Part-1)	8.73.0	2.50.0	UAW-Parai	Already leased out to Krishna reddy. Old Pit with an average dimension of 10700 X 5.83 = 62381CBM	12° 38' 20.58" N	77° 45' 10.82" E
45	Mathakondapalli	265/1 (Part-2)	8.73.0	2.50.0	UAW-Parai	Virgin	12° 38' 14.09" N	77° 45' 10.26" E
46	Mathagondapalli	265/1 (Part-3)	8.73.0	1.60.0	UAW-Parai	Virgin	12° 38' 10.50" N	77° 45' 10.82" E
47	Mathagondapalli	265/1 (Part-4)	8.73.0	1.60.0	UAW-Parai	Virgin	12° 38' 4.14" N	77° 45' 5.57" E
48	Kalikondapalli	360	0.62.5	0.62.5	UAW	Virgin Age old pit with water logged condition without any recent cutting is observed with a dimension of 3173Sq.M. X 4.25 Mts. = 13485 CBM	12° 38' 35.40" N	77° 44' 52.08" E
49	Nagamangalam	629 (Part)	188.50.0	4.00.0	UAW-Kallan kuthu	Virgin	12° 34' 15.776 9" N	77° 54' 59.38 10" E
50	Kottur	144	2.00.5	2.00.5		Virgin	12° 32' 15.06" N	77° 44' 28.97" E
51	Thekkarakal	738 (Part-2)	51.77.0	3.00.0	Mafai	Virgin	12° 34' 51.23" N	77° 47' 45.92" E

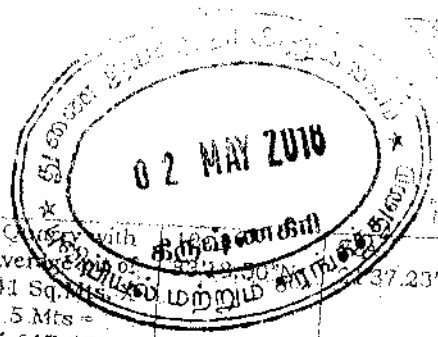


Krishnagiri Taluk

Sl. No.	Village	S.F. No.	Total Extent	Extent proposed for quarry lease	Classification	Latitude	Longitude
52	Kallukurukki	701 (Part-2)	83.80.5 Hects.	2.00.0	Malai	12° 35' 11.1" N	78° 13' 22.39" E
53	Kallukurukki	701 (Part-2)	37.7.15 Hects.	1.00.0	Malai	12° 32' 22.0" N	78° 13' 37.10" E
54	Kallukurukki	701 (Part-3)	83.60.5 Hects.	2.00.0	Malai	12° 32' 45.9" N	78° 13' 34.98" E
55	Kallukurukki	399/1 (Part-B)	13.62.0 Hects.	1.00.0	Kallan-kuthu	12° 33' 31.4" N	78° 13' 03.13" E
56	Kallukurukki	245 (Part)	2.48.0 Hects.	1.00.0	Podugai Kumbharan Malai	12° 34' 21.8" N	78° 12' 59.60" E
57	Kariyasagarun Thalav	50 (Part)	4.51.5 Hects.	2.76.0	Kalyettu Kuzhi	12° 34' 57.6" N	78° 06' 13.44" E
58	Krishnagiri Town	Ward-B Block-5/1 (Part-1)	49.67.0	2.50.0	Baira Malai Porambokku	12° 32' 38.5" N	78° 13' 32.91" E
59	Krishnagiri Town	Ward-B Block-5/1 (Part-2)	49.67.0	2.50.0	Baira Malai Porambokku	12° 32' 38.12" N	78° 13' 41.17" E

Bargur Taluk

Sl. No.	Village	S.F.No.	Total Extent	Extent proposed for quarry lease	Classification	Virgin or Old quarry	Coordinates	
							Latitude	Longitude
60	Nigaram path	366 (Part-II)	10.05.5	2.00.0	Malai	Virgin	12° 30' 37.60" N	78° 24' 53.24" E
61	Sigacole path	366 (Part-III)	20.24.5	2.00.0	Malai	Virgin	12° 30' 34.97" N	78° 24' 50.08" E



62	Bargur	62 (Part-B)	10.78.5	4.45.0		Old Quarry with an average pit of 17941 Sq. Mts. X 6.5 Mts = 1,16,517 CBM	12° 37' 23" N	78° 15' 33.9304" E
63	Seelamedai	74 (Part)	16.45.0	2.00.0	Pathai	Virgin	12° 30' 43.0485" N	78° 15' 33.9304" E
64	Melappadi	55 (Part)	12.50.3	2.00.0	Hodduarai	Old Quarry with an average pit of 4038 Sq. Mts. X 7.28 Mts = 29397 CBM	12° 30' 41.4854" N	78° 23' 19.5666" E
65	B.R.G. Madhavai	271 (Part)	3.55.0	3.00.0	Podugal	Old Pit in which illicit quarrying carried out and penalty levied is observed in the field. For the dimension of 11705 Sqm. X 7 Mts.	12° 33' 07.077" N	78° 19' 56.09" E

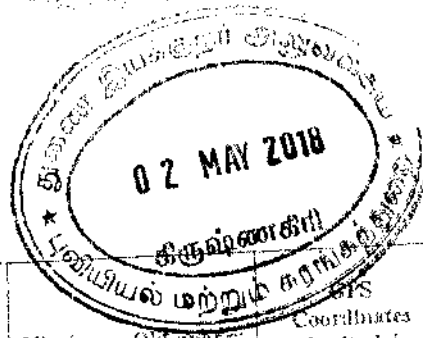
திருச்சிங்கபுரி மன்றம் 2-ம் தற்காலிகமாக நிறுத்திவைக்கப்பட்டுள்ள குவாரிகளில் 1 முதல் 15 வரைபள்ள இனங்களில், இனம் 10, 11 மற்றும் 12 ஆகியவைகளால் குறிப்பிடப்பட்டுள்ள புல எண்கள் மூலமாக 2 அண்டுகளை பகுதியாகும். எனவே இந்த இனங்களுக்கு மட்டுமே குவாரி பணி செய்ய அனுமதி வழங்க இயலாது. இவைகள் தவிர மீதமுள்ள இனங்கள் குறித்து ஆய்வுசெய்து பல்வேறு வகையான முடிவுகள் எடுக்கப்படவேண்டிய காரணத்தால், யாதொரு இடைவெளி தற்போது வழங்க சாத்தியக்கூறுகள் இல்லை என்பதை அன்புடன் தெரிவித்துக்கொள்கிறேன்.

பட்டியல் - 2

தற்காலிகமாக நிறுத்திவைக்கப்பட்டுள்ள குவாரிகளின் அளவைப் பட்டியல்

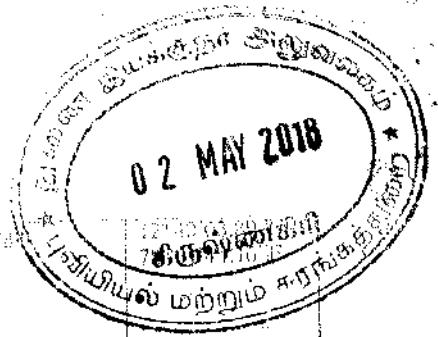
Hosur Taluk

Sl. No.	Village	S.P. No.	Total Extent	Extent proposed for quarry lease	Classification	Virgin or Old quarry	GPS Coordinates Latitude / Longitude
1	Marayyadu	77 (Part)	10.75.3	2.75.0	Katadu	Virgin	12° 41' 59.6736" N 77° 51' 37.53.8027" E
2	Podukate	27 (Part)	4.00.0	4.50.0	UAW	Virgin	12° 39' 43.72" N 77° 51' 38.87" E



Shoolagiri Taluk

Sl No.	Village	S.P. No.	Total Extent	Extent proposed for quarry lease	Classification	Virgin or Old quarry	GPS Coordinates Latitude/ Longitude
3	Venugopalapuram	215	437.0	437.0	UAW - Kurchi	Already leased area granted to Thiru Kumar and old pit having an average dimension of 1062.0x11.61x1112.18 CBM is observed in the area.	12° 43' 42.92" N 77° 55' 26.90" E
4	Athirayam	574/1	738.5	310.0	UAW - Parai	Old quarry with a pit having an average dimension of 26x26Sq.m x 9.5Mts = 24947CBM	12° 44' 16.5337" N 77° 57' 38.9077" E
5	Karampalli	877 (Part-1)	17,07.0	3,00.0	Karsala	Virgin	12° 41' 33.32" N 78° 3' 51.50" E
6	Madurapalli	53/1 (Part-2)	1,13.0	2,00.0	Karsala	Virgin	12° 41' 52.75" N 78° 01' 03.15" E
7	Berigan	314 (Part)	7,62.0	2,60.0	UAW - Parai	Virgin	12° 47' 19.0183" N 77° 57' 31.9787" E
8	Berigan	116/1 (Part)	3,35.5	2,00.0	UAW - Parai	Virgin	12° 47' 24.01" N 77° 57' 36.05" E
9	Bukkaspattanam	176/3 176/6 157/5	7,06.0 0,261.0 1,57.5	1,57.5	Anatheswari	Virgin	12° 43' 41.0009" N 77° 54' 57.7434" E
10	Kudhalapalli	131 (Part-1)	22,84.0	4,80.0	Karsala	Virgin	12° 40' 08.96" N 78° 04' 42.45" E



11	Pasathalapatti	131 (Part-2)	2284.0	2220.0	Karadu	Virgin	12° 39' 59.76" N 78° 04' 53.05" E
12	Pasathalapatti	131 (Part-3)	2284.0	2220.0	Karadu	Virgin	12° 39' 59.76" N 78° 04' 53.05" E

Denkanikota Taluk

Sl. No.	Village	S.F. No.	Total Extent	Extent proposed for quarry lease	Classification	Virgin or Old quarry	GPS Coordinates Latitude/ Longitude
13	Siguntur	1186 (Part-1)	3156.0	286.0	UAW-Karadu	Virgin	12° 32' 26.3764" N 77° 54' 2.1837" E
14	Siguntur	1186 (Part-2)	3156.0	286.0	UAW-Karadu	Virgin	12° 32' 26.9815" N 77° 54' 9.1192" E

Krishnagiri Taluk

Sl. No.	Village	S.F. No.	Total Extent	Extent proposed for quarry lease	Classification	Virgin or Old quarry	GPS Coordinates Latitude/ Longitude
15	Kalveti	1186	150.0	150.0	Kalveti Kuzhi	Virgin	12° 40' 28.58" N 78° 07' 51.90" E

தமிழ்நாடு அரசு,
மாநில அமைச்சு,
செ. சிவசுப்பிரமணியன்
02 MAY 2018

S. SIVASUBRAMANIAN
IAS/225/2011/A

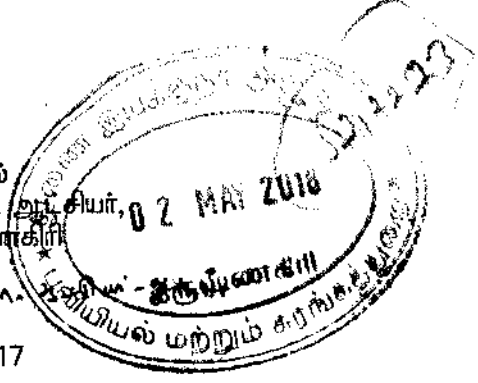
25/11/27

66, 67, 68

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அனுப்புதல்
திரு.ப.பெருமாள்,
வட்டாட்சியர்,
சூளகிரி

பெறுதல்
மாவட்ட ஆட்சியர்,
கிருஷ்ணகிரி



பதி. 2-1

ந.க.1568/2017/அ1 நாள் .04.2017

அய்யா,

பொருள்:

கனிமங்களும் குவாரிகளும் - சிறுகனிமம் - சாதாரண கல் - கிருஷ்ணகிரி மாவட்டம் - சூளகிரி வட்டம் - அரசு புலங்களில் டெண்டருடன் இணைந்த ஏலமுறையின் மூலம் சாதாரண கற்குவாரி குத்தகை உரிமம் வழங்க முன்மொழிவுகள் அனுப்புதல் - தொடர்பாக.



மார்வை:

மாவட்ட ஆட்சியர், கிருஷ்ணகிரி கடிதம் ந.க.எண் 72/2017/கனிமம் நாள் 22.03.2017

-oOo-

கிருஷ்ணகிரி மாவட்டம் சூளகிரிவட்டத்தில் அரசு புலத்தில் சாதாரண கற்கள் வெட்டி எடுக்க டெண்டருடன் இணைந்த ஏலமுறையில் குவாரி குத்தகை வழங்க கீழ்க்கண்ட இடங்கள் தகுதி வாய்ந்ததாக உள்ளது.

வ. எண்	கிராமத்தின் பெயர்	அரசு புல எண்	வகைபாடு	மொத்த பரப்பு (ஹெக்டேர்ஸ்)	குத்தகை விட உத்தேசித்துள்ள பரப்பு (ஹெக்டேர்ஸ்)	புதிய/ஏற்கனவே உரிமம் வழங்கப்பட்ட விவரம்
1	துப்புகானப்பள்ளி	637 பகுதி	தீ.ஏ.த கரடு	25.27.0	4.00.0 பகுதி-1	புதியது
				25.27.0	4.50.0 பகுதி-2	புதியது
					4.50.0 பகுதி-3	புதியது

மேற்கண்ட இடங்கள் தொடர்பான புலத்தணிக்கை அறிக்கை கிராம நிர்வாக அலுவலரின் வாக்குமூலம், கிராம கணக்குகளின் நகல்கள் மற்றும் புல வரைபடம், கூட்டு வரைபடம் ஆகியவற்றை இணைத்து அனுப்பியுள்ளேன் என்பதை தெரிவித்துக் கொள்கிறேன்.

இணைப்பு: மேற்கண்டவாறு

வட்டாட்சியர்
சூளகிரி

புலத்தணிக்கை அறிக்கை

அரசுக்கு வருவாய் ஈட்டும் வகையிலும், அருகில் உள்ள கிராம புலத்தணிக்கு வேலை வாய்ப்பு கிடைக்கும் என்பதை கருத்தில் கொண்டு, அரசு புறம்போக்கு புலங்களில் அனுமதியின்றி கள்ளத்தனமாக கனிமங்கள் வெட்டியெடுப்பதை தடுக்கும் வகையிலும் கிருஷ்ணகிரி மாவட்டம் சூளகிரி வட்டம் துப்புகானப்பள்ளி கிராமம் அரசு புல எண் 637 நிலத்தில் சாதாரண கற்கள் வெட்டி எடுக்க டெண்டருடன் இணைந்த ஏலமுறையில் குவாரி குத்தகை வழங்குதல் தொடர்பாக மேற்கண்ட புலத்தினை தனிச்சுமை மற்றும் விசாரணை மேற்கொண்டு எனது அறிக்கையினை கீழ்க்கண்டவாறு தெரிவித்துக் கொள்கிறேன்.

கிருஷ்ணகிரி மாவட்டம், சூளகிரி வட்டம், துப்புகானப்பள்ளி கிராம புல எண் 637 ல் 25.27.0 ஹெக்டேர் பரப்பளவு கிராம கணக்குகளின் படி அரசு புறம்போக்கு தீ.ஏ.த. கரடு என வகைப்படுத்தப்பட்டுள்ளது. மேற்கண்ட புலத்தில் ஜல்லி, சக்கை, ரப்கல் உடைக்க பயன்படும் சாதாரண வகை கற்கள் காணப்படுகின்றன. மேற்கண்ட புலத்தில் இதில் பகுதி-1 பரப்பு 4.00.0 ஹெக்டேர், பகுதி-2 பரப்பு 4.50.0 ஹெக்டேர் மற்றும் பகுதி-3 பரப்பு 4.500 ஹெக்டேர் என 3 பகுதிகள் கொண்ட நிலம் பரப்பளவில் சாதாரண கற்குவாரி குத்தகையை டெண்டருடன் இணைந்து ஏல முறையில் வழங்கலாம்.

மேற்கண்ட புல வரைபடத்தில் குவாரி குத்தகை வழங்க வரையறுக்கப்பட்டுள்ள பகுதியில் இருந்து 300மீ சுற்றளவிற்குள் குடியிருப்பு பகுதிகளோ, கிராம நத்தமோ, அங்கீகரிக்கப்பட்ட வீட்டு மனைகளோ, புராதன சின்னங்களோ, தொல் பொருள் துறையினரால் பராமரிக்கப்பட்டு வரும் பாதுகாக்கப்பட்ட தொல்லியல் சின்னங்களோ அமைந்திருக்கவில்லை.

மேற்கண்ட புலத்தின் 50மீ சுற்றளவிற்குள் கோவில், மசூதி, கிருஸ்துவ தேவாலயம், பொது மயானம், மின் கம்பி பாதை போன்ற நிலையான அமைப்புகள் ஏதுமில்லை.

மேற்கண்ட புலத்தில் குவாரி உரிமம் வழங்குவது தொடர்பாக அ1 அறிவிக்கை 10.04.2017 அன்று பிரசுரம் செய்யப்பட்டது. அதன் பேரில் மேற்கண்ட புலத்தில் குவாரி உரிமம் வழங்குவது தொடர்பாக அருகில் உள்ள பட்டாதாரர்களிடமிருந்தோ ஊர் பொது மக்களிடமிருந்தோ புலத்தணிச்சுமையின் போது ஆட்சேபனை ஏதும் வரப்பெறவில்லை. மேற்கண்ட புலத்திற்கு செல்ல புறம்போக்கு புலங்களின் வழியாக சாலை வசதி உள்ளது.

மேலும், மேற்கண்ட பகுதியில் இதுவரை குவாரி பணி நடைபெறவில்லை. புலத்தில் ஏற்கனவே வெட்டி எடுக்கப்பட்ட குழிகள் ஏதும் இல்லை. குவாரி குத்தகை வழங்க பரிந்துரை செய்யப்பட்ட மேற்கண்ட பகுதியின் எல்லைகள் கீழ்க்கண்டவாறு உள்ளது.



637(பகுதி-1)	வடக்கு -	481/1, 480/1	78மீட்டர் Percolation Pond
	கிழக்கு -	637 (பகுதி-2)	
	தெற்கு -	420	
	மேற்கு -	637ன் மீதி நிலம்	
637(பகுதி-2)	வடக்கு -	480/1, 449,448 மே.த.பு	பகுதி-2ல் கிருஷ்ணகிரி மாவட்ட ஆட்சியர் அவர்களின் செயல்முறைகள் ந.க.89/2008/கனிமம்-2/ நாள் 7.7.2008 என்படி 20.10.2008 முதல் 19.10.2013வரை சுமார் 11787ச.மீ ஓ 28.12மீ பரப்பு குத்தகை விடப்பட்டிருந்தது.
	கிழக்கு -	637 (பகுதி-3)	
	தெற்கு -	420 த்.ஏ.த	
	மேற்கு -	637 பகுதி -1	
637(பகுதி-3)	வடக்கு -	448 மே.த.பு	
	கிழக்கு -	637 மீதிநிலம்	
	தெற்கு -	420 த்.ஏ.த	
	மேற்கு -	637 பகுதி -2	

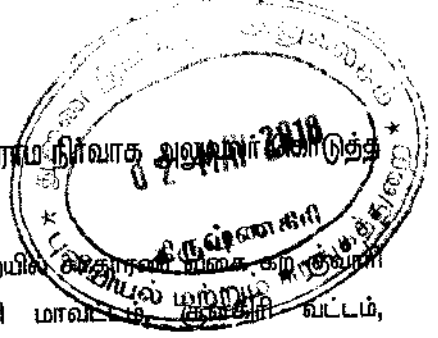
மேற்படி அரசு புறம்போக்கு நிலத்தில் உடைகல் மற்றும் ஜல்லி கற்கள் வெட்டியெடுக்க ஆட்சேபணைகள் ஏதும் இல்லையெனவும், அரசு மூலம் டெண்டர் மற்றும் பொது ஏலமுறையில் குத்தகை உரிமம் வழங்கலாம் என துப்புக்கானப்பள்ளி கிராம நிர்வாக அலுவலர் வாக்குமூலத்தில் தெரிவித்துள்ளார். எனவே, மேற்படி நிலத்தில் அரசுக்கு வருவாய் ஈட்டும் பொருட்டு ஆவணங்களின் அடிப்படையிலும் பொது மக்கள் ஆட்சேபணை ஏதும் தெரிவிக்காததாலும், சாதாரண கற்கள் வெட்டி எடுக்க டெண்டருடன் இணைந்த பொதுஏல முறை மூலம் குவாரி உரிமம் வழங்க பரிந்துரை செய்கிறேன்.

இத்துடன் துப்புக்கானப்பள்ளி கிராம நிர்வாக அலுவலரின் வாக்குமூலம், கிராம கணக்குகளின் நகல்கள் மற்றும் புல வரைபடம், கூட்டு வரைபடம் ஆகியவை இணைக்கப்பட்டுள்ளது எனத் தெரிவித்துக் கொள்கிறேன்.

W. D. Siva
வட்டாட்சியர்
குளகிரி

W. D. Siva
W. D. SIVA, M.Sc. (Geo)
25/2011/A

கிருஷ்ணகிரி மாவட்டம், சூளகிரி வட்டம், துப்புக்கானப்பள்ளி கிராம நிர்வாக அலுவலர் அலுவலகம்
 வாக்குமூலம்
 ஆஜர்,



அரசு புலங்களில் டெண்டருடன் இணைந்த ஏல முறையில் கிராம நிர்வாக அலுவலர் அலுவலகம் மூலம் உரிமம் வழங்குவது தொடர்பாக என்னால் கிருஷ்ணகிரி மாவட்டம், துப்புக்கானப்பள்ளி கிராம புல எண் 637 (பகுதி) தணிக்கை செய்யப்பட்டது. மேற்கண்ட புல எண் 637 (பகுதி) கிராம கணக்குகளின்படி அரசு புறம்போக்கு தீ.ஏ.த. கரடு என வகைப்படுத்தப்பட்டுள்ளது. அதன் மொத்த விஸ்தீர்ணம் 25.27.0 ஹெக்டேர் ஆகும். இதில் பகுதி-1 பரப்பு 4.00.0 ஹெக்டேர், பகுதி-2 பரப்பு 4.50.0 ஹெக்டேர் மற்றும் பகுதி-3 பரப்பு 4.500 ஹெக்டேர் என 3 பகுதிகள் கொண்ட நிலம் குவாரி குத்தகை விட ஆய்வு செய்யப்பட்டது. மேற்கண்ட புலத்தில் ஐல்வி, சக்கை, ரங்கல் உடைக்க பயன்படும் சாதாரண வகை கற்கள் காணப்படுகின்றன. மேற்கண்ட புலத்தில் 300மீ சுற்றளவிற்குள் குடியிருப்பு பகுதிகளோ, கிராம நத்தமோ, அங்கீகரிக்கப்பட்ட வீட்டு மனைகளோ, புராதன சின்னங்களோ, தொல் பொருள் துறையினரால் பராமரிக்கப்பட்டு வரும் பாதுகாக்கப்பட்ட தொல்லியல் சின்னங்களோ அமைந்திருக்கவில்லை.

மேற்கண்ட புலத்தின் 50மீ சுற்றளவிற்குள் பள்ளி கட்டிடங்கள், கோவில், மகுதி, கிருஸ்துவ தேவாலயம், பொது மயானம், மின் கம்பி பாதை, ஓடை, வாய்க்கால் போன்ற நிலையான அமைப்புகள் ஏதுமில்லை. மேற்கண்ட புலத்தில் குவாரி உரிமம் வழங்குவது தொடர்பாக அ1 அறிவிக்கை 10.04.2017 அன்று பிரசுரம் செய்யப்பட்டது. அதன் பேரில் அருகில் உள்ள பட்டாதாரர்களிடமிருந்தோ ஊர் பொது மக்களிடமிருந்தோ ஆட்சேபணை ஏதும் வரப்பெறவில்லை. மேற்கண்ட புலத்திற்கு செல்ல பட்டா/ அரசு புறம்போக்கு புலங்களின் வழியாக சாலை வசதி உள்ளது. புலத்தின் நான்கு எல்லைகள் குறித்த விவரம் பின்வருமாறு.


637(பகுதி-1)	வடக்கு -	481/1, 480/1	78மீட்டர் தொலைவில் Percolation Pond உள்ளது
	கிழக்கு -	637 (பகுதி-2)	
	தெற்கு -	420	
	மேற்கு -	637ன் மீதி நிலம்	
637(பகுதி-2)	வடக்கு -	480/1, 449,448 மே.த.பு	பகுதி-2ல் கிருஷ்ணகிரி மாவட்ட ஆட்சியர் அவர்களின் செயல்முறைகள் ந.க.89/2008/கனிமம்-2/ நாள் 7.7.2008 ன்படி 20.10.2008 முதல் 19.10.2013வரை சுமார் 11787ச.மீ x 28.12மீ பரப்பு குத்தகை விடப்பட்டிருந்தது.
	கிழக்கு -	637 (பகுதி-3)	
	தெற்கு -	420 தீ.ஏ.த	
	மேற்கு -	637 பகுதி -1	
637(பகுதி-3)	வடக்கு -	448 மே.த.பு	
	கிழக்கு -	637 மீதிநிலம்	
	தெற்கு -	420 தீ.ஏ.த	
	மேற்கு -	637 பகுதி -2	

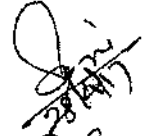
2

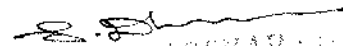
மேற்கண்ட புலத்தில் பகுதி-1 மற்றும் பகுதி-3 இதுவரை குவாரிப்பணி ஏதும் நடைபெறவில்லை. பகுதி-2ல் கிருஷ்ணகிரி மாவட்ட ஆட்சியர் அவர்களின் தெரிவுமுறைகள் ந.க.89/2008/கனிமம்-2/ நாள் 7.7.2008 ன்படி 20.10.2008 முதல் 10.2013 வரை சுமார் 11787ச.மீ x 28.12மீ பரப்பு குத்தகை விடப்பட்டிருந்தது. மேற்கண்ட புலத்தில் சாதாரண கற்கள் உள்ளதால் மீண்டும் இப்புலத்தில் டெண்டருடன் இணைந்த ஏல முறையில் குவாரி உரிமம் வழங்கும் பட்சத்தில் அருகில் உள்ள கிராம மக்களுக்கு வேலை வாய்ப்பு கிடைக்கும் என்பதை கருத்தில் கொண்டும், கிராம ஊராட்சிக்கு கனிமம் வெட்டி எடுப்பதன் மூலம் உரிய வருவாய் கிடைக்கும் என்பதை கருத்தில் கொண்டு துப்புக்கானப்பள்ளி கிராம புல எண் 637ல் பகுதி-1, பகுதி-2 மற்றும் பகுதி-3 என தனித்தனியே டெண்டருடன் இணைந்த ஏல முறையில் குவாரி உரிமம் வழங்கலாம் என்பதை தெரிவித்துக்கொள்கிறேன். கிராம கணக்கு நகல்களை இத்துடன் இணைத்து சமர்ப்பித்துள்ளேன்.

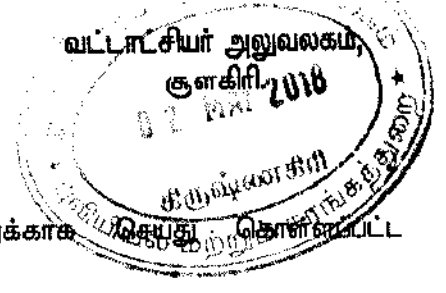
//படித்து பார்த்தேன் சரி//

// என் முன்பாக //


வட்டாட்சியர் 24/11/17
குளகிரி


க.க.அ. (அ)
தீயநடைப்பணி


V. S. SRINIVASAN



A1-நோட்டீஸ்

A1-கவர்மெண்ட் வசத்திலிருக்கும் நிலத்துக்காக செய்பது கொள்ளப்பட்ட விண்ணப்பத்தை குறித்த அறிக்கை:-

குளகிரி வட்டம், துப்புகானப்பள்ளி கிராமத்தைச் சேர்ந்த கீழ்க்கண்ட ஷெட்யூலில் காட்டப்பட்டிருக்கும் நிலங்களுக்காக ஏலம் மூலம் சிறு கனிமங்கள் வெட்டி எடுக்க குத்தகை விட உத்தேசிக்கப்பட்டுள்ளது. மேற்படி நிலங்களை குத்தகை மூலம் ஒப்படை செய்யக்கூடாதென்று ஆட்சேபிப்பவர்கள் இந்த அறிக்கை பிரசுரித்தும் செய்யப்படும் தேதியிலிருந்து 15 தினங்கள் கொண்ட அளவுக்குள் மேற்படி கிராமத்தின் கிராம நிர்வாக அலுவலரிடம் தங்களுடைய ஆட்சேபனையை தெரிவிக்க வேண்டும்.

ஷெட்யூல்:-

புல எண்	வகைபாடு	விஸ்தீரணம் ஹெக்/ஏக்	எல்லைகள்	
			வடக்கு -	கிழக்கு -
637 (பகுதி-1)	தீ.ஏ.த கரடு	25.20.0மொ த 4.00.0	481/1, 480/1	637 (பகுதி-2)
			420	
			637ன் மீதி நிலம்	
637 (பகுதி-2)		4.50.0	480/1, 449,448 மே.த.பு	637 (பகுதி-3)
			420 தீ.ஏ.த	
			637 பகுதி -1	
637 (பகுதி-3)		4.50.0	448 மே.த.பு	637 மீதிநிலம்
			420 தீ.ஏ.த	
			637 பகுதி -2	

தேதி: 10.04.2017.

சாட்சி:-1.

2.

(Signature)
S. DHANARAJARAJU (Secy)
07/11/18

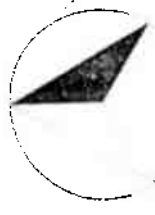
வட்டாட்சியர்
குளகிரி.

மேற்படி அறிக்கையானது மேற்கண்ட கிராம சாஷாயில் சம்மந்தப்பட்ட நிலங்களில் ஒட்டி வைக்கப்பட்டதென்றும் உறுதிமொழி கூறப்படுகிறது.

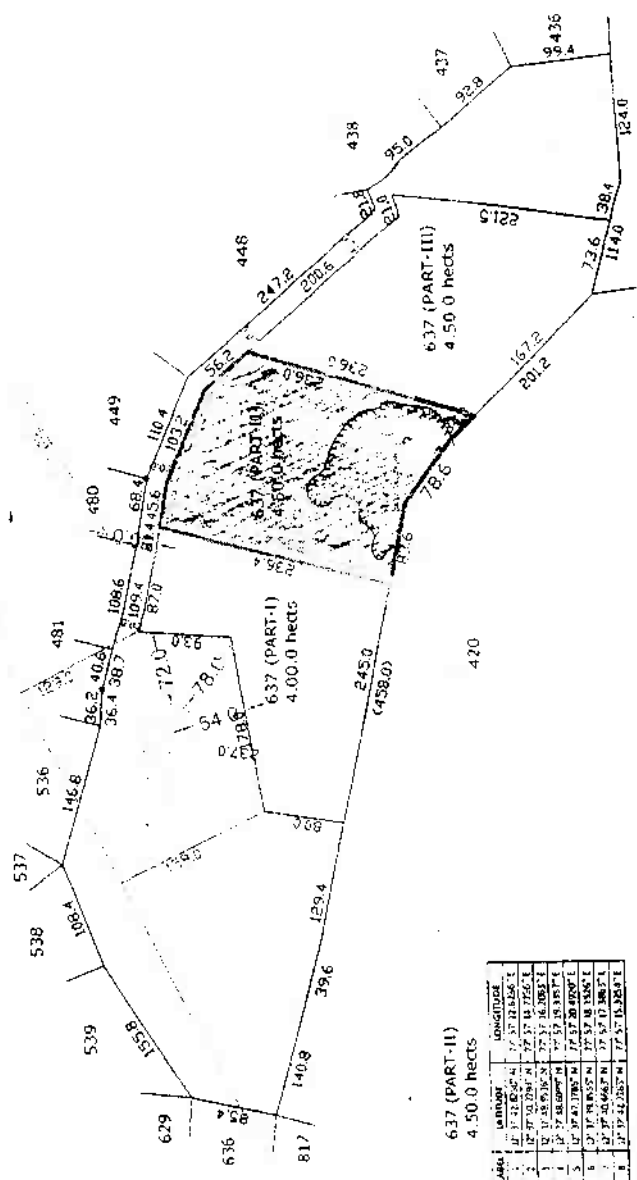
1. கிராம நிர்வாக அலுவலர், துப்புகானப்பள்ளி
2. தனி அலுவலர், துப்புகானப்பள்ளி ஊராட்சி.

1. Venkatesh . m
2. குடி
3. கர் கர் கர் கர்

KRISHNAGIRI DISTRICT
 THUPUGANAPALLI VILLAGE
 SFNO: 637
 EXTENT = 25.27.0 HECTS



SCALE 1 : 5000



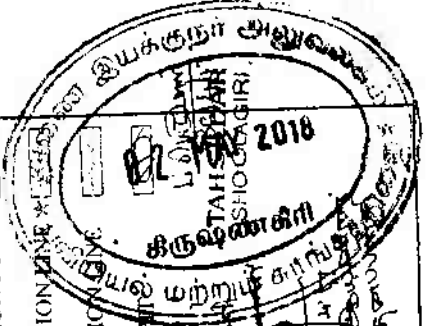
637 (PART-II)
4.50.0 hecets

S.No	Latitude	Longitude
1	12° 21' 25.50" N	77° 37' 28.856" E
2	12° 21' 25.50" N	77° 37' 44.725" E
3	12° 21' 25.50" N	77° 37' 46.085" E
4	12° 21' 25.50" N	77° 37' 46.085" E
5	12° 21' 25.50" N	77° 37' 46.085" E
6	12° 21' 25.50" N	77° 37' 46.085" E
7	12° 21' 25.50" N	77° 37' 46.085" E
8	12° 21' 25.50" N	77° 37' 46.085" E

EXISTING PIT DETAILS:
 11787 Sq.mts. X 28.12 Avg. Depth
 = 331450.44 CBM

LEGEND

- BOUNDARY LINE
- GPS LAT/LONG
- PERCOLATION POND
- HIGH TENSION LINE
- LOW TENSION LINE
- EXISTING PIT

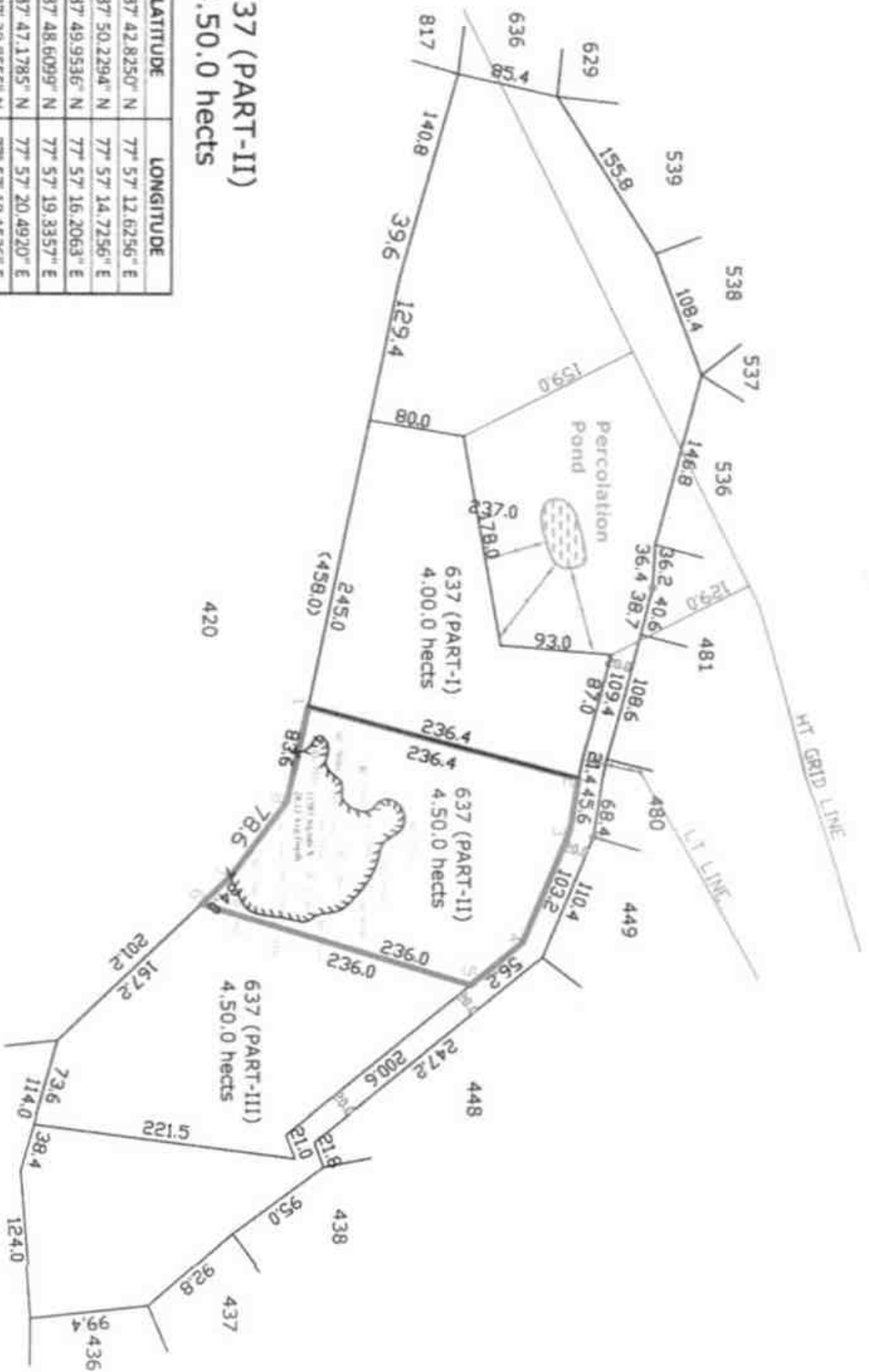


புதுபுகளாபல்லி கிராமம்
 பகுதி II

REMARKS

All dimensions are in meters

KRISHNAGIRI DISTRICT
 SHOOLAGIRI TALUK
 THUPUGANAPALLI VILLAGE
 SFNO:637
 EXTENT=25.27.0 Hects



LABEL	LATITUDE	LONGITUDE
1	12° 37' 42.8250" N	77° 57' 12.6256" E
2	12° 37' 50.2294" N	77° 57' 14.7256" E
3	12° 37' 49.9536" N	77° 57' 16.2063" E
4	12° 37' 48.6099" N	77° 57' 19.3357" E
5	12° 37' 47.1785" N	77° 57' 20.4920" E
6	12° 37' 39.8555" N	77° 57' 18.1526" E
7	12° 37' 40.6663" N	77° 57' 17.3863" E
8	12° 37' 42.2265" N	77° 57' 15.3254" E

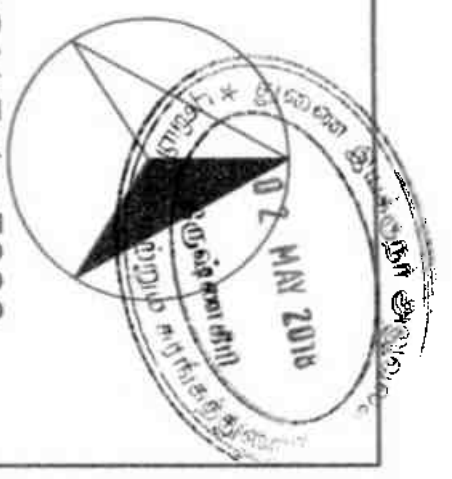
EXISTING PTT DETAILS:
 11787 Sq.mts X 28.12 Avg.Depth
 = 331450.44 CBM

REMARKS

All dimensions are in meters

Part II file progress
 168/11

SCALE 1 : 5000



LEGEND

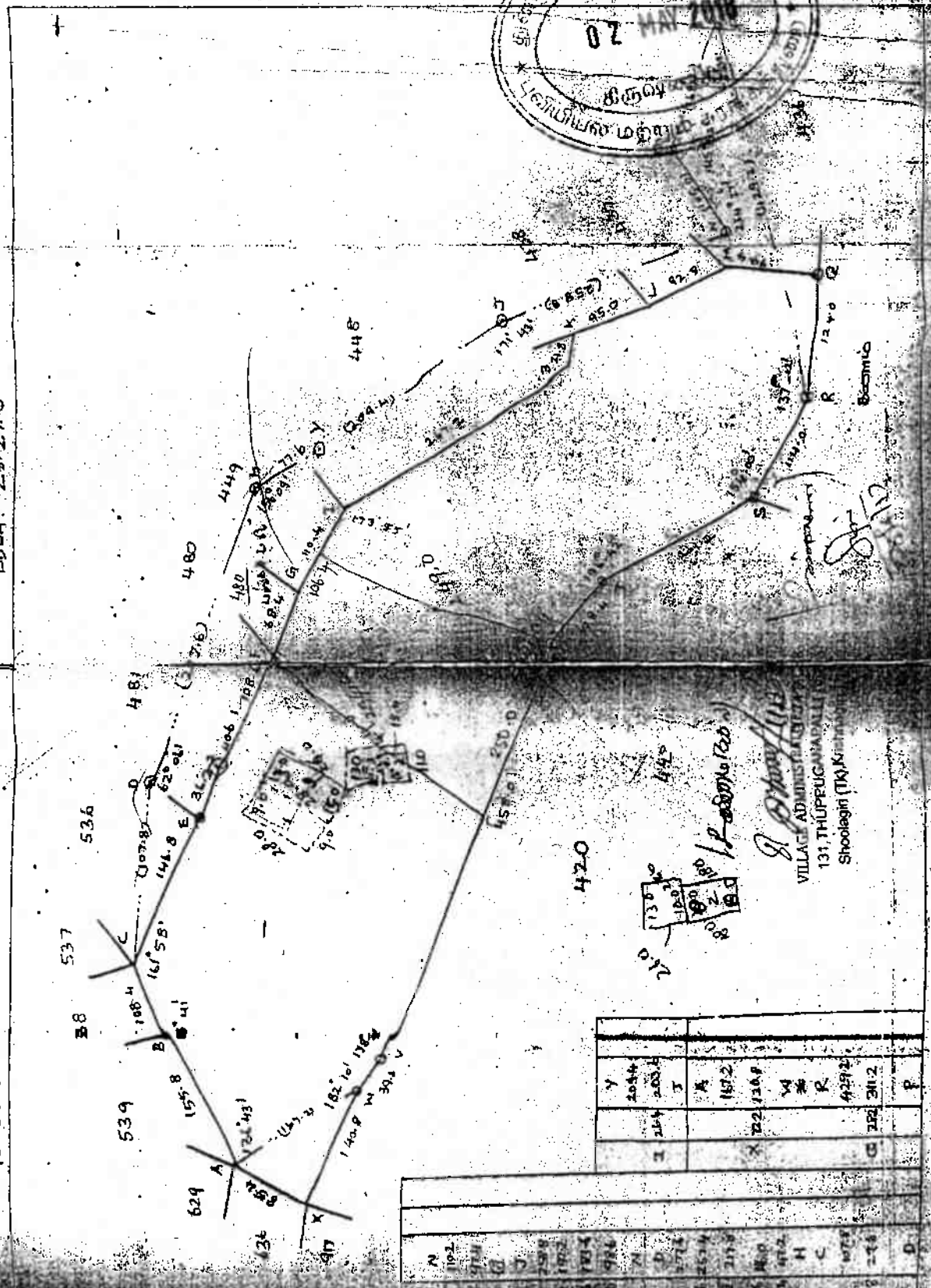
- BOUNDARY LINE
- GPS LAT/LONG
- PERCOLATION POND
- HIGH TENSION LINE
- LOW TENSION LINE
- EXISTING PTT

Surveyor's name: *Dr. [Signature]*
 TAHSILDAR: *[Signature]*
 SHOOLAGIRI
 District Surveyor's Office



சாதி: 131
 மொசை
 மூலம்: திட்டமிடப்பட்டது
 பரப்பு: 25.27.0

சாதி: 637
 மொசை
 மூலம்: திட்டமிடப்பட்டது
 பரப்பு: 25.27.0



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D	300		

S. Prabhakar
 VILLAGE ADMINISTRATOR
 131, THUPPUC-MAHALI
 SHOOLAGIRI (TK), KANNIYAKUMARI



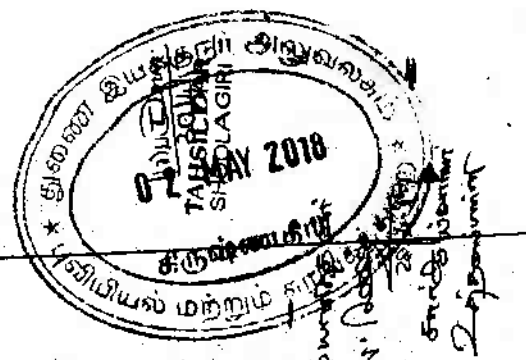
திருவணை 131 துப்புரவுப்பணி

2	3	4	5	6	7	8	9	10			
633-LIT	ர	4	...	8-5	12	0 62	0 06.5	0 06	839	அ. துர் உள்ளா சாம்பல் மற்றும் இரண்டு பேர்களுள்.	பூவாதித சாலை.
634	ர	4	...	8-5	12	0 62	0 44.5	0 28	839	அ. துர் உள்ளா சாம்பல் மற்றும் இரண்டு பேர்களுள்.	
635	அ	4	...	8-5	12	0 62	0 19.5	0 12			அனாதைமர்.
636-LIT	ர	4	...	8-5	12	0 62	0 00.5	0 06	431	மு. முனிமயம்.	
637	ர	4	...	8-5	12	0 62	0 20.5	0 13	63	மு. எல்லம்பா.	
638	ர	4	...	8-5	12	0 62	0 27.0	0 17	576	ரம. வெங்க கே. சன்.	
639-LIT	ர	4	...	8-5	12	0 62	0 21.0	0 13	181	திருமறையப்பா மணையி தெலாள் மகள்.	
639-LIT	ர	4	...	8-5	12	0 62	0 69.0	0 49			
639-LIT	அ	4	...	...	...	...	25 27.0	...			திர்மை ஏற்படாத தரிக.
638	அ	4	...	...	...	...	0 66.5	...			சாலைமர்.
639-LIT	ர	4	...	8-3	8	2 15	0 39.0	0 84	577	ர. வெங்க கே. சன்.	
639-LIT	ர	4	...	8-3	8	2 15	0 01.0	0 06	56	ஆஜிபிள்ளை.	
639-LIT	ர	4	...	8-3	8	2 15	0 03.0	0 06	37	ரமணமயா மணையி ஆஜி பிள்ளை.	
639-LIT	ர	4	...	8-3	8	2 15	0 03.0	0 06	148	ர. வெங்க கே. சன்.	
640-LIT	ர	4	...	8-3	8	2 15	0 06.0	0 13	36	Shoolagiri (TK), Krishnagiri Dt.	

2
26/5/17

DHANASEKAR, M.Sc
225/225

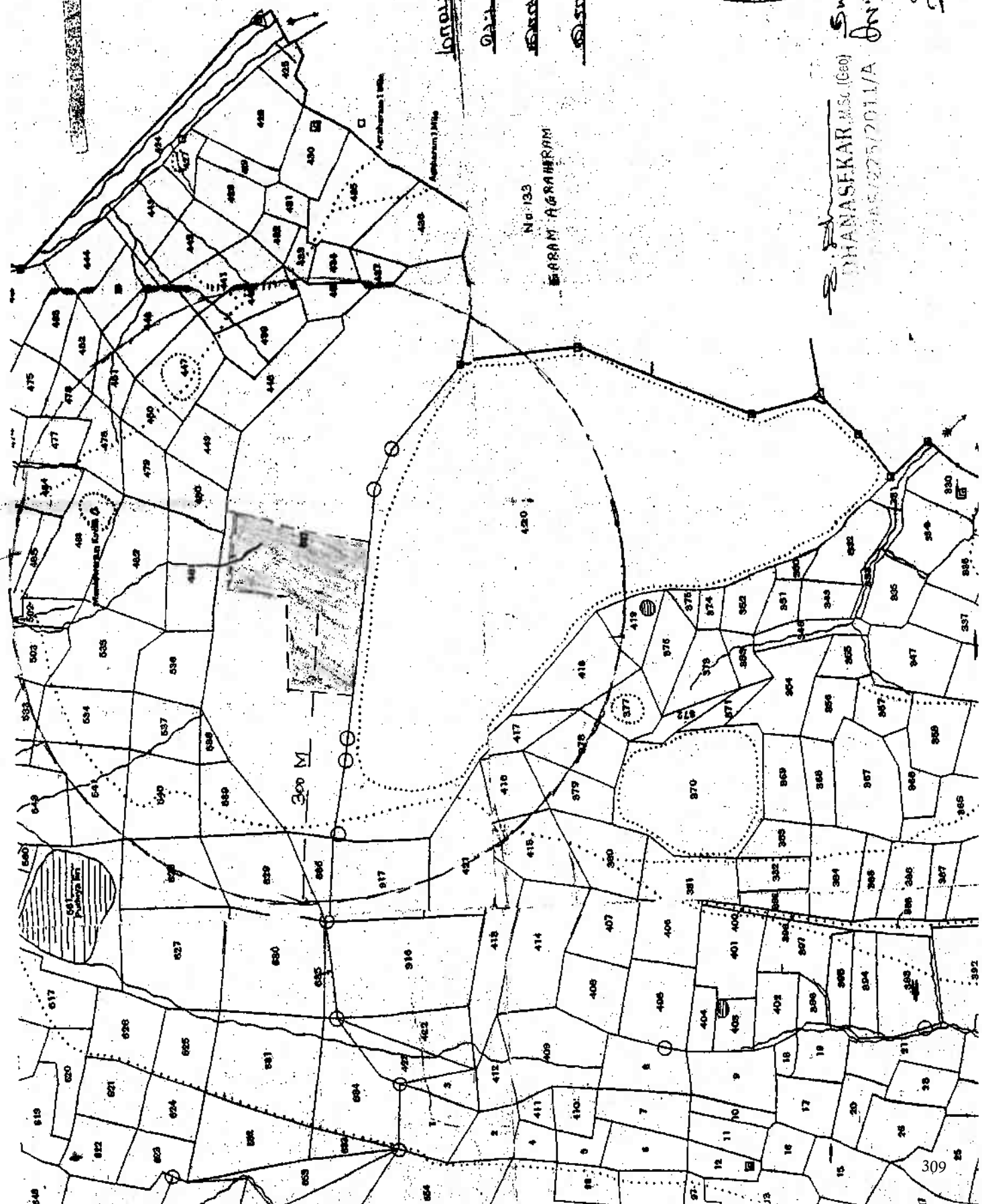
VILLAGE ADMINISTRATIVE OFFICE
131, THUPPUGANAPALLI (VII)



DHANASEKAR M.Sc. (Geo)
S.No. 2737011/A
S. Shanmugam
S. Subramanian

மண்டலம்: திருவாரூர்
பகுதி: கராமம்
பெயர்: கராமம்

No: 133
KARAM AGRARAM





**CERTIFICATE OF RECOGNITION AS
 QUALIFIED PERSON TO PREPARE MINING PLANS
 (Under Rule 22C of Mineral Concession Rules 1960)**

Shri S. DAMASEKAR, resident of Old No.6, New No.8/3, Kullappan Street, Opp. Indian Bank Line, Omalur (P.O), Salem - 636 455, son of Shri R. SUNDARAM having given satisfactory evidence of his qualifications and experience is hereby granted recognition under Rule 22C of the Mineral Concession Rules, 1960 as a Qualified Person to prepare Mining Plans.

His registration number is

RQP/MAS/225/2011/A

recognition is valid for a period of ten years ending 12.01.2021.

**Regional Controller of Mines
 Indian Bureau of Mines
 Chennai Region**

**Place : Chennai
 Date : 13.01.2011**

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

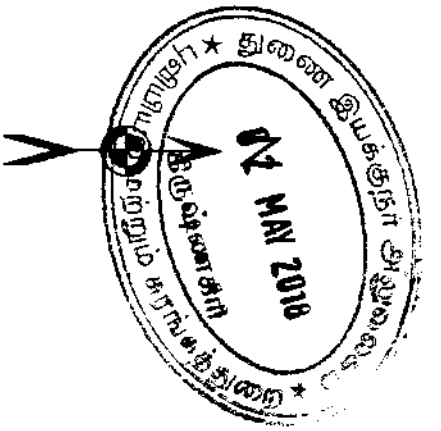
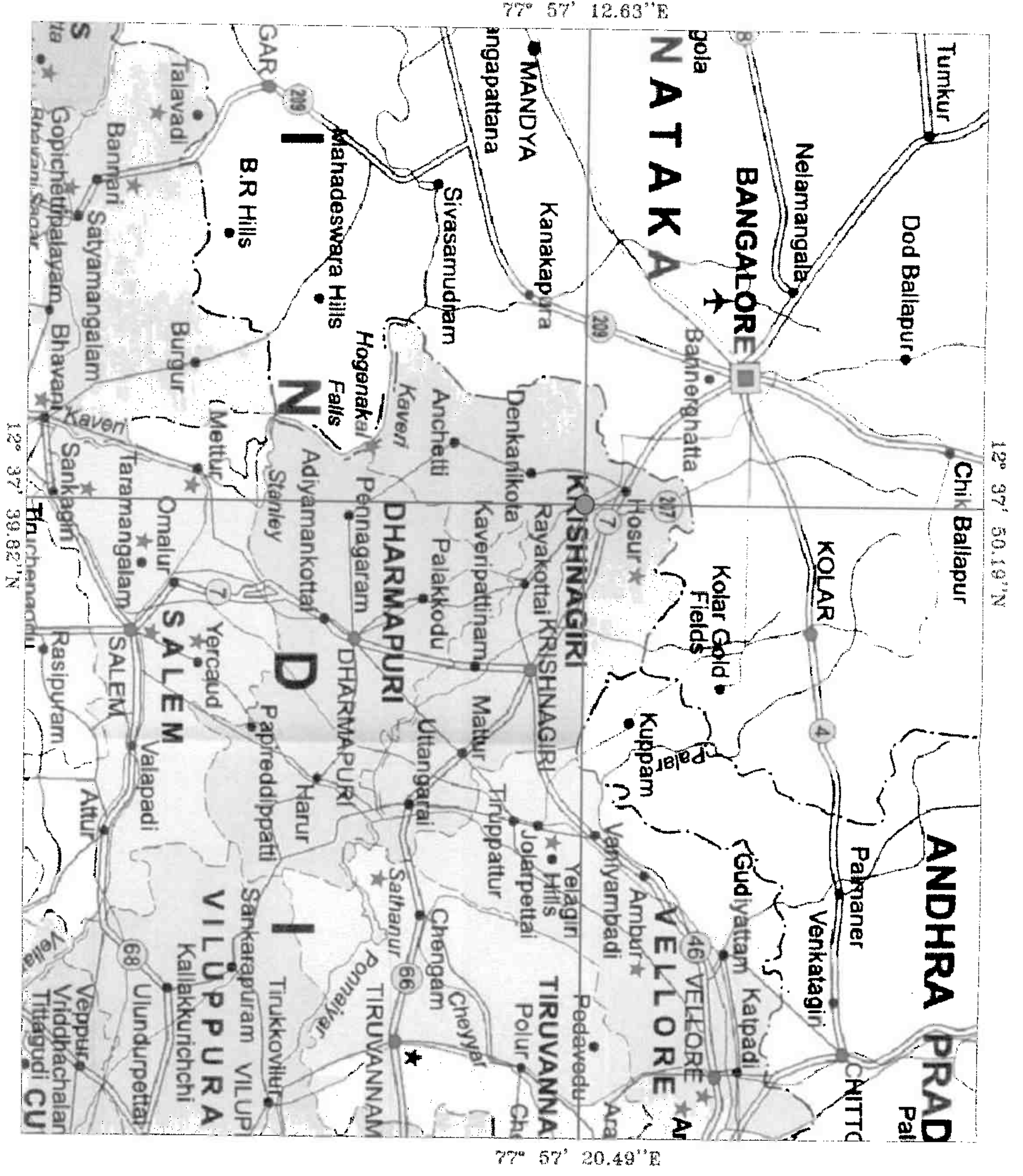


PLATE NO-1 Date of Survey: 17.3.2018

APPLICANT:
 THIRU, K.P. ANAND,
 S/O, V.P. PERUMAL,
 NO. 2/10, VELAMPATTY POST,
 PENNAGARAM TALUK,
 DHARMAPURI DISTRICT-636809.

LOCATION:
 S.F. NO : 637 PART-2,
 EXTENT : 4.50.0 Hq.,
 VILLAGE : THIRUPUGANAPALLI,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

INDEX
 MINE LEASE AREA : ●
 TOPO SHEET NO. : 57 H/14
 LATITUDE : 12° 37' 39.82"N to 12° 37' 50.19"N
 LONGITUDE : 77° 57' 12.63"E to 77° 57' 20.49"E

LOCATION PLAN

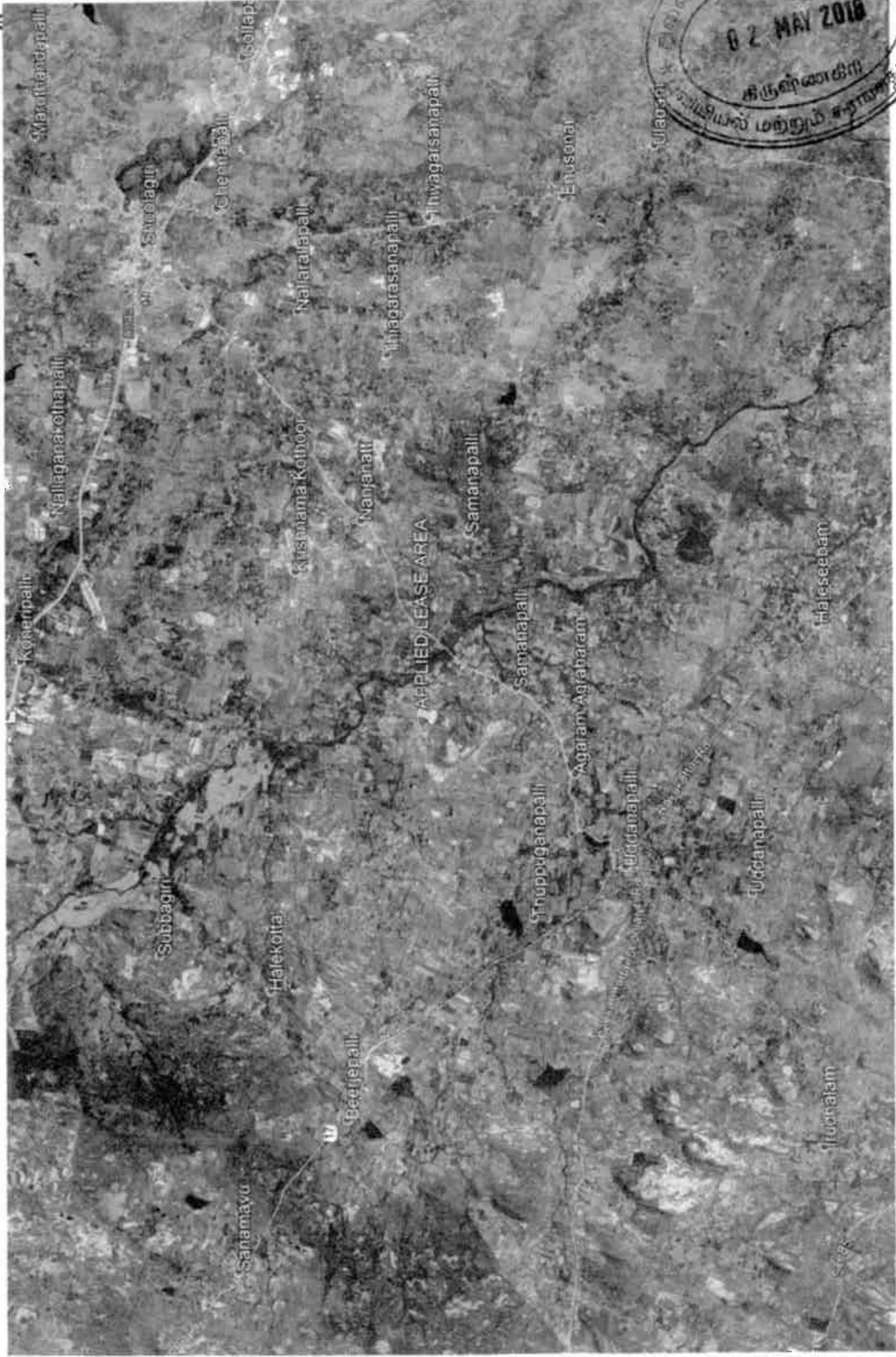
Prepared by:

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.,
 RECOGNIZED QUALIFIED PERSON
 ROP/MAS/PS/2011/A

ROUTE MAP

PLATE NO-IA



[Signature]
S.DHANASEKAR.M.Sc.,
RECOGNIZED QUALIFIED PERSON
ROP/MAS/225/2011/A

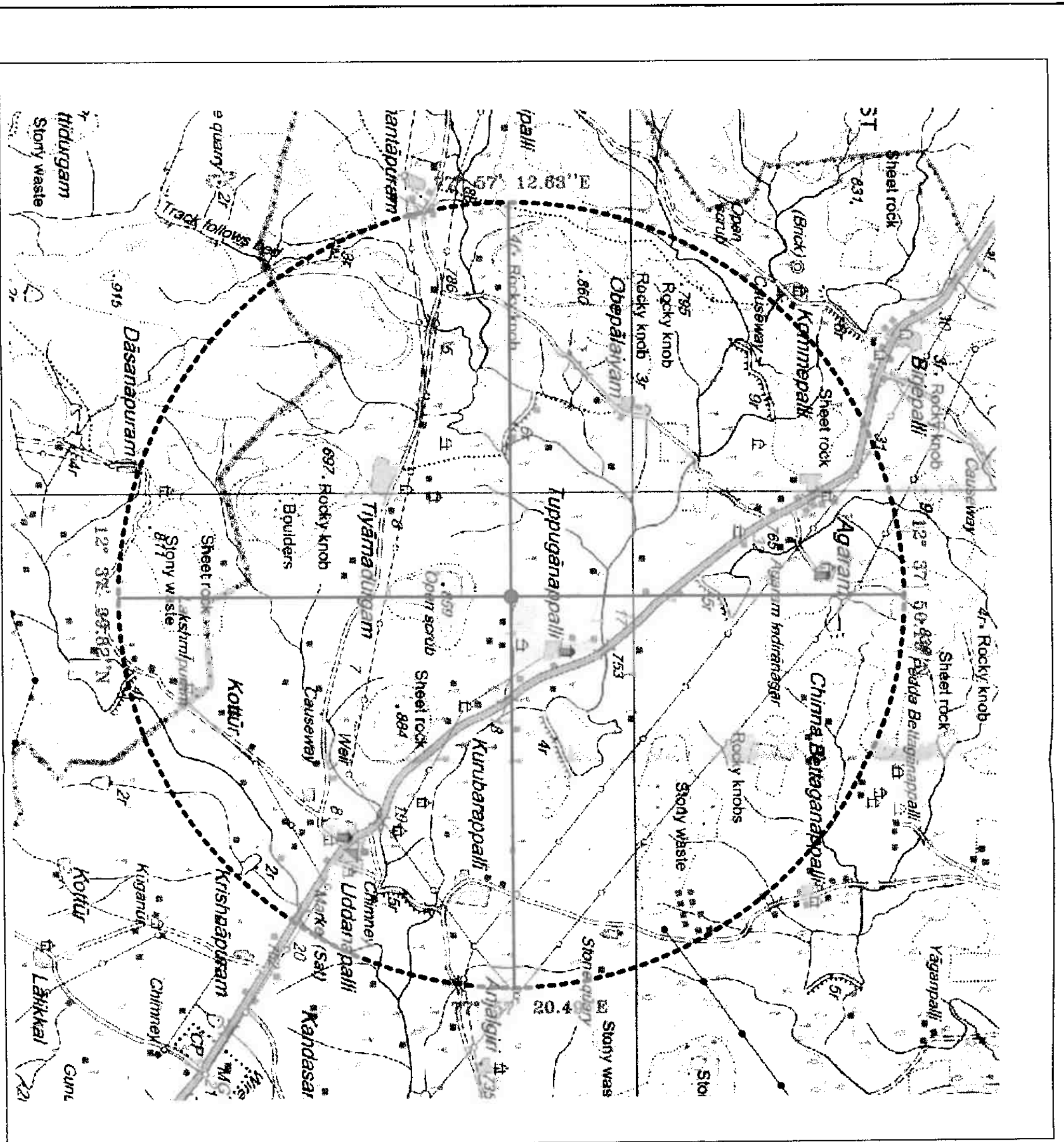


PLATE NO-IB

Date of Survey: 17.2.2018

APPLICANT:

THIRU.K.P.ANAND
S/O.V.P.PERUMAL
NO.2/10,VELAMRATY POST,
PENNAGARAM TALUK,
DHARMAPURI DISTRICT.

Official Stamp: 02 MAY 2018

LOCATION:

S.F.NO : 637 PART-2,
EXTENT : 4.50.0 Hq.
VILLAGE : THUPUGANAPALLI,
TALUK : HOSUR,
DISTRICT : KRISHNAGIRI.

INDEX

- MINE LEASE AREA :
- 500M RADIUS :
- TOPO SHEET NO. : 57 H/14
- LATITUDE : 12° 37' 39.82" N to 12° 37' 50.19" N
- LONGITUDE : 77° 57' 12.63" E to 77° 57' 20.49" E

CONVENTIONAL SYMBOLS

- MINE LEASE AREA
- 500 M RADIUS
- ROAD
- WATER COURSE
- RAILWAY LINE
- CANAL
- BUILDING
- CEMETERY
- WELL
- TEMPLE
- CHIMNEY
- SHED
- BRIDGE
- TOWER
- WATER TOWER
- MOUND
- SAND PIT
- QUARRY
- STONY WASTE
- ROCKY KNOB
- SHEET ROCK
- Boulders
- OPEN SCRUB
- CAUSEWAY
- WEIR
- SAND PIT

TOPO SHEET KEY MAP

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, I.S.C.
RECOGNIZED QUALIFIED PERSON
RQP/MS/225/2011/A

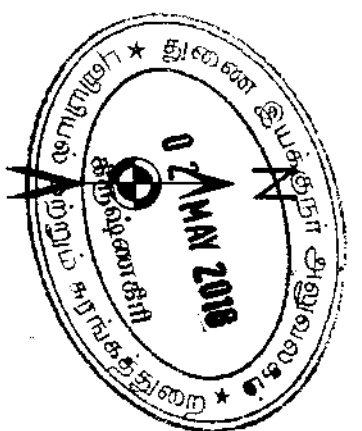


PLATE NO-IC Date of Survey: 17.3.2018

APPLICANT:
 THIRU.K.P.ANAND,
 S/O. V.P.PERUMAL,
 NO.2/10,VELAMPATTY POST,
 PENNAGARAM TALUK,
 DHARMAPURI DISTRICT-636809.

LOCATION:
 S.F.NO : 637 PART-2,
 EXTENT : 4.50.0 Ha,
 VILLAGE : THUPUGANAPALLI,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

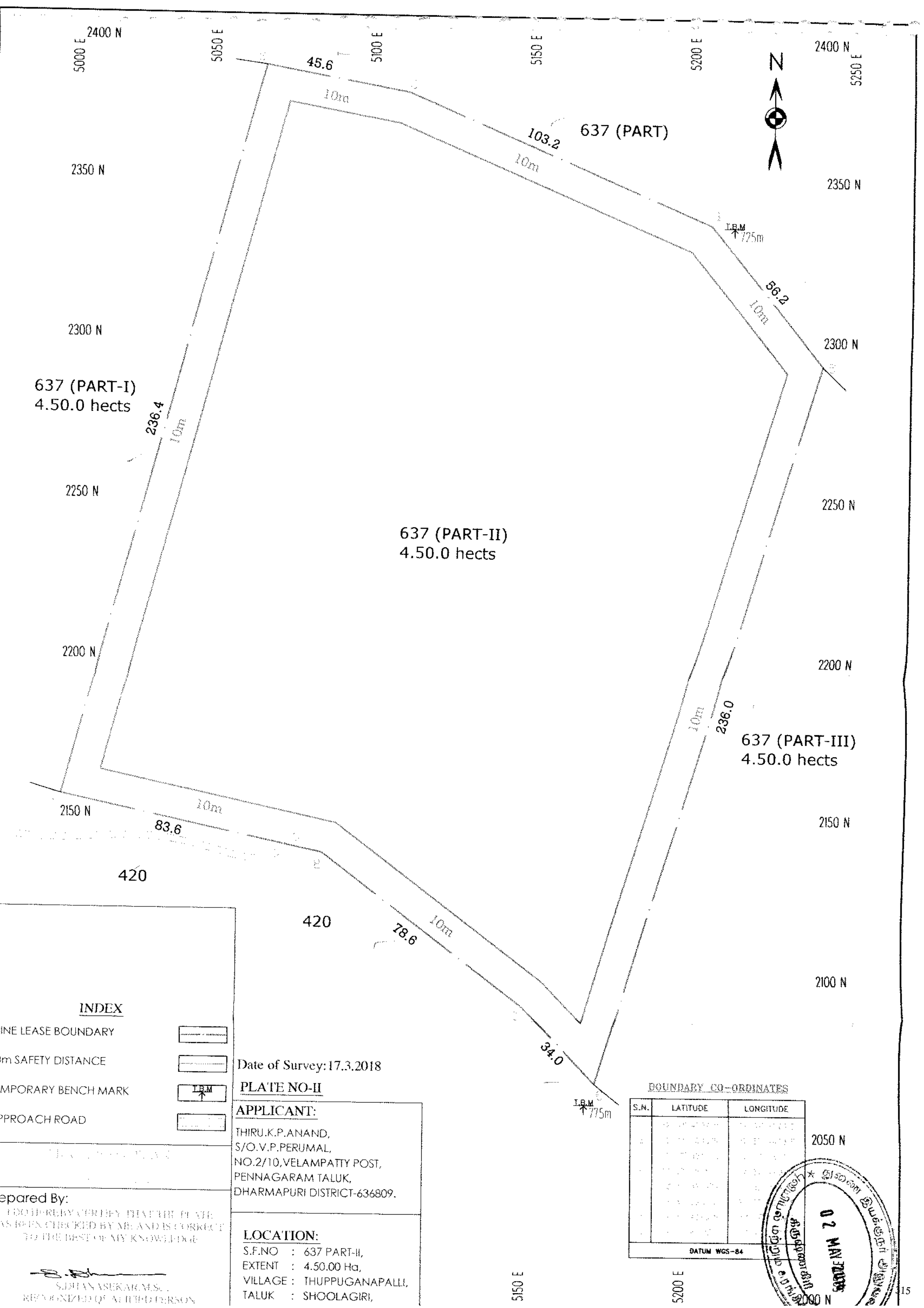
INDEX

MINE LEASE AREA	—————
VILLAGE ROAD	-----
APPROACH ROAD	.....
500m RADIUS	.....

TOPO SHEET NO. : 57 H/14
 LATITUDE : 12° 37' 39.82" N to 12° 37' 50.19" N
 LONGITUDE : 77° 57' 12.63" E to 77° 57' 20.49" E
 SATELLITE IMAGINARY MAP

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.,
 RECOGNIZED QUALIFIED PERSON



637 (PART-I)
4.50.0 hec

637 (PART-II)
4.50.0 hec

637 (PART-III)
4.50.0 hec



INDEX

- LINE LEASE BOUNDARY
- 10m SAFETY DISTANCE
- TEMPORARY BENCH MARK
- APPROACH ROAD

Date of Survey: 17.3.2018

PLATE NO-II

APPLICANT:
THIRU.K.P.ANAND,
S/O.V.P.PERUMAL,
NO.2/10,VELAMPATTY POST,
PENNAGARAM TALUK,
DHARMAPURI DISTRICT-636809.

LOCATION:
S.F.NO : 637 PART-II,
EXTENT : 4.50.00 Ha,
VILLAGE : THUPPUGANAPALLI,
TALUK : SHOOLAGIRI,

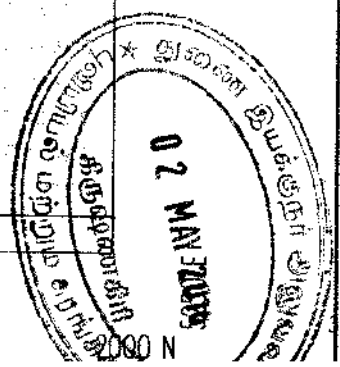
Prepared By:
S. JAYANASEKAR, M.S.C.,
AS BEEN CHECKED BY ME AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE

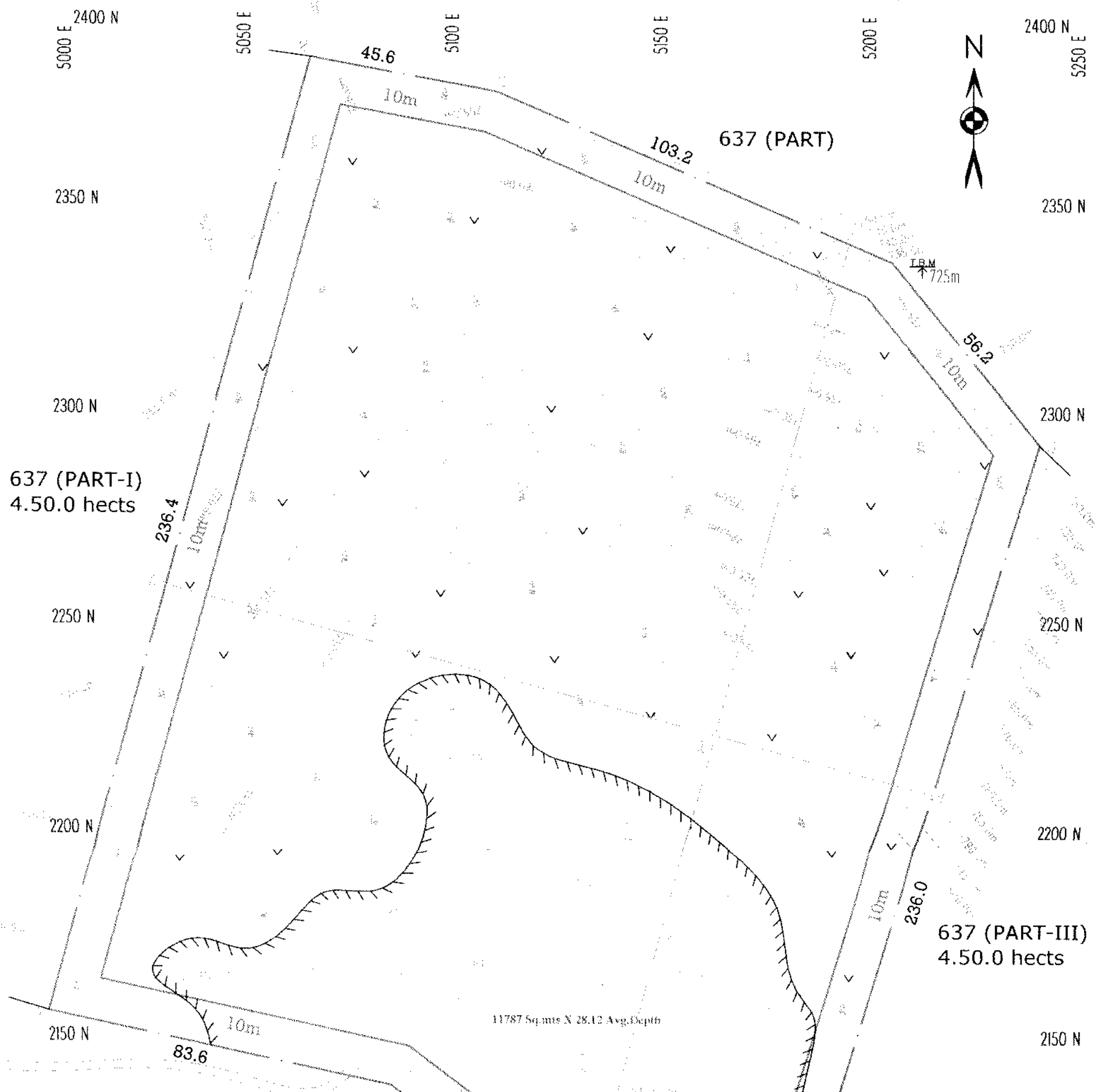
S. JAYANASEKAR, M.S.C.,
RECOGNIZED BY THIRD PERSON

BOUNDARY CO-ORDINATES

S.N.	LATITUDE	LONGITUDE
1	2050 N	5200 E
2	2050 N	5250 E
3	2100 N	5250 E
4	2100 N	5150 E
5	2150 N	5150 E
6	2150 N	5050 E
7	2200 N	5050 E
8	2200 N	5000 E
9	2250 N	5000 E
10	2250 N	5100 E
11	2300 N	5100 E
12	2300 N	5150 E
13	2350 N	5150 E
14	2350 N	5200 E
15	2400 N	5200 E

DATUM WGS-84





420 INDEX

MINE LEASE BOUNDARY	
10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
STRIKE & DIP	
QUARRY PIT	
ROUGH STONE	
SHRUB	
TOP SOIL	
TOPOGRAPHICAL CONTOUR	

Date of Survey: 17.3.2018
PLATE NO-III
APPLICANT:
 THIRU.K.P.ANAND,
 S/O.V.P.PERUMAL,
 NO.2/10,VELAMPATTY POST,
 PENNAGARAM TALUK,
 DHARMAPURI DISTRICT-636809.

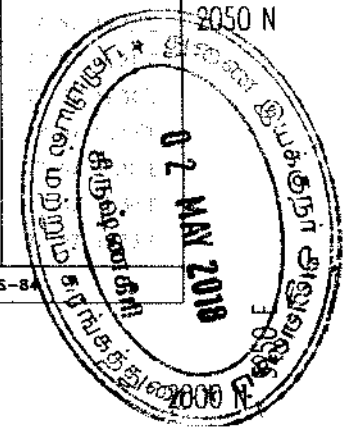
LOCATION:
 S.F.NO : 637 PART-II,
 EXTENT : 4.50.00 Ha,
 VILLAGE : THUPPUGANAPALLI,
 TALUK : SHOOLAGIRI,

EXISTING PIT DETAILS:
 11787 Sq.mts X 28.12 Avg.Depth
 = 331450.44 CBM

BOUNDARY CO-ORDINATES

S.N.	LATITUDE	LONGITUDE
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

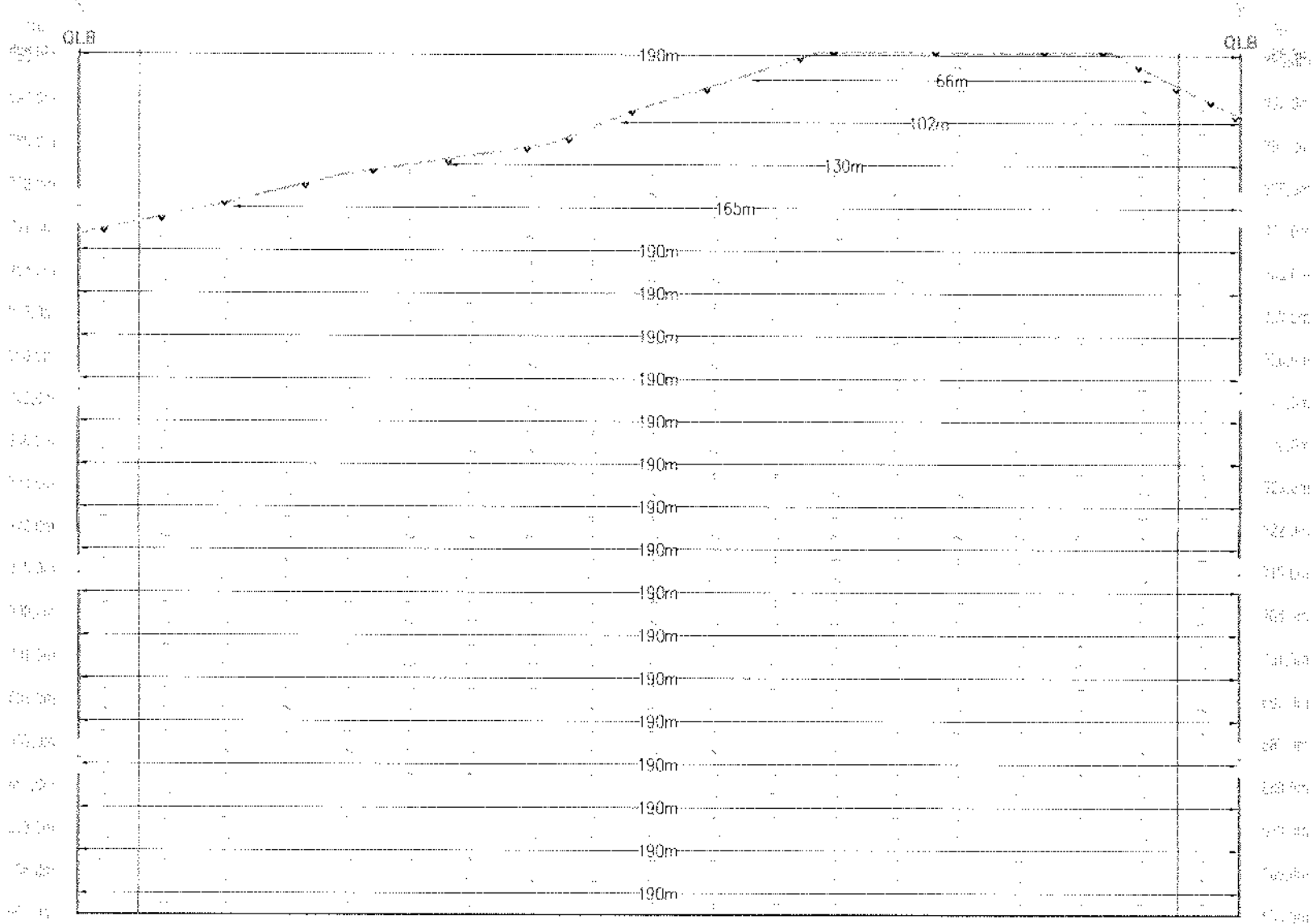
DATUM WGS-84



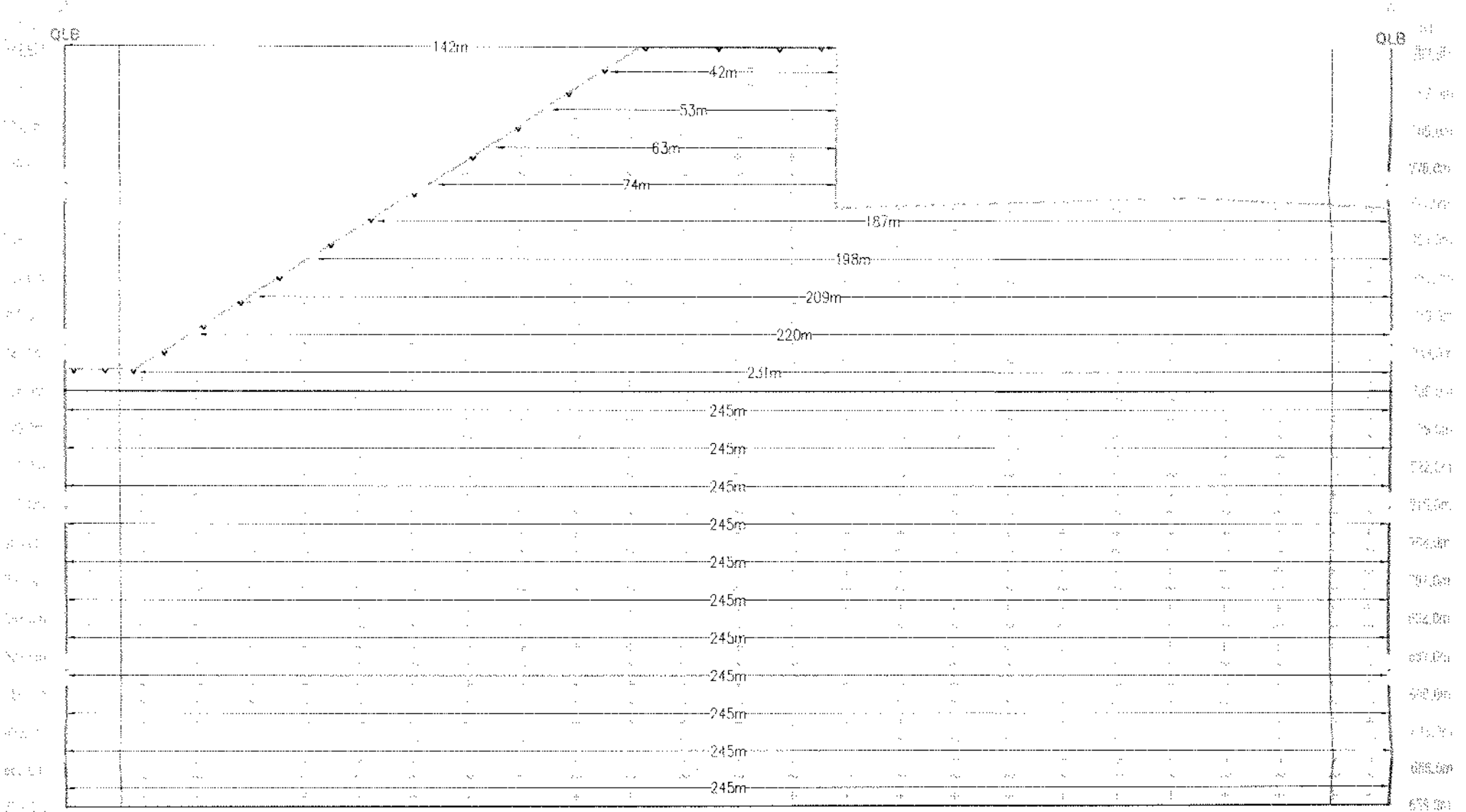
Prepared By:
 I DO HEREBY CERTIFY THAT THE PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

S. DEVA ANEKAR, M.Sc.
 RECOGNIZED QUALIFIED PERSON

SECTION ALONG X-Y



SECTION ALONG A-B



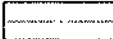


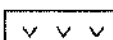
YEARWISE DEPTH = 141m
 SURFACE GROUND LEVEL ABOVE - 64m
 SURFACE GROUND LEVEL BELOW - 77m

PLATE NO-III-A

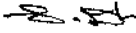
APPLICANT:
 THIRU.K.P.ANAND,
 S/O.V.P.PERUMAL,
 NO.2/10,VELAMPATTY POST,
 PENNAGARAM TALUK,
 DHARMAPURI DISTRICT-636809.

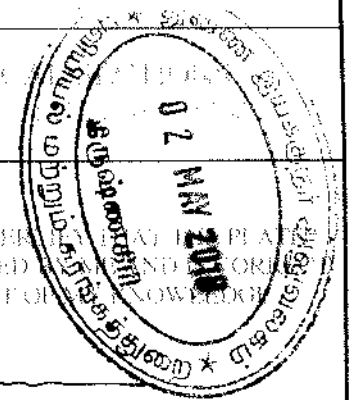
LOCATION:
 S.F.NO : 637 PART-II,
 EXTENT : 4.50.00 Ha,
 VILLAGE : THUPPUGANAPALLI,
 TALUK : SHOOLAGIRI,
 DISTRICT : KRISHNAGIRI.

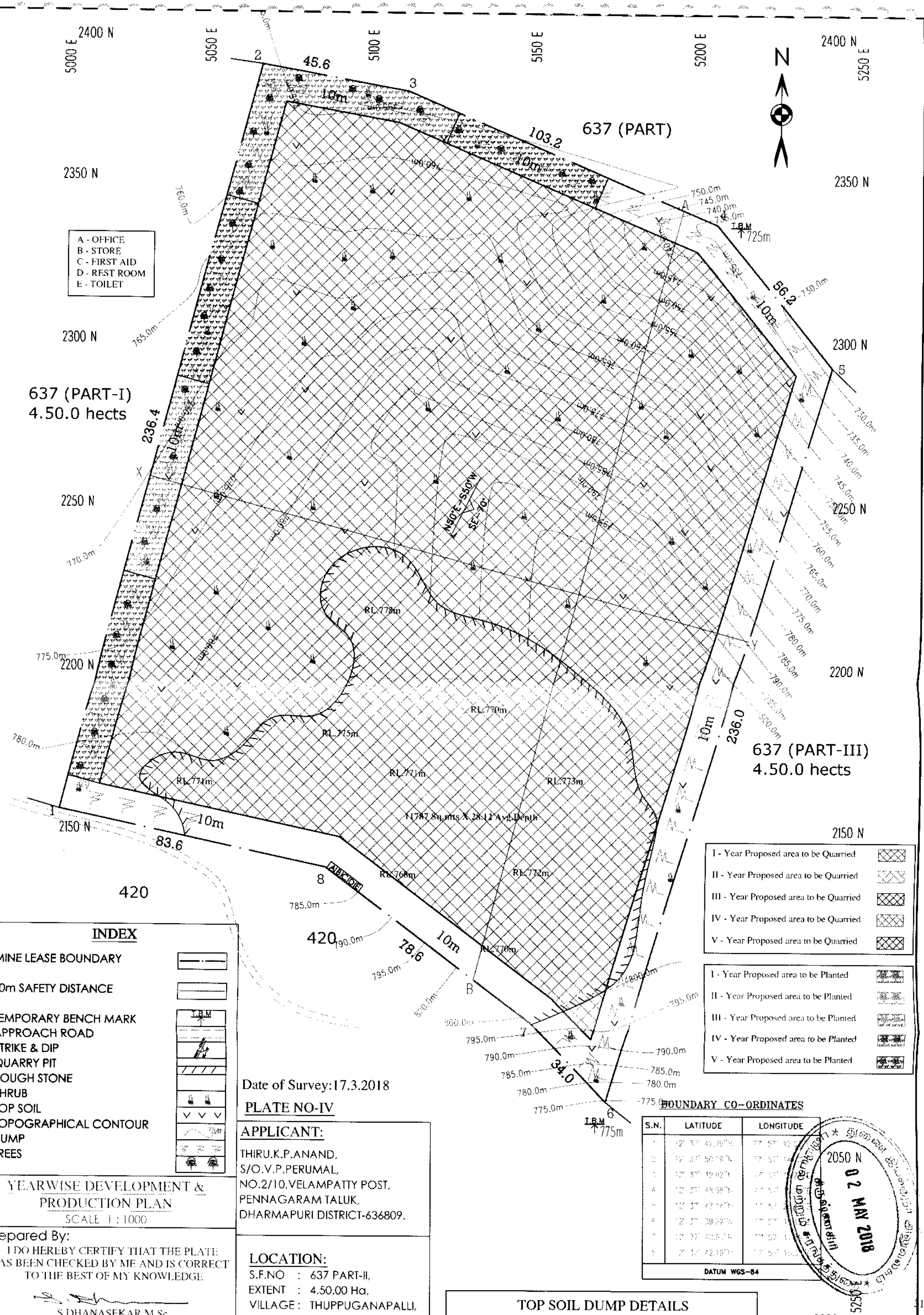
INDEX

- MINE LEASE BOUNDARY 
- 10m SAFETY DISTANCE 
- ROUGH STONE 
- TOP SOIL 

Prepared By:
 I DO HEREBY CERTIFY THAT THE PLAN
 HAS BEEN CHECKED AND FOUND CORRECT
 TO THE BEST OF MY KNOWLEDGE


 S. DHANASEKARAN, S.E.,
 RECOGNIZED QUALIFIED PERSON





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

637 (PART-I)
 4.50.0 hec

637 (PART-III)
 4.50.0 hec

- I - Year Proposed area to be Quarried
- II - Year Proposed area to be Quarried
- III - Year Proposed area to be Quarried
- IV - Year Proposed area to be Quarried
- V - Year Proposed area to be Quarried

- I - Year Proposed area to be Planted
- II - Year Proposed area to be Planted
- III - Year Proposed area to be Planted
- IV - Year Proposed area to be Planted
- V - Year Proposed area to be Planted

INDEX

- MINE LEASE BOUNDARY
- 0m SAFETY DISTANCE
- TEMPORARY BENCH MARK
- APPROACH ROAD
- TRIKE & DIP
- QUARRY PIT
- ROUGH STONE
- GRUB
- TOP SOIL
- TOPOGRAPHICAL CONTOUR
- DUMP
- REEFS

Date of Survey: 17.3.2018

PLATE NO-IV

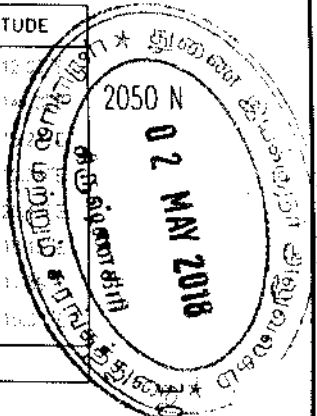
APPLICANT:
 THIRU.K.P.ANAND,
 S/O.V.P.PERUMAL,
 NO.2/10,VELAMPATTY POST,
 PENNAGARAM TALUK,
 DHARMAPURI DISTRICT-636809.

LOCATION:
 S.F.NO : 637 PART-II,
 EXTENT : 4.50.00 Ha,
 VILLAGE : THUPPUGANAPALLI,
 TALUK : SUGGLACI

BOUNDARY CO-ORDINATES

S.N.	LATITUDE	LONGITUDE
1	12° 37' 42.10"	77° 57' 12.50"
2	12° 37' 58.18"	77° 57' 14.50"
3	12° 37' 19.42"	77° 57' 14.50"
4	12° 37' 43.58"	77° 57' 14.50"
5	12° 37' 39.52"	77° 57' 14.50"
6	12° 37' 43.58"	77° 57' 14.50"
7	12° 37' 43.58"	77° 57' 14.50"
8	12° 37' 42.10"	77° 57' 12.50"

DATUM WGS-84



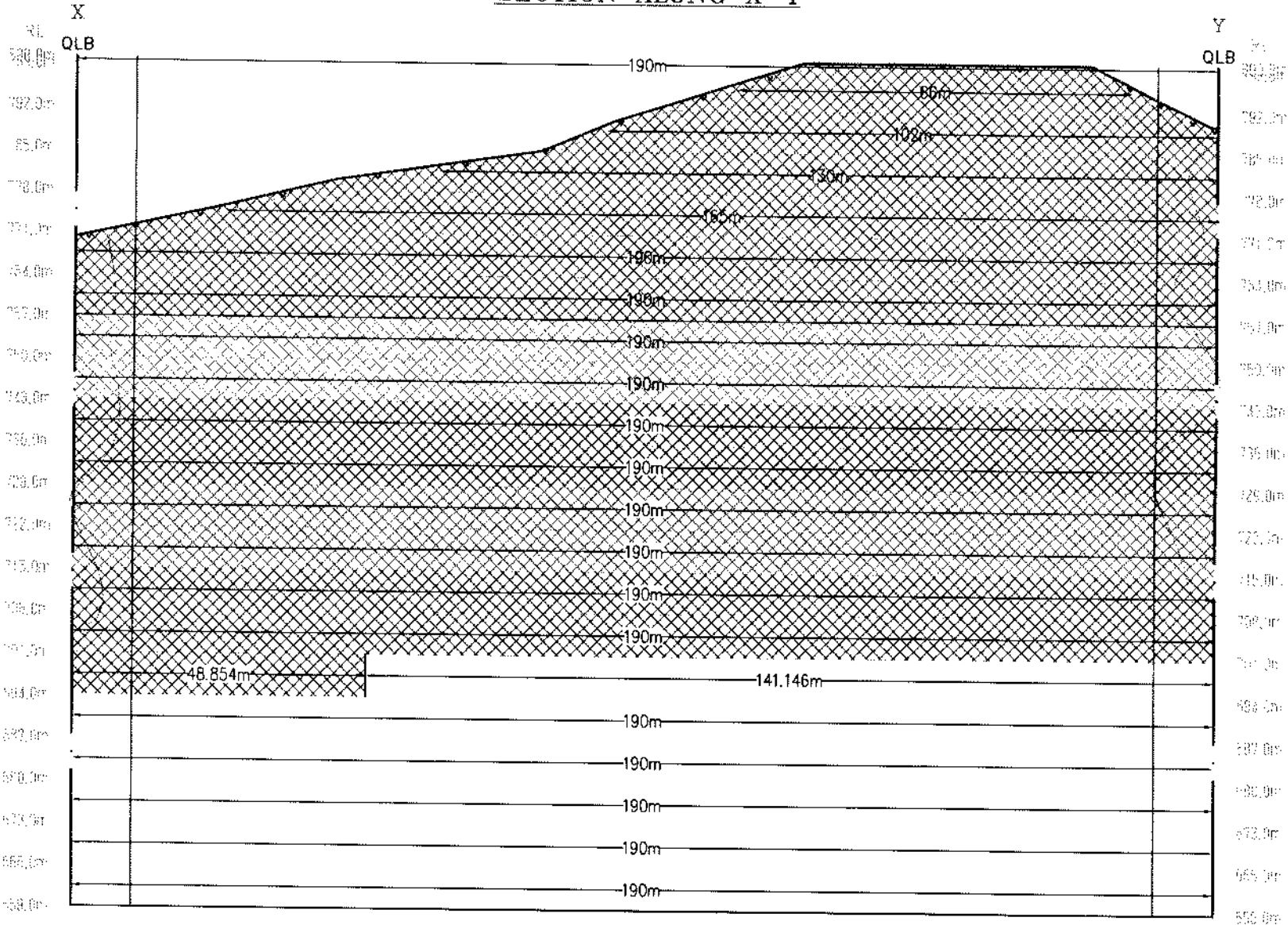
YEARWISE DEVELOPMENT & PRODUCTION PLAN
 SCALE 1 : 1000

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

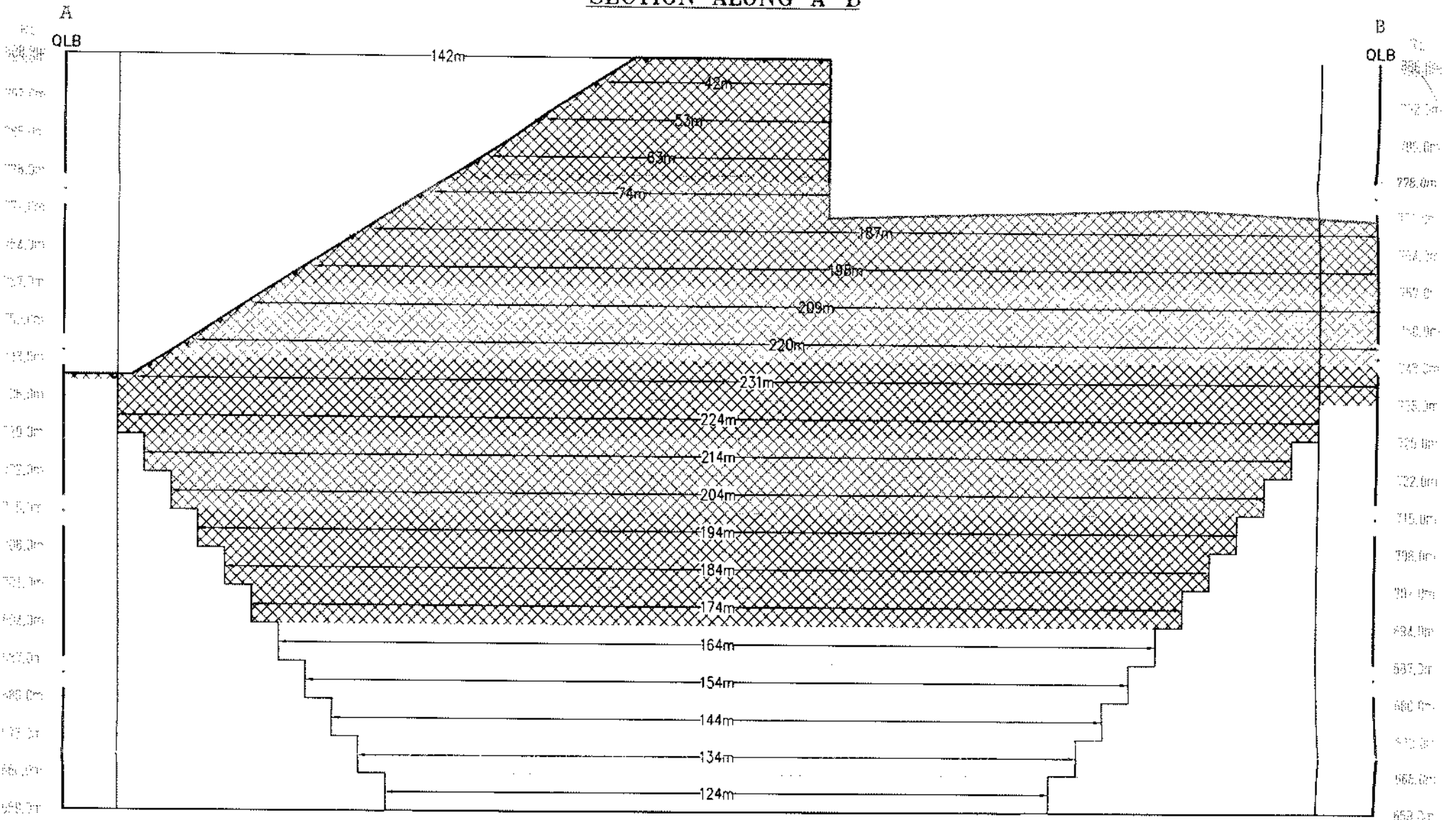
S.DHANASEKAR.M.Sc.,

TOP SOIL DUMP DETAILS

SECTION ALONG X-Y



SECTION ALONG A-B



YEARWISE DEPTH = 106m
SURFACE GROUND LEVEL ABOVE - 64m
SURFACE GROUND LEVEL BELOW - 42m

PLATE NO-IV-A

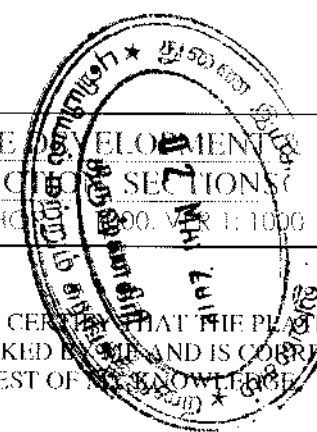
INDEX

- MINE LEASE BOUNDARY
- 10m SAFETY DISTANCE
- ROUGH STONE
- TOP SOIL

YEARWISE ELEMENTARY
PRODUCTION SECTIONS
 SECTION HO. NO. 00. V. 1: 1000

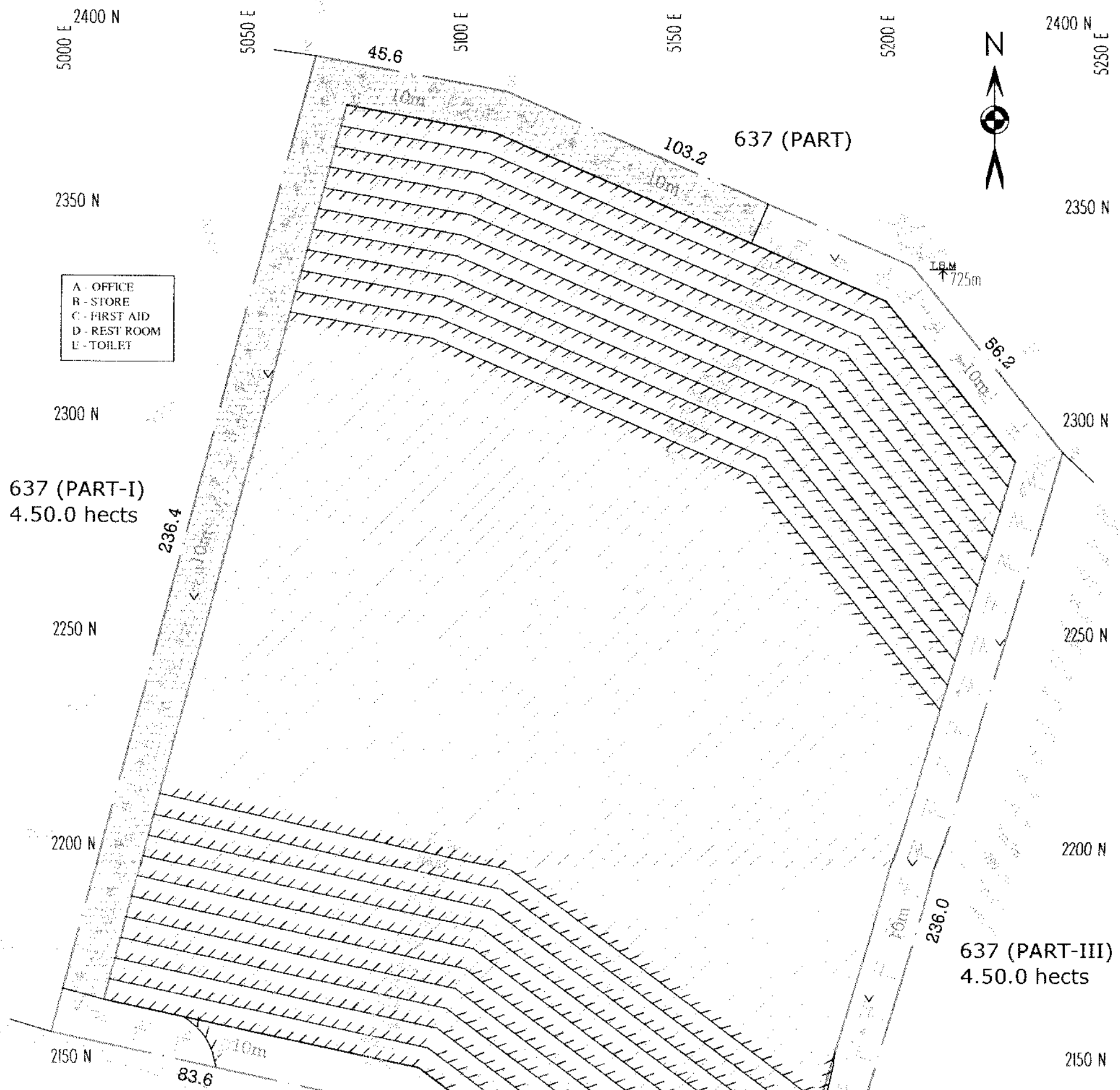
Prepared By:
 I DO HEREBY CERTIFY THAT THE PLAN
 HAS BEEN CHECKED AND IS CORRECT
 TO THE BEST OF MY KNOWLEDGE

S.DHANASEKAR.M.Sc.,
 REGISTERED QUALIFIED PERSON



APPLICANT:
 HIRU.K.P.ANAND,
 /O.V.P.PERUMAL,
 O.2/10,VELAMPATTY POST,
 ENNAGARAM TALUK,
 HARMAPURI DISTRICT-636809.

LOCATION:
 S.F.NO : 637 PART-II,
 EXTENT : 4.50.00 Ha,
 VILLAGE : THUPPUGANAPALLI,
 TALUK : SHOOLAGIRI,
 DISTRICT : KRISHNAGIRI.



- A - OFFICE
- R - STORE
- C - FIRST AID
- D - REST ROOM
- E - TOILET

637 (PART-I)
4.50.0 hec

637 (PART-III)
4.50.0 hec

BOUNDARY CO-ORDINATES

S.N.	LATITUDE	LONGITUDE
1	22° 57' 42.87"	77° 57' 12.67"
2	22° 57' 58.14"	77° 57' 13.21"
3	22° 57' 48.27"	77° 57' 16.07"
4	22° 57' 48.26"	77° 57' 16.34"
5	22° 57' 47.14"	77° 57' 17.50"
6	22° 57' 50.81"	77° 57' 17.57"
7	22° 57' 45.54"	77° 57' 17.63"
8	22° 57' 45.54"	77° 57' 17.63"

DATUM WGS-84

INDEX

MINE LEASE BOUNDARY	
10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
STRIKE & DIP	
QUARRY PIT	
ROUGH STONE	
SHRUB	
TOP SOIL	
TOPOGRAPHICAL CONTOUR	
DUMP	
TREES	

Date of Survey: 17.3.2018
PLATE NO-V
APPLICANT:
 THIRU.K.P.ANAND,
 S/O.V.P.PERUMAL,
 NO.2/10,VELAMPATTY POST,
 PENNAGARAM TALUK,
 DHARMAPURI DISTRICT-636809.

LOCATION:
 S.F.NO : 637 PART-II,
 EXTENT : 4.50.00 Ha,
 VILLAGE : THUPPUGANAPALLI,
 TALUK : SHOOLAGIRI,
 DISTRICT : KRISHNAGIRI.

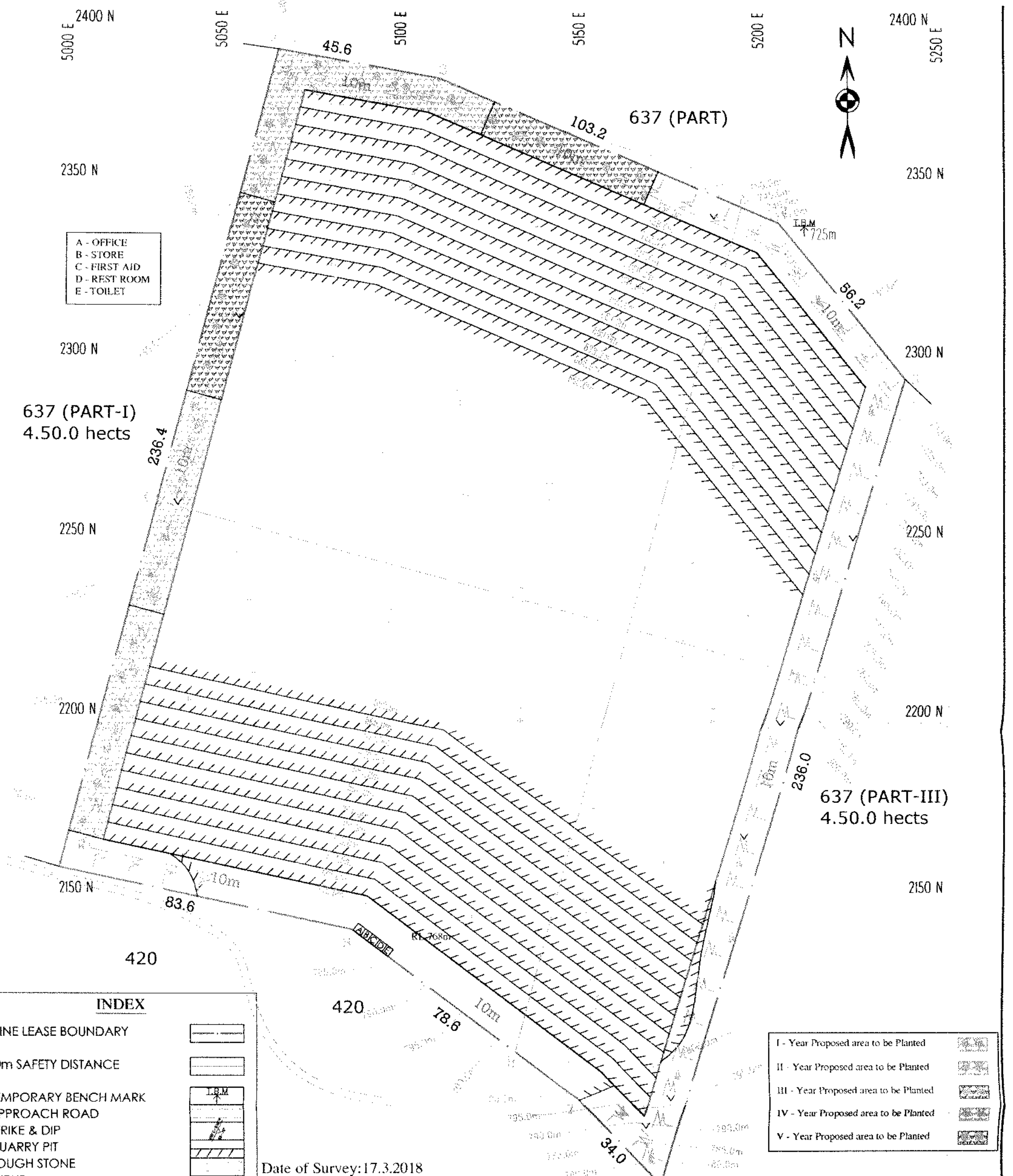
MINE LAYOUT AND USE PATTERNS

DESCRIPTION	PRESENT AREA (Ha)	AREA UNDER USE DURING THE QUARRYING PERIOD (Ha)	COLOR CODE
AREA UNDER QUARRYING	1.17.9	4.30.9	
INFRASTRUCTURE	Nil	0.01.0	
ROADS	0.01.0	0.02.0	
GREEN BELT & DUMP	Nil	0.16.1	
UN-UTILIZED AREA	3.31.0	Nil	
GRAND TOTAL	4.50.0	4.50.0	

TOP SOIL DUMP DETAILS
 Top Soil Dump = 26980 Cbm (4012 Sqm X 6.72m(H))

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

 S. JAGAN SEKHAR M.S.C.,
 RECOGNIZED QUALIFIED PERSON
 RQP-MANAGER 2011A



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

INDEX

MINE LEASE BOUNDARY	
10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
STRIKE & DIP	
QUARRY PIT	
ROUGH STONE	
SHRUB	
TOP SOIL	
TOPOGRAPHICAL CONTOUR	
DUMP	
TREES	

- I - Year Proposed area to be Planted
- II - Year Proposed area to be Planted
- III - Year Proposed area to be Planted
- IV - Year Proposed area to be Planted
- V - Year Proposed area to be Planted

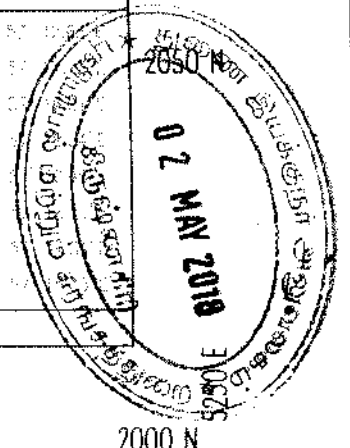
Date of Survey: 17.3.2018
PLATE NO-VI
APPLICANT:
 THIRU.K.P.ANAND,
 S/O.V.P.PERUMAL,
 NO.2/10,VELAMPATTY POST,
 PENNAGARAM TALUK,
 DHARMAPURI DISTRICT-636809.

LOCATION:
 S.F.NO : 637 PART-II,
 EXTENT : 4.50.00 Ha,
 VILLAGE : THUPPUGANAPALLI,
 TALUK : SHOOLAGIRI,
 DISTRICT : KRISHNAGIRI.

BOUNDARY CO-ORDINATES

S.N.	LATITUDE	LONGITUDE
1	23 54 42.14 N	77 57 02.14 E
2	23 54 42.14 N	77 57 02.14 E
3	23 54 42.14 N	77 57 02.14 E
4	23 54 42.14 N	77 57 02.14 E
5	23 54 42.14 N	77 57 02.14 E
6	23 54 42.14 N	77 57 02.14 E
7	23 54 42.14 N	77 57 02.14 E
8	23 54 42.14 N	77 57 02.14 E
9	23 54 42.14 N	77 57 02.14 E
10	23 54 42.14 N	77 57 02.14 E

DATUM WGS-84

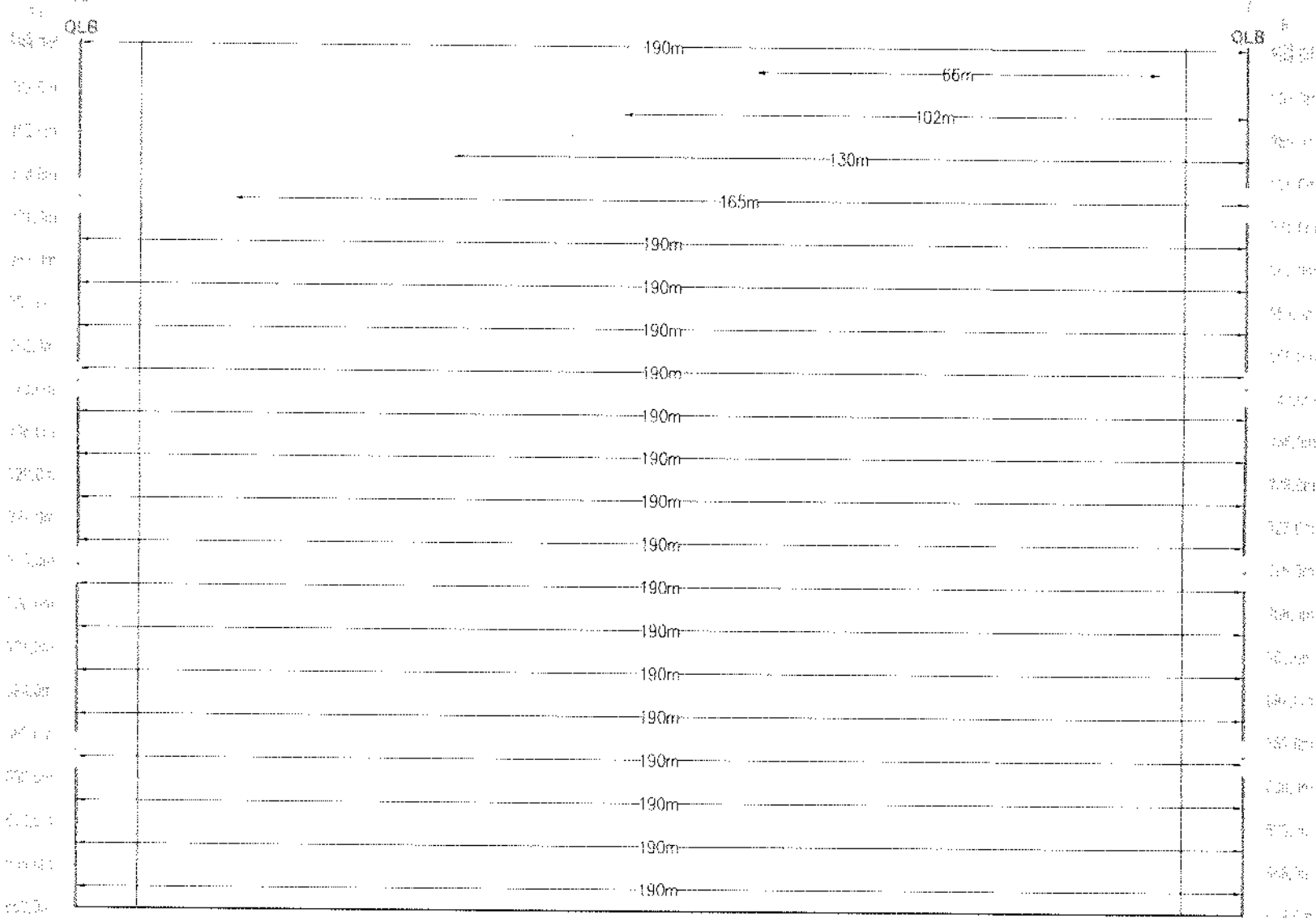


TOP SOIL DUMP DETAILS
 Top Soil Dump = 26980 Cbm (4012 Sqm X 6.72m(H))

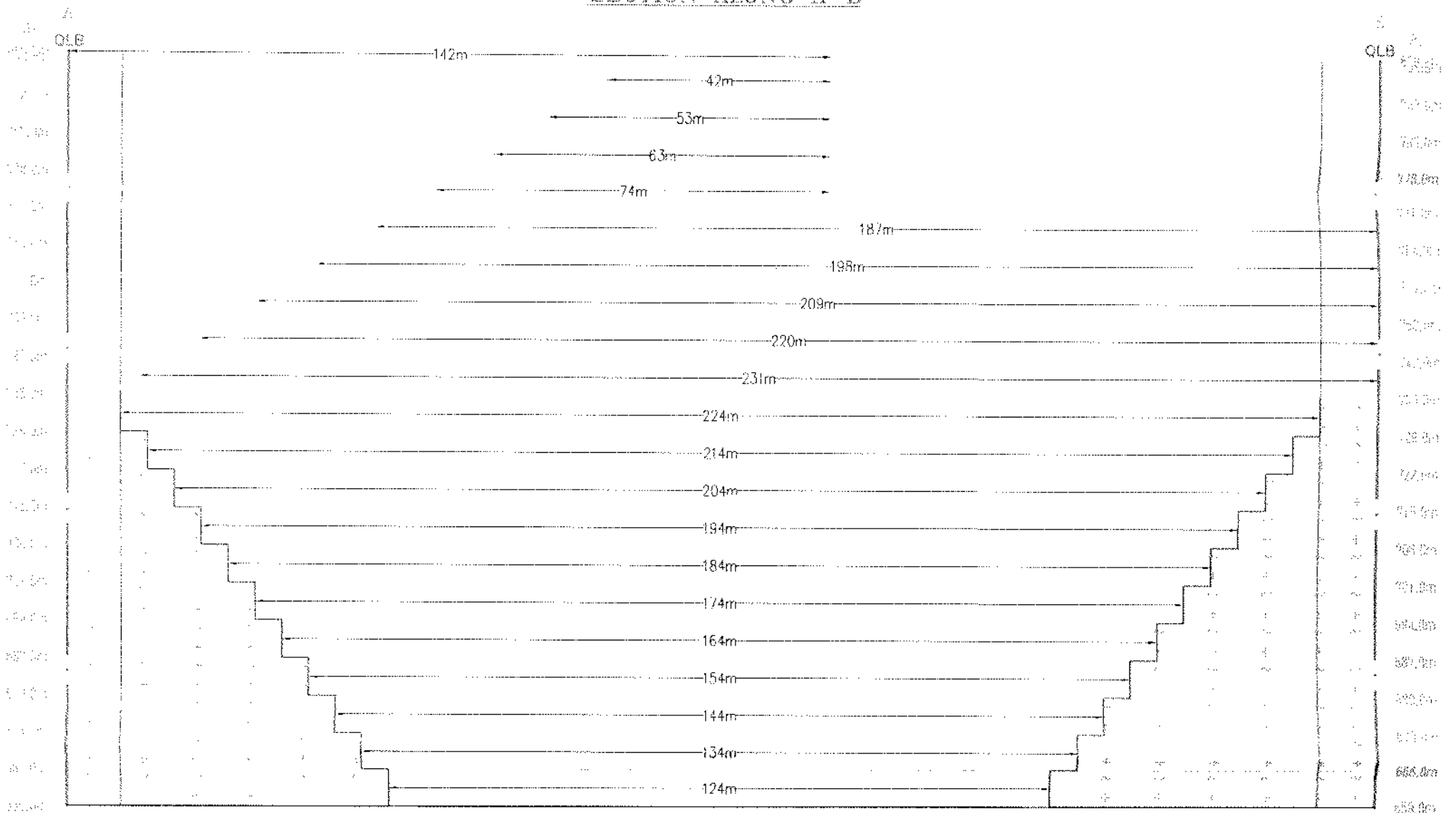
Prepared By:
 I HEREBY CERTIFY THAT THIS PLATE HAS BEEN CHECKED BY ME AND IS CORRECT TO THE BEST OF MY KNOWLEDGE.

 S. DHYANASEKAR, M.S.C.,
 RECOGNIZED QUALIFIED PERSON
 ROB/MAS/22/2011/A

SECTION ALONG X-Y



SECTION ALONG A-B



YEARWISE DEPTH = 141m

SURFACE GROUND LEVEL ABOVE - 64m
SURFACE GROUND LEVEL BELOW - 77m

PLATE NO-VI-A

APPLICANT:

THIRU.K.P.ANAND,
S/O.V.P.PERUMAL,
NO.2/10,VELAMPATTY POST,
PENNAGARAM TALUK,
DHARMAPURI DISTRICT-636809.

LOCATION:

S.F.NO : 637 PART-II,
EXTENT : 4.50.00 Ha,
VILLAGE : THUPPUGANAPALLI,
TALUK : SHOOLAGIRI,
DISTRICT : KRISHNAGIRI.

INDEX

- MINE LEASE BOUNDARY
- 10m SAFETY DISTANCE
- ROUGH STONE
- TOP SOIL

Prepared By: **S.DHANASEKAR.M.Sc.**
REGISTERED QUALIFIED PERSON

02 MAY 2019

HAS BEEN CHECKED AND IS CORRECT TO THE BEST OF MY KNOWLEDGE

NAME OF THE LESSEE	VILLAGE	S.F. NO & EXTENT	COLLECTOR'S PROCEEDING NO. & DATE	LEASE PERIOD
1	THUPPUGANAPALLI	637 (PART 1), 4.00.0 Ha	.....	PROPOSED TCA
2	THUPPUGANAPALLI	637 (PART 2), 4.50.0 Ha	.....	PROPOSED TCA
2	THUPPUGANAPALLI	637 (PART 3), 4.50.0 Ha	.....	PROPOSED TCA
TOTAL EXTENT		13.00.0 Ha		

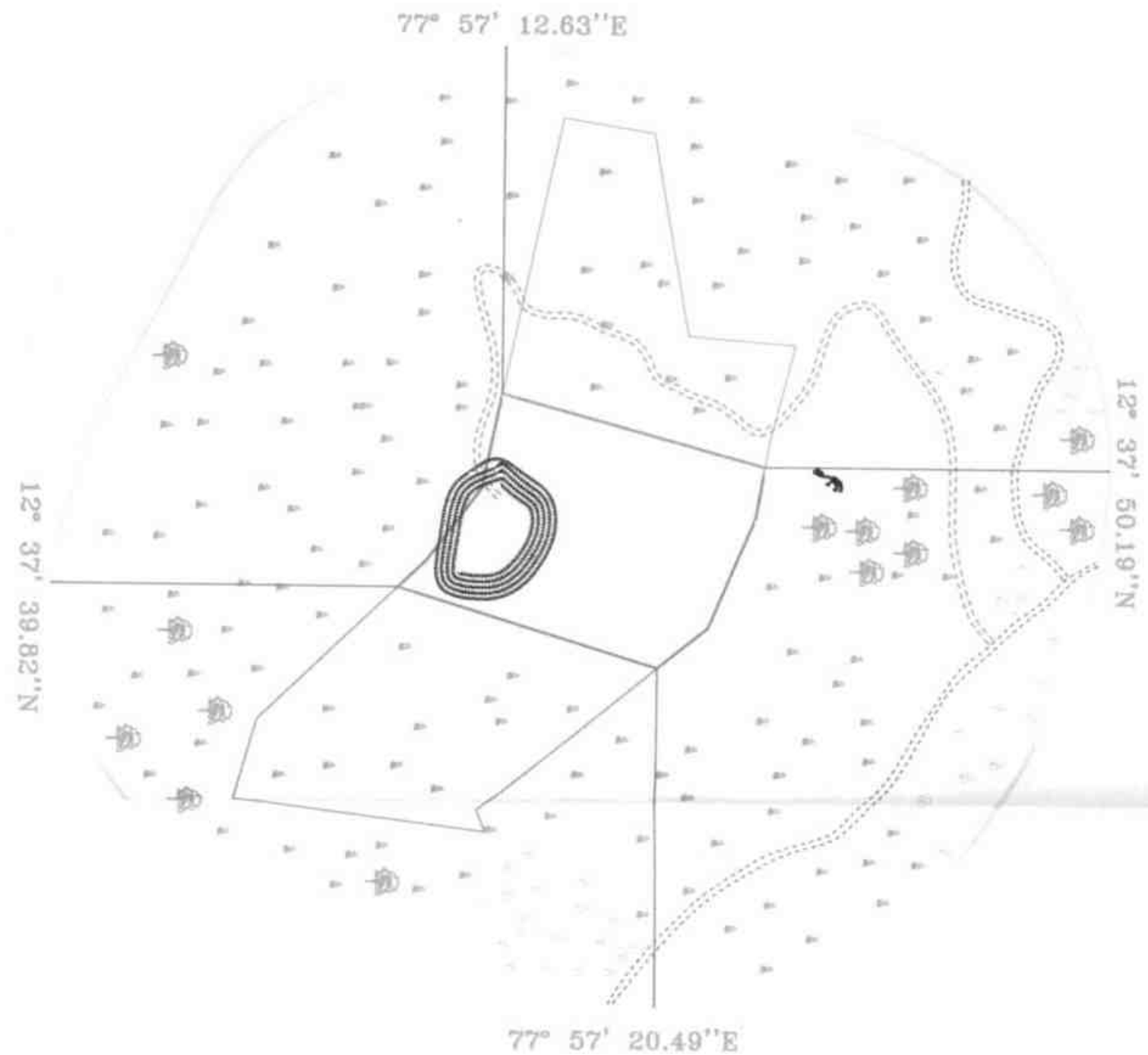


LAND USE PATTERN	PERCENTAGES
QUARRY AREA	15%
ROAD	10%
TREES	5%
INFRASTRUCTURES	5%
AGRICULTURAL LAND	20%
BARREN LAND	45%

Prepared By:

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

S. Dhanasekhar, M.Sc.
 RECOGNIZED QUALIFIED PERSON
 RQ/P/MS/215/2011/A



APPLICANT:
 THIRU.K.P. ANAND,
 S/O. V. P. PERUMAL,
 NO.2/10, VELAMPATTY POST,
 PENNAGARAM TALUK,
 DHARMAPURI DISTRICT-636809.

LOCATION:
 S.F. NO : 637 PART-2,
 EXTENT : 4.50.0 Ha,
 VILLAGE : THUPPUGANAPALLI,
 TALUK : HOSUR,
 DISTRICT : KRISHNAGIRI.

500M RADIUS :

MINE LEASE AREA :

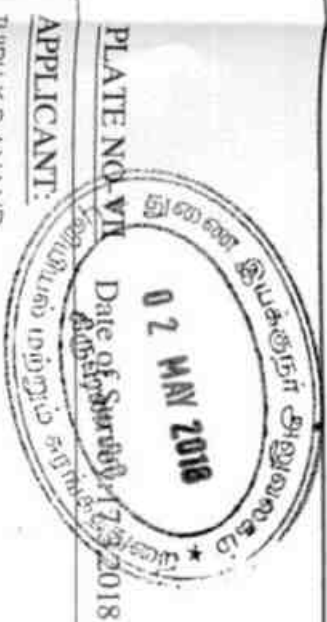
TOPO SHEET NO. : 57 H/14

LATITUDE : 12° 37' 39.82" N to 12° 37' 50.19" N
 LONGITUDE : 77° 57' 12.63" E to 77° 57' 20.49" E

INDEX

VILLAGE ROAD	
APPROACH ROAD	
APPLICANT INFRASTRUCTURES	
TREES	
AGRICULTURAL LAND	
BARREN LAND	
EXISTING PIT	
CRUSHER UNIT	

ENVIRONMENTAL PLAN



ANNEXURE-VII
VAO CERTIFICATE

கீழ்க்கண்டவாறு லாபவல்லி கிளையார்

வல்லி கீழ்க்கண்டவாறு லாபவல்லி கீழ்க்கண்டவாறு

நியாய கிராம யா சார் : 637 (part II) -ல்

2008 ஆம் கி.பி. அக்டோபர் 15-ல் Rough Stone

Quarry -ல் சார் சிலா 500 லட்சம் சிமென்ட்

கிராம நதிநீர், யாசார், குடிசைவசதி, மின்சாரம்

சீமைக்கல், மரக்கல், மரக்கல், மரக்கல்

அரசு கல்நிலைக்கல் சிமென்ட் தொழிலகம்

மேல் தொழிலகம் தொழிலகம் தொழிலகம்

சார் 21/06/2023
கிராம மன்றம் அலுவலர்
131, துப்புக்கானபள்ளி,
காளூர் (TK), கீழ்க்கண்டவாறு (DT)

THIRU. K.P. ANAND, Rough stone quarry in the S.F.No. 637(Part-II) over an extent of 4.50.0ha. in Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District.

GENERAL VIEW OF THE APPLIED LEASE AREA



K.P.Anand
(Deponent)

K.P. Anand

[Signature]
சீராம நாராயண அலுவலர்
131, துப்புகான்பள்ளி, 326
குகளகிரி (TK), கிருஷ்ணகிரி (DT).

ANNEXURE-VIII
BLASTING DOCUMENT



Cell : 98427 44073, 94437 44073

VISHNU EXPLOSIVES



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

Ref: To

Thiru. K.P. Anand,
S/o. V.P. Perumal,
No.2/10, Velampatty Post,
Pennagaram Taluk,
Dharmapuri District - 636 809.

Date :

Sir,

Sub: Willingness to do Explosives Blasting Works – Reg.

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

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

We kindly request yourself to engage us to do Explosives Blasting Works in your proposed Rough stone Quarry situated at S.F.No: 637 (Part-2) in Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District over an extent of 4.50.00 hectares.

SERVING BEST AT ALL TIMES

Thanking you.

For VISHNU EXPLOSIVES,

Enclosure: Magazine License Copy.

ANNEXURE-IX
AFFIDAVIT



தமிழ்நாடு தமில்நாடு TAMILNADU 23.6.2023/க-ஊ - BH 521944

K.P. Anand
Dharmapuri

M. க. சண்முகம்
முத்திரைத்தாள் விநியோகம்
உரிமம் எண். 1/2003
கப்ரமணிய நகர் விரிவாக்கம்,
காமங்கலம், சேலம்-5, தமிழ்நாடு

AFFIDAVIT TO SEIAA, TAMIL NADU

I, **K.P. Anand**, S/o. V. P. Perumal residing at No.2/10, Velampatty Post, Pennagaram Taluk, Dharmapuri District - 636 809, do hereby solemnly declare and sincerely affirm that, I have applied for getting environment clearance to SEIAA, Tamil Nadu for quarry lease for Rough Stone quarry over an extent of 4.50.0 Ha with Survey No. 637 (Part-2), in Thuppuganapalli Village, Shoolagiri Taluk, Krishnagiri District, Tamil Nadu.

1. 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,
 - a. Notified Protected areas under the wild life (Protection) Act, 1972 (NBWL).
 - b. Critically polluted areas as notified by the central pollution control board constituted under water (Prevention and control of Pollution) Act 1974.
 - c. Eco sensitive area as notified.
 - d. Interstate boundaries and international boundaries within 10km radius from the boundary of the proposed quarry site.



K.P. Anand

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.86,30,000/-	Rs.8,00,000/-
Total cost Allocation	Rs.86,30,000/-	Rs.8,00,000/-

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

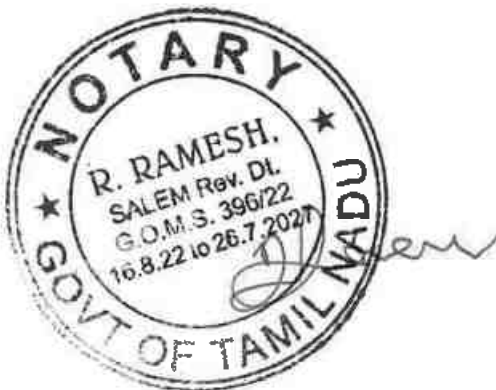
a. Existing Quarries						
S.No	Name of the lessee	Village & Taluk	SF.No.	Extent in Hectare	Roc. No. & date	Lease Period.
1.	M/s. AVS Building Solutions India private Limited, Plot No.298, Sipcot Staff Housing Colony, Mookandapalli, Hosur- 635 126.	Thuppuganapalli Village & Shoolagiri Taluk	637 (Part-3)	4.50.0Ha.	Rc.No:211/2018/ Mines dt:25.01.2018	25.01.2019 To 24.01.2029
2.	Thiru.S. Sundraiah, S/o. Subramaniyam (Late), No.14/5, Amman Nagar, Opp to Government ITI, HCF (Post), Hosur.	Thuppuganapalli Village & Shoolagiri Taluk	420 (Part-2)	3.00.0Ha.	Rc.No:98/2016/ Mines dt:08.08.2016	22.08.2016 To 21.08.2026

b. Details of Abandoned /Old Quarries						
S.No	Name of the lessee	Village & Taluk	SF.No.	Extent in Hectare	Roc. No. & date	Lease Period.
1.	Thiru. R. Rathinam, Manankundram, Aiagu Goundanapatti Post, Buthar Natham Trichy,	Thuppuganapalli Village & Shoolagiri Taluk	420 (Part-5)	5.00.0Ha.	Rc.No:91/2008/ Mines dt:29.03.2018	03.07.2008 To 02.07.2018



K.P. An

c. Details of Proposed/ Applied Quarries						
S.No	Name of the lessee	Village & Taluk	SF.No.	Extent in Hectare	Rc. No. & date	Lease Period.
1.	Thiru. Anand, V.P. Perumal, No.2/10, Velampatty Post, Pennagaram Taluk, Dharmapuri District- 636 809.	Thuppuganapalli Village & Shoolagiri Taluk	637 (Part-2)	4.50.0	Rc.No:210/2018 / Mines dt:09.03.2018	TCA EC Obtained Tender Lease not yet granted.
2.	Thiru. Anand, V.P. Perumal, No.2/10, Velampatty Post, Pennagaram Taluk, Dharmapuri District- 636 809.	Thuppuganapalli Village & Shoolagiri Taluk	637 (Part-1)	4.00.0	Rc.No:209/2018 / Mines dt:09.03.2018	TCA EC Obtained Tender Lease not yet granted.
3.	M/s. Sri Vari Infrastructure. Prop. Thiru. Adal Arasu, S/o. Ramathilagan, D.No.2/389, Poosaripatti Village, & Sogathur Post, A.Reddyhalli, Dharmapuri.	Thuppuganapalli & Agaram Agraharam Village & Shoolagiri Taluk	637 (Part) & 4 (Part)	2.95.0 & 0.95.0	Rc.No:231/2019 / Mines dt:13.06.2019	Precise Area Given
4.	M/s. AVS Building Solutions India Private Limited, Plot No.298, Sipcot Staff Housing Colony, Mookandapalli, Hosur - 635 126.	Thuppuganapalli Village & Shoolagiri Taluk	420 (Part-5)	4.90.0	Rc.No:230/2019 / Mines dt:13.06.2019	Precise Area Given



K.P. Venu

4. There will not be hindrance or disturbance to the people living on enrooted/ nearby my quarry site while transporting the mineral and due to quarrying activities.
5. There is no approved habitation within 300m radius from the periphery of my applied quarry.
6. I swear that afforestation will be carried out during the course of quarrying operation and maintained.
7. Insurance coverage will be arranged for the laborers working in my quarry site.
8. The existing road from the main road to quarry is in good condition and the same will be maintained and utilized for Transportation of Rough Stone.
9. I will not engage any child labor in my quarry site and I am aware that engaging child labor is punishable under the law.
10. All types of safety / protective equipment will be provided and used by all the laborers working in my quarry.
11. No permanent structures, temple etc., are located within 500m radius from the periphery of my quarry.

I ensure to do the social and Environment commitment as mentioned in the Mining plan to the best of my knowledge.

K.P. Anand

K.P. Anand
(Deponent)

Ramesh
23.6.2023
R. RAMESH, B.A., B.L., P.G.D.P.M
Advocate & Notary,
2/48, V.M.R. Nagar, Meyyanoor,
SALEM - 636004. © 9443694543
G.O.M.S. 396/22 Dt. 18.8.22
Valid upto 28.7.2027



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/23/3062

December 11, 2023

To,

Eco Tech Labs Pvt Ltd.,
48, 2nd main road, Ram Nagar South Extn,
Pallikaranai, Chennai-600100, Tamil Nadu
(**Kind Attention:** Mr. A Dhamodharan)

Sub.: Extension of Validity of Accreditation till March 10, 2024– regarding
Ref.: 1. Certificate no. NABET/EIA/2124/SA 0147
2. Request e-mail dated December 08, 2023

Dear Sir,

This has reference to the Accreditation of your organization under the QCI-NABET EIA Scheme and your request email dated December 08, 2023. It is to inform your good self that the validity of **Eco Tech Labs Pvt Ltd.,** is hereby extended till **March 10, 2024,** or the completion of the accreditation process, whichever is earlier.

2. The above extension is subject to the submission of required documents/information concerning your existing application, timely submission/closure of NC/Obs (if any), and applicable fee (pending if any) during the application process.
3. You are requested not to use this letter after the expiry of the above-stated date.

With best regards.

(A K Jha)
Senior Director
QCI-NABET